Journal of Financial Services Research, 3: 261–286 (1989)

When Financial Markets Work Too Well: A Cautious Case For a Securities Transactions Tax

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Abstract

Unlike most major industrialized nations, the United States does not impose an excise tax on securities transactions. This article examines the desirability and feasibility of implementating a U.S. Securities Transfer Excise Tax (STET) directed at curbing excesses associated with short-term speculation and at raising revenue. We conclude that strong economic efficiency arguments can be made in support of a STET that throws "sand into the gears," in James Tobin's (1982) phrase, of our excessively well-functioning financial markets. Such a tax would have the beneficial effects of curbing instability introduced by speculation, reducing the diversion of resources into the financial sector of the economy, and lengthening the horizons of corporate managers. The efficiency benefits derived from curbing speculation are likely to exceed any costs of reduced liquidity or increased costs of capital that come from taxing financial transactions more heavily. The examples of Japan and the United Kingdom suggest that a STET is administratively feasible and can be implemented without crippling the competitiveness of U.S. financial markets. A STET at a .5% rate could raise revenues of at least $10 billion annually.

Technological and institutional innovations have radically transformed financial markets in the United States and around the world. These changes have permitted and encouraged spectacular increases in the volume of trade in securities of all kinds. In 1960, 766 million shares were traded on the New York Stock Exchange; by 1987, more than 900 million shares changed hands in the average week. More shares were traded on the lowest-volume day in 1987 than in any month in 1960. And more shares changed hands in the first 15 minutes of trading on October 19 and 20, 1987, than in any week in 1960.

Increases in trading have been even more spectacular in other markets. In 1960 or 1970 there were no organized markets in derivative securities. Today, the dollar value of contracts traded on the stock market futures market alone significantly exceeds the volume of trade

We wish to thank David Cutler, Thomas Kalil, James Poterba, Jonathan Evans, and Charles Perry for useful discussions, and Jeffrey Mantz for dedicated research assistance.

on the stock market itself, and the volume of trade in stock market futures is nearly equalled by trade in index options. Explosive increases in trading volumes have not been confined to corporate equities. While the value of shares traded on the New York Stock Exchange averages less than $10 billion a day, the daily value of trade in government bonds averages more than $25 billion and the daily value of trade in foreign exchange approaches $300 billion. There is every reason to expect trading volumes to continue to increase. Already, the New York Stock Exchange is planning for a billion share day. And with increasing international linkages between markets, an increasing variety of securities will soon be tradable 24 hours a day.

In the narrow sense of permitting trade to take place between consenting adults, it is obvious that our financial markets have become much more efficient over time. Unloading a million dollar portfolio of stock might easily have cost $10,000 or more in 1960; today a functionally equivalent transaction can be carried out in the futures market for a couple of hundred dollars or less. There are, however, increasing concerns that financial markets may have deteriorated over time in performing their social functions of spreading risk and efficiently guiding the allocation of capital, despite their increased transactions efficiency.

On the question of risk taking, First Boston's Albert Wojnilower (1980) expressed the fears of many in financial markets when he wrote that: "The freeing of financial markets to pursue their casino instincts heightens the odds of crises . . . . Because unlike a casino, the financial markets are inextricably linked with the world outside, the real economy pays the price." Treasury Secretary Brady (1988) has expressed concerns about the costs of our financial system: "We are headed in the wrong direction, when so much of our young talent and so much of this nation's resources are aimed at financial engineering when the rest of the world is laying the foundation for future growth." And the proposition is widely endorsed that American business needs to be freed from market pressures that prevent it from taking the long view.

Concern about the consequences of rapid turnover in financial markets is hardly new. In one of the most famous chapters of *The General Theory,* Keynes questioned the benefits of more liquid and smoothly functioning financial markets:

> As the organization of investment markets improves, the risk of the predominance of speculation does increase. In one of the greatest investment markets in the world, namely New York, the influence of speculation is enormous. Speculators may do no harm as bubbles on a steady stream of enterprise. But the position is serious when enterprise becomes the bubble on a whirlpool of speculation. When the capital development of a country becomes the by-product of the activities of a casino, the job is likely to be ill-done. The measure of success attained by Wall Street, regarded as an institution of which the proper social purpose is to direct new investment into the most profitable channels in terms of future yield cannot be claimed as one of the outstanding triumphs of laissez-faire capitalism—which is not surprising if I am right in thinking that the best brains of Wall Street have been in fact directed towards a different object.

He continues the same passage by suggesting a possible remedy for the problems caused by excessive speculation:

> These tendencies are a scarcely avoidable outcome of our having successfully organized "liquid" investment markets. It is usually agreed that casinos should in the public interest be inaccessible and expensive. And perhaps the same is true of stock exchanges . . . . 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 enterprises in the United States.

Today, 50 years after Keynes wrote these words, the United States is one of the only major industrialized countries that does not levy a significant excise tax on the transfer of financial securities. Such taxes raised more than $12 billion in Japan in 1987, and raised significant amounts of revenue in most European countries despite the fact that their stock markets are much smaller than that of the United States. In light of concerns about both the large federal deficit and the pace and volatility of the markets, it is hardly surprising that the idea of imposing some form of Securities Transaction Excise Tax (STET) in the United States has received serious attention in recent years. James Tobin (1982) has urged adoption of such a tax to curb excessive volatility in international financial markets. Former House Speaker Jim Wright proposed a .5 percent tax on all securities transactions. An alternative approach to curbing speculation through the use of the tax system has been advocated by Felix Rohatyn, Warren Buffett, and Henry Kauffman, among many others. They have called for raising the tax rate on short-term capital gains and reducing the tax rate on long-term gains.

This article analyzes some of the economic and administrative issues raised by proposals to use a transactions tax to curb speculation. We conclude that there are strong economic efficiency arguments to be made in support of some kind of STET that throws "sand into the gears," to use James Tobin's (1982) phrase, of our excessively well-functioning financial markets. The efficiency benefits from curbing speculation are likely to exceed any costs of reduced liquidity or increased costs of capital that come from taxing transactions more heavily. The examples of Japan and Britain suggest that transactions taxes are administratively feasible and would not unduly interfere with our international competitiveness in the provision of financial services. International cooperation and coordination in setting STET rates could increase the ability of all countries to tax financial transactions fairly, in a manner designed to achieve the goals of curbing speculation and raising revenue.

Our article is organized as follows. Section 1 contrasts the Panglossian, theoretical, efficient markets view of the operation of financial markets with the way they work in practice. This section focuses on three concerns—excessive volatility caused by destabilizing speculation; the diversion of human and capital resources away from more socially profitable pursuits into the financial sphere; and the impact of rapid financial turnover on the way in which corporate investment decisions are made. It also examines the extent to which these problems can be addressed by taxes that curb speculation. Possible adverse economic effects of transactions taxes are considered. Section 2 describes international experiences with transactions taxes and considers the historical United States' experience. It considers a number of aspects of the operation of a U.S. STET, and concludes that such a tax would be workable and could yield significant new government revenues. Section 3 offers some concluding policy observations.

1. How well do our financial markets function?

American financial markets are extremely successful, as measured by the narrow test of facilitating free trade in a huge array of securities. Capital market participants today enjoy a degree of flexibility that would have been inconceivable even a decade ago. Large institutions are able to reallocate their portfolios between stocks and bonds in a matter of hours. Well-developed futures and options markets enable investors to hedge all kinds of risks. Starting with relatively little capital, it is now possible to take over all but the largest companies within a matter of weeks.

The difficult question about our financial markets, however, concerns how well they perform their ultimate social functions of spreading risks, guiding the investment of scarce capital, and processing and disseminating the information possessed by diverse traders. Financial innovators and their academic champions argue that the facilitation of trading necessarily contributes to economic efficiency. They therefore see innovations that reduce trading costs as clearly beneficial and regard as badly misguided proposals, such as those of Keynes and Tobin, to throw "sand into the gears" of financial markets.

The belief that facilitating trading improves the social functioning of financial markets is premised on the acceptance of the efficient markets hypothesis. If prices in unfettered financial markets closely track fundamental values, then they will provide proper economic signals, guide investment appropriately, and facilitate the spreading of risks. If, on the other hand, easy trading encourages speculation that drives prices away from fundamental values, there is cause for concern about the social functioning of financial markets. Excessive speculation that increases volatility would create rather than reduce risk, distort the allocation of investment, and limit the information content of asset prices. In this case, benefits would be derived from tax measures that would help to curb speculation.

This section begins by summarizing the available evidence on the market efficiency hypothesis. It then considers three possible adverse consequences of excessive short-term trading: increases in volatility; the excessive diversion of resources into rent-seeking activities; and the shortening of the investment horizons of corporate managers.

1.1. Do prices track fundamental values?

Although it has never been completely accepted among practitioners, the efficient markets view that stock prices will always reflect fundamental values has, until recently, commanded widespread allegiance from academic students of financial markets. The logic of efficient markets is compelling. If a stock's price diverges from the fundamental value of the company at any point, there would be a profit opportunity for anyone who recognized this fact. If a stock were underpriced relative to the underlying value of the assets it represents, for example, then efforts to profit by purchasing it would continue until its price was pushed up to the point where it equalled that underlying value. If one assumes that stock prices move quickly to eliminate easy profit opportunities, then it must be the case that prices closely mirror fundamental values. Changes in stock prices should, then, reflect changes in the fundamental value of the underlying assets, or at least in the market's estimate of those underlying values based upon changing information regarding the assets.

Furthermore, in the efficient markets model, investors who drive prices toward the fundamental value of a company that is undervalued by the market, by buying low and selling high, will prosper over time. Those who destabilize prices by buying high and selling low will lose money. Accordingly, "good money" will drive out "bad money" and markets will come to function better over time.

This logic has historically been supported by a vast amount of empirical literature demonstrating the difficulty of making predictable excess profits in the stock market. In 1978, Michael Jensen was able to label the efficient markets hypothesis "the best established empirical fact in economics." More recently, however, the efficient markets hypothesis, and its implication that the tremendous volatility of stock prices reflects corresponding movements in the fundamental value of assets, has been subjected to unfavorable scrutiny. As a matter of theory, critics have noted that even speculators who recognize a deviation of prices from fundamental values will be reluctant to trade on the basis of their observation as long as there is the possibility that the deviation will get larger before it gets smaller. For example, many people thought the market was undervalued at 1700 on the afternoon of October 19, 1987, but were reluctant to buy stock for fear that the market would fall further before stabilizing. More important, several types of empirical studies have questioned the presumption that movements in stock prices reflect movements in fundamental values.

First, the difficulty of isolating the news that drives stock prices even with the benefit of hindsight is well documented. Table 1, reproduced from Cutler, Poterba, and Summers (1988), describes the news events on the 50 days since World War II on which the largest market moves were observed. On many of the days, it is difficult to point to any event at all that should have had a major impact on fundamental values. The example of the 1987 crash is particularly striking. It is difficult to imagine what news that occurred on that day was sufficient to cause a 22 percent decline in the value of the American corporate sector.

This method of examining the ability of "news" to account for stock market volatility is inherently subjective, since there are always many possible factors that could have affected fundamental values. A sharper test is possible using simpler markets. Roll (1985) examined the futures market in frozen orange juice, in which prices are substantially determined by predictions about the weather in Florida. Even in this simple market, it is not possible to account for a large fraction of the observed volatility based upon any changes in external information. Roll (1988) later reached a similar conclusion with respect to the stock market, by examining the relative movements of individual corporate stocks.

Perhaps the clearest evidence that something other than fundamental values drives stock prices comes from French and Roll's (1987) ingenious study of volatility over periods when the market is open and when it is closed. It has long been observed that the market's variability between Friday's close and Monday's close is much less than three times as great as its variability between Monday's close and Tuesday's close. In the efficient market theory, this fact is attributed to the observation that less relevant news is revealed on weekend days than on weekdays. However, French and Roll examined volatility during a period in 1968 when the market was closed on Wednesdays because of the pressures caused by heavy volume. Remarkably, they found that the market volatility between Tuesday and Thursday was approximately halved when the market was closed on Wednesday! If Thursday's prices always reflected "fundamental" news generated since the last market

Table 1. Fifty largest postwar movements in S&P index and their "causes"

	Date	*Percent Change*	*New York Times Explanation*
1	Oct. 19, 1987	−20.47%	Worry over dollar decline and trade deficit; Fear of U.S. not supporting dollar.
2	Oct. 21, 1987	9.10%	Interest rates continue to fall; deficit talks in Washington; bargain hunting.
3	Oct. 26, 1987	−8.28%	Fear of budget deficits; margin calls; reaction to falling foreign stocks.
4	Sep. 3, 1946	−6.73%	" . . . no basic reason for the assault on prices."
5	May 28, 1962	−6.68%	Kennedy forces rollback of steel price hike.
6	Sep. 26, 1955	−6.62%	Eisenhower suffers heart attack.
7	Jun. 26, 1950	−5.38%	Outbreak of Korean War.
8	Oct. 20, 1987	5.33%	Investors looking for "quality stocks."
9	Sep. 9, 1946	−5.24%	Labor unrest in maritime and trucking industries.
10	Oct. 16, 1987	−5.16%	Fear of trade deficit; fear of higher interest rates; tension with Iran.
11	May 27, 1970	5.02%	Rumors of change in economic policy: " . . . the stock surge happened for no fundamental reason."
12	Sep. 11, 1986	−4.81%	Foreign governments refuse to lower interest rates; crackdown on triple witching announced.
13	Aug. 17, 1982	4.76%	Interest rates decline.
14	May 29, 1962	4.65%	Optimistic brokerage letters; institutional and corporate buying; suggestions of tax cut.
15	Nov. 3, 1948	−4.61%	Truman defeats Dewey.
16	Oct. 9, 1974	4.60%	Ford to reduce inflation and interest rates.
17	Feb. 25, 1946	−4.57%	Weakness in economic indicators over past week.
18	Oct. 23, 1957	4.49%	Eisenhower urges confidence in economy.
19	Oct. 29, 1987	4.46%	Deficit reduction talks begin; durable goods orders increase; rallies overseas.
20	Nov. 5, 1948	−4.40%	Further reaction to Truman victory over Dewey.
21	Nov. 6, 1946	−4.31%	Profit taking; Republican victories in elections presage deflation.
22	Oct. 7, 1974	4.19%	Hopes that President Ford would announce strong anti-inflationary measures.
23	Nov. 30, 1987	−4.18%	Fear of dollar fall.
24	Jul. 12, 1974	4.08%	Reduction in new loan demands; lower inflation previous month.
25	Oct. 15, 1946	4.01%	Meat prices decontrolled; prospects of other decontrols.
26	Oct. 25, 1982	−4.00%	Disappointment over Federal Reserve's failure to cut discount rates.
27	Nov. 26, 1963	3.98%	Confidence in President Johnson after Kennedy assassination.
28	Nov. 1, 1978	3.97%	Steps by Carter to strengthen dollar.
29	Oct. 22, 1987	−3.92%	Iranian attack on Kuwaiti oil terminal; fall in markets overseas; analysts predict lower prices.
30	Oct. 29, 1974	3.91%	Decline in short-term interest rates; ease in future monetary policy; lower oil prices.
31	Nov. 3, 1982	3.91%	Relief over small Democratic victories in House.
32	Feb. 19, 1946	−3.70%	Fear of wage-price controls lowering corporate profits; labor unrest.
33	Jun. 19, 1950	−3.70%	Korean War continues; fear of long war.
34	Nov. 18, 1974	−3.67%	Increase in unemployment rate; delay in coal contract approval; fear of new mid-East war.
35	Apr. 22, 1980	3.64%	Fall in short-term interest rates; analysts express optimism.

36	Oct. 31, 1946	3.63%	Increase in commodity prices; prospects for price decontrol.
37	Jul. 6, 1955	3.57%	Market optimism triggered by GM stock split.
38	Jun. 4, 1962	−3.55%	Profit taking; continuation of previous week's decline.
39	Aug. 20, 1982	3.54%	Congress passes Reagan tax bill; prime rate falls.
40	Dec. 3, 1987	−3.53%	Computerized selling; November retail sales low.
41	Sep. 19, 1974	3.50%	Treasury Secretary Simon predicts decline in short-term interest rates.
42	Dec. 9, 1946	3.44%	Coal strike ends; railroad freight rate increase.
43	Jun. 29, 1962	3.44%	" . . . stock prices advanced strongly chiefly because they had gone down so long and so far that a rally was due."
44	Sep. 5, 1946	3.43%	"Replacement buying" after earlier fall.
45	Oct. 30, 1987	3.33%	Dollar stabilizes; increase in prices abroad.
46	Jan. 27, 1975	3.27%	IBM wins appeal of antitrust case; short-term interest rates decline.
47	Oct. 6, 1982	3.27%	Interest rates fall; several large companies announce increase in profits.
48	Jul. 19, 1948	−3.26%	Worry over Russian blockade of Berlin; possibility of more price controls.
49	Nov. 30, 1982	3.23%	" . . . analysts were at a loss to explain why the Dow jumped so dramatically in the last two hours. . . . "
50	Oct. 24, 1962	3.22%	Khrushchev promises no rash decisions on Cuban Missile Crisis; calls for U.S.-Soviet summit.

Note: The last column is per the *New York Times* financial section or front page.

close and nothing else, one would not expect the opening or closing of the market on Wednesday to have any effect at all on the total price movements between Tuesday and Thursday. The implication of French and Roll's findings is that Wednesday's trading is itself a source of market volatility with lasting effects.

A second type of evidence has been derived from studies that seek to compare stock price movements with movements in fundamental values. Shiller (1981) developed a statistical method of comparing the volatility of stock prices with the volatility of fundamental values, as estimated from a study of the movement of dividend levels. He concluded that the stock market was far more variable than could be reasonably attributed to the observed behavior of dividends. Shiller's work is controversial because of its assumption that valid inferences about the variance of the fundamental value of a company's equity can be drawn from its dividend behavior. Other evidence on this point is, however, more clear-cut.

Consider the example of closed end mutual funds. Since the only asset of a closed end mutual fund is its stock portfolio, which is easily valued, the fundamental value of the fund shares is easily evaluated. Interestingly, closed end funds typically sell for less than the aggregate market value of their underlying assets. Further, these discounts vary widely and inexplicably from fund to fund, in a manner that is extremely hard to square with the theory that stock market prices always reflect fundamental values. Similarly, it is very difficult to see how the extremely rapid fluctuations in the price of shares of companies that are active takeover targets could reflect actual changes in the fundamental value of the company over

the course of a few days or weeks, or even the availability of new information that allowed the market to make better estimates of such value.

Practical evidence that stock prices fluctuate more than fundamental values comes from the success of investment strategies that seek to exploit the long-term tendency of the price of individual securities and the market as a whole to return toward fundamental values. The success of noted investor Warren Buffett and of the Value Line trading system is based on the pursuit of an approach of this type. Statistical studies reveal that stocks whose prices are low relative to dividends, earnings, capital assets, or even past prices consistently outperform other securities.

None of the foregoing is intended to suggest that stock prices are entirely unrelated to fundamental values or that they are driven only by speculation. Indeed the evidence suggests that the stock market probably is efficient according to the rather weak definition offered by noted financial economist Fischer Black:

> We might define an efficient market as one in which price is within a factor of two of value, i.e., the price is more than half the value and less than twice the value. By this definition, I think almost all markets are efficient almost all the time. "Almost all" means at least ninety percent.

Variable divergences of price from value obviously suggest the presence of substantial excess volatility in the stock market. We turn next to the question of whether excessively liquid financial markets are responsible.

1.2. Does speculation contribute to excess volatility?

Even if one accepts that stock prices are excessively volatile, it does not necessarily follow that this is due to excessive short-term speculation. Indeed, excessive volatility is often ascribed to *insufficient* short-term speculation. In markets that are demonstrably extremely illiquid, such as those for certain types of art or real estate, prices are observed to be extremely volatile. Volatility arises because sellers cannot find buyers or buyers cannot find sellers except after large price changes. However, it does not follow that once an adequate level of liquidity has been attained, as must have been the case with the stock market many years ago, further increases in liquidity are stabilizing. Indeed, Keynes was at pains to argue that excessive liquidity actually encourages destabilizing speculation.

The evidence reviewed above suggests that a significant part of market volatility reflects "noise trading"—trading on the basis of something other than information about fundamental values. Those who seek to gauge "market psychology" or to guess how the guesses of others will evolve might be labelled as noise traders. Measures discouraging such noise trading should contribute to reductions in volatility and improve the functioning of speculative markets, as Delong, Shleifer, Summers, and Waldmann (1988) have demonstrated. Reductions in noise trading will cause prices to fluctuate less violently about fundamental values, both because there will be less speculative pressure on prices and because speculative pressures will be more easily resisted because risk inherent in irrational noise trader demands will be reduced.

In considering the relationship between speculation and volatility, it is helpful to distinguish between two types of speculative strategies. The first type, which might be called "value investing," involves negative feedback. Traders who purchase stocks on the basis of comparisons of stock prices with some relatively stable estimate of fundamental values will normally find themselves selling when prices rise and buying when they fall. This strategy, when pursued by any substantial number of players, will tend to reduce volatility by returning stock prices to the (perceived, stable) fundamental value of the underlying company. Stabilizing negative feedback will also arise when traders rebalance their portfolios, following a risk-reducing strategy of buying and selling equity in order to maintain specified fractions of their assets in the form of equity versus debt, and when they trade against the market on the theory that the market typically initially overreacts to news in either direction.

The second type of trading strategy involves positive feedback. Traders following such a strategy buy when markets rise and sell when they fall. Such positive feedback traders tend to increase volatility. Strategies based upon the slogan "the trend is your friend," the placement of stop-loss orders, and the use of certain complex dynamic hedging strategies to provide "portfolio insurance" all contribute to the destabilization of market prices.

Those following negative feedback trading strategies have no need to trade frequently—portfolio assets are expected to earn abnormally high returns in a manner of months or more likely years, not in days or weeks. On the other hand, frequent trading is the essence of positive feedback trading strategies. Any sort of curbs on short-term speculative trading through reductions in liquidity are, therefore, more likely to discourage positive feedback investing to a greater extent than negative feedback investing and may reduce price volatility.

The theoretical effects of reductions in transactions costs on asset price volatility are ambiguous. However, as an empirical matter the evidence cited earlier regarding the extent of price movements over periods of comparable length when the market is open and when it is closed does suggest the possibility that trading itself may be a source of volatility. This possibility is also highlighted by the events of 1929 and 1987. In both cases, stock prices increased dramatically on very high volume, as investors reinvested their market gains while assuming they could quickly extricate themselves from the market in the event of a decline. In fact, the presumption of universal liquidity proved to be an illusion. In both cases, prices collapsed as traders sought to liquidate their positions quickly. The association between high turnover and volatility is not confined to periods of market breaks. Statistical studies such as Schwert (1988) inevitably find a positive relationship between turnover and volatility, although the direction of causation is far from clear. It is striking that on the American stock market, turnover has increased very substantially because of declining transactions costs over the last several decades, with no concomitant decrease and perhaps a trend increase in volatility.

On balance, this evidence suggests that there is little basis for concern that volatility would increase if short-term trading in financial markets were discouraged, and some basis for concluding that taxes that discouraged turnover might reduce volatility in general and the risk of fluctuations like those in 1987 in particular.

1.3. Are too many resources devoted to financial engineering?

Perhaps the most frequent complaint about current trends in financial markets is that so much talented human capital is devoted to trading paper assets rather than to actually creating wealth. The spectacle of one-fourth of the Yale senior class applying for a job at First Boston generated more than a little comment to this effect. Even after the 1987 crash, financial jobs remain extraordinarily popular among top business school students. This situation is very different from that in Japan, where top graduates vie for positions in large manufacturing companies such as Toyota, and less successful students typically enter the financial services industry.

In many sectors where productivity increases have been far greater than those in the overall economy, for example, in agriculture and manufacturing, the share of employment has declined over time. However, the demand for financial services seems to be so elastic that, as figure 1 demonstrates, the share of American employment in the securities industry has increased sharply over time. Increases in trading volumes have been so dramatic that they have more than offset sharp declines in commission rates and other trading costs, causing the total real transaction costs associated with securities trading to have risen significantly in recent years, as figure 2 indicates. Perhaps James Tobin (1984) is correct in his assessment that "the immense power of the computer is being harnessed to the paper economy not to do the same transactions more efficiently but to balloon the quantity and variety of financial exchanges."

It is striking to contemplate the costs of operating our financial system. Its primary social function is the allocation of capital among corporations. These corporations had a combined income of about $310.4 billion in 1987. The combined receipts of member firms on the New

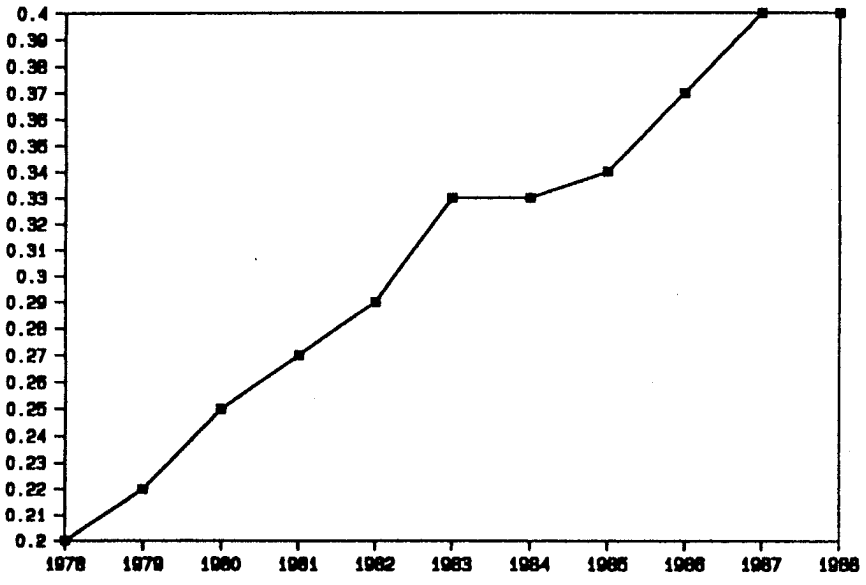

Fig. 1. Securities industry personnel as a percentage of the civilian U.S. labor force, 1978–1987
Source: New York Stock Exchange *Fact Book* (1988).

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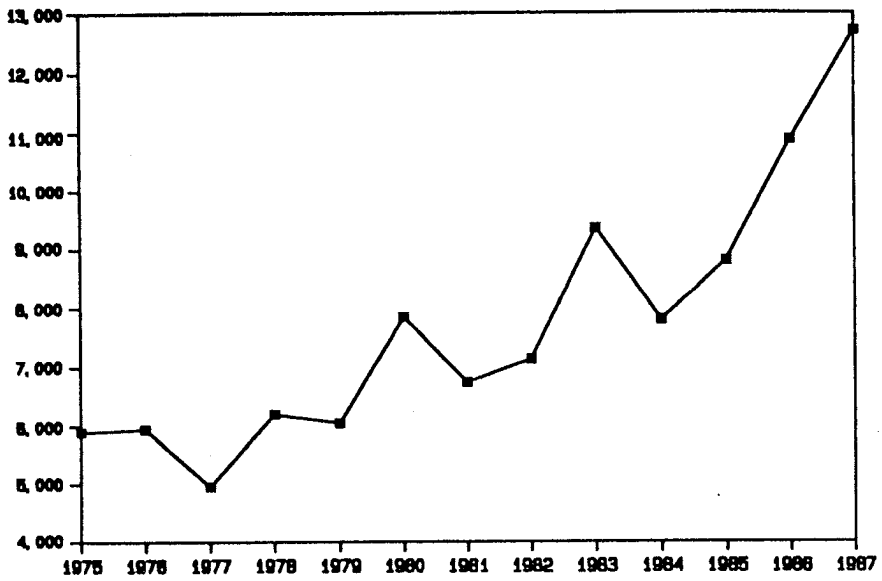

Fig. 2. Income from securities commissions of NYSE member firms (in millions of dollars)
Note: Adjusted to fourth quarter 1987 dollars; commissions for 1987 do not include fourth quarter earnings and are adjusted.
Source: New York Stock Exchange *Fact Book* (1988).

York Stock Exchange in that year was $53 billion. This figure takes no account of the costs borne by individuals and institutions in monitoring their portfolios, acquiring information about securities, or actually making investment decisions. Nor does it take any account of the costs corporations incur in seeking to attract investors in their securities. It is not uncommon for the chief executive officers of major U.S. corporations to spend a week or more each quarter telling their corporate story to security analysts. If we assume that these latter costs are even half as great as direct payments to securities firms, it follows that the cost of operating our securities market was over $75 billion in 1987. This represented one-fourth of total corporate profits, and close to half of corporate net investment.

Is this too much? It is hard not to agree with James Tobin's (1984) judgment that "[w]hat is clear is that very little of the work of the securities industry, as gauged by the volume of market activity, has to do with the financing of real investment in any very direct way." This provides a strong case for reducing the volume of resources flowing into trading activities. Tobin, speaking of the recent proliferation of new financial markets, raises the consideration that "[e]very financial market absorbs private resources to operate and government resources to police. The country cannot afford all the markets that enthusiasts may dream up." It is true that many attempts to start financial markets fail, just as many new casino games fail to catch on. But the fact that the private market test eliminates some markets itself hardly establishes that those that succeed should be able to inflict the costs of regulation on the government.

There is, however, a more fundamental reason for concern about the diversion of human and capital resources into the trading of securities than the costs of additional government regulation or the absolute size of the financial sector. While well-functioning securities

markets produce the socially desirable byproducts of sharing risks and allocating capital to high value uses, it is nonetheless true that speculative trading is a zero-sum game in terms of its direct effects. When A buys stock from B, because he has a good tip, or good information, or even a particularly trenchant analysis of the current situation, and the stock subsequently rises sharply he wins a zero-sum game. His gain from trading is exactly matched by B's loss. Individuals each gain from acquiring information and trading on it, but much of the gains come at the expense of others. Therefore, the social gains are much less than the private ones. As Hirschleifer pointed out years ago, in such situations there is likely to be excessive investment in gathering information. Consider the question of how the social return to research directed at gauging track conditions at Churchill Downs compares with the social return to research directed at developing a better mousetrap. What about personally profitable research directed at predicting Carl Icahn's next move, or anticipating GM's earnings announcement hours early, or finding patterns in past stock prices that help to predict future stock prices?

When I stand up at a football game, I see better. When everyone stands up, tall people see better and short people see less well than they did before. Overall, however, the game cannot be viewed any more clearly. The same is largely true when everyone seeks to gather information to guide their trading on the stock market. There is, of course, a potentially important difference between the stock market and the race track. There is no social utility to knowing about track conditions. On the other hand, if individuals gather information and trade on it, stock prices will reflect this information and perhaps contribute to the efficient allocation of capital by moving toward their fundamental values. This may well be an important beneficial effect of long-term investment strategies. It is hard to believe, however, that investments made with a horizon of hours reveal much socially beneficial information to the market place.

A transactions tax is a natural policy for alleviating this market failure. While it would not have much impact on long-term investors who invest on the basis of judgments about the true value of assets, it would have a significant impact in making it less attractive to invest resources in various short-term prediction activities, since the tax cost would increase with the frequency of trading. By encouraging investment research directed at long-term rather than short-term prediction, such a tax might help to solve the conflict noted by Keynes between the privately and socially most desirable investment strategies.

1.4. Does excessive speculation shorten managerial horizons?

In his discussion of the stock market in *The General Theory,* Keynes was at pains to stress that most investors did not focus on gauging long-term fundamentals, but instead concentrated on assessing market psychology and the likely direction of short-run movements in markets. He attributed this to the temperament of those likely to go into money management and to the way in which money managers are evaluated. Keynes stressed the fact, no less true today, that those who are orthodox and wrong are often more richly rewarded than those who are unorthodox and right. Probably the most common complaint of corporate executives about financial markets is that the stock market forces

them to take the short rather than the long view. The usual statement of the argument goes something like this. "Portfolio managers are evaluated and hired or fired on the basis of their quarterly performance. They therefore care only about maximizing the performance of their portfolio over the very near term. This makes them focus only on companies' reported earnings and their near-term prospects. As a consequence, managers who are concerned about maximizing their stock price, either in the interests of current shareholders or because they want to avoid being taken over, are forced to slight long-term investment in favor of managing short-term earnings." Treasury Secretary Brady has adopted this position and has stated that changing this situation is his highest priority.

The image created is one of contagious myopia. Those who hire portfolio managers are myopic; therefore, the managers of the companies in which portfolio managers invest are myopic. The argument linking these different forms of myopia is less than transparent, however. For example, shouldn't portfolio managers who are concerned with long-run performance nonetheless hold the assets today the total return on which they think will be highest over the next week or month? Even if it is granted that portfolio managers care only about returns over a short horizon, they nonetheless necessarily must care about the price at which they can unload their stock. This will depend on tomorrow's demand for that stock, which will in turn depend upon tomorrow's expectations about corporate performance thereafter. It should be clear that a holder of corporate stock today who anticipates quickly selling to a sequence of future short-term holders should nonetheless be concerned about his company's profitability over the long term, at least as long as it will exert some influence on its stock market price.

The connection between the horizons of portfolio managers and of corporate managements is a rich subject for future investigation. Here we indicate possible mechanisms through which tax measures that discourage short-term speculative trading might serve to lengthen managerial horizons.

First, if transactions taxes drove irrational investors who do not look beyond quarterly earnings reports out of the market, companies might be more willing to accept reductions in quarterly earnings that reflected investments with long-term payoffs. Firms might take a longer view when their stock price is less sensitive to their current quarterly performance. Further, lengthening portfolio holding periods by discouraging speculation may well induce investors to focus more on fundamental values—on confronting "the dark forces of ignorance," to use Keynes's phrase—rather than on gauging market psychology. To the extent that this change in investment practices was conveyed to corporate managers through their observation of the market treatment of their stock, they might pursue more long-term strategies. Or, perhaps more plausibly, in the different environment that would result if speculation were reduced, different types of managers would be selected to run major companies.

Second, as Lowenstein (1988) and other have argued, transaction taxes that tie shareholders to firms may induce shareholders to take a more active role in monitoring management and insuring that proper planning and investment activities take place. In Albert Hirschman's famous phrase, transactions taxes tend to substitute shareholder "voice" for shareholder "exit." With significant transactions costs, it is possible that dissatisfied shareholders would seek to influence or displace corporate managements rather than simply

to buy other companies. The importance of this effect is open to question. Even for relatively large passive investors, the free rider problem is likely to discourage efforts to control managerial behavior.

There is not much empirical evidence beyond abundant anecdotes on the importance of these mechanisms. And the available anecdotes do not always distinguish sharply between the consequences of rapid turnover in financial markets and the rather different issue of takeover threats. It may be relevant that there is a general sense that managers are more myopic in America than they used to be and that stock market turnover has increased dramatically over time. It may also be suggestive that the American stock market has relatively high turnover by world standards and American managers are thought to be more myopic than most.

1.5. Conclusion

The three economic arguments presented in this section support the presumption that it would be desirable to curb short-term speculation if this could be done without adverse side effects. We conclude this section by considering possible economic arguments against transactions taxes. Two stand out. First, such taxes may reduce market liquidity, which may discourage investment and increase the risks borne by the owners of capital. Second, transactions taxes may reduce the supply of funds available for investment by increasing the costs of investment.

We have argued that, beyond a certain point, increased liquidity may have costs that exceed its benefits. Further, as we note below, transactions taxes are in place with respect to most of the world stock markets, and have apparently not reduced liquidity sufficiently to create severe problems. The introduction of even quite substantial transaction taxes would raise trading costs in the American marketplace back only to their levels in the 1950s, 1960s, and early 1970s. Major liquidity problems were not evident at that time. Finally, to some degree, the perceived liquidity of the U.S. market is an illusion. When all investors tried to move in the same direction in October 1987, the tenuous nature of market liquidity became painfully apparent. At this late date, it is fair to throw the challenge back to the supporters of financial innovation. Trading opportunities have multiplied enormously. Whose risks have been reduced relative to those that existed ten years ago? Whose access to capital has been augmented?

The concern is legitimate that transactions taxes, like any tax that falls upon investment income, would discourage investment. A first reponse is that transactions taxes could be matched by reductions in other taxes on corporate income, so that the total tax burden on investment income was not increased. Even if this were not done, a modest transaction tax would not have a major impact on the return to the long-term investors who are the primary suppliers of capital in the U.S. market. A tax of .5 percent on the purchase or sale of stock is not likely to stop an investor with a horizon of several years from investing in the stock market. Certainly any behavioral effects with respect to those investors could be expected to be dwarfed by those caused by, for example, the 1987 increase in the maximum capital gains tax rate from 20 to 28 percent.

2. How would a STET work?

Most other major industrialized countries presently impose some form of STET. As table 2 indicates, such taxes are in place in West Germany, France, Italy, the Netherlands, Sweden, Switzerland, the United Kingdom, and Japan, among other places. These taxes collect a significant amount of revenue. In 1985, revenue collections ranged from .04 percent of gross national product (GNP) in Germany to .48 percent of GNP in Switzerland. This would correspond to a range from about $2 billion to $25 billion in the United States. Similar figures are suggested by the comparisons of STET revenues with total tax revenues and with the market value of outstanding equity.

A brief comparison of the administrative approaches used in other countries suggests that the problems that arise in structuring a STET may be resolved in a number of different ways. The overall lesson to be drawn from international comparisons is that a STET can be made to work in a modern financial economy without insurmountable distortions, and without crippling the national securities industry.

We note here certain aspects of the Japanese and British systems, as well as the former United States documentary stamp tax, imposed until the end of 1965. We then examine in more detail some of the issues raised in creating an administrable STET and potential resolutions of those issues.

Table 2. Transactions taxes and tax revenue

		Tax Revenue as a Percent of		
Country	*Tax*	*Total Revenue*	*GNP*	*Market Value of Equity*
Canada	None	NA	NA	NA
France	0.3% below FFr 1 mill. 0.15% above FFR 1 mil.	0.26%	0.12%	1.19%
Germany	0.25%	0.14%	0.04%	0.28%
Italy	0.15%	1.10%	0.38%	6.10%
Japan	0.18% on dealers 0.55% on individuals	1.42%	0.17%	0.34%
Netherlands	0.5% below Dfl 1200	0.63%	0.32%	1.17%
Sweden	1.0% on sales	0.87%	0.36%	1.55%
Switzerland	0.15% (Swiss issuer) 0.30% (Foreign issuer)	2.33%	0.48%	0.94%
United Kingdom	0.5%	0.80%	0.30%	0.01%
United States	Document and stock transfer tax (State and Local)	0.17%	0.03%	0.08%

Source: Revenues and market capitalizations are for 1985. Transaction tax rates are from Spicer and Oppenheim, *Securities Markets Around the World* (New York: John Wiley & Sons, 1988). Revenue statistics are from OECD, *Revenue Statistics,* various issues. Market values are from Morgan Stanley, *Capital International Perspectives,* various issues.

2.1. *The Japanese tax*

The Japanese transactions tax is situs-based, falling upon the transfer within Japan of "securities," including both equity and debt instruments. It is imposed upon a base determined by the sale price of the instrument. The rate applicable to the transfer depends upon the nature of the interest transferred; that applicable to debt interests, .03 percent, is one-tenth that applicable to equity interests, .3 percent (reduced from .55 percent in the recent 1988 tax reform). Derivative instruments that are not deemed to fall within the meaning of a "security"—for example, stock index futures—are not subject to the tax. National bonds, as well as privately issued debt securities, are, however, covered.

The tax is collected from the seller by the securities firm making the transfer. Certain transfers of covered securities, including gifts and some corporate mergers, are exempt from the tax. The Japanese securities transfer tax raised 1.7 trillion yen in fiscal year 1987–1988, translating into more than $12 billion.

2.2. *The British tax*

The present British system of documentary transfer taxes was instituted in 1891. It was drastically revised in 1986 in order to widen the base of transactions that are subject to transfer tax and to lower the rate of tax applicable to many transactions. The original tax ("Stamp Duty") is a documentary stamp tax. It falls upon the issuance or transfer of stampable instruments. These instruments include corporate securities, although in 1988 Stamp Duty ceased to apply to the initial issuance of corporate stock. The 1986 Budget augmented the Stamp Duty by imposing the new "Stamp Duty Reserve Tax" (SDRT). This tax, despite its name, is not a stamp duty at all, but rather a pure transfer tax, designed to fall upon transfers of beneficial ownership of certain rights and securities which in the modern financial system may not be reflected in any "stampable" instruments.

The current British system has several notable features. Unlike the Japanese tax, the rate applicable to all taxed transfers is now the same, .5 percent of value. However, the British tax exempts pure debt securities. Exemptions are also provided for options and futures traded on the Stock Exchange Traded Options Market and the London International Financial Futures Exchange, as well as for government gilt securities, purchases by charities, and bearer securities (although these are subject to a special higher "bearer instrument duty" upon issuance). Securities subject to SDRT include stocks and shares and rights to stocks and shares in a United Kingdom company or in a foreign company that keeps a register in the United Kingdom. Because SDRT applies to transfers of beneficial ownership of chargeable securities, transfers in street name, or between brokerage accounts without changing the street name, are picked up. The tax is imposed upon nonresidents of the United Kingdom if their acquisition of chargeable securities occurs within the United Kingdom, through a broker or an agent there.

The potential to avoid the tax on transfers of beneficial ownership of U.K. chargeable securities by U.K. residents by making such transfers outside the United Kingdom is

addressed under British company law. British corporations are in general required to maintain a corporate register of their stock within Britain. Thus, transfers of actual registered stock ownership must occur within Britain in order to be effective, and may therefore be picked up by the tax.

The development of modern financial instruments permitted the avoidance of this constraint, however, by permitting the transfer of beneficial ownership in an enforceable way without the need to transfer actual stock ownership. U.K. securities are transferred into a "depository" or "clearance system," and rights to the underlying stock then traded (outside Britain) through that system. The SDRT legislation dealt with these systems by creating a toll charge, at the rate of three times the normally applicable transfer tax, upon the transfer of chargeable securities into such a depository or clearance system. The subsequent transfer of the depository receipts or beneficial interests within the clearance system outside Britain is then free from SDRT. A similar charge applies upon the issuance of bearer instruments which are of a type which would have been subject to the tax if issued in registered form. These toll charges are intended to serve as a proxy for imposing tax on the unrecorded subsequent transfers of rights to British equity interests which, it was felt, could not be monitored or enforced in Britain.

2.3. The former United States documentary stamp tax

Until 1965, the United States imposed a federal stamp tax on the transfer of certain securities in the United States. The repeal of this tax occurred as a part of the 1965 legislation repealing almost all of the hodge-podge of federal retail and manufacturers' excise taxes which had accumulated over the course of three decades. At that time, the repeal of the tax on securities transfers was estimated to result in revenue loss of approximately $195 million annually (in 1965 dollars). The dollar volume of transactions on the New York Stock Exchange has increased about 20-fold since that time; thus the imposition of an identical tax, ignoring any effects on behavior, could be estimated to collect about $4 billion annually today.

The tax was imposed upon the transfer and issuance of capital stock, shares in mutual funds, certificates of indebtedness, and rights to acquire these interests. Like the current Japanese tax, the rates of tax applicable to different types of interests differed. Interestingly, however, the differences were reversed; the charge on the issuance or transfer of certificates of indebtedness exceeded that on the issuance or transfer of equity.

The tax contained an exemption for state and federal obligations, similar to that contained in the British tax. Foreign stock exchanged in the United States was also not subject to the stamp duty. Perhaps significantly for the current debate over the feasibility and wisdom of such a tax, transfers of U.S. equities that took place entirely outside the United States were exempt from the tax. Certain exemptions also existed for transfers occurring in corporate mergers and consolidations; however, the issuance of new equity instruments in such transactions was in general subject to the tax. Notably, tax-exempt entities were not exempt from paying the stamp tax on their transfers of covered instruments.

2.4. *Designing a STET*[2]

A number of fundamental questions must be answered regarding the structure of a STET, including:

1. What assets should be subject to the tax?
2. How should transactions by U.S. persons taking place outside the United States be treated? Does the answer differ depending upon the nature of the asset being traded, i.e., whether the asset represents an interest in a U.S. entity? How should transactions by non-U.S. persons taking place within the United States be treated?
3. What, if any, exemptions based upon the identity of the persons transferring or receiving the assets should be permitted? Should any exemptions based upon the nature of the transfer itself be provided?
4. How and by whom should the tax be collected?

2.5. *Assets subject to the STET*

Perhaps the most important issue involved in the adoption of a STET is the question of what assets should be subject to the tax. Decisions must be made regarding the treatment of debt (as opposed to equity), of bearer instruments, of tax-exempt obligations, and of obligations of the federal government. The economic arguments discussed above suggest that a STET should cover the transfer of marketable securities or their equivalents. By this we mean debt or equity interests in corporations or business enterprises in other forms, debt of governmental entities, rights to acquire title or beneficial ownership to such assets, and other financial assets. None of the considerations raised above suggests the adoption of a tax applicable to every contract for the transfer of other types of assets, such as documents of conveyance for real or personal tangible property or trust instruments. Further, interests in privately held corporations for which there is no ready market could likewise be exempt from the STET.

We see no argument for a blanket exemption from the tax for all debt instruments, though a lower rate for such instruments, such as is imposed under the Japanese transfer tax, may be appropriate because of the tremendous volume of trading in fixed income markets. A complete exemption for debt would merely exacerbate the existing problems under the income tax in distinguishing debt from equity interests. Further, an exemption for debt, even if it could be easily administered, would create additional distortions of capital structure in favor of debt financing. Although the use of a lower rate of tax with respect to debt instruments might arguably lead to these distortions as well, albeit to a lesser extent, the purpose of such a lower rate is actually to equalize the economic effects of the tax with respect to debt and equity, because of the much greater trading frequency and shorter average maturity of debt. A sliding scale for different forms of debt could theoretically be introduced to take more specific account of these differences, like the scale that was used for this purpose between differing maturities of debt under the former U.S. Interest Equalization Tax.

To some degree the omission of a blanket exemption for debt merely pushes back to another level the decision as to what instruments should be covered by the tax. If debt securities are to be covered in at least some forms, the issue arises as to which loan contracts will fall within the ambit of the tax. For example, should the issuance of a promissory note be taxable? What features of a bank loan for a corporate acquisition would distinguish it from corporate bonds in a way sufficiently significant to draw an administrable line? The issue of what debt should be chargeable is a very real one; this question was addressed repeatedly by the courts, including the Supreme Court, in the administration of the old U.S. documentary stamp tax. Then, the question was answered largely by reference to the degree and ease of marketability of the instrument in question. Such distinctions are neither impossible to make, nor unique to the transfer tax issue; distinctions between "securities" and nonsecurity debt contracts are formally drawn in both the income tax and the securities laws. For the purposes suggested here, a marketability test would be appropriate. However, it should be noted that this approach under the old U.S. documentary stamp tax led to a distortionary pattern of avoidance of the tax by the use of private financings through banks or other lenders in circumstances where debentures would otherwise have been used.

If readily marketable debt is in general to be covered by the STET, the question of whether government debt should be exempt must be addressed. The old U.S. tax exempted federal, state, and municipal obligations. Similarly, the British system exempts transfers of government debt obligations. The Japanese, however, do impose their transfer tax upon national bonds. The distortionary effects of allowing an exemption for government obligations are probably much lower than those involved in the decision whether to exempt all "pure" debt from the reach of the tax. Such an exemption would, however, significantly reduce the revenue raised by the tax and might make the cost of capital to corporations somewhat higher than if the tax were imposed upon government bonds as well as privately issued debt. Further, speculation in government obligations and government-backed obligations is probably at least as serious a problem (on the arguments presented in this article) as that with respect to privately issued instruments.

It is clearly desirable to impose the tax upon rights to acquire or to control, currently or in the future, assets that are themselves subject to the tax. Failure to do so could lead to avoidance of the transfer tax by the use of economically equivalent derivative securities. However, the taxation of the transfers of options, futures, and other derivative financial assets does introduce considerable complexity. In particular, if the STET is to be imposed on an ad valorem basis, the value of the right to acquire the asset must itself be valued. The decision whether, and how, to apply such a value-based tax in the case of various derivative securities is not at all straightforward. As we have seen, traded financial futures and options are exempt from the U.K. transactions tax, and the Japanese exempt derivatives such as stock index futures. In examining the issue, however, it is important to distinguish between arguments that such an application of the tax would be feasible and arguments that domestic financial business in these sectors would be harmed by imposing such a tax. The latter issue is discussed below.

In the case of commodity and currency futures, the question arises whether the transfer of such rights should be subject to the STET when a contract for the transfer of the underlying tangible asset itself would not be subject to the transfer tax contemplated here.

Perhaps a rule could be drawn that distinguished rights with respect to which delivery of the commodity itself may be taken or required and those more purely financial assets with respect to which the underlying asset is not deliverable. Further, the fact that such futures are used as hedging devices against changes in values or exchange rates with respect to assets used in or produced by the nonfinancial sector raises the possibility that the imposition of a transactions tax curbing such hedging could create undesirable distortions in sectors other than the capital markets. Finally, enforceability issues, discussed below, arise where there is no intrinsic connection between the market and the United States; such financial futures may be traded as easily worldwide as in the United States.

2.6. Issues raised by international markets

The global marketplace raises several issues that must be addressed in the creation of a workable STET. First is the possibility that such a tax would harm the competitiveness of the U.S. financial industry, both with respect to trades and investments by U.S. persons and by foreigners. Second is the question of whether trades occurring "outside" the United States but involving U.S. persons should be taxed. Finally, the mechanism for and feasibility of enforcing the tax in the context of trades occurring outside the U.S. markets must be resolved.

Perhaps the principal objection raised to a STET by its opponents is that such a tax would cripple the United States securities industry by driving much of the activity of the U.S. financial markets offshore. We tentatively conclude that fears regarding a drastic reduction in the size of the U.S. securities industry are unwarranted. As the significant revenue collections realized from similar taxes in many other countries attest, such a tax can actually be enforced without resulting in the elimination of national stock markets. Trading in derivative securities and commodities may, however, pose a greater problem in this regard. Evidence for this may be found in the exemption from transfer tax of certain of such products in both the United Kingdom and Japan, as well as, for example, the downfall of the small Sweden Options and Futures Exchange, attributed by some to the Swedish government's decision to increase turnover taxes on options transactions. The imposition of a significant STET would clearly exert market pressure to move trading beyond its reach; the question, which has not yet been definitively answered, is whether such a tendency would be sufficiently great to prevent the tax from raising significant revenue or to harm U.S. competitiveness in financial services.

At least two possible approaches to this problem present themselves. First, and perhaps most ambitious, harmonization of the STET structure and enforcement among the financial center countries would minimize the potential gains from shifting trading to those nations. Of course, the possibility would remain for tax-haven countries to provide sanctuary in this case as well as in the case of direct taxes. Second, the STET could be imposed upon transactions occurring outside the United States but involving U.S. persons as principals, on a residency, rather than a situs, basis. This would minimize the advantages of such offshore trading. Conversely, with respect to the competitiveness of the U.S. markets for foreign participants, transactions by foreigners within the United States could be partially or wholly exempted.

As a theoretical matter, we conclude that the STET should be imposed upon any transaction involving a U.S. beneficial owner, regardless of the location of the transaction. Such an approach, if it were administratively feasible, would minimize the attractiveness of offshore trading of U.S. assets by such persons and would increase the revenue raised by the tax. Avoiding a shift to offshore trading of U.S. assets is important for reasons other than protecting the competitiveness of the U.S. securities industry. One of the goals of imposing a STET is to curb speculative trading, through the imposition of an extra marginal cost on each trade. This goal clearly would not be achieved merely by moving the location of such trades. Furthermore, the United States has additional interests in regulating the markets for domestic assets and their derivatives, which would be undermined if those markets moved beyond U.S. jurisdiction to a greater extent than they already have.

Several considerations support the view that trades in non-U.S. assets by U.S. persons should also be taxed, whether here or abroad. First, of course, is the revenue issue. Second, in interlinked markets the United States may be concerned with excess volatility not only of the U.S. stock market but of world markets; excessive speculation by U.S. persons in those markets may contribute significantly to such volatility. The connections between the world's markets were made dramatically apparent during the events of October 19, 1987. Finally, the definition of a "U.S. asset" would add an additional layer of complexity to the STET system. For example, should publicly traded debentures of a wholly owned foreign subsidiary of a U.S. corporation be considered different for this purpose from similar debentures of a domestic subsidiary doing business abroad?

Nonetheless, such taxation of foreign assets would be a departure from past U.S. practice, as well as that of most other established STET systems. Furthermore, inclusion of foreign transfers of assets, especially in the case of non-U.S. assets, is likely in some cases to subject such transfers to a double STET, that of the United States and of the country where the trade takes place. This could be addressed through a treaty or credit system, or, alternatively, that result could be allowed. Double taxation of offshore trading would certainly serve as an additional disincentive to moving parts of the U.S. securities industry out of the United States.

It would be possible to exempt from the tax either or both the transfer of U.S. assets or foreign assets on U.S. markets by foreign persons; this approach would minimize the anti-competitive nature of the STET with respect to the use of the United States as a world financial center. We conclude, however, that the registration of foreign stock or debt on U.S. markets or the use of U.S. markets or brokers by foreign persons should subject trades in such assets or by such persons to the STET. The STET is not an inappropriate price to pay for access to the U.S. markets. Furthermore, the fact that a speculative trader has his tax residency outside the United States will not serve to limit the destabilizing effect of his frequent trades which (as argued above) increase U.S. market volatility. Finally, providing exemptions for foreign assets or trades by non-U.S. persons through U.S. markets or brokers would merely complicate further the already complex administrative issues surrounding the imposition and enforcement of a new STET.

While a tax structured as just outlined would be theoretically preferable, such a structure does raise a number of issues that would have to be resolved to implement the tax. These international considerations can be dealt with in several ways. First, any transfer made

through a U.S. broker, regardless of the identity of the principal or the nature of the asset, could be collected in the normal course, as described in the following section. This method would not, however, pick up transfers effected through foreign affiliates of U.S. brokers. Second, the tax on any transfer of equity recorded on a register kept in the United States (whether the principal register or a duplicate) could be enforced by prohibiting the transfer agent from effecting a change in registration without evidence of payment of the tax.

The transfer of beneficial interests on behalf of U.S. persons by non-U.S. brokers, agents, or clearance services without transfer of registration of legal title to the actual assets does raise significant enforcement problems. These transactions would probably have to be subject to voluntary reporting. Capital gains realized by U.S. persons on transactions occurring outside the United States is required now in the income tax context. It is no less likely that the STET would be reported and paid as that the income tax on such gains would be paid. While a certain amount of avoidance will be inevitable, large institutional investors, in particular, are probably unlikely to fail intentionally to report legally taxable transactions. (Although tax-exempt investors such as pension funds are not now subject to capital gains taxes on these or most other market transactions, pension funds are required to file certain annual reports which could be expanded to include reporting regarding the STET.)

The spectre of offshore mutual funds organized to trade on behalf of U.S. persons in foreign assets raises the prospect of avoidance, since the non-U.S. entity itself would be conducting the trading. A very similar problem was addressed in the income tax area with the 1986 creation of the so-called "Passive Foreign Investment Company" (or "PFIC") rules. These rules alone may have been enough to restrict the use of such offshore funds by U.S. investors who are aware of them. However, a similar system of rules in the case of the STET could be used. Such a scheme would impose a very high tax on the investor upon the receipt of distributions from the fund or on liquidation of his interest, which would serve as a proxy for the foregone STET which should have been incurred by the U.S. investor during the period in which he held the fund. In order to avoid this penalty tax, the investor would have to make current periodic payments in lieu of a direct STET, based upon accounting by the fund to the investors regarding the volume of its trading on world markets.

2.7. Nature of the domestic transfers and persons to which the STET should apply

There are several obvious possibilities for exemption from the STET, including transfers of taxable assets by gift, bequest or inheritance, charitable donations, transfers in transactions that are free from federal income tax, and transfers by tax-exempt entities.

It could be argued that an exemption for transfers by gift or bequest would probably create little distortion and that the taxation of gifts and bequests would in any event likely do little to reduce speculative trading. The administration of the tax would be rendered more complicated by the creation of such an exemption, however. Furthermore, there seems to be little reason to exempt such transfers in a tax environment that has seen the simultaneous creation of record federal budget deficits and the virtual evisceration of the federal estate and gift tax.

An exemption for charitable donations could be included as a policy matter. Such an

exemption would probably be best implemented through a system under which the donor claimed a credit on its federal income tax return.

An argument may be made that where stock or securities are issued or transferred on a tax-free basis in a nontaxable corporate acquisition or merger, the transfer tax should not apply. However, the logic of the income tax exemption does not necessarily apply to the STET. The tax-free reorganization provisions are premised upon the view that the beneficial interest of the participants in the corporate enterprise has merely changed form in such a transaction, and that the transaction is not, therefore, an appropriate moment to impose a tax upon the increase in value of the beneficial interests in the enterprise. The argument for the imposition of the STET is different, however. In that case the acquisition of interests, and not merely the disposition of interests, is the event giving rise to imposition of the tax. In a tax-free transaction, the shareholders may have retained a requisite interest in their former assets, but they have typically obtained as well a beneficial interest in a different enterprise. Thus, such corporate reorganizations would be an appropriate time for the imposition of the STET.

Exemptions should be provided, however, for the transfer of securities in certain transactions that constitute mere changes in place of organization, identity, or form, and for corporate recapitalizations to the extent that the value of the entity after the recapitalization does not exceed that preceding it. These specific exemptions were included in the old U.S. documentary stamp tax. Exemptions should also be made for certain other transfers, including, for example: (1) transfers of title only, in which the beneficial ownership of the asset remains the same (for example, in the case of a transfer to a grantor trust); (2) transfers through fiduciaries or nominees where a single beneficial transfer occurs, but using multiple steps, for example, to a broker for sale or to the executor of a decedent's estate for subsequent (taxable) transfer to the beneficiaries; and (3) transfers of title or possession only where the asset is transferred for security for a loan. In many cases, these exemptions, like those for charitable donations, would be most easily administered through a credit system, rather than forcing the collecting agents, discussed below, to make distinctions in each case.

One of the key questions raised by a STET is its application to tax-exempt participants in the market. The general rule should be that the tax-exempt status of the transferor or transferee is of no consequence for the imposition of the STET. It might well be argued that the discouragement of short-term, speculative trading is most important for these very investors, since tax-exempt pension funds and other institutions account for a tremendous portion of the volume of trading in the market and thus contribute significantly (on the theory expressed here) to excess volatility. Second, such a tax could serve as an additional regulatory mechanism in the fiduciary context, analogous to the long-standing "short-short rule." This is a provision designed to protect small investors from speculation, which limits certain tax benefits for mutual funds that churn their portfolios too rapidly. If this rule is a sensible one for the protection of the small investor, then imposing the less draconian disincentive of the STET in the case of the retirement funds of workers should likewise be viewed as beneficial. While certain common law and statutory doctrines already govern the investment decisions of pension fund managers, the STET would create additional incentives in the appropriate direction.

Finally, the application of the tax in the case of mutual funds must be addressed. As noted,

such entities are already subject to certain tax restrictions that depend upon the frequency of their trades. We conclude that transactions by mutual funds should be subject to the STET in the normal manner. A reduced rate of tax could be applied to transfers of the stock of domestic mutual funds in order to reduce the double taxation effect.

2.8. Collection of and liability for the STET

The two keys to effectively implementing and enforcing a STET are simplicity of record keeping and centralized collection. In the current electronic age, a collection mechanism that relied on documentary stamps would be hopelessly unwieldy. Instead, a system like that used for transactions on national exchanges under the old U.S. documentary stamp tax should be utilized for the administration of a new STET. All registered brokers effecting transactions subject to the tax would serve as the agents of collection of the tax. This would also apply in the case of transfers by brokerage houses of stock held in street name from one account to another. The proper implementation of the tax in these cases could be enforced, in part, through the mechanism of Securities and Exchange Commission (SEC) audits. Brokers now collect a small SEC transaction tax on every sale of shares, so that the requirement of accounting for and withholding an additional more significant tax should not prove unduly burdensome, as long as the tax is imposed upon transactions that are well defined by law, with values that are easily discernible by the brokers.

Further, exemptions from the tax, as outlined above, should as a general rule be implemented by a means of system under which the principal in the transaction would be responsible for claiming a credit on its federal tax return (or by means of a form filed with its information reporting return or separately, in the case of tax-exempt entities), rather than requiring the agent to determine whether an exemption applied.

In order to centralize further the administration of the tax, the tax on transfers taking place on a national or regional exchange should be collected through the exchange itself. This system has been followed in the administration of the British SDRT.

The tax on transactions effected directly with the issuer of the transferred instrument should be collected by the issuer itself. Collection of the tax on transactions effecting a change in registered owner between nonissuing persons without the services of a broker could be enforced by requiring the transfer agent to refuse transfer without evidence of payment of the tax, or by the direct collection of the tax by the transfer agent.

Domestic taxable transactions occurring outside the ambit of any of the foregoing situations would be subject to voluntary reporting, but would be relatively small in terms of economic effect. Reporting and remittance could be accomplished in such circumstances by a form accompanying the annual federal income tax return.

2.9. Is it too late?

Although this discussion has only touched on some of the administrative problems and issues raised by a STET, it is clear from the implementation of such taxes in other countries that the imposition of such a tax on at least a significant volume of securities transactions

is feasible. However, it must be acknowledged that there is some trend toward the abolition of existing transfer taxes elsewhere.

Britain in 1988 abolished its capital duties on the original issuance of securities, as mentioned above, although not its transfer taxes. In 1986, the rate of its transfer taxes was reduced (simultaneously, however, with the introduction of the broader based SDRT). As previously noted, Japan has recently reduced the rate of its transfer taxes on equity. Perhaps most interestingly, a proposed EEC directive issued in mid-1987 calls for the abolition of all transfer taxes in the European Community in connection with the economic unification of Europe, although the fate of this proposal is as yet unclear. It was made after a decade of discussion and study regarding the harmonization of all of the transfer taxes of the EEC member states, a task ultimately determined to be extremely difficult, if not impossible. Clearly, this conclusion does not bode well for the feasibility of the suggestion that the U.S. STET should be harmonized with other nations' existing taxes.

To some extent, then, the imposition of a transfer tax at this point might be viewed as bucking the world trend. However, it is quite possible that the introduction of such a tax here would have some effect upon the actions of other countries. The forces leading to the support for a STET in the United States—revenue needs and a concern with excessive speculation—are also concerns in other major financial center nations. A harmonized system among these countries would greatly reduce the potential for offshore flight of trading activities and lessen market competition issues, as well as providing a relatively administrable source of revenue. There is at least a prospect that if a STET were imposed in New York, the rush of other financial centers to reduce their taxes would be slowed or reversed.

3. Conclusions

The analysis in this article suggests that some form of securities transactions tax would have the desirable economic effects of curbing speculation and of raising a significant amount of revenue. The revenue potential would depend on just how the STET was designed and administered. But a conservative estimate based on a .5 percent rate, with only a small allowance for revenues collected from assets other than corporate stocks, would suggest that $10 billion could be raised annually.

In considering the desirability of the STET as a revenue source, it is important to recall that most other tax measures are universally agreed among economists to have adverse effects on incentives to work and save. Even if a STET were to have no beneficial effects on the stock market, it would therefore be a more efficient source of revenue than most alternatives. Furthermore, since its ultimate incidence would fall on the holders of corporate stock, it would be highly progressive as well.

Notes

1. For general discussions of the theoretical validity of the efficient markets hypothesis, see Shiller (1984), Kyle (1985), Black (1986), Summers (1986), and De Long, Shleifer, Summers, and Waldmann (1988).

2. This section draws heavily on the "Staff Memorandum on the Imposition of a Security Transactions Tax," Joint Committee on Taxation (1987).

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