

# IDS IN FOCUS POLICY BRIEFING

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## Is a Financial Transaction Tax a Good Idea? A Review of the Evidence

The Institute of Development Studies has undertaken a comprehensive review of the feasibility of financial transaction taxes (FTTs). We find that, worldwide, a financial transaction tax on foreign exchange transactions could raise US\$26 billion. In the UK alone it could raise US\$11 billion (£7.7 billion), roughly the same as the entire UK aid budget. Such a tax would be most effective if implemented by the key financial centres around the world, but a currency transaction tax could be implemented by individual countries. However, an FTT is unlikely to reduce market volatility as claimed by some campaigners. We recommend that the UK Government designs and implements an FTT on sterling transactions and explores the possibility of coordinating the introduction of similar FTTs with the governments of other major financial centres on their own currencies.



Mark Chilvers/Panos

The dealing floor of the London International Petroleum Exchange, which deals in futures and options for oil and gas.

In 1978, the Nobel Prize Laureate in Economics James Tobin proposed to 'throw some sand in the wheels of our excessively efficient international money markets', by levying a small tax on all foreign exchange transactions in order to penalise short-term speculators but not long-term investors. The idea was that discouraging speculative behaviour would stabilise markets. Ever since, the issue of the 'Tobin Tax' (and other similar FTTs) has generated emotive debate. On the one hand, many economists share an instinctive dislike for taxing transactions and most working in the financial sector regard it as unworkable or naïve. On the other hand, campaigning groups, such as The Robin Hood Tax campaign, many politicians and some economists propose FTTs in reaction to major financial crises.

### Policy implications snapshot

The UK Government should:

- Design and implement a currency transaction tax on sterling.
- Monitor the implementation of this new tax.
- Coordinate with policy makers in other financial centres with a view to encouraging a similar tax in the Euro zone and in the US.
- Study the feasibility of a broader FTT to include derivative and Over-The-Counter (OTC) markets, in coordination with other major financial centres.

# Is a Financial Transaction Tax a Good Idea? A Review of the Evidence

“ Worldwide, an FTT on foreign exchange transactions could raise US\$26 billion – in the UK alone it could raise US\$11 billion, roughly the same as the entire UK aid budget. ”

## Key Findings

### (1) What is the impact of FTTs on volatility?

#### Summary

*Although theoretical models suggest that FTTs reduce volatility, most empirical evidence shows that higher transaction costs are actually associated with more, rather than less, volatility.*

Would an FTT dampen volatility in financial markets or would it squeeze out liquidity, potentially making volatility worse? There are two approaches to this question. Firstly, there is an extensive theoretical literature examining whether such taxes would stabilise markets, along with simulations showing how market participants might react to the imposition of such a tax. Secondly, there is empirical work examining the actual impact on markets when similar taxes have been imposed in various countries.

#### Theoretical models

Over the last 20 years, a new generation of theoretical models has looked at the ‘microstructure’ of financial markets to try and explain the behaviour of real financial markets. These models typically assume that market actors apply rules of thumb when making decisions to buy or sell.

A distinction is usually drawn between ‘fundamentalist’ traders (that is, those that trade based on a view about the fundamental value of the assets) and ‘noise’ traders (speculators). The volatility of the market is therefore driven by what share of market traders are noise traders (who increase volatility) and what share are fundamentalists (who reduce it). In such models, an FTT will have an effect on volatility if the imposition of the tax changes the share of noise traders in the market.

Generally speaking, theoretical models find that an FTT should reduce volatility by

reducing the number of noise traders. But many models also suggest that care should be taken in choosing the size of the tax. If it is too large, the reductions in market trading and liquidity could result in an increase, rather than a decrease, in volatility.

#### Empirical evidence

Real financial markets do not necessarily behave the way that theoretical models predict. Most of the studies examining the link between transaction costs and volatility find a positive relationship between the two – that is, higher transaction costs are associated with more, rather than less, volatility. For example, an analysis produced in 2002 of stocks moving from the NASDAQ stock market to the New York Stock Exchange (NYSE) found strong evidence that the newly NYSE listed stocks reduce both trading costs and the volatility of daily returns. Similarly, a study of French stocks found that a 20 per cent increase in transaction costs generated an increase in volatility of about 30 per cent.

Studies of foreign exchange markets also suggest that higher transaction costs are associated with greater volatility. For example, Aliber et al. (2003) look at transaction costs, volatility and trading volume in foreign exchange markets. They find that an increase of 0.02 per cent in transaction costs leads to an increase of volatility of 0.5 percentage points.

Turning to the few studies of actual transaction taxes, we find a similar story. Sweden introduced a 1 per cent round trip tax on equity transactions in 1984, which was increased to 2 per cent in 1986. Umlauf (1993) compares the performance of the Swedish stock market under the no tax, 1 per cent and 2 per cent tax regimes. He concludes that the imposition and increase of the transaction tax increased

volatility. He also notes that there was huge market diversion from the Swedish towards the London stock market as a result of the tax. On the other hand, in 1997 it was found that the imposition of UK Stamp Duty had no significant effect on the volatility of equity prices in the UK.

### (2) Is an FTT feasible?

#### Summary

*We find that due to changes in the way transactions are settled it is now much easier for countries to unilaterally introduce certain forms of FTTs, such as a currency transaction tax.*

Many of the arguments against the introduction of FTTs are related to the ability to implement such taxes effectively. There are three core implementation concerns: substitution, tax rate and migration.

#### Substitution – the potential for market actors to shift away from taxed financial instruments to untaxed instruments

To address the problem of substitution, most supporters of FTTs have argued that the tax should cover a broad range of financial instruments, including spot (immediate transaction), forward (transaction in a few days) and swap (combined spot and forward) transactions. There is less agreement in the literature about whether futures and options should, or even could, be taxed. Similarly, there is a debate about whether it would be feasible to include transactions in the OTC market (i.e. not on exchanges), with concerns that an FTT might reduce transparency by pushing transactions off exchanges.

#### Tax rate – different rates may be appropriate for different instruments

To avoid major distortions it is generally agreed that the tax rate would have to be a

Market	World (US\$bn)	UK (US\$bn)	Tax rate (10% of transaction cost)	Elasticity of volume with respect to transaction costs	Total annual revenues world (US\$bn)	Total annual revenues UK (US\$bn)
Equity	456	18.24	0.116	0.58	100	4.0
Derivative	4933	1335	0.004	1.5	33	8.9
Foreign Exchange	2914	1269	0.005	0.606	26	11.1
OTC	2544	1094	0.076	1.5	336	144.3
<b>Without OTC</b>					<b>159</b>	<b>24.1</b>
<b>With OTC</b>					<b>495</b>	<b>168.4</b>

Notes: It is assumed that the volume of trade is reduced by 20 per cent due to avoidance, and by a further amount due to the tax itself. The latter is based on estimates of the reduction in trading volume resulting from the tax drawn from the literature.

small percentage of the size of existing transaction costs in financial markets. However, the size of transaction costs varies enormously across markets suggesting that there would have to be a range of different tax rates in different markets.

#### Migration – the ability of market actors to shift their activities to untaxed locations

Unilateral introduction of a tax on foreign exchange transactions has been made easier in recent years due to a strong shift towards centralisation, formalisation and regulation of settlement sites. The Continuous Linked Settlement (CLS) Bank, launched in 2002, now settles more than half of all foreign exchange transactions, with the remainder processed through national Real Time Gross Settlements systems. Both of these systems allow a one-to-one correspondence between foreign exchange payments and their originating trades. Moreover, the messaging and netting system, SWIFT, is more or less universally adopted so that central banks can enforce the tax on offshore netting systems and on derivatives. As a result, it is now much easier for countries to unilaterally implement an FTT at the settlement sites, because they are formal, organised and centralised.

#### (3) How much money would an FTT collect?

##### Summary

*We find that applying a 0.005 per cent tax to the foreign exchange market alone might raise around US\$26 billion per year (£17.6 billion) worldwide. The revenue potential for the UK would be around US\$11 billion (£7.7 billion). Applying an FTT to other markets, e.g. derivatives and OTC markets, is more difficult, but, if successful, could raise much larger sums.*

IDS has reviewed the models typically used to calculate the revenue that an FTT would collect. It depends on three key factors: which markets are taxed (equity, foreign exchange, derivatives, OTC); the rate of taxation; and the reduction in trade caused both by the tax and by avoidance.

The table above shows the estimates of the revenue that would be collected for each of the markets, based upon a tax rate equal to 10 per cent of the existing transaction costs in that market.

We find that applying a 0.005 per cent tax to the foreign exchange market alone might raise around US\$26 billion per year worldwide. Including the other markets, the revenue raised could reach over US\$150 billion, even if the OTC market is excluded, and well over US\$400 billion if it is included. These are large sums, especially compared with the US\$121 billion estimated aid from wealthy countries to poor countries in 2008. The revenue potential for the UK is also significant – around US\$11 billion (£7.7 billion) from a 0.005 per cent tax applied only to the foreign exchange market. This is roughly the same as the entire UK international aid budget.

Like all revenue estimates in this area, these results should be treated with considerable caution. Although implementing the tax on foreign exchange transactions is clearly feasible, the application of the tax to derivative and OTC markets would be much more difficult. At the same time, the existing evidence does support the view that a relatively small FTT could yield relatively large sums of revenue.

#### (4) Who would end up paying the tax?

##### Summary

**There is general agreement that wholesale traders would bear the initial cost of the tax. In the long run, a significant proportion of the tax could end up being passed on to consumers.**

One of the most prominent claims made by proponents of FTTs, is that the tax would be extremely progressive, primarily affecting wealthy institutions and individuals. By the same token, opponents of the tax have argued that the tax would end up being paid by end users in the form of wider spreads or higher borrowing costs.

Unfortunately, the evidence about who would ultimately pay the Tobin Tax is far from clear. Although there is general agreement that wholesale traders, particularly those involved in short-term foreign exchange transactions, would bear the initial cost of the tax, the final incidence will depend on the extent of competition in different segments of the financial sector. In the long run, a significant proportion of the tax could end up being passed on to consumers. However, given that most households earn relatively little of their income from returns to capital, it would seem likely that an FTT would be more progressive than several other forms of taxation, such as VAT.

“ Although the evidence is not conclusive on all points, it seems clear that an FTT is implementable and could make a significant contribution to revenue in the major financial economies. ”

## Policy Implications

In an environment in which the governments of most of the world's financial centres are faced with making large spending cuts, the existence of a significant source of currently untapped revenue is important. Although the evidence is not conclusive on all points, it seems clear that an FTT is implementable and could make a significant contribution to revenue in the major financial economies. It seems unlikely that it would stabilise financial markets but, if appropriately designed, it is unlikely to destabilise them either. Although a multilateral agreement between the key economies is clearly preferable, it would not be impossible to implement unilaterally, at least for a major economy. The incidence of such a tax would not be as progressive as some of its proponents claim, but we have no reason to believe that it would be significantly worse than most alternatives, nor that it would be any more difficult to collect.

## The UK Government should:

### 1. Design and implement a currency transaction tax on sterling

The logical first step would be to design and implement an FTT on sterling transactions, since settlement of these transactions is under the direct control of the UK authorities.

### 2. Monitor implementation of the tax

Even if well designed, a new tax of this kind is likely to give rise to avoidance. It is therefore important that the implementation of the tax is closely monitored and the design adjusted to minimise opportunities for avoidance.

### 3. Coordinate with policy makers in other financial centres

A tax on sterling will raise revenue, but it will also disadvantage sterling relative to other currencies. It will therefore be important for the UK to coordinate policy with other countries, with a view to encouraging the application of a similar tax in the Euro zone and in the US.

### 4. Study the feasibility of a broader FTT

If the currency transaction tax is successful, it would then be sensible for the Government to study the feasibility and revenue potential of broadening the FTT to include derivative and OTC markets, in coordination with other major financial centres.

## Credits

This *In Focus Policy Briefing* was written by [Neil McCulloch](#), a Research Fellow in the Globalisation Team at IDS, and [Grazia Pacillo](#) at the University of Sussex. It was edited by [Sarah Nelson](#) and [James Georgalakis](#).

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## Further reading

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