



# The Tobin tax: Reason or treason?

## A Comparative Study of the Potential Effects of a UK Tobin Tax

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### Executive Summary

1. FX turnover in the City of London reached over \$1.8 trillion every day in 2010, accounting for 36.7% of the global total. The City is vital to Britain's economic interests.
2. A Tobin tax is a proportional tax on all spot conversions from one currency into another. There are now calls for a Tobin tax to be introduced into Britain.
3. A sole implementation of a Tobin tax by the UK would be economic suicide. Almost 60% of trading volume of the 11 most actively traded Swedish shares migrated to London during Sweden's attempted Tobin tax. The temptation, and indeed relative ease, with which capital flight and cross-border arbitrage can occur would spell disaster for the UK.
4. Sweden is the only country to have tried a "pure" Tobin tax, of 0.5%. It raised only one thirtieth of the proceeds predicted by its proponents and was scrapped after five years. The taxes sparked an exodus of financial activity from Sweden. By 1990 60% of the trading volume for the top 11 most traded Swedish stocks had moved to London. Trading for over 50% of Swedish equities had moved to London by 1990.
5. There is a consistent lack of evidence that transaction taxes increase market stability. The UK's experience with stamp duty suggests that the opposite is true. Numerous studies found a significant reduction in equity turnover following the stamp duty introduction, with a significant (-3.3%) fall in the FTSE All Share Index returns witnessed in the 1% rate rise in 1974.
6. A cross-study, consistent, empirically convincing causal link, either statistical or econometric, has yet to be found between an increase in transaction costs and a reduction in volatility. In both equity and foreign exchange markets, a large number of empirical studies reveal a positive relationship between increasing transaction costs and higher levels of volatility.
7. This is usually accompanied by significant declines in turnover, stock prices and a migration of trading activity. A Tobin tax could drive a significant proportion of the financial sector out of Britain.
8. *The worst cases of speculation usually cited by Tobin tax advocates occur in emerging markets. However a Tobin tax would provide little deterrence to investors in these markets, where often short-term movements of 2% – 5% are expected. In the worst cases of currency crises and manias (i.e. where investors expect short-term devaluations of over, say, 10%) a Tobin tax would be an almost irrelevant deterrence to speculators.*
9. The claim by supporters of a "Robin Hood Tax" that £20 billion annually can be removed from the UK financial sector without causing significant disruption is ill-informed and reckless. This recklessness is augmented by the fact that we are emerging from one of the most accentuated cycles of boom and bust to date.
10. Employment in the UK financial services sector stands at over 1 million; 4% of the UK total. A Tobin-style tax would result in job losses both within the financial sector and also within supporting industries through employment spillover effects.

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## Introduction

### The UK FX Market

London is the world's leading centre for foreign exchange trading. In 2010, foreign exchange turnover in the UK reached over \$1.8 trillion daily, accounting for 36.7% of the global total. Strong relationships with hedge funds, prime brokerage and the capital markets result in twice as many US dollars being traded on the UK foreign exchange market than in the US itself, and more than twice as many Euros being traded in London than in the whole of the Euro-areas combined. Approximately half of European investment banking activity is conducted through London, with over 80% of Europe's Hedge fund assets being managed in London.

Quite simply, the City matters.

### TT Theory

A Tobin tax is a proportional tax on all spot conversions from one currency into another. By placing a small, proportional tax on foreign exchange transactions, advocates argue that short-term transactions are discouraged in favour of longer-term transactions; providing a reduction in market speculation and enabling a sounder management of exchange-rate volatility.

Prompted by the 1971 collapse of the Bretton Woods system, Nobel Laureate James Tobin outlined his proposals. Having outlined the problems with exchange-rate volatility, Tobin gave two recommendations; either a single global currency or a move towards greater financial segregation between currency areas. Conceding the former approach as unrealistic, Tobin developed the latter, as an attempt to "throw some sand in the wheels of our excessively efficient international money markets".<sup>1</sup> Hence, the Tobin tax was born.

Tobin outlined that a unilaterally agreed approach would be required, administered locally by national government. The location of the transaction would define the jurisdiction, irrespective of the currencies involved. Tobin believed that the tax should apply to all purchases of foreign instruments denominated in another currency in order to prevent avoidance. Note that the tax applies to the specific activity, and not the institution *per se*.

### Recent Political Movements

The Tobin tax is not a new idea, but over the last ten years it has begun to creep into public policy discourse.

In 1999, Canada became the first G20 country to formally consent to a Tobin tax. In 2001, a Tobin tax amendment was adopted by the French National Assembly. In 2004, an approval by the Belgian Federal Parliament of the 'Spahn Tax' paved the way for an approval of the Tobin tax, on the condition that other Eurozone members acted accordingly.

The 2008 financial crisis has yielded yet another resurgence in public opinion towards a Tobin-style tax, particularly within the Eurozone. Separately throughout 2009, Nicolas Sarkozy, Gordon Brown and Herman Van Rompuy lent their support for a Tobin-style tax. On the 8<sup>th</sup> March 2011, MEP's voted (non-binding) in favour of introducing a Tobin-style tax on financial transactions.

In particular, the idea has become the *cause célèbre* of the 'Robin Hood Campaign'; a UK movement composed of "charities, green groups, trade unions, celebrities, religious leaders and politicians".

*"The big idea behind the Robin Hood Tax is to generate billions of pounds – hopefully even hundreds of billions of pounds.... And it will come from fairer taxation of the financial sector.... For the 200 million people around the world forced into poverty by a financial crisis they did absolutely nothing to bring about...The banks can afford it. The systems are in place to collect it. It won't affect ordinary members of the public, their bank accounts or their savings. It's fair, it's timely, and it's possible".<sup>2</sup>*

Can it really be that simple? The political motivations driving the debate are unmistakable; a vote-winning taxation in the wake of the 2008 crisis of the financial sector as a symbolic redistribution of wealth from the rich to the poor.

## Empirical experience with Tobin taxes

### Sweden's Experience with the Tobin tax

The rise and fall of the only case of a "pure" Tobin tax began in Sweden, when a 0.5% tax on the purchase of all equity securities (and stock options) was introduced on 1<sup>st</sup> January 1984. The tax applied to both domestic and foreign customers, and was levied directly on registered Swedish brokerage services. Until 1987, inter-broker trades were considered intermediate (and hence exempt). 'Round trip' taxation effectively made the net taxation 1%,

1 Tobin (1978).

2 [www.robinhoodtax.org](http://www.robinhoodtax.org)

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or 100 basis points. This was doubled in 1986, and later to include fixed income. Furthermore, a tax on stock options of 2% was introduced (1% relating to the premium, 1% upon exercise).

Understandably, investors devalued their assets to reflect the present value of future tax payments on the marginal share. The 2.2% average decrease in share prices on the announcement day added to the -5.35% index return over the 30 day period including the announcement. A further 1% share price reduction was seen in 1988 in reaction to the rate doubling. Numerous studies find a statistically significant increase in the daily variance of returns during this period. Naturally, the market reacted by demanding an increase in the cost of government borrowing, as higher returns were sought in return for holding increasingly taxed securities. Furthermore, spillover effects disturbed the Swedish market for corporate expansion, employment (both financial sector and the broader economy) and also capital raising activities.<sup>3</sup>

### Tax outcomes

Tax revenue generation was far from impressive. Despite estimates that the fixed income security tax would generate 1.5bn kroner per year (approximately £330 million in 2010 figures), average revenues of 50 million kroner per year were recognised (approximately £11 million in 2010 figures). Even in its 'finest' year, a mere 80 million kroner was generated from fixed income taxes (approximately £17 million in 2010 figures). This represents a thirtyfold overestimate of the actual revenue gathered. Decreasing trading volumes led to secondary effects such as a reduction in capital gains taxes, almost entirely netting the (exceptionally low) tax revenue being generated.<sup>4</sup>

### The Swedish effect: trading volume

The taxes sparked an exodus of financial activity from Sweden. Capital flight was ubiquitous. Put simply, whilst the tax presented foreign investors with a huge disincentive to partake in Sweden's financial activities, many domestic investors either took their business abroad, or switched to non-taxed instruments such as forward-rate agreements and swaps. Despite the tax being higher on equities, it was the fixed income market that suffered most. Despite the 'low' 0.003% tax levied on 5-year bonds, trading volumes dropped by 85% alone in the first week after

implementation. Futures trading fell by 98%, and the options market was virtually non-existent. At the time of the 1986 rate rise, 60% of the trading volume for the top 11 most traded Swedish stocks had moved to London. Trading for over 50% of Swedish equities had moved to London by 1990.<sup>5</sup>

### Stamp duty in the UK

The 1963 introduction of the securities transaction tax into the UK provides an alternative, albeit less obvious, comparison of the effects that increasing transaction costs can have on market volatility. Despite preceding the birth of the Tobin tax, its nature, combined with the distinct rate changes throughout its life, allow for clear testing of its effects on market volatility, turnover and returns.

Initially introduced at 2% (subsequently fluctuating between 1% and 2%), the tax was gradually reduced to its current level of 0.5%, acting as a tax on any purchase of shares of UK companies. Unlike the Swedish approach, Stamp Duty is a global tax on ownership transfer of companies incorporated in the UK, independent of investor nationality or transaction location. Numerous studies found a significant reduction in equity turnover, with a significant (-3.3%) fall in the FTSE All Share Index returns witnessed in the 1% rate rise in 1974.<sup>6</sup>

Whilst the heterogeneity of financial markets admittedly makes it hard to assess the impacts that a Tobin-style tax might have specifically on the UK market *per se*, a consistent lack of supporting evidence in both theoretical simulations and in 'real world' settings for the stabilising effects of a Tobin tax is evident. The mean outcome of studies thus far remains inconclusive.

As a result, numerous Tobin tax advocates are left relying upon indirect evidence in an attempt to show how a Tobin tax can 'stabilise' markets. Many (wrongly) believe a reduction in trading volumes to be associated with a reduction in price volatility, and hence several claims of the 'stabilising effect of a Tobin tax' are instead made in reference to this. Particularly common in the political arena, this manipulation of evidence provides, at best, only a weak, indirect link between financial transaction taxes and volatility, based upon misguided assumptions and displaying little regard for the intermediary causations.

3 Umlauf (1993)

4 Umlauf (1993)

5 Umlauf (1993)

6 The City UK

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## Financial impact of a Tobin tax

### Volatility

Currency markets thrive on volatility. Foreign exchange market liquidity has been largely uninterrupted during the recent economic downturn, generating a steady source of profit for our banks in difficult times. Faced with increasing risk and uncertainty in many other markets, investors increasingly turned to currencies as a liquid market within which to invest.

Whilst currency speculation is not the only factor in the development of a currency's value, perhaps the single largest economical advantage put forward in favour of the Tobin tax is a reduction of foreign-exchange market volatility. The effects of a Tobin tax on market volatility have long been disputed.

### Theoretical Simulations

An aggregation of the theoretical simulations performed on taxes on financial transactions show their effects to be much less straightforward than the theory suggests, with no consistent, clear, convincing case emerging either for or against a reduction in volatility. Whilst some studies suggest a tax on foreign-exchange transactions to reduce volatility, some conclude the opposite. Aggregated, the results stand as inconclusive.

Even 'Heterogenous Agent Models' (HAMs) which seek to more closely mimic the irrationalities, excess liquidity, fat tailed distributions and volatility clustering of financial markets, provide largely inconclusive results when aggregated. Similar inconclusiveness exists under Zero Intelligence Models (ZIMs).<sup>8</sup>

### Empirical evidence

However appealing a tax on financial transactions might seem in theory, the practical experience with financial transaction taxes is far from encouraging. As a Tobin tax has yet to be imposed on the UK market, no pure, direct empirical studies exist for the UK, however an aggregation of the floating empirical evidence provided by those nations who have experimented with increasing financial transaction costs offers, again, no clear support for market volatility reduction.

*A cross-study, consistent, empirically convincing causal link, either statistical or econometric, has yet to be found between an increase in transaction costs and a reduction*

*in volatility.* In fact, in both equity and foreign exchange markets, a large number of empirical studies reveal a positive relationship between increasing transaction costs and higher levels of volatility. This is usually accompanied by significant declines in turnover, stock prices and a migration of trading activity. Empirical studies of tick size changes give the same results.

### Defining volatility

A further, more contentious consideration when dealing with Tobin tax evidence is the definitional consideration of the term 'volatility'. Defining and measuring volatility has long been disputed, naturally allowing for selective, customised procedures to be employed to best suit the stance taken. Studies based on tick size effects treat volatility as the standard deviation of the midprice return, not allowing for robust cross-tick size regime volatility comparisons. Coincidentally perhaps, since the introduction of the Tobin tax into mainstream debate a separate bespoke conceptual understanding of the term 'volatility' has emerged. Rejecting the more traditional definitions of 'volatility', many recent Tobin tax advocates have evolved to define volatility not in its traditional sense, but as a longer-term excesses of speculative prices.

### Liquidity

The Tobin tax contains retrospective reasoning. It was synthesised during a time of great upheaval in the global currency markets, where fiscal government policies played the lead role, not speculation. Since the September 1992 suspension of the UK's membership of the ERM, the floating exchange rate system adopted by the UK has served to dampen down many of the problems that the Tobin tax was created to address. The relative fluidity of the financial environment within which the UK operates today should seek to pacify concerns associated with the fixed exchange rate systems influential in the Tobin tax's conception.

Liquidity is possibly the most important determinant of market quality. *Would the introduction of a Tobin-style tax provide similar liquidity-reducing effects as an increase in spreads?*

*All market participants would be subject to the tax; a Tobin tax is unable to discriminate between de-stabilising trades and those which provide liquidity, information and trade-financing. With short-term trading providing invaluable liquidity to the market, an incapability to segregate individual*

8 Kaiser *et al* (2007)

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trader motivations will therefore lead to a reduction in both liquidity and welfare-enhancing trade, in addition to increasing market susceptibility to individual shocks.

### **Would the levels of market mispricing fostered by a Tobin tax serve to augment the market cycle?**

British economist Tim Harford uses a basic analogy to illustrate this. Imagine the current UK ATM system. At present, no charge or limit is made for withdrawals, and hence users are free to use ATMs as many times as they like, to withdraw whatever amount they wish, for no fee.

Now imagine what would happen if an ATM transaction fee was introduced. The frequency of transactions would decline, and the withdrawal amounts would increase. Instead of withdrawing, say, £10 each day, users would withdraw their whole week's estimated spend once a week. Such irregular, larger payments would increase the fluctuations of the cash reserves within both the ATM and the wallets of the users; reducing liquidity and increasing market fluctuations.

Whilst basic, Harford's analogy demonstrates how an increase in transaction costs could provide a discouragement of the short-term management of risk-exposure, adversely affecting market liquidity. In thinner markets, each trade would have a larger impact on price; resulting in less fluidity within the currency inventories of broker-dealers, the 'liquidity providers' of the market. Interestingly, Harford encourages us to "bear in mind, too, that the most bubble-prone asset market is for housing, which is bought in very lumpy, long-term chunks".<sup>9</sup>

Even if we assumed that a Tobin tax *would* reduce market volatility – *to what levels would it have to be to be worthwhile?* The worst cases of speculation usually cited by Tobin tax advocates occur in emerging markets. However a Tobin tax would provide little deterrence to investors in these markets, where often short-term movements of 2% – 5% are expected. In the worst cases of currency crises and manias (i.e. where investors expect short-term devaluations of over, say, 10%) a Tobin tax would be an almost irrelevant deterrence to speculators.

### **What would a "Robin Hood Tax" mean for Britain?**

Whilst Tobin's original intentions were for the resulting tax revenue to be used as aid for developing countries, contemporary public thought has shifted the emphasis

towards providing insurance for the global taxpayer against future banking crises and to kickstart economies. This is a laudible goal, but there is a sad lack of evidence to support this claim.

Whilst the Tobin tax's roots lie in economic theory, its current appeal is evidently political. The Robin Hood imagery drives the tax's public support. It is its 'stealing from the rich to give to the poor' appeal that attracts many of its advocates, not the belief in its realistic economic capability. Understandably, some people are more-easily influenced by a well publicised, celebrity-endorsed Robin Hood Tax marketing campaign than by econometrical analysis or time series data.

But viewing the tax as a good way to raise revenue, or the 'just' thing to do, unfortunately misses the point of the tax entirely. James Tobin himself renounced such motivations. Praying on people's emotions has no place in formulating the national UK economic strategy.

"A tiny tax on the financial sector can generate £20 billion annually in the UK alone."  
([www.robinhoodtax.org](http://www.robinhoodtax.org))

*But what is meant by 'tiny'?* Sweden's 0.003% tax on 5-year bonds caused trading volumes to decrease by 85% in one week alone. The claim that £20 billion annually can be removed from the UK financial sector without causing significant disruption is both ill-advised and reckless. This recklessness is augmented by the fact that we are emerging from one of the most accentuated cycles of boom and bust to date.

### **Employment**

The multiplier effect stands as one of the more sinister implications of the Tobin tax, partly due to its difficulty to predict. Employment in the UK financial services sector stands at over 1 million; 4% of the UK total. A Tobin-style tax would result in job losses both within the financial sector and also within supporting industries through employment spillover effects.

Emotions aside, we mustn't lose sight of the crucial importance to the UK that the financial sector provides. Rightly or wrongly, the reliance of the UK economy on the health of the financial sector has been crudely illustrated

9 *Financial Times* (T.Harwood).

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in the recent financial crisis; it is impossible to shield the broader economy from the performance of the City. The tax revenue generated from the UK financial services sector in 2009/10 was £53.4bn, representing 11% of total UK government tax receipts. Furthermore, in 2009 financial and business services generated trade surpluses of £40bn and £14.3bn respectively. Financial services accounted for 28% of the UK's total exports of services, with banks standing as the largest single contributor.<sup>10</sup>

### Misjudged assumptions

The underlying assumption of the Tobin tax is that short term trades are likely to be more destabilising than long term trades. *But why is speculation viewed as so inherently wicked? Does exchange-rate volatility have to be managed? Why does short-term lending have to be dissuaded at all?*

Trading should be viewed as the 'oil' in the engine of the UK market, with the 'invisible hand' guiding it towards efficiency, liquidity and asset-price discovery. The Efficient Market Hypothesis argues that prices tend to reflect fundamental values. *Does speculation occur only at times of market inefficiencies, with rational arbitrage existing solely to exploit profit opportunities?* If we see a market price as warranted by economic fundamentals, then speculation clearly becomes an effective market clearing mechanism; pulling prices to fundamental values, stabilising prices and performing an important risk transferring function.

### Technical barriers to a Tobin tax

Even setting aside the immense economic damage that a Tobin tax would do to the British economy and jobs market, there would be significant technical barriers to implementing the tax. The sheer technical infeasibility of introducing a Tobin tax undermines the case even further. Whilst Tobin himself outlined the implementational difficulties, developments within modern finance since the 1970s merely augment any initial apprehensions. As high-frequency trading platforms move towards executing trades in 'picoseconds' (one trillionth of a second), both the breadth and depth of the UK market and the complexities within which our modern financial markets operate makes any potential implementation seem difficult to fathom.

Furthermore, *what do we even mean by a 'financial transaction'?* A tax on, say, options, futures and FX spot transactions within the UK could have a very different outcome if extended to include all derivatives, and say, fixed income. Sweden provides the case for this.

Logistically, *at what point should the tax be collected?* Despite the vast complexities of financial products, most trades ultimately end with a currency spot conversion, and hence Tobin tax proponents admit that the most feasible method of tax collection should be at the place of settlement (e.g. continuous linked settlement). This seems reasonable until we consider the vast proportion of inter-

#### Friedman on Speculation

*"The empirical generalization about the prevalence of destabilizing speculation, which is what gives the theoretical proposition its interest, seems to be one of those propositions that has gained currency the way a rumor does— each man believes it because the next man does, and despite the absence of any substantial body of well documented evidence for it."*

*(The Optimum Quantity of Money. Milton Friedman. Chapt 13, p285).*

Friedman argued that the existing market price is warranted by economic fundamentals. If agents are making money, speculation therefore must be stabilising. Anticipating the rising price of an asset class, agents will buy today. If correct, these agents make a profit and hence the price change is smoothed by the higher demand today; dampening market price fluctuations. Conversely, agents who make bad speculators cannot long endure in that these agents would price themselves out of the market, and hence disappear in the long run.

Rational speculation therefore provides the market with a stabilizing influence irrespective of the time horizon; pulling prices to fundamental values and performing an important function of transferring risk and providing a market for hedging.

<sup>10</sup> The City UK.

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dealer currency trading in the UK (currently representing approximately 40% of total market volume), with many of the trades being extremely short-term in nature. Forming an integral part of market design, the majority of these trades will bypass the tax entirely.

At present, too many logistical issues remain unanswered. *The implementational parameters need to be firmly set for any progression of discussion.*

## Conclusion

Finance is one of the most innovative industries operating today, with the UK being no exception. Capital flight is becoming increasingly easy, not least in the financial services industries (where product homogeneity exists throughout exchange traded products and throughout many asset classes). *Will cross-border arbitrage with non-consenting jurisdictions be minimal?*

Whilst more heterogeneity can exist for complex, OTC securities, the homogeneity of exchange-traded products, and indeed the financial services industry as a whole results in a highly competitive, global industry. In the long run, will companies continue to list in London, when transaction costs and the regulatory burden are considerably lower in, say, Hong Kong? Multilateral implementation is therefore by far the largest pre-requisite for any discussion of a Tobin tax to progress.

A sole implementation of a Tobin tax by the UK would be tantamount to economic suicide. Almost 60% of trading volume of the 11 most actively traded Swedish shares migrated to London during Sweden's attempted Tobin tax. The temptation, and indeed relative ease, with which capital flight and cross-border arbitrage can occur would spell disaster for the UK.

Undoubtedly, anything less than a globally unified, multilateral implementation and strict enforcement by every world nation would force traders to shift their activity to jurisdictions with lower taxes and a lighter regulatory burden; destabilizing markets and hence marking the failure of the tax. The UK, let alone the world, is not ready for this.

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