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## The financial transaction tax: Boon or bane?

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# The Financial Transaction Tax – Boon or Bane?

Against the backdrop of the debate over the introduction of a financial transaction tax (FTT) in the European Union, this Forum is dedicated to the discussion of issues concerning the implementation and impact of such a tax on the financial sectors of the member states. Dorothea Schäfer regards as the main policy goal of an FTT to be the prospect of slowing down the mutually reinforcing and growing trends of an increasing number of derivative products and shorter holding periods. The FTT can therefore make an important contribution to preventing the decoupling of financial markets from the real economy. The paper by Stephan Schulmeister discusses the essential features of a general FTT that will ensure that the more short-term oriented and riskier a transaction is, the greater the effect of the FTT on transaction costs. John Vella identifies some commonly made claims about an FTT which are of questionable foundation and compares the FTT with some alternative taxes on the financial sector. Donato Masciandaro and Francesco Passarelli focus on how an FTT measure aimed at reducing financial systemic risk can cause political distortions, leading to inefficient and ineffective policies. Finally, the paper by Ross Buckley analyses common myths, inaccuracies and untruths about the EU's proposed FTT.

Dorothea Schäfer

## Financial Transaction Tax Contributes to More Sustainability in Financial Markets

We argue in this Forum contribution that a financial transaction tax (FTT) complements financial market regulation. With the tax, governments have an additional instrument at hand to influence trading activity. The FTT aims to reduce regulatory arbitrage, flash trades, over-active portfolio management, excessive leverage and speculative transactions of financial institutions – activities that have contributed to the financial crisis. However, if, contrary to expectations, harmful transactions are not curbed, the FTT will at least generate large tax revenues that can contribute to covering the costs of the financial crisis. Attempts at tax avoidance are, of course, inevitable, and therefore the effect of the tax should be monitored closely so that governments can react quickly if tax loopholes and tax-induced geographical relocation plans of financial institutions come to light.

### The Paradigm of Efficient Financial Markets Is Dead

Two scientific opinions dominated the attitude of economists towards financial markets in the years prior to the financial crisis. First it was thought that findings from the Arrow-Debreu world applied: financial innovation would make the financial markets more complete and foster

better management and distribution of risk. Second, financial markets in which large volumes were traded with high frequency were considered highly liquid and, therefore, would show a strong tendency towards efficient price formation.<sup>1</sup>

Against the background of these prevailing paradigms, opponents of the FTT typically require FTT proponents to demonstrate that excessive trading activities are actually the cause of sharp price fluctuations and of market price deviations from fundamental values. However, proving that excessive trading activity causes inefficient pricing is rather difficult. The “right” price is hardly determinable. Likewise, there is a lack of robust evidence on the relationship between transaction volume/turnover rate and price fluctuations as well as between transaction volume/turnover rate and the deviation of prices from the level justified by fundamentals.<sup>2</sup>

1 See e.g. European Central Bank (ECB): European Central Bank, Opinion of the European Central Bank of 4 November 2004 at the request of the Belgian Ministry of Finance on a draft law introducing a tax on exchange operations involving foreign exchange, banknotes and currency (CON/2004/34), 2004.

2 S. Schulmeister: Implementation of a General Financial Transactions Tax, WIFO Monographs, 2011.

Is the lack of such evidence justification enough to reject the FTT? The ongoing financial and economic crisis teaches a different lesson. Prior to the crisis, markets were flooded with new products. The crisis brought to light the fact that, instead of making the market more complete, many of the most innovative products simply channel funds into opaque assets whose risk is hard to monitor. When this eventually became clear in 2007, the US housing price bubble burst. In the aftermath of this shock, dramatic reductions in the prices of various other securities occurred.

Bubbles are a longer-term deviation of the actual price from the “right” price, i.e. the price justified by fundamentals. Because of this failed pricing, substantial amounts of risk were shifted from financial market participants to taxpayers. Moreover, the explosion in trading volume is associated with increasingly shorter cycles of boom and bust in financial markets. Therefore, the very existence of the current crisis speaks clearly against the paradigm of efficient price formation in highly liquid financial markets. And if markets are inefficient to begin with, one can hardly claim that financial transaction taxes would destroy efficient pricing.

The financial crisis has also shown that stability in the financial markets is a public good. Banks and other market participants can neither be excluded from using financial stability nor is there rivalry in the consumption of the “good” as long as stability is there. Financial markets driven by self-interested parties tend to overuse financial stability and are unable to provide stability by themselves. Only the state can provide financial stability. Trading can thus be viewed as using the public good “financial market stability”. Against this background, the FTT is a mean to prevent over-usage and to contribute to the financing of this public good.

### The Financial and Real Economies Are Decoupling

Since 2000 the volume of financial transactions has exploded. Two sources contributed to this development. First, financial innovation produced huge numbers of new products, which then flooded easily accessible financial markets. Second, turnover rates increased and holding periods for financial instruments decreased dramatically.

Currency trading is among the most active segments in financial markets. According to the Bank for International Settlements, average daily turnover in foreign exchange markets (spot and derivatives trading) of the 53 econom-

ically most important countries grew between 2007 and 2010 by about 20% to \$4 trillion per day.<sup>3</sup> The daily turnover amounts to about \$1,000 trillion of trading volume per year given approximately 250 trading days per year. This volume is more than 15 times the global domestic product of more than \$63 trillion (see Figure 1a).

In the current financial and economic crisis, the ratio of foreign exchange transactions to gross domestic product has not decreased (see Figure 2a). This phenomenon stands in clear contrast to the situation at the beginning of the 21st century when the dot-com crisis unfolded. Remarkably, however, the volume of financial transactions in which customers outside the financial sector were involved has indeed declined. This decline suggests that the demand for hedging foreign trade activities during the crisis decreased. The development of the ratio of foreign exchange transactions to foreign trade volume supports this hypothesis (see Figure 1b).

3 The BIS survey of average daily turnovers is conducted every three years: 1998, 2001, 2004, 2007 and 2010. It is carried out in April and covers about 97% of the total derivatives trading in the participating economies. Bank for International Settlements: Triennial Central Bank Survey, Foreign exchange and derivatives market activity in April 2010; M.R. King, D. Rime: The \$4 trillion question: what explains FX growth since the 2007 survey?, BIS Quarterly Review Special feature, 2010.

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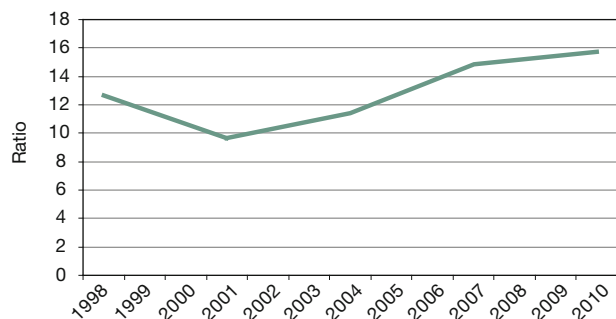
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Figure 1a  
Ratio of Foreign Exchange Transactions/World GDP



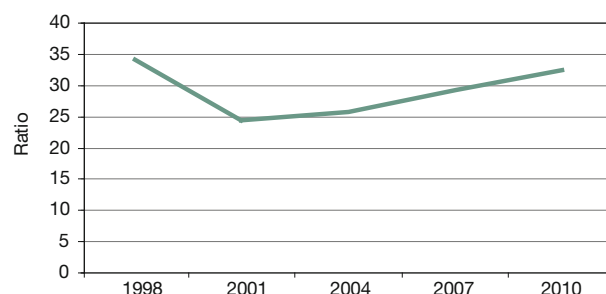
Source: Bank for International Settlements, World Bank, WHO, own calculations.

According to the Bank for International Settlements, the growth in foreign exchange (FX) trading in the three-year period between 2007 and 2010 came mainly from high-frequency traders, smaller banks trading as clients of the biggest FX dealers and retail investors trading online. The heavy investment of large banks in proprietary trading reinforced the trend toward higher concentration in FX trading.<sup>4</sup>

Over-the-counter (OTC) derivatives are another rapidly expanding market segment. In 2011, OTC derivatives grew to reach a two-digit multiple of the gross domestic product of the G10 plus Switzerland (see Figures 2a and 2b).<sup>5</sup> Since 2000 the outstanding notional value of OTC derivatives has increased sevenfold. In 2007 trading in derivatives at exchanges was 18 times higher than in 1990. After a short stagnation, the trading volume again grew substantially in 2011. Driving these developments were a sharp reduction in transaction costs to about one-tenth the level of the 1980s<sup>6</sup>, increasingly shorter holding periods and the huge amount of new products available. Derivative trading permits a much lower initial capital investment than trading in normal assets. However, derivatives are associated with high leverage. Therefore, liquidity and default risks increase as derivative trading expands.

The financial transaction tax aims at reducing the number of transactions in order to bring financial market activity more in line with the level of activity in the real economy. The tax is charged if, and only if, trade in financial assets occurs. If trading activity is low, the

Figure 1b  
Foreign Exchange Transactions/Trade Volume



Source: Bank for International Settlements, World Bank, WHO, own calculations.

amount of tax collected will also be low. The tax will unambiguously have a progressive impact since financial assets are held disproportionately by members of the upper income classes.

### Tax Burden Is High if, and only if, Trade Activity Is High

The base of the financial transaction tax is the nominal value of the traded security. According to the EU Commission's proposal<sup>7</sup>, a tax rate of 0.1% will be imposed on the buyer and the seller of the security. The rate for a trade in derivatives is 0.01% of the value of the underlying asset for each contracting party. Because of these comparatively low tax rates, a high tax burden would only materialise with frequent trading. Consider, for example, a rather passive fund manager and a rather active one. Let us assume an identical portfolio of 12 equity securities at a price of €100 per asset. The fairly passive manager trades 25% of the portfolio once a year while the active management sells the complete portfolio and buys a new one twice a year. Thus, the active manager's trading activity is eightfold higher. Accordingly, the passive manager only owes the tax authorities sixty cents (representing just 0.05% of the total portfolio value), while the highly active manager's tax burden amounts to €4.80 (0.4% of the total portfolio value).

The effect of turnover frequency on the tax burden becomes even clearer if we track the performance of a portfolio in which 100 euros are invested every month

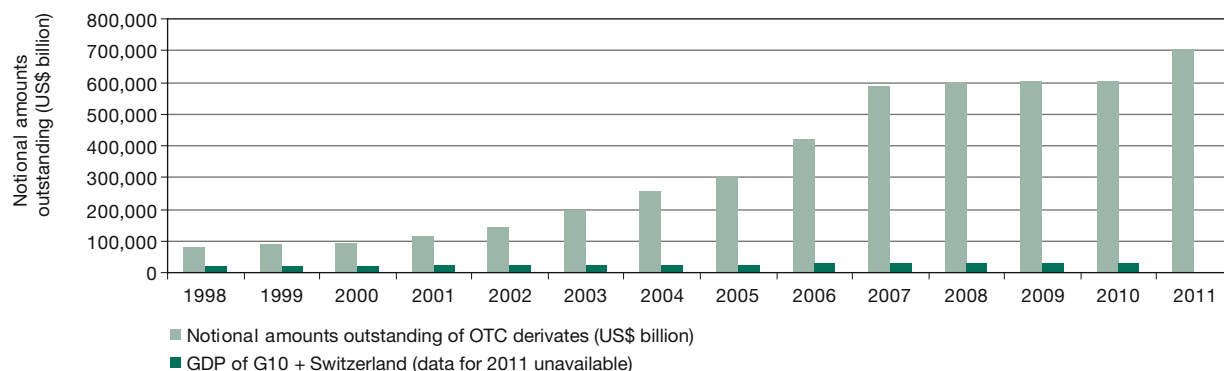
4 M.R. King, D. Rime, op. cit.

5 The ten are Belgium, Canada, France, Germany, Italy, Japan, the Netherlands, Sweden, the United Kingdom and the United States.

6 T. Matheson: Taxing Financial Transactions: Issues and Evidence, Working Paper No. 11/54, International Monetary Fund, 2011.

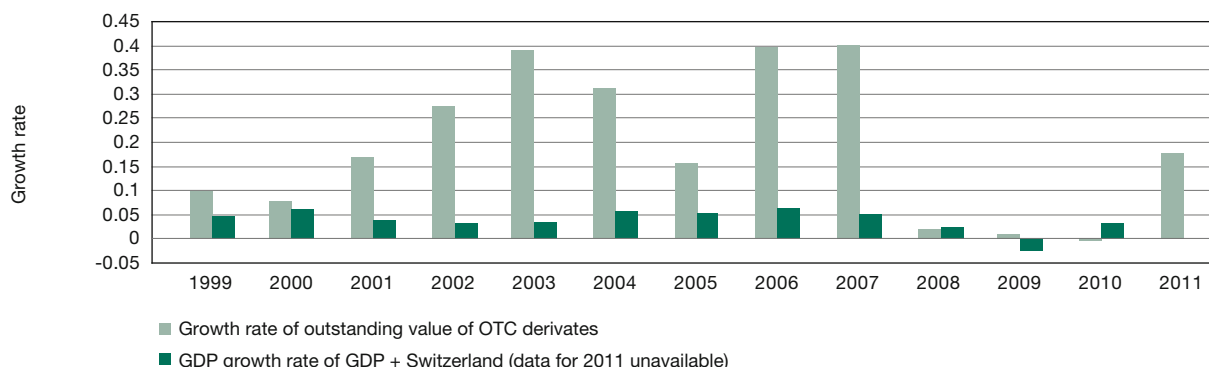
7 European Commission: Proposal for a Council Directive on a common system of financial transaction tax and amending Directive 2008/7/EC, {SEC(2011) 1102}, {SEC(2011) 1103}, [http://ec.europa.eu/taxation\\_customs/resources/documents/taxation/other\\_taxes/financial\\_sector/com%282011%29594\\_en.pdf](http://ec.europa.eu/taxation_customs/resources/documents/taxation/other_taxes/financial_sector/com%282011%29594_en.pdf), 2011.

Figure 2a  
Notional Amounts Outstanding of OTC Derivates and GDP



Source: Bank for International Settlements, OECD, own calculations.

Figure 2b  
Growth Rate of Notional Amounts Outstanding of OTC Derivates and GDP



Source: Bank for International Settlements, OECD, own calculations.

over 40 years. The sales charge is assumed to be five per cent of the monthly savings. In addition, the managing fund would charge a management fee of 1.2% of the portfolio value. Let the annual return of the portfolio be five per cent. The FTT of 0.1% will be collected when the fund manager buys and sells securities. Therefore, a transaction with a value of 100 euros (either a purchase or sale of shares) results in a tax of 20 cents.

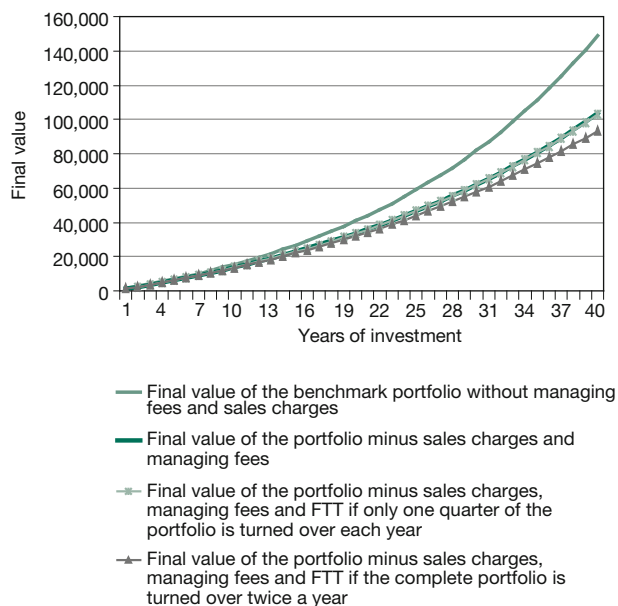
Consider first what the final value of the portfolio would be after 40 years without any initial charges, administrative costs or FTT. This benchmark value is slightly lower than €150,000 (see Figure 3a). If sales charge and annual administration are taken into account, the final value is reduced by more than €45,000. Let us now assume that the trading activity is high and the portfolio manager turns over the entire portfolio twice a year. In this case, the final tax burden adds up to around €10,000 over 40 years. The gross FTT burden after 40 years would even be higher. Fortunately, however, the taxation saves the

investor parts of the administrative cost by dampening the value expansion of the portfolio, resulting in the lower net tax burden.

The situation is different when the fund manager rarely trades. Let us assume that only a quarter of the total portfolio is replaced each year by new securities. In this case the final value of the tax after 40 years amounts to around €1,400 (Figure 3b). The notional value of the tax paid over the years is even lower (around €800), since the final value accounts for interest rate effects. The burden is thus only a small fraction of the fees that the fund charges. Accordingly the tax has only a tiny impact on the value path of the portfolio (Figure 3a).

The lesson to be learned from this example is that following the implementation of the FTT, savers for retirement should select the fund with the lowest total costs (sales charge plus management fee plus financial transaction tax). Intense competition would require fund pro-

Figure 3a  
Value of the Portfolio over 40 Years



Source: own calculations.

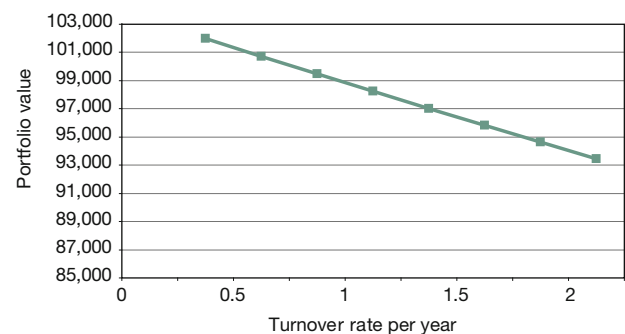
viders to carry the burden of the FTT. That is, the tax would simply reduce the fees charged by funds. Fund providers would then have a vested interest in keeping turnover rate small. Ultimately, the FTT will most likely induce lower trading volumes and extended holding periods within the fund industry.<sup>8</sup>

### FTT May Contribute to Crisis Prevention

Prior to the financial crisis, special purpose vehicles (SPV) used to buy simple housing loans, divide these loans into tranches and then rate the tranches. The loans were the underlying assets for differently rated bonds that the SPV then issued, so-called mortgage-backed securities (MBS). Another SPV would then buy certain tranches of the MBS, apply the same technique, and transform the MBS into another bond class, so-called collateralised debt obligations (CDO). In the next step,

8 In the United Kingdom the problem of overactive trading by institutional investors was recently recognised when the interim report of the Kay review of UK equity markets and long-term decision-making was published. The report states that "short-termism in equity markets is likely to have its roots in the short-term investment horizon of many institutional shareholders. The investment strategy of a significant proportion of fund managers is oriented towards share trading rather than long-term company ownership." See J. Kay: The Kay Review of UK Equity Markets and Long-Term Decision Making, Interim report, 2012, <http://www.bis.gov.uk/policies/business-law/corporate-governance/kay-review>.

Figure 3b  
Impact of Turnover Rate per Year on Final Portfolio Value



Source: own calculations.

CDOs would be used to underlay another bond issue called CDOs squared, and finally these CDOs squared would back a bond issue called CDOs cubed. Such derivative cascades were common before the outbreak of the US subprime crisis. The convoluted structure made the identification of the original borrower extremely difficult and, in the case of default, rendered an orderly credit restructuring impossible. The confusion regarding original borrowers and the complexity of securities contributed heavily to the rapid collapse of the CDO market after 2007.<sup>9</sup>

A cascade of new products derived from standard financial instruments multiplies trading activities. In a world with an FTT, however, each step of the cascade would be subject to the tax both at the outset as well as for each subsequent trade of the new instruments. The more derivatives financial institutions construct and trade, the higher the tax burden in the system. Consequently, it can be expected that these or similar financial innovations would lose their appeal with the introduction of an FTT.

Speculation with derivatives, like naked short selling and credit default swaps, also tends to grow explosively, as the cost of entry into the market is very low for a large financial institute. In times of crisis, the European stock exchange supervisory authority, ESMA, is allowed to temporarily ban naked short selling and trade in naked credit default swaps. But an FTT would permanently decrease the attractiveness of market entry for such instruments and thus dampen the overall activity of financial institutions in this area.

9 D. Schäfer, K.F. Zimmermann: Bad Bank(s) and Recapitalisation of the Banking Sector, in: *Intereconomics*, Vol. 44, No. 4, 2009, pp. 215-225.



An FTT dampening effect can also be expected in financial transactions that are made solely for regulatory reasons. For example, financial institutions with large balance sheets but an insufficient capital basis may have an incentive to use sale and repurchase agreements (repos) for window dressing. A repo is a sale of an asset combined with a simultaneous repurchase agreement. This makes it an ideal vehicle for the short-term outsourcing of balance sheet items. With the repo, a balance sheet will look smaller on a specific date than it actually is and the leverage ratio will appear higher. Prior to bankruptcy, the US investment bank Lehman Brothers took advantage of repo transactions on a regular basis to reduce their balance sheet. By 2015, when Basel III will require banks to publish their leverage ratios and a shortfall in achieving the interim three per cent threshold could result in a loss of trust, there will be an incentive for European banks to also carry out such operations. The FTT makes such window dressing more expensive and therefore less attractive.

Another example of a regulation-motivated and, from a stability point of view, undesirable activity is the outsourcing of assets into the shadow banking system, for example by establishing a formally independent special purpose vehicle or a hedge fund. If outsourcing occurs, trading which previously would have been regarded as an internal transaction is reclassified as trading between independent units. The FTT would punish outsourcing and reward internalising transactions. This effect would help combat the shadow banking system.

### FTT Curbs High-Frequency Trading

Up to the 1970s, the average holding period of US stocks was about seven years. Then a radical shortening took place. By 2000, the average holding period had dropped to less than two years. In 2007, it had fallen to just seven months. A similar development occurred in the United Kingdom. The average duration of equity holdings decreased from around five years in the mid-1960s to around two years in the 1980s and then to just over a year by the turn of the century. By 2007, it had decreased to 7½ months.<sup>10</sup>

High-frequency trading (HFT) is said to be responsible to a large extent for the recent acceleration of turnover rates and the increasingly shorter average holding periods of securities. HFT is a form of computerised automatic trading controlled by algorithms. The Chicago

Federal Reserve Bank estimates that high-frequency traders execute about 70% of US stock trading.<sup>11</sup> For Europe, the HFT market share is estimated to be between 30-40%.<sup>12</sup>

The trading strategies are manifold. Often high-frequency traders simply jump on observed trading patterns. Therefore regulators suspect that HFT is strengthening negative herding behaviour and is contributing to the formation of bubbles in financial markets.<sup>13</sup> Other automatic trading programs allow for “cream skimming” by analysing incoming buy and sell orders in a fraction of a second and then immediately placing orders that exploit the observed price patterns. For example, imagine that a pension fund places a limit order to purchase a large amount of one particular stock. Once the HFT computer detects the limit price, the program accepts all incoming sell orders below that price and immediately resells these to the pension fund at the higher limit price. By holding the shares for only a tiny fraction of a second, the high-frequency trader is able to “skim the cream”.

Historically exchanges made this form of arbitrage even easier by allowing high-frequency traders to front-run other market participants and gain insight into orders before everyone else could see it (flash trading). HFT systems sometimes also fake orders to find out what price other dealers are ready to pay. Many of these tentative orders are cancelled again immediately after having been placed. It is estimated that between 80 and 90 per cent of HFT orders are cancelled. If trading partners' willingness to pay is known, the maximum possible surplus can be acquired. Although the profit from one transaction may be extremely small, the possibility to execute thousands of such transactions within a fraction of a second facilitates the generation of huge surpluses at the expense of other market participants, such as pension funds.

Tiny gains per transaction unit make high-frequency trading sensitive to an increase in transaction costs. Therefore, an FTT will presumably make trading volumes fall. The European Commission's proposal even provides for an FTT on transactions that are later cancelled or corrected. In the USA, the Securities and Exchange Commission (SEC) is contemplating comparable action. Among other options, the SEC is considering whether to curb high-frequency traders' outside influence on stock

10 A.G. Haldane: *Patience and Finance*, Bank of England, Oxford China Business Forum, Beijing 9 September 2010, p. 16.

11 C. Clark: *Controlling risk in a lightning-speed trading environment*, Chicago Fed Letter No. 272, 2010.

12 S. Schulmeister, *op. cit.*

13 [www.zerohedge.com/article/scientific-proof-high-frequency-trading-induces-adverse-changes-market-microstructure-and-dy](http://www.zerohedge.com/article/scientific-proof-high-frequency-trading-induces-adverse-changes-market-microstructure-and-dy).

trading by charging fees for the huge number of buy and sell orders that are later cancelled.<sup>14</sup>

### Financial Transaction Taxes Are Nothing Unusual

Currently more than a dozen nations have some sort of a financial transaction tax. Even the UK Treasury charges a stamp duty. In the eurozone, Finland, Greece and Italy, for example, collect taxes for some transactions on exchanges. However, the United States will object to such a tax and the United Kingdom will most likely also refuse to accept the EU proposal.<sup>15</sup> Thus, there is currently no chance that an FTT will be adopted worldwide. This raises the problem of tax avoidance via geographic relocation.

Thus far, the possibility of tax evasion is still the most popular argument against implementation of an FTT. However, experience with the stock transfer tax in Sweden on the one hand and the UK stamp duty on the other shows that the risk of tax evasion strongly depends on how the FTT is designed.

### The Source Principle of the UK Stamp Duty...

The revenue from the UK stamp duty amounts to four billion euros per year. 90% of the revenue comes from the Stamp Duty Reserve Tax, which covers electronic trading.<sup>16</sup> The tax is due when a security issued in the UK is traded. The tax rate is 0.5% of the market price of the security. The rate is about twice as much as the average transaction cost in UK and is also fairly high in comparison to the 0.2% in the EU Commission's proposal.<sup>17</sup> Derivatives are not subject to the tax. The tax does not apply to the shares of those companies listed on UK stock exchanges which have their headquarters abroad. Additionally, there are a number of exemptions. For example, transactions by brokers who buy shares for the purpose of providing liquidity in the market are exempt from the tax. According to estimates, only 20% of trading on the London Stock Exchange is covered by the tax.<sup>18</sup>

A central feature of the UK stamp duty prevents a substantial geographical shift of trading activity. The tax follows the source principle. That is, it applies to trading in the securities of companies which have their seat in the UK or whose parent company is based in the UK, regardless of whether those shares are bought or sold in London, Frankfurt, Paris or New York. Settlement is efficiently handled by CREST, a central securities depository for the UK. Since 2002, CREST has been a part of the Euroclear group, in which over 2000 financial institutions from more than 90 countries are members.<sup>19</sup> The tax is collected automatically by CREST when the security is traded. Tax evasion does not seem to be a noticeable problem. This observation contradicts the repeatedly expressed concern that the isolated introduction of an FTT in the eurozone or in a single country is unenforceable.

### ...versus the Exchange Residence Principle in Sweden

In 1984 Sweden introduced a tax of 0.5% on the purchase or sale of securities. The Swedish tax authorities levied this tax on all transactions that were executed domestically. Because of its application only to trading on domestic exchanges, the tax was relatively easy to avoid. Traders had only to move their activities to foreign exchanges. Accordingly, immediately after the introduction of the tax, revenue began to fall. By 1990 about 50% of the trading at Swedish exchanges had moved to the UK. In 1991, in the midst of the Nordic financial crisis, the Swedish government abolished the tax. With the ebbing of the crisis, trade volume in Sweden grew significantly.

### The EU Commission's Directive: Residence Principle for Buyer and Seller

The European Commission's directive proposal envisages the home country principle to keep tax evasion to a minimum. Each transaction in which either the buyer or the seller has its residence within the region where the law applies is taxed. If one contracting party is based outside the tax zone, the party inside will be held jointly liable. In case the external contractor is unwilling to pay his/her share, the tax burden for the insider will double. Both contracting parties would have to move to a region where the law is not valid if they want to circumvent the FTT.

14 Wall Street Journal: SEC May Ticket Speeding Traders, 23 February 2012.

15 European Commission: Proposal for a Council Directive..., op.cit.

16 European Commission: Commission Staff Working Paper on Impact Assessment – Proposal for a Council Directive on a common system of financial transaction tax and amending Directive 2008/7/EC, 2010, [www.parlament.gv.at/cgi-bin/eukp.pdf?P\\_EU=XXIV.pdf/EU/05/98/059894.pdf](http://www.parlament.gv.at/cgi-bin/eukp.pdf?P_EU=XXIV.pdf/EU/05/98/059894.pdf).

17 European Commission: Proposal for a Council Directive..., op.cit.

18 T. Matheson, op. cit.

19 [www.euroclear.com](http://www.euroclear.com).



The reason behind the burden sharing between buyer and seller is to ensure the proportional distribution of revenues if contractors are from different countries. Imposing a tax of 0.1% of the price of the security on each side avoids the immediate transfer of tax revenues to either the home country of the buyer (if the home country of the seller were to collect the complete tax) or the seller (if the home country of the buyer were to collect it in its entirety).

In many of the transactions that are subject to taxation according to the EU directive (for example, derivative trading and securitisation), large international banks are buyers and sellers. Such banks could easily set up subsidiaries in countries not subject to the law and let these subsidiaries perform the trading for it. To address this problem, the tax liability should be linked to the residence of the parent company. Financial innovations will also most likely be employed in order to circumvent the FTT. However, tax-induced financial innovation is likely to play only a minor role if the burden of proof falls on the innovator to show that a new product does not fall under the law and should not be taxed.

### EU Transaction Tax Proposal Is Preferable to the UK Stamp Duty Tax

The European Commission proposes to make trading in financial instruments, including derivatives and structured bonds, subject to taxation. Cancelled buy and sell orders will also be taxed. Transactions in the primary market, such as the purchase and sale of shares by individuals, will be exempt, as will transactions by banks with the ECB and the lending and borrowing activities of households and enterprises.

The intention behind these exceptions is to ensure that the funding of business transactions and investment activity as well as the financing of private households are not adversely affected by the tax. This is justified, as the primary objective of the tax is to curb trading activity between financial institutions. However, the exclusion of non-derivative foreign exchange trading deserves criticism. The great expansion of this market in recent years and the decoupling of foreign exchange transactions and foreign trade (Figure 1b) suggest that governments should have an instrument that allows them to influence trading activity in this area. Despite these exceptions, the EU Commission's approach is much broader than the UK stamp duty, which basically applies only to corporate shares and bonds. Consequently, the EU directive increases the probability of capturing the true driv-

ers of exploding trading volumes in recent decades and of curbing destabilising market activities such as regulatory arbitrage, flash trading, overactive portfolio management and all kinds of highly leveraged and purely speculative trading.

### Central Depository Systems Counteract Tax Avoidance

Most of the existing financial transaction taxes apply to securities that are traded on official exchanges. However, the bulk of trading in financial markets is done over-the-counter. This shadow trading lacks transparency, similar to shadow banks. Contract terms and prices are usually the private knowledge of the contracting parties. Accordingly, an FTT could be difficult to enforce in the OTC sector. However, central clearinghouses and a general registration requirement for OTC transactions will increase transparency and thus improve the basis for tax collection. The settlement of the UK stamp duty within CREST has already proven that central depository systems allow effective tax collection. The Dodd-Frank Wall Street Reform and Consumer Protection Act includes extensive clearing and reporting requirements for OTC derivatives. In the EU, there are plans for the standardisation of derivatives and OTC transactions and for processing them through a central counterparty. Governments could also consider imposing a higher tax rate on OTC trading to create an incentive for the use of central clearing and depository systems.

### Conclusion

The duration and severity of the financial crisis and, in particular, its dramatic resurgence in 2011 show that self-interested parties in financial markets tend to overuse the public good financial stability. This fact justifies testing new tools which promise to improve the situation and which complement the regulatory steps undertaken in recent years. The introduction of an FTT, as proposed by the EU Commission, will increase transaction costs and offers the prospect of slowing down the mutually reinforcing and growing trends of an increasing number of derivative products and shorter holding periods. It can therefore make an important contribution to stopping the decoupling of financial markets from the real economy. Moreover, with the FTT, policymakers gain an additional instrument with which to govern financial markets that is complementary to their current regulatory instruments but easier to adjust.

Stephan Schulmeister

## A General Financial Transactions Tax: Strong Pros, Weak Cons

A general financial transactions tax (FTT) aims at two main targets. First, it aspires to mitigate the fluctuations of the most important asset prices, like stock prices, exchange rates and commodity prices. Second, it seeks to provide substantial revenues for governments.

There are several essential features of a general FTT.<sup>1</sup> First, it should be levied on all transactions involving the buying or selling of spot and derivative assets. These instruments are traded either on organised exchanges or over-the-counter (i.e. bilateral OTC transactions, exclusively carried out by professional market participants). Second, the size of the tax should be based on the value of the underlying asset or, in the case of derivatives, on their notional value (e.g. the value of a futures contract at the current futures price, the notional principle of a swap or the spot value of the underlying asset in the case of options). Third, the FTT rate should be low so that only very “fast” (i.e. speculative) trading with high leverage ratios will become more costly (in the present article a rate of 0.05% is assumed). Fourth, the FTT must not tax “real-world transactions”, like payments related to the goods and labour markets, initial public offerings of stocks and bonds or foreign exchange transactions which stem from international trade or direct investment. Finally, the tax burden should be divided between the buyer and the seller; hence, each side of a financial transaction would pay just 0.025% of the asset value (2.5 basis points).

These features ensure that the more short-term oriented a transaction is (the faster open positions are changed) and the riskier it is (the higher the leverage ratio is), the greater the effect of the FTT on transaction costs. At the

same time, holding a financial asset (including hedging) will not be burdened by the FTT.

Several examples shall illustrate this proposition:

*Example 1:* A corporation raises €10 million in capital through a stock IPO (initial public offering). No FTT has to be paid. The same holds true if the government or a corporation raises capital through a bond issue.

*Example 2:* A company earns (pays) €10 million from (for) an export (import) of goods. No FTT has to be paid in this case either.

*Example 3:* A private person (a pension fund) buys stocks in the spot market with a market value of €10,000 (€10 million). In this case, the FTT amounts to €2.50 (€2,500), to be paid by the respective person (pension fund).

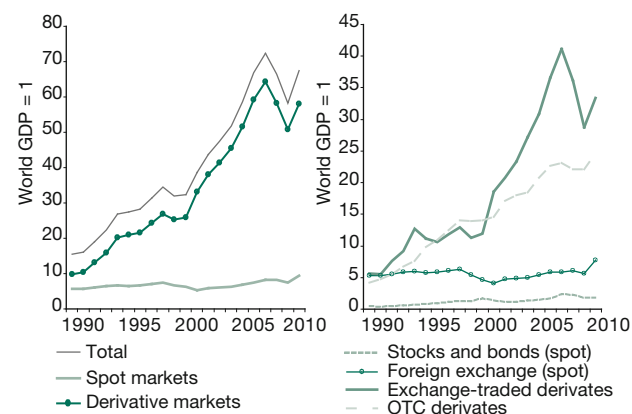
*Example 4:* A trader tries to exploit intraday price runs of the DAX future. The (notional) base value of the future contract is 25 times the number of index points. At an index level of 6000, the future has a value of €150,000. If the trader expects an upward run, he will buy a contract for which he has to make a margin deposit of €7,500 (for simplicity a margin rate of 5% is assumed). If the DAX increases by 0.2%, the trader cashes in a profit of €300 (0.2% of €150,000), representing 4% of his cash investment (€7,500). At a tax rate of 0.05%, the FTT would amount to €75.10 (0.025% of €150,000 plus 0.025% of €150,300), roughly 25% of the speculative profit.

*Example 5:* An airline hedges future kerosene costs by opening a long position in the oil futures market, e.g. by buying futures contracts with a notional value of €5 million. The additional hedging costs would be 0.05% of €5 million, i.e. €2,500 (0.025% for opening the long position and 0.025% for closing it when the kerosene is delivered).

*Example 6:* A hedge fund (“trend follower”) uses a “fast” automated trading system based on high-frequency data. This system changes open positions of €10 million on average 50 times a day, involving 100 transactions (one for closing the former position and one for opening a new one). The fund’s daily transaction volume based on the notional value is €1 billion, hence, the FTT would increase transaction costs by €250,000. At a margin

<sup>1</sup> The first detailed description of a general FTT (in contrast to special transactions taxes like the Tobin tax) was published as a study of the Austrian Institute of Economic Research (WIFO). See S. Schulmeister, M. Schratzenstaller, O. Picek: A General Financial Transactions Tax, WIFO Monographs, March 2008. This study builds upon previous research on special transactions taxes, as summarised therein. In recent years the idea of introducing such a tax has attracted rising attention, mainly due to the increasing instability of asset prices, the related financial crisis, pressure from NGOs and the need for fiscal consolidation. A summary of the recent debate can be found in: S. Claessens, M. Keen, C. Pazarbasioglu: Financial Sector Taxation – The IMF’s Report to the G-20 and Background Material, Washington, September 2010; European Commission: Commission Staff Working Paper, Impact Assessment accompanying the document “Proposal for a Council Directive on a common system of financial transaction tax and amending Directive 2008/7/EC”, September 2011; S. Schulmeister: Implementation of a General Financial Transactions Tax, WIFO Monographs, June 2011.

Figure 1  
Financial Transactions in the World Economy



Sources: BIS, WFE, WIFO.

of 5% (€500,000), the cash requirement would rise by 50%, significantly reducing the profitability of this kind of “gambling” or possibly even making it unprofitable.

### Arguments in Favour of a General Financial Transactions Tax

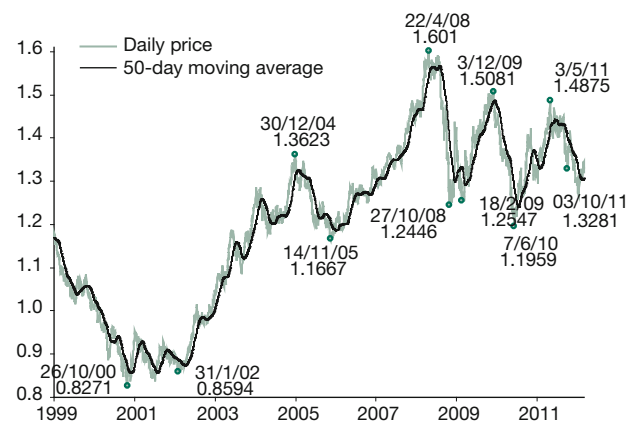
The main propositions underlying the concept of a general financial transactions tax can be summarised as follows<sup>2</sup>:

*Proposition 1:* There is excessive trading activity (i.e. liquidity) in modern asset markets due to the predominance of short-term speculation. As a consequence, the overall volume of financial transactions was roughly 70 times higher than world GDP in 2010 (Figure 1). Speculative trading, mostly supported by or based on trading systems, aims at exploiting the trending of asset prices (“the trend is your friend”). The phenomenon of trending repeats itself across different time scales (Figures 2 to 6). Hence, trading systems can be based on different data frequencies. In the case of moving average (MA) models, a trader would open a long position (buy) when the current price crosses the MA line from below and would sell when the opposite occurs (Figure 2). If a model uses two moving averages, then their crossing indicates a trading signal (Figure 4). Models based on higher data frequencies (Figure 3) need to be more sophisticated (they must at least also account for volatility).

*Proposition 2:* The ever “faster” trading activities destabilise exchange rates, commodity prices, interest rates

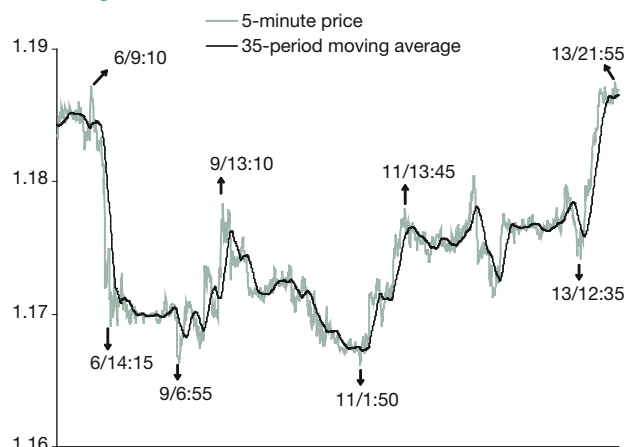
<sup>2</sup> For documentation of the empirical evidence upon which the following propositions are based, see S. Schulmeister, op. cit.

Figure 2  
Technical Trading of Daily Dollar/Euro Exchange Rate



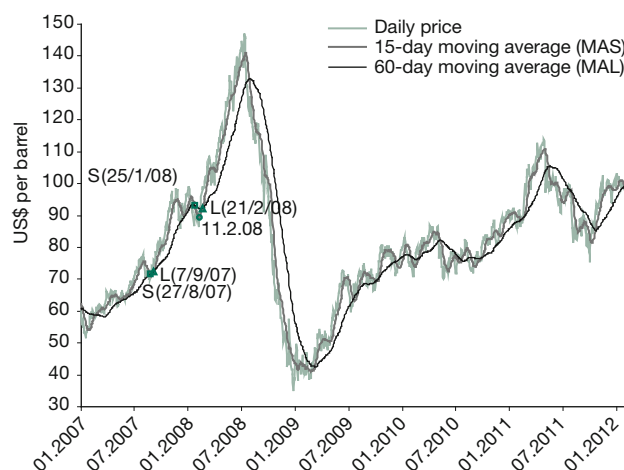
Sources: Fed, Olson Ltd.

Figure 3  
Technical Trading of the Intraday Dollar/Euro Exchange Rate, 6-13 June 2003



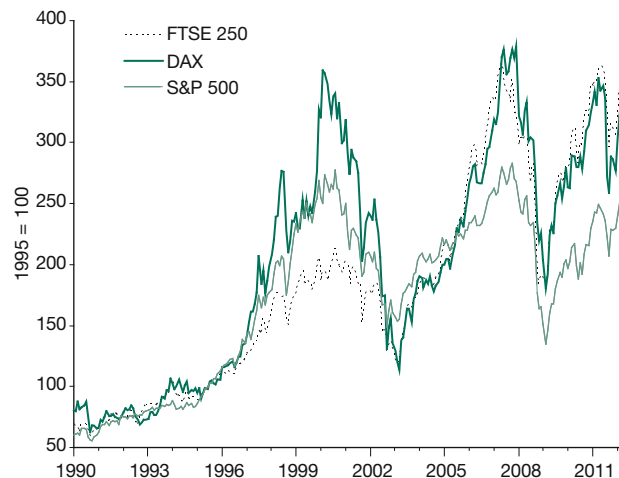
Sources: Fed, Olson Ltd.

Figure 4  
Technical Trading of Oil Futures 2007-2012



Sources: NYMEX, WIFO.

**Figure 5**  
**Stock Prices in Germany, the UK and the USA**



Source: Yahoo finance.

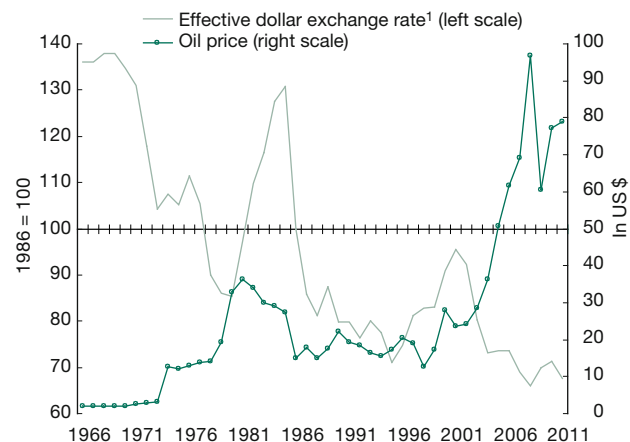
and stock prices over the short term as well as over the long term (Figures 2, 3, and 4). This is because short-term price trends (based on intraday data) are strengthened by the use of (automated) trading systems. These trends then accumulate to become medium-term trends based on daily data which in turn are reinforced by trading systems based on daily data. The sequence of several upward (downward) trends based on daily data results in a bull (bear) market, capable of lasting several years in many cases (Figures 2 to 6).

*Proposition 3:* The systematic overshooting of exchange rates, commodities prices, interest rates and stock prices favours rent-seeking activities by financial investors/speculators and impedes entrepreneurial activities in the real economy. This is because these prices link the real and financial spheres of the economy in time (interest rates and stock prices) and in space (exchange rates) or they concern the most important exhaustible resources, like crude oil, the consumption of which results in tremendous social costs, e.g. climate change. Hence, asset price overshooting has been shifting the “core energy” of capitalism from the real to the financial sphere of the economy since the early 1970s. It is no coincidence that economic growth has declined since then from decade to decade.

*Proposition 4:* The detrimental effects of inflated asset prices are particularly pronounced in the context of the development of financial crises.

- Example 1: From 2003 onwards, the simultaneous boom of stock prices, commodity prices and house

**Figure 6**  
**Dollar Exchange Rate and Oil Price Fluctuations**



<sup>1</sup> Vis-à-vis DM, Franc, Pound, Yen.

Source: IMF, WIFO.

prices had built up the potential for their simultaneous collapse. As a result, the US mortgage crisis developed into a global economic crisis in 2008/2009.

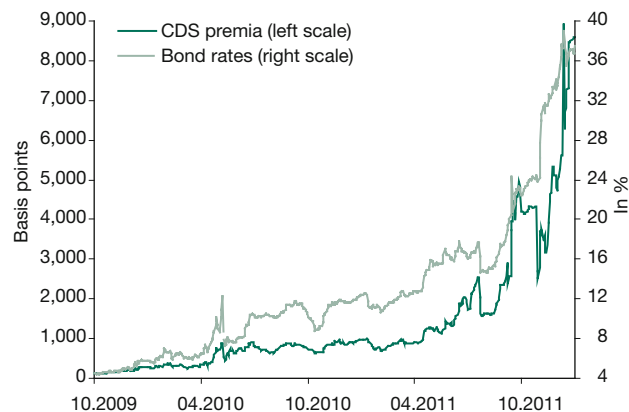
- Example 2: From 2009 onwards, financial investors were able to make significant profits by driving up the premia of credit default swaps (CDS) and, hence, interest rates on the government bonds of highly indebted euro countries (Figures 7 and 8).
- Example 3: In 2011, the interaction between speculation in the CDS markets and the bond markets intensified, driving a wedge between northern and southern euro countries (Figure 9).

*Proposition 5:* A small FTT of, e.g., 0.05% (shared by the buyer and the seller) would not affect transactions aimed at holding a financial asset (including hedging). For example, if a private person (a company) buys stocks (commodity futures) with a market value of €10,000 (€10 million), then the FTT amounts to only €2.50 (€2,500).

*Proposition 6:* An FTT would specifically increase the costs of those speculative transactions which are unrelated to market fundamentals. This is because the greater the degree to which a trading activity is oriented toward the short term (and in the case of derivatives, the higher the amount of leverage employed), the more the FTT will raise transaction costs, thereby rendering high-frequency trading unprofitable.

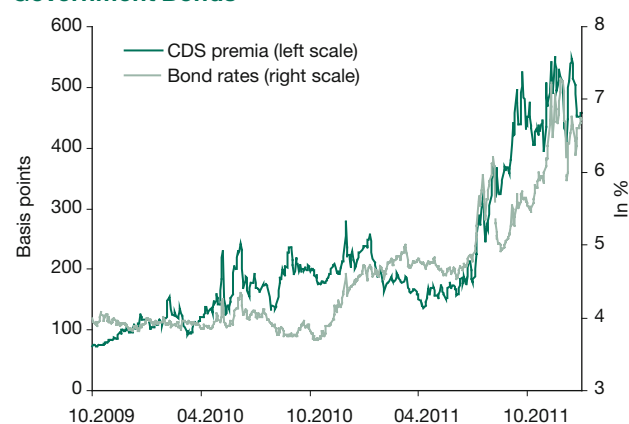
*Proposition 7:* An FTT would levy a substantial charge on those actors whose activities significantly contributed to

**Figure 7**  
**CDS Premium and Interest Rates on Greek Government Bonds**



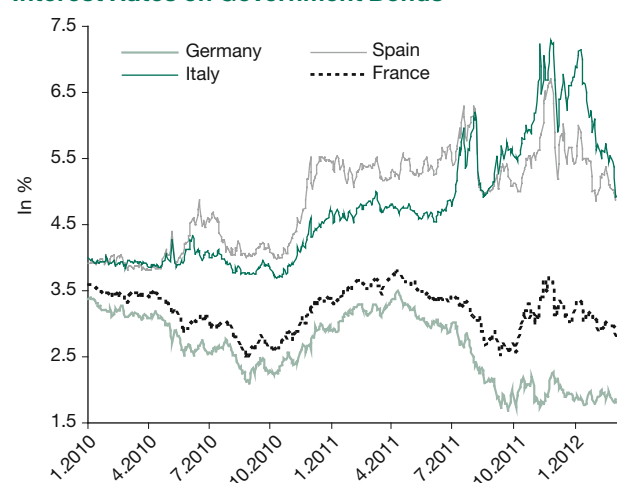
Source: Thomas Reuters.

**Figure 8**  
**CDS Premium and Interest Rates on Italian Government Bonds**



Source: Thomson Reuters.

**Figure 9**  
**Interest Rates on Government Bonds**



Source: Thomson Reuters.

the development of the financial crisis in 2008/2009 and the euro crisis in 2010. At the same time, those financial actors who (still) focus on servicing the real economy (“boring banking”) would not be burdened. This is an important contrast between an FTT and a general bank levy or a financial activities tax.

*Proposition 8:* At a tax rate of 0.05%, an FTT would yield substantial revenues. For Europe, e.g. revenues would amount to 1.8% of GDP (based on 2010 data). These revenue estimates imply a trading reduction of roughly 70% due the introduction of an FTT (see Table 1). The revenues would be highest by far in the UK.

*Proposition 9:* The implementation of an FTT is technically easy because one could make use of the fact that all transactions are captured by the electronic payment, clearing and settlement systems of banks, organised exchanges and of the (future) Central Counterparty Platforms (CCPs). An FTT could be implemented in either a centralised or a decentralised manner.

*Proposition 10:* With a centralised approach, the FTT would be collected according to the “territorial principle”, i.e. all transactions within a certain jurisdiction would be subject to the tax. The tax would be deducted at the point of settlement, i.e. at the exchanges or at CCPs in the case of OTC transactions. There are two preconditions for the realisation of this approach. Firstly, clearance of OTC transactions via CCPs would have to be mandatory, and secondly, all important countries within a trading time zone like the EU27 would have to introduce the tax.

*Proposition 11:* With a decentralised approach, the FTT would be collected according to the “personal principle”, i.e. the debtors would be the residents of an FTT country who engage in a financial transaction. The tax would be deducted by the banks (and brokerage firms) receiving and processing the order. For example, if only Germany were to introduce an FTT, the transactions of German residents (individuals, financial and non-financial corporations) would be taxed, irrespective of whether their transactions were executed at home or abroad. The proposal by the European Commission follows this approach.

*Proposition 12:* A general FTT has the potential to become the first supranational (European) tax and ultimately the first global tax. The gradual expansion of the application of such a tax across countries would match – though with some lag – the process of globalisation which has been by far most pronounced in financial markets and institutions.



Table 1

**Hypothetical Transaction Tax Receipts in Some European Countries 2010, Tax Rate: 0.05%**

	Europe		Germany		France		Netherlands		Denmark		United Kingdom	
	% of GDP	€ billion	% of GDP	€ billion	% of GDP	€ billion	% of GDP	€ billion	% of GDP	€ billion	% of GDP	€ billion
Spot transactions on exchanges	0.09	11.7	0.04	0.9	0.02	0.4	0.05	0.3	1.10	2.6	0.18	3.1
Derivatives transactions on exchanges	0.71	92.2	0.63	15.7	0.00	0.0	0.00	0.0	0.00	0.0	3.28	55.8
OTC transactions	1.00	130.4	0.18	4.4	0.50	9.7	0.38	2.2	1.65	3.9	5.13	87.3
All transactions	1.80	234.3	0.84	21.0	0.52	10.2	0.43	2.5	2.76	6.5	8.59	146.2

Source: WIFO.

**Objections to Financial Transactions Taxes**

The main arguments against the introduction of an FTT and their counterarguments can be summarised as follows<sup>3</sup>:

*Objection 1:* An FTT would raise the costs of capital, because it would have the same effect as taxes on future dividends. As a consequence, the present (discounted) value of an asset will decline in reaction to the introduction of an FTT. To compensate for the future tax burden, investors will demand a higher return and therefore a lower asset price.

Counterargument: This reasoning does not take into account the basic characteristic of the FTT, namely, that it does not burden the asset as such but only the trading of that asset. The assumption that an FTT has the same effect as a tax on dividends is misleading, because the latter would affect any dividend-paying stock, whereas the FTT would address only those stocks which are (frequently) traded.

*Objection 2:* The distortive effects of an FTT will be higher than those of other kinds of taxes – in particular the VAT – because the FTT is a turnover tax which burdens transactions between businesses several times.

Counterargument: This reasoning suggests that financial transactions between banks, hedge funds, other financial

institutions (e.g. insurance companies) and non-financial corporations can be perceived as intermediate inputs and outputs. This analogy is misleading. Buying an asset does not represent an (intermediate) input, and selling an asset does not represent an (intermediate) output. A more precise analogy to an FTT would be taxes on gambling, where usually any bet/transaction is taxed (without considering these taxes as having “cascading” effects as sales taxes relative to VATs).

*Objection 3:* An FTT hampers the price discovery process. Furthermore, it is impossible to distinguish between harmful speculation and beneficial transactions.

Counterargument: This reasoning just assumes that asset markets are basically efficient. However, this assumption has become increasingly questionable. Firstly, a clear correlation prevails between the deregulation of financial markets and the rising financial instability over the past three decades. Secondly, the phenomenon of “bulls” and “bears” in the stock, currency and commodity derivatives markets have become progressively more pronounced over this period. Thirdly, there has been a tremendous increase in the use of trading systems which only process information contained in past prices to guide their trading activity. This implies that either traders do not act rationally (if the systems are unprofitable) or that markets are not even weakly efficient (if the systems are profitable).

*Objection 4:* Most financial transactions are not driven by (destabilising) speculation but stem from managing and distributing risk.

Counterargument: Before something can be distributed, it has to be produced. The production of risk and uncertainty in financial markets has risen due to the increasing use of (automated) trading systems that utilise trend-following or contrarian technical models and high-frequency sys-

3 S. Claessens et al., op. cit.; European Commission: Financial Sector Taxation, SEC (2010) 1166/3, August 2010; S. Schulmeister, op. cit. Note that the European Commission changed its position towards an FTT fundamentally between August 2010 (when it still rejected such a tax in most respects and favoured instead financial activities taxes – as the IMF still does) and September 2011 (when it proposed the “Council Directive on a common system of financial transaction tax” – see European Commission, op. cit.).



tems. In the aggregate, the trading signals produced by these models strengthen the trending of asset prices over the (very) short run as well as over the medium and long run.<sup>4</sup> All these systems disregard market fundamentals and are therefore by construction destabilising.

*Objection 5:* Derivatives should not be taxed, in particular because this would increase hedging costs.

Counterargument: If a “Standard Classification of Financial Transactions” were introduced in connection with the FTT implementation so that each transaction would be assigned a specific code, it would be easy to exempt from the FTT the hedging of counter-positions in the real economy as well as all financial transactions which constitute an equivalent to real economy transactions (e.g. foreign exchange transactions stemming from international trade or direct investment).

*Objection 6:* It remains unclear who ultimately has to carry the burden of an FTT (incidence of an FTT).

Counterargument: Even though one cannot specify exactly who will really pay the tax, the tax incidence issue is at least clearer in the case of an FTT than in the case of a bank levy or a financial activities tax. As the latter two tax certain balance sheet positions or (components of) the value added, banks could (and would) easily shift the tax burden onto their clients. By contrast, the FTT would levy certain activities irrespectively of who carries them out. Banks which do not engage in proprietary trading would pay no FTT at all (when they carry out the order of a customer, the latter would pay the tax). Hedge funds which use trading systems based on high-frequency data would shift the tax burden onto their clients. Amateur speculators (of which there are millions in advanced economies nowadays) would pay the tax, their (internet) brokers would not (because these also would shift the tax burden onto their clients).

*Objection 7:* The introduction of an FTT will lead to a considerable relocation of trading activities to tax-free jurisdictions, in particular to offshore markets.

Counterargument: This is already the case today. Many funds operate from offshore markets since these jurisdictions serve as tax havens (i.e. for reasons of income tax circumvention). Many/most of them engage in short-term trading (“trend followers”), which is almost exclusively

done on organised derivatives exchanges around the world. To the extent that they (must) trade on exchanges in FTT countries (Eurex in Frankfurt, Euronext in London), they will have to pay the FTT at the exchanges.

The high-frequency traders cannot move offshore, for their computer servers need to be located as close as possible to the servers of the exchanges.

To curb the migration of trading, one could introduce an FTT substitute levy (FTTSL) in FTT countries. The FTTSL would be charged for any transfer of funds from a bank account in an FTT country to a brokerage firm or hedge fund in a non-FTT country. The size of the FTTSL would have to be several times higher than the FTT. For an FTT of 0.05%, the FTTSL could be 2% or even higher. At 2% it would be the equivalent of 40 round-trip transactions. The FTTSL can be seen as a kind of “security deposit” in case the FTT is not paid due to transactions carried out abroad.

Finally, if an FTT were implemented according to the residence principle (the decentralised approach proposed by the European Commission), all of the financial transactions stemming from an FTT country (e.g. Germany) that were carried out in a non-FTT country (e.g. the UK) would be taxed in the FTT country. This also holds true if the company which orders the transaction is legally a resident of the non-FTT country but is an affiliate of a company resident in an FTT country. For example, if the Deutsche Bank London or its affiliate Smith & Co. in Coventry trades at Euronext in London, Deutsche Bank’s headquarters in Frankfurt would have to pay an FTT for that transaction to the German government. It is therefore understandable why the UK government has become increasingly nervous about the European Commission’s FTT proposal.

### Concluding Remark

The rejection of a general FTT is embedded into the *Weltanschauung* which has dominated the mainstream of economics and politics over the previous decades. If one assumes that the “freest” markets, i.e. the financial markets, cannot produce systematically wrong price signals – the type of signals one would see if trending were the most characteristic property of asset price dynamics – then one must reject even the very modest taxation of financial transactions. The implementation of an FTT is therefore not primarily a technical problem but instead a question of moving from a rather theoretical and abstract paradigm out of touch with reality to a more pragmatic and realistic worldview. Politicians might be in a better position to make such a move than mainstream economists.

<sup>4</sup> For a documentation of these feed-back mechanism see S. Schulmeister: Boom-Bust Cycles and Trading Practices in Asset Markets, the Real Economy and the Effects of a Financial Transactions Tax, WIFO Working Paper No. 364, 2010, presented at the International Monetary Fund on 15 March 2010.

John Vella\*

## The Financial Transaction Tax Debate: Some Questionable Claims

In an article published in the Daily Telegraph on 9 February 2012, Commissioner Semeta wrote: “We owe a proper debate to all stakeholders who will potentially be affected [by the FTT].”<sup>1</sup> The title of the article was “Rebalancing the financial transactions tax debate” and its tenor was captured rather well in the sub-title: “It is time to banish the myths surrounding the European Commission’s proposal for a financial transactions tax.” It is indeed regrettable that a number of claims about the proposed FTT are repeatedly made with an assuredness and lack of qualification that, at best, masks the uncertainty which underlies them. Interest groups, commentators and politicians alike have been guilty of this practice. Unfortunately, so has the Commission. Cautious statements it has made in one place sometimes tend to harden into bolder claims in another.

We should recognise that our understanding of some of the issues concerning an FTT is partial, tentative or uncertain. Repeating partial truths or guesses clothed as absolute certainties is simply not conducive to a meaningful debate. This article identifies some commonly made claims which are of questionable foundation. Other claims could have been included in this list but have been omitted due to considerations of space. The article concludes with a very brief comparison of the FTT with some alternatives.

### Ordinary Citizens and Businesses Will Hardly Be Affected by the FTT

The Commission’s proposal (Proposal) makes the strong claim that “[p]rivate households and SMEs not actively investing in financial markets would *hardly* be affected by this proposal thanks to the ring-fencing features built in the design of the FTT.”<sup>2</sup>

1 A. Semeta: Rebalancing the financial transactions tax debate, in: The Telegraph, 9 February 2012. Available at <http://www.telegraph.co.uk/finance/newsbysector/banksandfinance/9072297/Rebalancing-the-financial-transactions-tax-debate.html>.

2 European Commission: Proposal for a Council Directive on a common system of financial transaction tax and amending Directive 2008/7/EC Brussels, COM (2011) 594 final, 28 September 2011, p. 5 [emphasis added]. All the documents relating to the Proposal are available at [http://ec.europa.eu/taxation\\_customs/taxation/other\\_taxes/financial\\_sector/index\\_en.htm](http://ec.europa.eu/taxation_customs/taxation/other_taxes/financial_sector/index_en.htm).

\* The author would like to thank Michael P. Devereux, Clemens Fuest and Giorgia Maffini for comments. The usual disclaimers apply.

Companies and other legal entities cannot bear the economic incidence of a tax; taxes are ultimately borne by natural persons. When a tax is imposed on legal entities, the difficulty lies in identifying which group of natural persons connected with the entity actually bears it. A corporation tax, for example, will ultimately be borne by shareholders, creditors, customers, employees or a combination of these different groups. Academic studies have attempted to determine which group is more likely to bear the economic incidence of a corporation tax<sup>3</sup>; nevertheless considerable uncertainty still surrounds this issue.

Similarly, whilst the proposed FTT will be paid by banks, investments funds and other financial institutions, the economic incidence of the tax will ultimately be borne by natural persons. The tax could be passed on to the employees, owners or customers of the financial institutions. If the owners or customers are themselves legal entities, then again, one has to determine which of a number of possible groups of persons connected with those entities will ultimately bear the tax. These are not easy questions.

In the current climate, few would be concerned if the tax were borne by employees of financial institutions earning multi-million pound bonuses. However, even if the tax were passed on to employees, it could be passed on to anyone employed by financial institutions, including employees on ordinary salaries. The tax might also be passed on to owners of financial institutions. Again, many might not be overly concerned if these are high net worth individuals, however this need not be the case. Pension funds and investment funds, for example, hold shares of and thus partially own banks. Finally, the tax could be passed on to customers. Whilst high net worth individuals are prominent customers of financial institutions such as hedge funds, this again is only part of the picture. Customers of financial institutions, such as pension funds and investment funds, include ordinary citizens at lower parts of the income distribution. Bank customers also include such ordinary citizens as well as small businesses. The FTT could be passed on to them through higher borrowing costs, lower saving rates and various other channels.

3 See for example W. Arulampalam, M.P. Devereux, G. Maffini: The Direct Incidence of Corporate Income Tax on Wages Working Papers, No. 09/17, 2009, Oxford University Centre for Business Taxation. This is available at <http://www.sbs.ox.ac.uk/centres/tax/papers/Pages/PaperWP0917.aspx>.

The Proposal seeks to insulate private households and businesses from the tax by excluding their lending and borrowing activities and other day-to-day financial activities such as payment transactions. Whilst this ensures that they will not be directly subject to the tax on these activities, it does not mean they will not bear the economic incidence of the tax. To be clear, it is not simply that the tax can be passed on to ordinary citizens only if they purchase shares in companies or invest in an investment fund. The tax paid on a transaction between two financial institutions can also be passed on to ordinary citizens through various channels, some of which are described above. Consequently, the Commission's estimate that 85% of the transactions covered by the FTT are between financial institutions does not provide comfort in this regard.

Determining the incidence of an FTT levied on different types of institutions and financial transactions is difficult. It depends on a number of factors including relative tax elasticities and market structure. We simply do not know exactly how it will be shared among employees, owners and customers of financial institutions. The claim that private households and SMEs not actively investing in financial markets would hardly be affected by the Proposal is far too strong.

### The Proposed FTT Is a "Small Tax"

Part of the populist attraction of FTTs must be the low rate at which they are proposed. Commissioner Semeta recently asked "[h]ow could this *small tax* on the financial sector be worse for growth and competitiveness than further hikes in income taxes, or deeper cuts in public spending?"<sup>4</sup> This is a strong selling point. Surely, a tax at such a low rate cannot cause too much harm? Leaving aside the question as to the extent of the harm a tax at a low rate can actually cause, the often-made claim<sup>5</sup> that the rate of the proposed FTT is low is only partly true. It is true in that the headline rate is set at 0.01% for financial transactions related to derivative instruments and 0.1% for all other financial

transactions.<sup>6</sup> In reality, however, the effective rate of tax for a particular transaction can be higher for two reasons.

First, the proposed FTT cascades. This means that the tax must be paid a number of times when undertaking what is in practice a single transaction. Consider the purchase/sale of a security on the London Stock Exchange. This might include a sale from the vendor to a broker, a sale from the broker to a clearing member, a sale from the clearing member to a clearing system, a sale from the clearing system to a clearing member, a sale from the clearing member to a broker and a sale from the broker to the ultimate purchaser. In such a transaction, the FTT will be levied on both parties in each of these transactions<sup>7</sup>, except for the clearing system which is exempt. The effective tax rate for such a purchase/sale would be 1%.

Certain financial transactions involve a number of separate transactions for their execution and thus create multiple charges to the tax. Consider a retail investment with capital guarantees. A charge to FTT will be due when the investor buys and sells back the retail investment and every time the fund buys and sells securities. Note also that the purchase and sale of securities on a stock exchange might involve the string of transactions described above. The fund might also wish to limit any loss of capital by using derivatives. The derivatives could be renewed regularly, generating a charge to FTT on each renewal.<sup>8</sup> The purchase of a retail investment with capital guarantees thus involves multiple charges to the tax, making it less attractive. It could drive investors away from this otherwise perfectly sensible form of investment. They could move from the investment which they would have chosen had it not been for the tax to another investment which is less in line with their preferences and perhaps even more risky, such as an investment with no capital guarantee. To this extent, the FTT would distort the market, possible channelling investments towards riskier options.

Secondly, the effective rate of tax on derivatives relative to their price can be much higher than the head-

<sup>4</sup> A. Semeta, *op. cit.*

<sup>5</sup> In the same article Commissioner Semeta wrote: "If banks and other players want to avoid the FTT, they would have to abandon their European clients altogether – an unlikely response to a *small tax* of 0.1pc on shares and bonds and 0.01pc on derivatives" [emphasis added]. See also A. Semeta: EU tax coordination and the financial sector, London, 17 February 2012, Speech 12/109. This is available at <http://europa.eu/rapid/pressReleasesAction.do?reference=SPEECH/12/109>.

<sup>6</sup> The rates of the tax are to be set by each Member State, however they cannot be less than the rates stated in the text. European Commission: Proposal for a Council Directive..., *op. cit.*, Art. 8.

<sup>7</sup> When a financial institution sells to a broker, both will pay the FTT; when the broker sells to the clearing member, both will pay the FTT and so on.

<sup>8</sup> This example is based on an example given in Oxera: What would be the economic impact of the proposed financial transaction tax on the EU, December 2011. This is available at <http://www.oxera.com/cmsDocuments/The%20economic%20impact%20of%20the%20proposed%20FTT.pdf>. Other examples can be found at p. 17.

line rate of 0.01%. This is due to the fact that the FTT on derivatives is charged on the nominal amount involved.<sup>9</sup> The Commission's Impact Assessment (IA) provides a simple example which illustrates this point quite clearly.

An EU-based company has to pay a bill of USD 11 million in 3 months and fears a devaluation of the Euro. The company wants to hedge the risk that the Euro falls below USD 1.10. It acquires an option to buy USD at an exchange rate of 1.10 USD per Euro in 3 months. The price for this option is EUR 30,000. The value of the underlying is USD 11 million = EUR 10 million EUR. Assuming a very low tax rate of 0.01%, the tax payment would be EUR 1,000. Now compare the tax payment (EUR 1,000) to the price (EUR 30,000). If we define the tax payment in relation to the real cash-flow of buying the option as an effective tax rate, the effective rate is 3.3% in this example. Now assume that the company wants to hedge the extreme case that the Euro drops below parity with the USD. The price would be only 5,000 EUR in this case given the low risk that this case will occur in the next three month. In this case, the tax base is USD 11 million = EUR 11 million. The tax payment would be EUR 1,100. This leads to an effective tax rate of 22% when relating the tax paid with the actual price paid.<sup>10</sup>

The company here need not be in the financial sector. It could be a manufacturing company acquiring raw material from overseas. An FTT at such a high effective rate will negatively affect this company's ability to hedge and thus its decision to invest.

The effective rate of tax for certain financial transactions can thus be higher, even considerably higher, than the low headline rates generally mentioned in the debate.

### The Financial Sector Is Under-Taxed

The Proposal notes that "[t]here is a strong consensus within Europe and internationally that the financial sector should contribute more fairly given the costs of dealing with the crisis *and the current under-taxation of the sector*."<sup>11</sup> One of the objectives of the FTT is thus "to ensure a level playing field with other sectors from a

taxation point of view."<sup>12</sup> The argument here is that the financial sector is under-taxed because most financial and insurance services are exempted from VAT.<sup>13</sup> The certainty with which this statement is expressed can be contrasted with the qualified statement found in the Impact Assessment:

The extent to which applying VAT to the financial sector (and its clients) would raise additional tax revenues and – consequently – the extent to which the exemption constitutes a tax advantage for the financial sector is *an unsettled empirical question*.<sup>14</sup>

There remains, in fact, considerable uncertainty as to whether the VAT exemption leads to under-taxation. Whilst the exemption reduces the tax burden on services to consumers it also increases the tax burden on transactions with businesses. The IA reviews some estimates of the potential tax advantage produced by the exemption and presents a new estimate which suggests an advantage in the range of 0.11 per cent and 0.017 per cent of GDP. The IA is careful in stressing that "all these estimates are very rough approximations and should be interpreted with caution."<sup>15</sup> It then concludes cautiously: "...the VAT exemption for a large share of financial services is an important issue. It *possibly* results in a preferential treatment of the financial sector compared with other sectors of the economy as well as in distortions of prices."<sup>16</sup>

Since the publication of the IA, a new study, commissioned by PricewaterhouseCoopers and carried out by a leading tax economist, found neither under-taxation nor over-taxation.<sup>17</sup> It is not argued here that one study is superior to the other, or that the financial sector is under-taxed or over-taxed as a result of the VAT exemption. Our understanding of this issue is improving, but at this point in time, as the Commission itself noted, this question is still unsettled.

12 Ibid.

13 The Commission's Press Release is even bolder: "the financial sector enjoys a tax advantage of approximately €18 billion per year because of VAT exemption on financial services" [emphasis added], <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/11/1085>.

14 Impact Assessment, accompanying the document: Proposal for a Council Directive on a common system of financial transaction tax and amending Directive 2008/7/EC, Vol. 1, SEC (2011) 1103 final, 28 September 2011, IA Vol. 1, p. 14 [emphasis added].

15 Ibid.

16 Ibid., p. 15 [emphasis added].

17 B. Lockwood: Estimates from National Accounts Data of the Revenue Effect of Imposing VAT on Currently Exempt Sales of Financial Services Companies in the EU, 2011. This study is attached to the report: PwC: How the EU VAT exemptions impact the Banking Sector 2011. This is available at [http://www.pwc.com/en\\_GX/gx/financial-services/pdf/2011-10-18\\_VAT\\_Study\\_final\\_report.pdf](http://www.pwc.com/en_GX/gx/financial-services/pdf/2011-10-18_VAT_Study_final_report.pdf).

9 European Commission: Proposal for a Council Directive..., op. cit., Art. 6.

10 European Commission: Commission Staff Working Paper. Impact Assessment Accompanying the document Proposal for a Council Directive on a common system of financial transaction tax and amending Directive 2008/7/EC, Vol. 12, SEC (2011) 1102 final, 21 October 2011, pp. 21-22.

11 European Commission: Proposal for a Council Directive..., op. cit., p. 2 [emphasis added].

## High-Frequency Trading Ought to Be Discouraged

One of the objectives of the proposed FTT is “to create appropriate disincentives for transactions that do not enhance the efficiency of financial markets.”<sup>18</sup> The Commission’s chief target here appears to be short-term trading, particularly high-frequency trading (HFT).<sup>19</sup> Commissioner Semeta recently explained, for example, that “a second objective [of the FTT] is to discourage unwarranted and leveraged transactions such as high frequency trading which inflate market volumes in all segments. This should complement regulatory measures and expose financial market actors to price signals.”<sup>20</sup> One presumes that the FTT aims at discouraging these transactions because they are deemed to be somewhat harmful.

Whilst often made, the claim that certain types of short-term trading, particularly HFT, ought to be discouraged is critically undermined by the fact that, as the Commission noted, “the empirical economic literature is still *rather inconclusive* on effects from this trading form in terms of increased volatility or price deviations.”<sup>21</sup> Indeed, some studies have found that HFT improved market efficiency through tighter spreads and increased liquidity.<sup>22</sup>

There is no doubt that HFT raises a number of concerns. The flash crash of 6 May 2010 was a warning call

that must be heeded. It is imperative that systems and processes are in place to address these concerns. This is being done at an EU level by the European Securities and Markets Authority through its proposed guidelines and by the Commission through its proposed revision of the Markets in Financial Instruments Directive.

After reviewing existing literature on the impact of computer trading (of which HFT is a subset) on liquidity, price efficiency/discovery and transaction costs, Linton and O’Hara noted the need for regulation but warned against misguided interventions:

Computer trading is now the reality in asset markets. Technology has allowed new participants to enter, new trading methods to arise, and even new market structures to evolve. Much of what has transpired in markets is for the good: liquidity has been enhanced, transactions costs have been lowered, and market efficiency appears to be better, or certainly no worse. But there are issues with respect to periodic illiquidity, new forms of manipulation, and potential threats to market stability due to errant algorithms or excessive message traffic that must be addressed. Regulatory changes in practices and policies will be needed to catch up to the new realities of trading in asset markets. Caution must be taken to avoid undoing the very many advantages that the high frequency world has brought.<sup>23</sup>

It is of paramount importance that we continue to investigate the effect of HFT, and short-term trading more generally, on markets.<sup>24</sup> At present, however, existing evidence on the effect of HFT on market efficiency is simply inconclusive.

## The FTT Addresses the Causes of Financial Crises

### Future Crises

This claim partly follows from the preceding one. By creating appropriate disincentives for transactions that do not enhance the efficiency of financial markets, the proposed FTT is meant to “[complement] regulatory measures aimed at avoiding future financial crises.”<sup>25</sup>

18 European Commission: Proposal for a Council Directive..., op. cit., Art. 2.

19 HFT is an “algorithmic trading strategy that profits from incremental price movements with frequent, small trades executed in milliseconds for investment horizons of typically less than one day.” European Commission: Commission Staff Working Paper..., op. cit. p. 2.

20 A. Semeta: Financial Transactions Tax: The Way Ahead, Meeting of Members of the Finance and Fiscal Committees in the Danish Parliament Copenhagen, 19 March 2012, speech 12/196. This is available at <http://europa.eu/rapid/pressReleasesAction.do?reference=SPEECH/12/196>.

21 Impact Assessment..., op. cit., p. 16 [emphasis added].

22 See the literature reviewed in O. Linton, M. O’Hara: The impact of computer trading on liquidity, price efficiency/discovery and transaction costs, 2011. This is available at <http://www.bis.gov.uk/assets/foresight/docs/computer-trading/11-1276-the-future-of-computer-trading-in-financial-markets.pdf>. In a recent consultation paper the Commission explained: “Existing evidence is inconclusive about the impact of HFT on market efficiency. Some studies suggest that HFT using market making and arbitrage strategies has added liquidity to the market, reduced spreads and helped align prices across markets. However, the average transaction size has decreased considerably and some participants question the value of the additional liquidity provided. They argue there may be improved liquidity for investors who trade retail-size orders but it is now more difficult for institutional investors to execute large orders. Also, there are different views about whether HFT increases or reduces market volatility.” European Commission: Public Consultation: review of the markets in financial instruments directive (MiFID), December 2010, p. 14 [emphasis added]. This is available at [http://ec.europa.eu/internal\\_market/consultations/docs/2010/mifid/consultation\\_paper\\_en.pdf](http://ec.europa.eu/internal_market/consultations/docs/2010/mifid/consultation_paper_en.pdf).

23 O. Linton, M. O’Hara, op. cit.

24 The UK Government has launched its Foresight Project on The Future of Computer Trading in Financial Markets. This is expected to report in autumn 2012. More information is available at <http://www.bis.gov.uk/foresight/our-work/projects/current-projects/computer-trading>.

25 European Commission: Proposal for a Council Directive..., op. cit., p. 2.



Commissioner Semeta recently argued that “[t]he economic case [for an FTT] is even clearer when one factors in the FTT’s potential to discourage some forms of socially useless and high-risk trading, and therefore to help prevent future crises.”<sup>26</sup>

As seen above, however, the existing evidence on the effect of HFT on market efficiency is inconclusive. Indeed, the effect of an FTT on the market is also uncertain. The IA itself notes, for example, that:

[m]any studies show that a FTT could *aggravate* volatility (because of a reduction in the number of transactions), creating more room for speculators. An extensive review of the economic literature overall concludes that the effects of the FTT on volatility is *largely inconclusive* and depends on market structure.<sup>27</sup>

To this extent, the claim that the FTT will somehow contribute to the avoidance of future crises does not appear to be backed by evidence. This claim was repeated in a report<sup>28</sup> commissioned by the Socialists and Democrats in the European Parliament. This report concluded that “the impact of introducing an FTT on level of GDP all things considered, is likely to be positive, at around +0.25% – as a minimum.” The reasoning which led to this conclusion was as follows:

...possibly the most important additional positive effect on future growth is that the FTT would somewhat reduce systemic risk, and therefore the likelihood of future crises. We are clearly not arguing that on its own, the FTT would reduce the risk of crises, as prudent macroeconomic policies and effective financial regulation as well as supervision also have a major role to play in crisis prevention. However, by significantly reducing the level of noise trading in general and reducing (or eliminating) high frequency trading in particular,<sup>29</sup> the FTT would make some contribution to the reduction of severe misalignments and hence the probability of violent adjustments. Moreover, in financial crises “gross” expo-

sures matter more than the net ones, and financial transaction taxes will reduce the gap between the two... Should the FTT, for example, decrease the probability of crises by a mere 5%, (which is a very low assumption), and the cost of GDP lower growth in the long term due to crises were around 7% which consistent with the above estimates, then the positive impact of the FTT on the level of GDP, due to crisis avoidance, could be a 0.35% of GDP. In that case, the net effect of the FTT on the level of GDP would be +0.25% (if we combine the negative impact estimated by the Commission model of -0.1%, with the positive one just estimated of +0.35%).

This argument is not supported by evidence. No evidence is produced in support of the claim that the FTT can reduce the probability of financial crises. Nor is any evidence provided to support the assumption that it would reduce the probability by 5%, despite it being described as a “very low” assumption. Clearly, if robust evidence were produced in support of this argument, it would carry considerable weight.

### The Recent Crisis

The argument for an FTT is often framed in such a way that it can confuse the uninformed on the relation between the FTT and the recent crisis. The argument is often framed in the following manner: the recent financial crisis was, to a large extent, caused by the practices of financial institutions; the FTT is aimed at changing some of the practices of financial institutions and will help avoid future financial crises.<sup>30</sup> Whilst this argument might not be intentionally framed to mislead, it clearly presents the uninformed with a simple inference to draw: the FTT deals with the causes of the recent crisis.

We should be clear that the FTT does not address any of the recognised causes of the recent crisis, such as over-leverage and insufficient liquidity provisioning. These can be addressed through other taxes, including bank levies. The FTT purports to contribute to the prevention of future crises not by dealing with the recognised causes of the recent crisis but by dealing with practices which are not known to increase the risk of crises.

26 A. Semeta: Rebalancing the Financial Transactions..., op. cit.

27 Impact Assessment..., op. cit., p. 52 [emphasis added].

28 S. Griffith-Jones, A. Persaud: Financial Transaction Taxes, February 2012. This is available at [http://www.socialistsanddemocrats.eu/gpes/media3/documents/3835\\_EN\\_Financial%20Transaction%20Taxes\\_Griffith%20Jones%20and%20Persaud\\_February%202012.pdf](http://www.socialistsanddemocrats.eu/gpes/media3/documents/3835_EN_Financial%20Transaction%20Taxes_Griffith%20Jones%20and%20Persaud_February%202012.pdf).

29 In another part of the report the authors are more explicit: “...we think reducing High Frequency Trading could actually have a positive long term effect on growth, given that it could reduce systemic risk and thus the likelihood of crises.” S. Griffith-Jones, A. Persaud, op. cit.

30 For example, the Proposal states: “The present proposal aims at complementing the EU regulatory framework for safer financial services by addressing particularly risky behaviour in some segments of financial markets so as to avoid the repetition of past practices.” European Commission: Proposal for a Council Directive..., op. cit., p. 2.



## Conclusion – How Does the FTT Compare with Alternatives?

One can be critical of FTTs whilst supporting further taxes on the financial sector. There are at least three good reasons for introducing such taxes: to recover part of the costs of the recent crisis, to compensate for the implicit bailout guarantee which certain banks enjoy but do not pay for, and to correct certain behaviour which is known to have contributed to the recent crisis. However, other taxes are superior to the FTT in achieving these goals. Financial Activities Taxes (FAT), along the lines proposed by the IMF<sup>31</sup>, and bank levies are preferable to achieve these goals.<sup>32</sup>

Some might not favour these objectives and, consequently, the taxes which seek to achieve them. We can, however, set aside the specific reasons for introducing a further tax on the financial sector and simply consider which tax is preferable as a revenue raiser. The IA compared an FTT and an FAT on a number of criteria. It concluded:

Both taxes seem to have the potential for raising significant tax revenues from the financial sector. The FTT, however, is likely to be associated – when adopted in isolation – with a *higher risk* of delocalisation of transactions, especially with respect to frequent short-term transactions. Both taxes are also expected to have small effects on GDP and employment, with the negative effects of the FTT probably being *slightly higher* than those of a FAT. The reason for this negative effect is the increase in the cost of capital, as the taxed persons will try to pass the tax through to their clients, and which then negatively interacts with investment.<sup>33</sup>

The FAT does appear to be preferable to the FTT in terms of being more efficient, potentially having a less negative effect on growth and being less susceptible to avoidance. Furthermore, whilst the incidence of a tax is always somewhat uncertain, it can be argued that the incidence of an FAT, in particular the FAT types 2 and 3, is much more likely to fall where it is intended. This is because the FAT taxes excessive wages and profits generated in the financial sector.

One can thus oppose the FTT on the ground that there appear to be superior taxes to raise revenue from the financial sector. It might still be argued that the FTT is superior to the FAT in that it can reduce certain types of trading which in one way or another are thought to have a negative impact on the market, particularly HFT. As seen, however, this argument is not supported by existing evidence. An FTT cannot be preferred on these grounds.

One further reason for the preference of an FTT over other taxes might be that it is thought to have a more realistic chance of being adopted due to the apparent groundswell of public opinion backing it. This line of argument is suspect.

First, if popular views are to be taken into account, one should note the results of the latest Eurobarometer survey. Whilst 64% of people polled were in favour of an FTT, 81% were in favour of a tax on profits made by banks.<sup>34</sup>

Secondly, the strength of the opposition of some states to the FTT is well known. The adoption of an FTT by these states is not more realistic than the adoption of other taxes on the financial sector. Indeed, the Commission's statement that its proposal "should pave the way towards a coordinated approach with the most relevant international partners"<sup>35</sup> appears to be no more than an expression of hope, which some might term fanciful.

The zealous support for the FTT in some quarters is puzzling. This is particularly so when it is combined with a tepid interest in other, arguably superior, forms of taxation on the financial sector. The other forms of taxation which have been proposed are not without difficulty, but they do seem to be more promising than an FTT. Proponents of the FTT have yet to articulate a convincing case for their preference.

31 IMF: A fair and substantial contribution by the financial sector – Final Report for the G-20, June 2010, available at <http://www.imf.org/external/np/g20/pdf/062710b.pdf>.

32 See J. Vella, C. Fuest, T. Schmidt-Eisenlohr: The EU Commission's Proposal for a Financial Transaction Tax, in: British Tax Review, Issue 6, 2011. This is available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2026158](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2026158).

33 Impact Assessment..., op. cit., p. 38 [emphasis added].

34 There is considerable variation from state to state. Standard Eurobarometer, 76 / Autumn 2011, December 2011. This is available at [http://ec.europa.eu/public\\_opinion/archives/eb/eb76/eb76\\_first\\_en.pdf](http://ec.europa.eu/public_opinion/archives/eb/eb76/eb76_first_en.pdf).

35 European Commission: Proposal for a Council Directive..., op. cit., p. 3.

Donato Masciandaro and Francesco Passarelli

## The Financial Transaction Tax: A Political Economy View

The Italian Prime Minister Mario Monti announced that Italy is willing to reconsider its position on the so-called European Tobin tax, which had been opposed by the previous government. The renewed Italian support reinforces the European Commission proposal of September 2011 to tax financial transactions. The proposal has given rise to a large debate in which the new tax has been viewed not only as a way to ensure that financial institutions pay for their responsibility in the economic crisis but also as a fundamental component of a broader reshaping of policy intervention in the financial markets. Taxation can be a powerful tool for curbing systemic risk, a peculiar case of an externality resulting from contagion in financial markets. The externality arises because contagion effects are not completely internalised by the individual contracting parties. The possible failure of a specific financial balance sheet can produce a generalised fear of counterparty risk, with potential domino effects that spread throughout the markets.

So far the debate has considered normative aspects, e.g. which is the best policy and what should its optimal level be. The positive aspects have been somewhat disregarded. Thus we do not have even tentative answers to questions like which instrument are policymakers more likely to select, and at what level will it be imposed?

In this article we offer a positive perspective based on a theoretical framework developed in Masciandaro and Passarelli<sup>1</sup>, which in turn is based on a political economy argument proposed for a general pollution problem by Alesina and Passarelli.<sup>2</sup>

Here we claim that when policies to reduce financial systemic risk are decided by voting, relevant political distortions may occur. Specifically, regulation yields a progressive effect, since it has a much stronger impact on balance sheets or portfolios which contain a large share of systemic risk items. If this is the case, low-risk portfolio owners have an incentive to choose harsh reg-

ulation which concentrates the sacrifices of reducing systemic risk in the system on high-risk portfolio owners. Vice versa, a tax on financial transactions is likely to yield a regressive effect: small-risk producers pay proportionally more than large-risk producers. In this case, a majority of small portfolio owners will tend to choose a tax level which is too low.

This argument is based on the idea that intervention in financial markets is a general interest policy. If this is the case, the idea that policymaking reflects the opinion of the majority is legitimated. If not, policymaking would instead reflect the lobbying of banks and other financial institutions. The financial crisis has raised everybody's concerns about the way financial markets are regulated or taxed. Therefore, interventions aimed at curbing systemic risk have recently become a general interest, rather than a special interest, policy issue.

### Voting on Financial Regulation vs. Financial Taxation

The balance and interconnections between the regulation and the taxation of financial activities have come under closer scrutiny as a result of the recent crisis. The main reason is that both regulation and taxation represent policy tools for curbing systemic risk.

J. M. Keynes<sup>3</sup> was one of first proponents of a systemic risk tax. He identified security contracts as a source of financial instability. Thus he proposed to tax only those kinds of contracts. Subsequently many others took the same view, e.g. Stiglitz.<sup>4</sup>

We claim that attention should be focused on the overall financial playing field, rather than on the transaction. The default of any specific financial contract may instigate negative and amplifying effects, not only on the lender's and/or borrower's portfolios but also on other interconnected operators' claims.

In principle, any financial contract can be characterised by its level of "toxicity" in terms of system risk external-

1 D. Masciandaro, F. Passarelli: Financial Systemic Risk: Taxation or Regulation?, Working Paper Series, Paolo Baffi Centre, Bocconi University, 2011 and D. Masciandaro, F. Passarelli: Financial Systemic Risk, Regulation and Taxation: Economics and Politics, in: J. Alworth, G. Arachi (eds.): Taxation and the Financial Crisis, Oxford University Press, 2012 (forthcoming).

2 A. Alesina, F. Passarelli: Regulation versus Taxation, NBER Working Papers, No. 16413, 2010.

3 J.M. Keynes: General Theory of Employment, Interest Rates and Money, Harcourt Brace & World, New York 1936.

4 J. Stiglitz: Using Tax Policy to Curb Speculative Short Term Trading, in: Journal of Financial Services Research, Vol. 3, 1989, No. 2-3, pp. 101-115.

ity (SRE). In other words, any single financial portfolio produces a certain amount of systemic risk pollution, even an extremely small one. Therefore, curbing systemic risk represents a general interest policy task, and any citizen's portfolio choice is potentially affected by that policy.

In a perfect Pigouvian world, taxation and regulation would be equivalent policy tools: both policies can achieve the best outcome if well calibrated to deal with the externality. In the real world, dominated by uncertainty and asymmetric information, policymakers usually choose financial regulation to produce progressive effects from the risk-taking of economic agents<sup>5</sup>, while taxation is used to produce proportional effects through the use of flat tax schemes.<sup>6</sup> Thus, from a normative viewpoint, the choice between regulation and taxation is made by looking at the shape of the externality and the distribution of costs.

Here we offer a positive perspective, taking the view that in a democratic system the public choices – including financial regulation and taxation – are ultimately decided by voting. Our attention is mainly focused on the “political distortion” that occurs when the choice of policy instrument is made by voting. As in the political analysis of income taxation<sup>7</sup>, the distortion depends on the position of the median voter relative to the average.

The argument runs as follows. Suppose that regulation is structured to have a stronger impact on portfolios with high-risk pollution, while a tax is levied proportionally and hence on low-polluting portfolios as well. Under these circumstances, a median voter whose portfolio pollutes less than the average owner's portfolio may have a strategic incentive to choose regulation simply because of its progressive effects. In fact, with regulation the burden of risk reduction will be charged mainly on the minority of high-risk portfolio owners. This explains why regulation is so common in financial markets, whereas taxation is rarely employed to cope with systemic risk problems.

However, taxes and rules are different in the way they allocate the sacrifices of the externality reduction. In the case of regulation, most sacrifices are made by the top risk producers. Thus, even when the median voter

produces an amount of risk that is above the average, the majority of voters will prefer regulation that is too restrictive. By contrast, in the case of taxation, low risk producers bear a significant burden. Thus the median voter is induced to prefer taxes that are too low. The two instruments are quite different in their political distortion: regulation is very likely to be too restrictive, while taxation is likely to be too low.

### Progressive Regulation and Regressive Taxation

This argument is based on the assumption that, independent of the toxicity measure adopted, regulation has a more than proportional impact on the more toxic instruments, i.e. it induces people to pursue progressive toxicity reductions. For example, a full prohibition rule (such as “all instruments whose toxicity level is above a given level will be banned”) would have a dramatically progressive impact and would resemble an extremely convex tax schedule (such as “a 100% toxicity tax will be levied above a given level”). By its nature, taxation tends to be less progressive, if not regressive.

Our assumption that regulation is more progressive than taxation is straightforward if regulation consists of the full prohibition of toxic instruments. Apart from this extreme case, the assumption can be justified in light of the fact that lending institutions usually react to regulations on operational risk with drastic cuts to their most toxic activities. Conversely, they may react to taxation by deciding to continue engaging in certain high-risk activities and paying the associated taxes as long as they can create high value from those activities.

In addition, the idea that regulation is more progressive is realistic in the presence of a measurement problem. In principle, the base of both taxation and regulation should be a non-distorted measure of toxicity. However, measuring toxicity may be quite costly, if not virtually impossible. In reality, rules and taxes are applied to differently distorted measures of toxicity.

Therefore rules may have progressive effects because they directly affect the supply of the most toxic instrument rather than the production of toxicity by any kind of instrument. Taxes are usually levied on non-linear measures of toxicity, resulting in a regressive effect. For example, a fixed tax on financial transactions is independent of actual risk production and, hence, is regressive in terms of SRE. Realistically, the measurement problem seems to be more severe with taxation. This possibly explains why both the political and academic debates have paid relatively little attention to taxation.

5 S. Claessens, M. Keen, C. Pazarbasioglu: The Financial Sector Taxation, IMF, September 2010.

6 C.A.H. Goodhart: The New Emerging Architectures of Financial Regulation, 2010, mimeo.

7 A.H. Meltzer, S.F. Richard: A Rational Theory of the Size of Government, in: Journal of Political Economy, Vol. 89, 1981, No. 5, pp. 914-927.

A basic assumption of SRE taxation is that it is possible to evaluate the marginal systemic externality<sup>8</sup> of each financial firm. In the presence of a measurement bias, taxation results can be highly suboptimal. Regulation is less subject to a measurement problem. Rules can be more detailed and easier to implement than taxation. Soft information is easier to use in regulation than in taxation.<sup>9</sup>

Due to a measurement bias, regulation is more progressive than taxation. As a consequence, a majority of low-risk portfolio owners prefer regulation. The measurement bias may also explain why concrete proposals for financial taxation have thus far concerned taxes that are different from a proper SRE tax, e.g. levies on banks on an ex post basis that are based on funding, profits or banking bonuses.<sup>10</sup>

In general, financial activity taxation does not follow the SRE principle. There are, however, specific areas in which SRE principles have been applied, such as securities, currency, bank or real estate transactions, insurance premia and capital levies.

In the past decade, several G20 countries have imposed different forms of a financial transaction tax, although the current trend is toward a reduction in their application.<sup>11</sup>

Of course, taxation is not necessarily a substitute for regulation. In practice, regulation is the primary instrument to reduce systemic risk, while corrective taxation plays a complementary role.<sup>12</sup>

## Conclusion

The main point in this article is that when policies to reduce financial systemic risk are decided democratically, the political aspects of the decision are quite relevant and may cause significant distortions. These distortions are substantially different when taxation rather than regulation is under discussion.

We argue that regulation is more likely to be preferred to taxation in a direct democracy, in which citizens/voters are heterogeneous in their portfolio toxicity. One might

object that a lobbying model à la Stigler is possibly more appropriate to address politico-economic issues in financial markets. In this case, however, one would need to explain why banks would lobby for regulation rather than for taxation. Moreover, the idea that financial policies are specific interest policies is questionable. We rather think that any policy intervention in financial markets is in principle a general interest policy. Every citizen is a potential portfolio owner. Thus anyone could be affected by the private consequences of any policy measure that may affect, directly or indirectly, the relative cost of an alternative portfolio and the relative benefits of systemic risk reduction. In a sense, everybody is interested in reducing systemic risk; as a consequence of the selected policy measure, all investors would need to readjust their portfolios or bear a cost.

Taxation of the financial industry can also address goals that are different from externality reductions, such as the implementation of general taxation design<sup>13</sup>, ensuring that banks meet the direct financial costs of possible bailouts, the implementation of bankruptcy schemes<sup>14</sup> and developing macroeconomic policies to manage aggregate demand.<sup>15</sup>

If regulation is adopted, most costs and adjustments will be borne by producers of high levels of risk; if taxation is adopted, the sacrifices will be more evenly distributed across the population. Political distortions hinge on the distribution of sacrifices for the externality reduction. A majority of small portfolio owners with low risk production will tend to prefer regulation in order to concentrate the sacrifices on the producers of high levels of risk. Even a median voter whose portfolio pollutes above the average might prefer regulation, provided it has a sufficiently progressive effect on risk adjustments.

Therefore regulation may be highly inefficient. In particular, majorities tend to choose overly restrictive rules. For example, if the cost of complying with the rules grows at a fast rate, concentrating risk reduction on top risk producers is not socially optimal. However, a majority of the producers of low levels of risk will ignore this, resulting in the concrete risk of passing overly harsh regulation.

With a tax, the political distortion is quite different. Systemic risk is reduced by taxing distorted measures of risk, such as transactions, intermediaries' profits or their turnover. We argue that this is likely to yield a regressive

8 V. Acharya, L. Pedersen, T. Philippon, M. Richardson: Regulating Systemic Risk, in: V. Acharya, M. Richardson (eds.): *Restoring Financial Stability: How to Repair a Failed System*, Wiley 2009; T. Adrian, M. Brunnermeier: *CoVar*, Staff Report, Federal Reserve Bank of New York, No. 348, 2009.

9 S. Claessens et al., op. cit.

10 Ibid.

11 T. Matheson: *Taxing Financial Transactions: Issues and Evidence*, in: S. Claessens, M. Keen, C. Pazarbasioglu (eds.): *The Financial Sector Taxation*, IMF, September 2010.

12 S. Claessens et al., op. cit.

13 B. Lockwood: *How Should Financial Intermediation Services be Taxed?* Working Paper Series, Cesifo, No. 3226, 2010.

14 S. Claessens et al., op. cit.

15 J. Tobin: *A Proposal for International Monetary Reform*, in: *Eastern Economic Journal*, Vol. 4, 1978, No. 3-4, pp. 153-159.

effect: small risk producers would pay proportionally more than large risk producers. From a normative perspective, this regressive effect may be counterbalanced by a progressive transaction tax.

If a majority of small risk producers are obliged to adopt a flat rate tax, then a tax that is too low is more likely to be passed. This political economy argument is possibly helpful to understand why taxes on risky financial instruments are usually rare and low, whereas financial regulation is much more common.

An efficient European Tobin tax is rather unlikely to emerge if it is charged only on financial transactions. During the debate on the issue, huge political distortions can occur. And this is possibly what is happening in the current debate. We think that if a financial tax is aimed at curbing systemic risk rather than the number of financial transactions, a more precise measure of toxicity should be adopted as the taxation basis.<sup>16</sup> This would also contribute to reducing the distortion caused by the adoption of the law through the political process. With a more precise measure of toxicity, the political decision regarding the level of the tax would be more efficient.

<sup>16</sup> V. Acharya et al., op. cit.; T. Adrian et al., op. cit.

Ross P. Buckley

## A Financial Transaction Tax: The One Essential Reform

The Great Recession has sparked major regulatory reform in Europe and the USA. Yet most of the reforms have been attempts to improve the types of regulation that predated the recession. There are some exceptions to this, such as the Volcker rule in the USA and the measures to limit bank executive compensation in Europe. However, in broad terms the type of thinking that delivered the recession has lived on in devising responses to it.

Yet capital markets have changed fundamentally in the past two decades. The ratio of financial transactions to nominal world GDP in 2010 was about 70, compared to 15 in 1990.<sup>1</sup> This dramatic increase in financial market vol-

Of course there might be many other circumstances that explain the frequency and efficiency of certain policies. For example, taxes can be better calibrated to financial activity and produce more gradual externality reductions.

From a normative viewpoint, taxation is preferable when the contributions to system risk are more evenly distributed across all financial instruments and investors. Conversely, regulation is more effective when there are information concerns. If risk is produced through the use of private information, a rule that limits specific financial activities is more effective than a tax on those activities.

Financial risk externalities are clearly an international issue. In these circumstances, common decisions rely on the existence of institutions that ensure a sufficient degree of coordination among parties. Incentives and enforceability issues may severely limit the set of available policy options and distort common decisions.

Finally, as already mentioned, financial intermediaries may find that engaging in lobbying activities is profitable in order to distort the political process in a favourable direction. These are relevant aspects of policymaking with regard to systemic financial risk. They are not alternative but rather complementary to the points made here, and they may eventually suggest extensions of our approach.

umes was driven by derivative trading, as spot transactions of stocks, bonds and foreign exchange grew roughly in line with nominal world GDP.<sup>2</sup> Derivatives accounted for 88% of transactions in 2007.<sup>3</sup> Furthermore, an ever increasing proportion of market trades are short-term and

<sup>1</sup> S. Schulmeister: A General Financial Transactions Tax: Motives, Effects and Implementation, Summary of a Presentation at the Brussels Tax Forum 2011, 29 March 2011. The volume of financial transactions in Europe and the USA is closer to 100 times nominal GDP.

<sup>2</sup> S. Schulmeister: A General Financial Transactions Tax: A Short Cut of the Pros, the Cons and a Proposal, Austrian Institute of Economic Research Working Paper No. 344, October 2009, p. 5.

<sup>3</sup> Z. Darvas, J. von Weizsacker: Financial Transaction Tax: Small is Beautiful, in: Bruegel Policy Contribution, Feb. 2010, p. 5. See T. Canova: Financial Market Failure as a Crisis in the Rule of Law: From Market Fundamentalism to a New Keynesian Regulatory Model, in: Harvard Law & Policy Review, Vol. 3, No. 2, 2009, pp. 369, 388. See also, P. Farrell: Derivatives the New "Ticking Bomb": Buffett and Gross Warn: \$516 Trillion Bubble is a Disaster Waiting to Happen, Market Watch, 10 March 2008, available at <http://www.marketwatch.com/story/derivatives-are-the-new-ticking-time-bomb>.



technically driven. In 2009, algorithmic<sup>4</sup> or computer-driven trading accounted for at least 60% of equity market trading volume in the USA and 30-40% of European and Japanese equity trading.<sup>5</sup>

Many transactions involve “high-frequency trading” (HFT) aimed at exploiting minor price fluctuations.<sup>6</sup> HFT typically involves the generation of massive numbers of orders for very short periods (often less than a second), many of which are subsequently cancelled to mask the true intent of the trader.<sup>7</sup> Estimates of the proportion of trading classified as HFT vary but generally fall within the 50-75% range.<sup>8</sup> HFT is founded on an ability to transact rapidly. To enable faster processing speeds, market participants are now relocating their systems beside or within the buildings of the relevant exchanges. Co-location reduces latency, the time it takes for data to transact across electronic trading systems. French hedge funds moved their trading computers to London because the time it took electronic messages to travel from Paris was placing them at a disadvantage. Goldman Sachs moved its computers beside those of NASDAQ because each mil-

lisecond gained, by their calculations, added more than US \$100 million to company profits.<sup>9</sup>

So the financial markets have changed quite fundamentally, yet the measures we use to regulate them have not really changed at all.

The market patterns of high-frequency trading, computer-generated activity and short-termism are now well entrenched and will be difficult to change. Of the various ways available to seek to encourage this change, the best, in my view, is a financial transactions tax (FTT).

An FTT is a tiny impost of perhaps between 0.01% and 0.1% on all wholesale capital market transactions. It is advocated not primarily as a measure to raise funds, although of course it does do that, but as a measure to redress some of the fundamental, unhelpful changes in financial markets and to enhance the operation of such markets in accurately setting prices and thereby allocating resources.

An FTT specifically falls upon short-term speculative transactions. Its impact on longer-term transactions is minimal. For instance, a hedge fund buying US \$1,000,000 of stocks, holding them for eight seconds and then selling, would incur the same tax as an individual buying these stocks to hold long-term. At a rate of 0.05%, the tax either way is US \$500. This impost is unlikely to deter the longer term investor, while making the ultra-short-term trade, and much high-frequency trading, unprofitable.<sup>10</sup>

The ever faster trading we have witnessed in recent years tends to make exchange rates and stock and commodity prices less accurate, i.e. less close to that which would be dictated by economic fundamentals. This is because short-term price runs, fuelled by very rapid trading and strengthened by the impact of algorithmic trading programs, accumulate to long-term trends and distortions in prices. The resulting over-shooting of prices favours speculators over longer-term investors and thereby feeds into the ever higher levels of trading which we are seeing.<sup>11</sup>

The European Commission (EC) is seeking to implement an FTT in the EU by early 2018.<sup>12</sup> The tax will apply to

4 Algorithmic trading uses high-speed computer programs to generate, route and execute orders. The Australian Securities and Investments Commission defines algorithmic trading as “computer-generated trading activity where trading parameters are determined by strict adherence to a predetermined set of rules, aimed at delivering specific execution outcomes”. Australian Securities and Investments Commission, Market Assessment Report: ASX Group 23, Report 222, November 2010. See also Securities and Exchange Commission, Concept Release on Equity Market Structure 45, 17 CFR Part 242, 14 January 2010; Australian Securities and Investments Commission, Australian Equity Market Structure Proposals 21, Consultation Paper No. 145, November 2010.

5 T. Matheson: Taxing Financial Transactions: Issues and Evidence, International Monetary Fund Working Paper, WP/11/54, March 2011, p. 19. See also S. Kapoor: Re-Define, Financial Transaction Taxes: Tools for Progressive Taxation and Improving Market Behaviour, February 2010, p. 6, available at [http://www.oekosozial.at/uploads/tx\\_osfopage/ReDefine\\_FTTs\\_as\\_tools\\_for\\_progressive\\_taxation\\_and\\_improv....pdf](http://www.oekosozial.at/uploads/tx_osfopage/ReDefine_FTTs_as_tools_for_progressive_taxation_and_improv....pdf); S. Kapoor: Re-Define, The Financial Crisis – Causes and Cures, 2010, p. 96, available at [http://re-define.org/sites/default/files/Re-Define%20Book%20The%20Financial%20Crisis%20-%20Causes%20and%20Cures%20by%20Sony%20Kapoor\(1\).pdf](http://re-define.org/sites/default/files/Re-Define%20Book%20The%20Financial%20Crisis%20-%20Causes%20and%20Cures%20by%20Sony%20Kapoor(1).pdf). Kapoor highlights that a review of trading in Vodafone shares showed 90 trades and 72 changes to the price each minute of each day with most of this trading generated by automatic algorithms.

6 T. Matheson, op. cit. p. 19.

7 Some parties estimate the cancellation rate at more than 90%: J. Brigagliano, Co-Acting Director, Division of Trading and Markets US Securities and Exchange Commission (SEC), Address at the Trader Forum Fall Workshop, 8 October 2009, available at <http://www.sec.gov/news/speech/2009/spch100809jab.htm>.

8 Ibid. See also International Organization of Securities Commission (IOSCO): Regulator Issues Raised by the Impact of Technological Changes on Market Integrity and Efficiency Consultation, IOSCO Doc. CR02/11, July 2011, available at [www.securitiestechmonitor.com/news/iosco.php](http://www.securitiestechmonitor.com/news/iosco.php).

9 T. Williams: Oh dear! I'm Queued! It's Latency!, 29 October 2008, available at [http://www.mondovisione.com/exchanges/handbook-articles/oh-dear-im-queued-its-latency/#\\_ftn1](http://www.mondovisione.com/exchanges/handbook-articles/oh-dear-im-queued-its-latency/#_ftn1).

10 S. Schulmeister: A General Financial Transactions Tax: Motives..., op. cit. p. 1.

11 Ibid.

12 European Commission: Proposal for a Council Decision on the System of Own Resources of the European Union, 29 June 2011, p. 5.



shares and bonds and to derivatives of shares and bonds. The proposed tax rates are 0.1% on shares and bonds, and 0.01% on the derivatives of shares and bonds. The tax base applying to derivatives is the nominal value of the underlying assets. The proposed tax will be levied according to the fiscal residence of the seller of an asset (country of origin principle). The tax is expected to raise more than thirty billion euros by 2020<sup>13</sup> and up to fifty billion euros if currency transactions are included. The revenues from the tax are to go to the general EU budget.<sup>14</sup> The proposal requires ratification by all member states to become effective. A unanimous decision would have to be taken on the final form of the 2014-2020 EU budget by the Council after consulting the European Parliament. As the UK remains firmly opposed to the tax, it is only likely to be implemented across the twenty-seven EU countries after a long tussle among national governments, the EC and the European Parliament.<sup>15</sup> Civil society has played a major role in bringing the idea of an FTT to prominence, and its work in this regard is clearly very far from done.

Implementation of an FTT would satisfy multiple policy objectives. An appropriately structured FTT would improve market function and reduce systemic risks by dampening or discouraging ultra-short-term trading and the trading of derivatives and leveraged instruments. The tax could also meaningfully reduce sovereign debt levels and the associated risk that is so limiting at present to many developed nations, and it would ensure a fairer contribution from the financial industry to the public purse.

We need to reweight our markets in favour of longer-term investment and away from rewarding short-term speculation.<sup>16</sup> An FTT:

- is a credible measure to mitigate the entrenched culture of short-termism in markets;
- is likely to reduce levels of highly speculative trading;
- will result in a progressive incidence;

<sup>13</sup> Ibid.

<sup>14</sup> Ibid.

<sup>15</sup> Q. Peel, G. Wiesmann: Schauble Calls for EU Lead on Tobin Tax, in: Financial Times (online at ft.com), 31 October 2011; R. Preston: How Scary is a Financial Transaction Tax?, in: BBC News (online at bbc.co.uk), 10 October 2011. The German Finance Minister, Wolfgang Schäuble, has indicated that if agreement cannot be reached among the 27 eurozone countries, the EC will consider introducing it initially in some member states.

<sup>16</sup> The Aspen Institute: Overcoming short-termism: a call for a more responsible approach to investment and business management, 9 September 2009, available at <http://www.aspeninstitute.org/policy-work/business-society/corporate-programs/cvsg/public-policy>.

- could reduce opacity and excessive counterparty risk by imposing higher tax rates on OTC transactions and trading in specified complex derivative instruments.
- would assist policymakers and regulators to monitor market trends; and
- would enable more effective oversight of market trading and potential risks on a domestic and global basis.

In an ideal world, an FTT base should be as broad as possible to minimise avoidance issues and distortions across security classes and markets. The FTT should apply to all traded securities including equity, debt, currency and commodities. The taxed securities should include spot and derivative transactions through exchanges and over the counter. However, the tax should not apply to new security issuances or offerings of financial services provided by financial institutions to customers.

The tax should be implemented at a low rate initially, with an agreed review period of five years. The tax, in my view, should be a small impost of between 0.005% and 0.05%. Differential rates should be applied to instruments or asset classes to reflect the varying transaction costs and the extent to which the tax is intended to discourage trading in particular instruments or classes. The tax should be calculated on the notional values of the underlying security and should be adjusted for the term of the security.

The tax should be collected where possible by the relevant exchange or central clearing house. Its collection should be designed as a required part of the clearing process to minimise avoidance.<sup>17</sup> The cost of the tax should be shared between the buyer and seller.<sup>18</sup>

In an ideal world, the tax would be implemented across all jurisdictions. While the asymmetry of revenue across individual countries may be an issue<sup>19</sup>, the potential benefits of more stable, efficient and fair global markets and financial systems provide compelling reasons for the successful negotiation and implementation of this tax.

Much of the resistance to this tax is a testament not to its weaknesses as an appropriate policy response to the

<sup>17</sup> R. Pollin et al.: Securities Transaction Taxes for U.S. Financial Markets, in: Eastern Economic Journal, Vol. 29, No. 4, 2003, p. 542.

<sup>18</sup> See European Commission: Innovative financing at a global level, Commission staff working document, 1 April 2010, p. 19. The report indicates that collecting taxes through central clearing mechanisms is straightforward and cheap.

<sup>19</sup> S. Schulmeister: A General Financial Transactions Tax: A Short Cut..., op. cit. More than 97% of the EU spot and derivative transactions currently occur in the UK and Germany. Elsewhere a large portion of the trading occurs in the USA.

new world of globalised capital, but to the political power of the finance industry that has grown so large in the richer nations. When one analyses most of what has been written of late about the EU's proposed FTT, one finds it to be riddled with myths, inaccuracies and untruths. The seven most common myths are analysed below.

*Common Myth 1: James Tobin devised the FTT*

Forty years ago, the Nobel laureate James Tobin proposed a tax on currency transactions in an effort to improve the workings of the foreign exchange markets. An FTT is a much more broadly based tax than one just on currency and is thus far more difficult to transact around and avoid. In fact, an FTT was first proposed by Keynes in 1936 when he wrote, "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 US."<sup>20</sup>

*Common Myth 2: Tobin's idea is old hat – never implemented because impractical*

When Tobin proposed his idea, most trading was done on proprietary systems and implementation of the tax would have been difficult. However, there has been a revolution in settlement and clearing systems that has since seen a category of financial products typically traded on one of two or three massive competing clearing houses, so that the industry is today perfectly adapted to assess and collect this tax. This is why when, in August 2011, the IMF considered the administrative feasibility of levying an FTT, it concluded that an FTT "is no more difficult and, in some respects easier, to administer than other taxes".<sup>21</sup>

Yet, strangely, when I discuss the FTT with the media, the fact that Tobin proposed a related idea 40 years ago is often held against it. If this were a new idea it would receive a better hearing, but because it was first proposed almost 80 years ago and resurrected in a different guise 40 years ago, many commentators seem to see it as old hat. However, we live in radically different times. Computer-driven trading began less than 30 years ago. The short-termism of today's trading was unknown even 10 years ago.

It is now broadly accepted that Australia's and Canada's financial systems weathered the 2008 crisis so well because their banks had remained primarily service businesses whereas Europe's and America's banks suffered so much because "they had become the business".<sup>22</sup> The essential business of banking is intermediating capital to borrowers able to put it to good use. When the business of banking becomes speculating and trading, which viewed across the system is a zero-sum game, we are in a new world which calls for new regulatory responses. An idea that was good 80 and 40 years ago is even better, and more needed, today.

*Common Myth 3: This tax will mean the financial sector will shrink and the sky will fall in*

The tax will tend to mitigate the growth in the financial sector at the expense of other sectors of the economy. Bankers see this as a negative. Anyone else should be questioning the social usefulness of the growth of transactions that boost the relative and absolute size of the finance industry. Financial services have become such a significant part of the total economy in some countries that too many of the best-educated individuals in these countries may be trading paper assets rather than creating real wealth.<sup>23</sup> The Report of the Commission of Experts of the President of the United Nations General Assembly on Reforms of the International Monetary and Financial System highlights that the

measure of success of financial policy should not be the rate of growth or the size of the financial sector as a share of GDP. Indeed, an excessively large financial sector relative to the GDP of a medium to large economy should be a cause of concern to those interested in long-term economic growth because financial crises are often associated with unsustainable growth of the financial sector.<sup>24</sup>

20 J.M. Keynes: *The General Theory of Employment, Interest and Money*, New York 1936, p. 156.

21 J.D. Brondolo: *Taxing Financial Transactions: An Assessment of Administrative Feasibility*, IMF Working Paper No. 11/185, August 2011, p. 5.

22 P. Isaac: *Tobin Tax*, in *Chartered Accountants Journal*, November 2011, p. 55.

23 J. Stiglitz: *Using Tax Policy to Curb Speculative Short-Term Trading*, in: *Journal of Financial Services Research*, Vol. 3, No. 2-3, 1989, p. 109. See also L. Summers, V. Summers: *When Financial Markets Work Too Well: A Cautious Case for a Securities Transaction Tax*, in: *Journal of Financial Services Research*, Vol. 3, No. 2-3, 1989, p. 270; D. Baker: *The Benefits of a Financial Transaction Tax*, December 2008, available at <http://www.cepr.net/documents/publications/financial-transactions-tax-2008-12.pdf>; M. Blair: *Financial Innovation and the Distribution of Wealth and Income*, Vanderbilt University Law School, Working Paper No. 10-32, June 2010, p. 29; Financial Crisis Inquiry Commission: *The Financial Crisis Inquiry Report*, 2011, pp. 64-65, available at <http://www.gpo.gov/fdsys/pkg/GPO-FCIC/pdf/GPO-FCIC.pdf>.

24 Commission of Experts of the President of the UN General Assembly on Reform of the International Monetary and Financial System: *Report of the Commission*, 21 September 2009, p. 47.

*Common Myth 4: The EU cannot impose a tax alone as all trading will flee to untaxed jurisdictions*

This myth is wrong on two counts. Firstly, Hong Kong and London have both long had securities transactions taxes in place that are substantially larger than the scale proposed for an FTT, and securities are still traded in these centres. Secondly, to the extent the tax falls on currency transactions, all transactions in euros are cleared in Europe and are thus taxable there. It may well be that continental Europe will lack the political courage to impose a tax without London following suit, as there is a real risk of trading migrating across the Channel. However, the UK has a veto over new taxes at the EC level, so presumably it will be on board if the EC imposes a tax.

*Common Myth 5: This is just another cash-grab by Brussels*

When anyone says “tax” everyone thinks “revenue”, and of course, raising revenue is the primary purpose of most taxes. Yet raising revenue is not primarily why taxes are imposed on alcohol or tobacco. These are primarily imposed to enhance citizen’s health and reduce long-term medical costs. The revenue is a bonus. And so it is with this tax. Keynes and Tobin both proposed their taxes in response to markets that they saw would operate more efficiently and effectively if so taxed. Neither ever mentioned the revenue that would be raised. Their concern was the welfare-enhancing effects of better markets.

The EU is, of course, interested in the revenue. A quick glance at sovereign balance sheets in Europe shows how badly it is needed. However, today’s advocates are seeking the other benefits it offers. Lord Turner, Chairman of the United Kingdom’s Financial Services Agency, argues that the City of London has grown “beyond a reasonable size”. He describes much of the current market trading as “socially useless activity”<sup>25</sup> and suggests that “a bigger financial system is not necessarily a better one ... parts of the financial services industry have a unique ability to attract to themselves unnecessarily high returns and create instability which harms the rest of society.”<sup>26</sup>

*Common Myth 6: This is a tax on consumers and their retirement savings*

The British finance minister, George Osborne, claims that there “is not a single banker in this world that is go-

ing to pay this tax ... The people who will pay this tax are pensioners.”<sup>27</sup> Yet this statement is demonstrably false.

The claim that most of the burden of the tax will fall on pensioners assumes that pension fund managers are initiating most of the short-term trades. While global data on trading participants is limited, this is deeply improbable. Most short-term trades are initiated by hedge funds and the hedge-fund-like proprietary trading desks of the major banks. Accordingly, this tax will impact the profits of hedge funds and many of the major banks – its impact on retirees will be many orders of magnitude less. Indeed, to the extent that pension managers are involved in consistently high levels of short-term derivative trading, one might well question whether this is a sound investment policy and in the interests of their members. Pensioners are ultimately more likely to derive a net benefit from an FTT that encourages a longer-term investment horizon and more stable and efficient markets.

*Common Myth 7: This tax will dry up the supply of capital*

The argument that an FTT will be an additional burden on banks and reduce the banks’ proclivity to lend is industry-generated spin. The tax would apply to secondary trading of securities and not to mortgages, bank loans or primary capital issues.

The EC is right to be pushing for the imposition of an FTT within Europe by 2018. The tax is relatively simple to implement and, provided it remains very broadly based, it is difficult to avoid. The tax will tend to reward longer-term investments over ultra-short-term trades and thus nudge markets towards better fulfilling their traditional roles and away from serving as financial casinos. The end result will be markets that more accurately price assets and thus better allocate resources, while also facilitating a more appropriate contribution by financial firms to the societies from which they derive their profits.

The best words with which to conclude come from a 2011 letter to the G20 from 1000 economists: “The financial crisis has shown us the dangers of unregulated finance, and the link between the financial sector and society has been broken ... It is time to fix this link and for the financial sector to give something back to society ... this tax is technically feasible. It is morally right.”<sup>28</sup>

25 A. Monaghan: Tax “Socially Useless” Banks, Says FSA Chief Lord Turner, in: The Telegraph, 27 August 2009.

26 A. Turner: Address at the City Banquet, The Mansion House, London, 22 September 2009.

27 R. Kovacheva: Pros and Cons of a European Tax on Financial Sector, in: euinside.eu, 11 November 2011, available at <http://www.euinside.eu/en/news/pros-and-cons-a-european-financial-transaction-tax>.

28 The letter is available at <http://www.guardian.co.uk/business/2011/apr/13/robin-hood-tax-economists-letter>.