

**Implementation of a General  
Financial Transactions Tax  
Summary**

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Research assistance: Eva Sokoll

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## Summary

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Internal review: Margit Schratzenstaller • Research assistance: Eva Sokoll

### **Abstract**

The study summarises the most significant observations about trading behaviour and price dynamics in financial markets. Against this background, the main objections to a general financial transactions tax (FTT) as put forward by the International Monetary Fund and the European Commission are evaluated. The main part of the study deals with the two different ways of how an FTT could be implemented. With the centralised approach, the tax is collected at point of settlement, either from the electronic settlement systems at exchanges, or from Central Counterparty Platforms (CCPs) in the case of over-the-counter (OTC) transactions, respectively. With the decentralised approach, the tax is deducted by the banks which transmit an order to an exchange or which carry out an OTC transaction. The centralised tax deduction would be optimal but requires a broad consensus among countries within the same trading time zone. By contrast, the decentralised approach could be implemented by a group of (EU or euro) countries without doing much harm to their own markets.

# **Implementation of a General Financial Transactions Tax**

## **Summary of a WIFO study commissioned by the Austrian Chamber of Labour**

### **1. Concept of a general financial transactions tax**

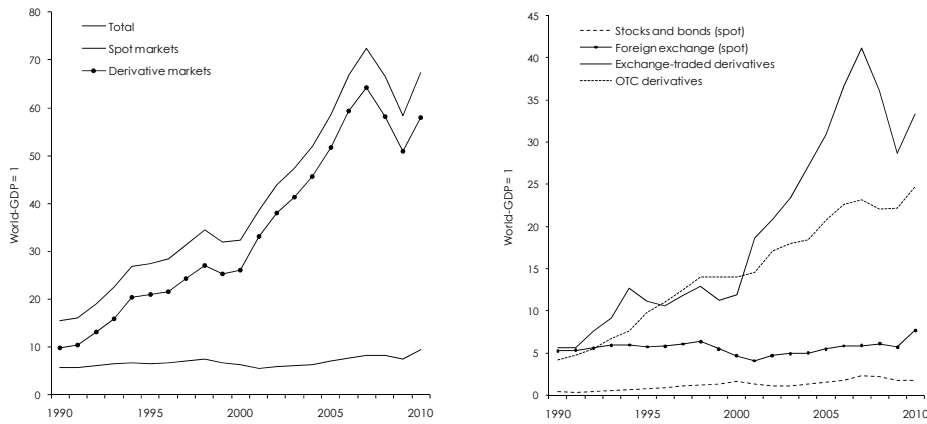
A general financial transactions tax (FTT) tracks two main targets: First, mitigating the fluctuations of the most important asset prices like stock prices, exchange rates, and commodity prices, and second, providing substantial revenues for governments.

The essential features of a general FTT are as follows:

- The FTT is levied on all transactions involving buying/selling of spot and derivative assets. These instruments are traded either on organized exchanges or over the counter (i.e., bilateral OTC transactions, exclusively carried out by professional market participants).
- The tax base is the value of the underlying asset, in the case of derivatives their notional value (e. g., the value of a futures contract at the current futures price, the notional principle of a swap, the spot value of the underlying asset in the case of options).
- The tax rate should be low so that only very "fast" (= speculative) trading with high leverage ratios will become more costly due to the FTT (in the present study a rate of 0.05% is assumed).
- The FTT does not tax "real-world-transactions" like payments related to the goods and labour markets, to initial public offerings of stocks and bonds as well as foreign exchange transactions which stem from international trade or direct investment.
- The tax burden is divided between the buyer and the seller, hence, each side of a financial transaction would just pay 0.025% of the asset value (2.5 basis points).

This concept ensures the following: 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 more will the FTT increase transactions costs. At the same time, holding a financial asset (including hedging) will not be burdened by the FTT.

Figure 1: Financial transactions in the world economy



## 2. Trading behaviour, asset price instability and a general FTT

The main propositions about trading behaviour and price dynamics underlying the concept of a general FTT can be summarized as follows.

Proposition 1: There is excessive trading activity (= liquidity) in modern asset markets due to the predominance of short-term speculation. The overall global volume of financial transactions is roughly 67 times higher than world GDP, in 1990 this ratio amounted to "only" 15.3. The increase in financial trading is exclusively due to the spectacular boom of the derivatives markets (figure 1).

Proposition 2: The ever "faster" trading activities destabilize exchange rates, commodity prices, interest rates and stock prices over the short term as well as over the long term. This is so because short-term price runs, strengthened by the use of (automated) trading systems, accumulate to long-term trends, i.e., bull markets and bear markets (figures 2 to 8).

Figure 2: Movements of the dollar/euro exchange rate and technical trading signals

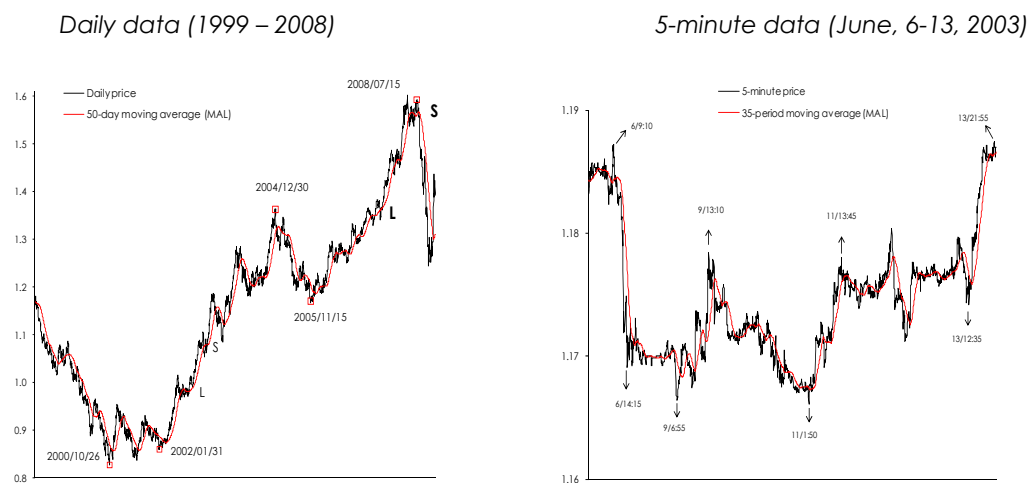
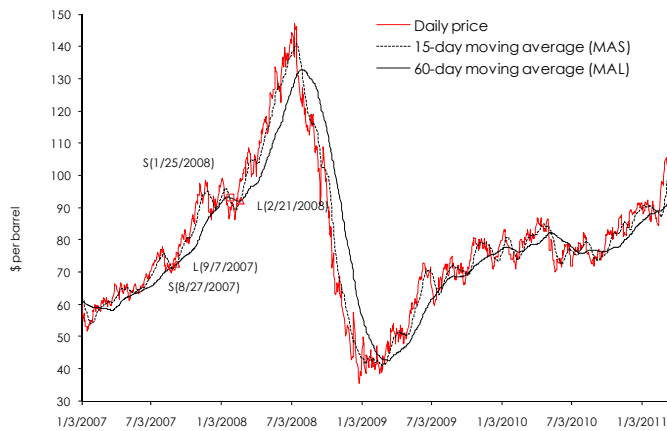


Figure 3: Technical trading of oil futures 2007 - 2011



Proposition 3: The overshooting of the most important prices (i.e., those which link the real and the financial sphere of the economy in space and time like exchange rates and interest rates) favours rent-seeking activities of financial investors/speculators and impedes entrepreneurial activities in the real economy.

Proposition 4: The detrimental effects of asset price overshooting are particularly pronounced as regards the development of financial crises:

- Example 1: From 2003 onwards, the simultaneous boom of stock prices, commodity prices and house prices built up the potential for their simultaneous collapse, causing the US mortgage crisis to develop into a global economic crisis in 2008/2009 (figures 2, 3, 4).
- 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 government bonds of highly indebted countries (from Greece to Spain – figures 7 and 8).

Figure 4: "Bulls" and "bears" in the US stock market and technical trading signals

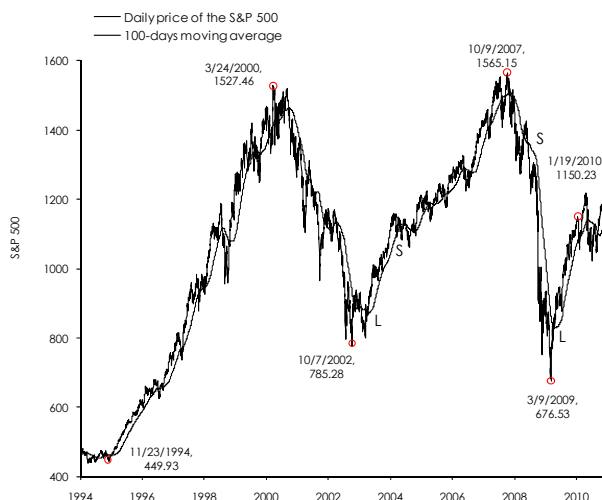
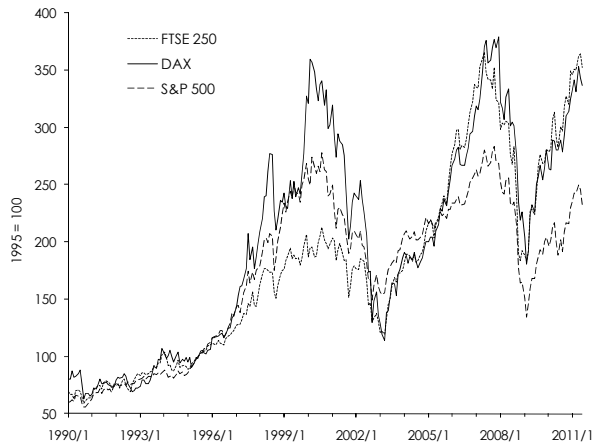


Figure 5: Stock prices in Germany, the UK and the USA

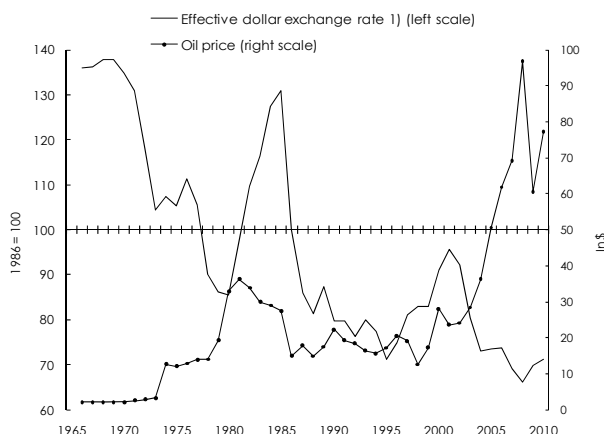


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Figure 6: Dollar exchange rate and oil price fluctuation



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).

Proposition 6: An FTT would specifically increase the costs of those speculative transactions which are unrelated to market fundamentals. This is so because the more short-term oriented a trading activity is and the higher its leverage is (in the case of derivatives), the more will the FTT raise transaction costs (e. g., high frequency trading would become unprofitable).

Figure 7: CDS trading and interest rate movements: Greek government bonds

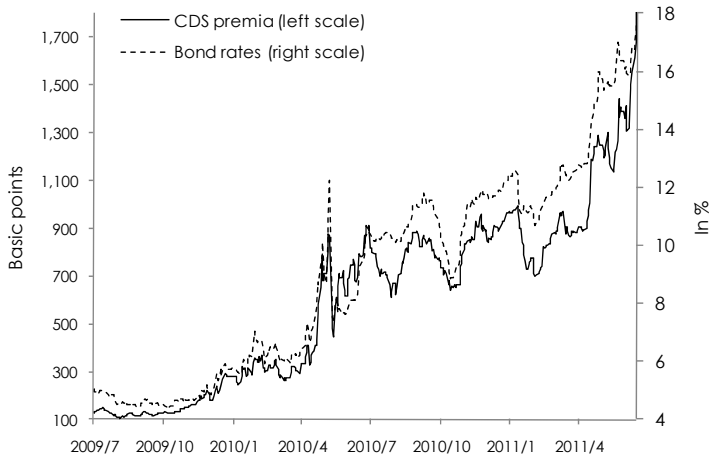
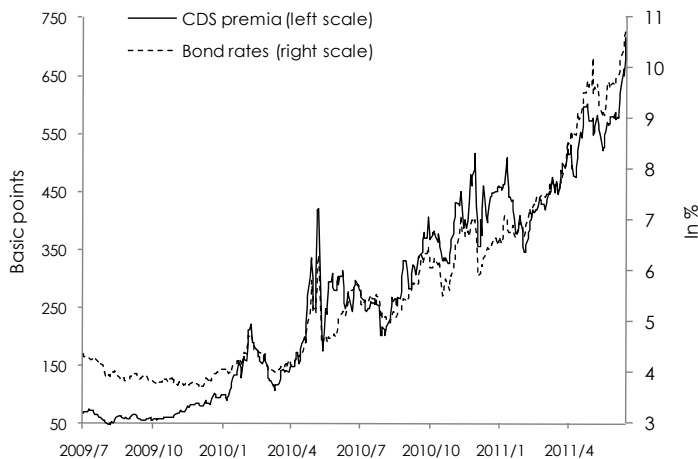


Figure 8: CDS trading and interest rate movements: Portuguese government bonds



Proposition 7: An FTT would levy substantial contributions on those actors whose activities had significantly contributed to the development of the financial crisis in 2008/2009 and of the euro crisis in 2010/2011. At the same time, those financial actors who (still) focus on servicing the real economy ("boring banking") would not be burdened (in contrast to a general bank levy or a financial activities tax).

Proposition 8: An FTT would compensate the distortionary effect caused by the exemption of most financial services from the value-added tax (VAT).

Proposition 9: The implementation of an FTT is technically easy because one could make use of the fact that all transactions are captured by electronic payment, clearing and settlement systems of banks, organized exchanges and of the (future) Central Counterparty Platforms (CCPs).

Proposition 10: A general FTT has the potential to become the first supranational (European) tax and finally the first global tax. The gradual extension of the application of such a tax across countries would match – though with some lag – the process of globalization which has been by far most pronounced as regards financial markets.

### 3. Hypothetical FTT revenues based on 2010 data

The revenue estimates are based on the assumption that transaction volumes will be reduced by the introduction of an FTT. The size of this reduction effect depends on the tax rate, the pre-tax transaction costs and the leverage in the case of derivatives instruments. For each tax rate and each of type of instrument (19 different classes of transactions are specified), a low, medium and high "transactions-reduction-scenario" (TRS) is assumed. It is

Table 1: Hypothetical transaction tax receipts in the global economy 2010

Tax rate: 0.05%

Medium transactions reduction scenario

|                          | World       |             | Europe      |             | North America |             | Asia and Pacific |             |
|--------------------------|-------------|-------------|-------------|-------------|---------------|-------------|------------------|-------------|
|                          | In % of GDP | In Bill. \$ | In % of GDP | In Bill. \$ | In % of GDP   | In Bill. \$ | In % of GDP      | In Bill. \$ |
| Spot transactions        |             |             |             |             |               |             |                  |             |
| on exchanges             | 0.08        | 48.8        | 0.09        | 15.6        | 0.14          | 22.0        | 0.12             | 9.6         |
| Derivatives transactions |             |             |             |             |               |             |                  |             |
| on exchanges             | 0.53        | 315.4       | 0.71        | 122.3       | 0.96          | 154.7       | 0.42             | 32.5        |
| OTC transactions         | 0.49        | 289.1       | 1.00        | 173.1       | 0.38          | 61.9        | 0.65             | 50.8        |
| All transactions         | 1.10        | 653.3       | 1.80        | 310.9       | 1.48          | 238.6       | 1.19             | 92.9        |

Table 1 presents the estimated revenues of a general FTT of 0.05% for the world economy as a whole under the assumptions of the medium TRS. Overall tax revenues would amount to 1.1% of nominal world GDP, in North America and Europe, tax revenues (relative to nominal GDP) would be significantly higher, lying between 1.48% and 1.80% of GDP. In absolute terms, revenues would amount to \$ 238.6 and \$ 310.9 billion, respectively (€ 179.8 and € 234.3 billion at average 2010 exchange rates).

In the UK, revenues from a general FTT would be extremely high, amounting to roughly 8.6% of GDP. This result reflects the fact that the volume of financial transactions relative to GDP is by far highest in the UK (in 2010, it was 563 times higher than GDP). This extraordinarily high ratio is



due to the traditionally strong position of the London market place. The concentration of trading activities in London was markedly strengthened by the bundling of the transactions on the (former) derivatives exchanges in Paris, Amsterdam, Brussels and Lisbon on Euronext in London.

Table 2: Hypothetical transaction tax receipts in some European countries 2010

Tax rate: 0.05%

Medium transactions reduction scenario

|                          | Europe      |             | Germany     |             | France      |             | Netherlands |             | Denmark     |             | United Kingdom |             |
|--------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------|-------------|
|                          | In % of GDP | In Bill. \$ | In % of GDP | In Bill. \$ | In % of GDP | In Bill. \$ | In % of GDP | In Bill. \$ | In % of GDP | In Bill. \$ | In % of GDP    | In Bill. \$ |
| Spot transactions        |             |             |             |             |             |             |             |             |             |             |                |             |
| on exchanges             | 0.09        | 15.6        | 0.04        | 1.2         | 0.02        | 0.6         | 0.05        | 0.4         | 1.10        | 3.4         | 0.18           | 4.1         |
| Derivatives transactions |             |             |             |             |             |             |             |             |             |             |                |             |
| on exchanges             | 0.71        | 122.3       | 0.63        | 20.9        | 0.00        | 0.0         | 0.00        | 0.0         | 0.00        | 0.0         | 3.28           | 74.0        |
| OTC transactions         | 1.00        | 173.1       | 0.18        | 5.9         | 0.50        | 12.9        | 0.38        | 3.0         | 1.65        | 5.1         | 5.13           | 115.8       |
| All transactions         | 1.80        | 310.9       | 0.84        | 27.9        | 0.52        | 13.5        | 0.43        | 3.4         | 2.76        | 8.6         | 8.59           | 193.9       |

Within the EU, the second highest FTT revenues would have accrued to Germany, namely, 0.84% of GDP or \$ 27.9 billion (€ 21.0 billion). Most of these revenues stem from transactions on the derivatives exchange EUREX (in contrast to the UK, OTC transactions are of minor importance in Germany). France would get \$ 13.5 billion (€ 10.2 billion), Denmark \$ 8.6 billion (€ 6.5 billion; relative to the size of Denmark's GDP the volume of OTC trading is extremely high) and the Netherlands would receive \$ 3.4 billion (€ 2.5 billion).

#### 4. Options for implementing the FTT

There are two fundamentally different ways of how an FTT could be implemented:

- With the centralized approach, the tax is collected at point of settlement, either from the electronic settlement systems at exchanges, or from Central Counterparty Platforms (CCPs) in the case of OTC transactions, respectively.
- With the decentralized approach, the tax is deducted by the banks and brokerage firms which transmit an order to an exchange (on behalf of a customer or as part of proprietary trading) or which carry out an OTC transaction.

Centralized tax deduction would be the optimal form of an FTT implementation. At the same time, however, this approach is difficult to realize in practice because it necessitates a broad consensus to introduce an FTT and to force OTC transactions to be settled via CCPs. Such a consensus has to be achieved at least among all important countries in a trading time zone. Otherwise substantial shifts in market shares of financial centres would occur. E. g., if Germany

would introduce an FTT together with some other member countries but the United Kingdom would not, then many transactions would "migrate" from Frankfurt to London.

In addition, there is the issue of how to distribute FTT receipts. Due to the concentration of trading on the exchanges in London and Frankfurt, roughly three quarters of revenues would stem from transactions on the London market place and one quarter from transactions in Frankfurt. However, the tax will effectively be paid by all counterparties who make use of these exchanges (e. g., 85% of all trades made at Eurex in Frankfurt stem from non-German traders). For this reason it is recommended that part of the revenues should go to the countries from which the transactions on organized exchanges originate. Of course, for providing the EU as a whole with such efficient market places as London and Frankfurt, the UK and Germany should get some fixed share of tax revenues.

These considerations suggest that the FTT revenues from exchange transactions should be divided into three parts if all EU countries agree to implement a common FTT. One part should go to the home country of the exchange, one part should go to the countries from which the transactions on exchanges originate, and the third part should/could go to supranational institutions like the EU or to supranational projects like development aid.

As regards OTC transactions, a major prerequisite for the centralized solution is the central mandatory clearance of all OTC transactions (standard and non-standard) through Central Counterparty Platforms (CCPs). If such a consensus could be reached, then it would be easy to legally force all banks and other financial institutions to centrally clear their OTC transactions. In this case counterparties from countries outside the EU would also be obliged to use the CCPs if they want to do business with financial institutions from EU countries.

However, a central collection through currently wholly private settlement institutions requires a high degree of tax coordination and cooperation as well as the harmonization and further integration of the clearing and settlement processes.

Since the CCPs represent just an electronic clearing system, their efficiency does not depend on network externalities of financial centres (as with organized exchanges). Hence, the FTT proceeds should be divided between the countries from which the transactions originate, and the EU institutions.

A centralized FTT implementation necessitates also the creation of a "Standard Classification of Financial Transactions" (SCFT). Such a classification (similar to the SITC as regards international trade) is also a prerequisite for an efficient supervision and regulation of financial markets (including restrictions to tax fraud as well as to terrorist activities).

The essential difference between the centralized and the decentralized approach to FTT implementation is as follows (taking transactions on exchanges as example). According to the centralized approach, any exchange situated in a country where an FTT applies (FTT-country) has to deduct the FTT for all transactions ("territorial or destination principle"). According to the decentralized approach, all orders of actors from an FTT country are subject to the tax, irrespective at which exchanges – domestic or abroad - these orders are carried

out ("personal or origin principle"). The tax is deducted by the bank or broker which places the respective order to the exchange ("taxing at the source").

A concrete example: If Germany would introduce an FTT, then only all German residents placing orders for transactions on exchanges - at home or abroad - are liable to pay the FTT. At the same time, all transactions stemming from residents of non-FTT countries at German exchanges would not be taxed. In this way, German exchanges would not be discriminated relative to exchanges abroad as long as those who place the order would not move from an FTT country to a non-FTT country.

However, some hedge funds and investment banks might shift their (very) short-term transactions (even more) from Frankfurt to London. The same might be true for some amateur "day traders" who would process their orders through brokers at London. The extent of this emigration of trading could be restricted by introducing an FTT substitute levy (FTTSL). The FTTSL would be charged on 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 should be several times higher than the FTT. With an FTT of 0.05% the FTTSL could be 2% or even higher. If it were 2% it would be the equivalent of 40 "round trip transactions". The FTTSL can be considered some kind of "security deposit". If the actor documents that the value of exchange transactions carried out abroad by himself or by his fund is smaller than the original deposit he gets part of the FTTSL reimbursed.

As regards OTC transactions, any bank, other financial institutions or non-financial customers of an FTT country are the debtors of an FTT. If both parties of the transaction are residents of an FTT country, then their fiscal authorities receive an FTT payment at the full rate (0.05%), if one partner is resident of a non-FTT country, then the FTT country gets only half of it (0.025%).

In executing OTC transactions, a bank is always involved, either trading on its own account (proprietary trading) or as the intermediary of two customers trading with each other. In any case, the bank has to deduct the FTT and transfer the proceeds to the tax authorities.

The decentralized approach takes into account the different political and institutional conditions among the advanced economies. In a pragmatic way, it would enable a group of EU or euro countries to start with the implementation of an FTT. Based on the experiences of the "forerunner countries", the introduction of a general FTT could then be enlarged to other countries in a stepwise process. However, one has to be aware that a substantial part of short-term trading would be shifted to non-FTT countries. For the economy of FTT countries as a whole such an emigration need not be harmful.