

## **Bank levy versus transactions tax: A critical analysis of the IMF and EC reports on financial sector taxation**

The International Monetary Fund (IMF) as well as the European Commission (EC) published papers on possible contributions of the financial sector to the costs of (future) financial crises (IMF, 2010; EC, 2010). Both papers give great consideration to a comparison between a bank levy (BL) and a financial transactions tax (FTT). The conclusions of both papers are similar in many respects:

- The IMF and the EC recommend a bank levy (BL) on certain balance sheet positions. The IMF calls the BL a "Financial Stability Contribution", the EC calls it a "measure for pricing leverage and risk-taking in the financial sector" or a "stability levy".
- By contrast, "a FTT does not appear well suited to the specific purposes set out in the mandate from G-20 leaders", according to the IMF. The EC asserts, that a FTT "would affect the price finding mechanism and could have negative effects on the allocative efficiency of financial markets".
- Both institutions, the IMF as well as the EC, propose as tax base of the BL all liabilities of financial institutions other than equity and (savings) deposits covered by a deposit insurance. These balance sheet items are considered the basis for the banks' leverage.
- According to the EC, a bank levy would raise 50 bn. € for the EU-27 if a tax rate of 0.15% is applied to all banks. By contrast, a FTT would yield only 20 bn. € "using realistic assumptions", i.e., when only spot transactions but no derivatives are subject to a FTT.
- For the IMF and the EC, a bank levy serves as a contribution to "financial stability". By contrast, a FTT "is not focused on the core sources of financial instability" (IMF). In addition, "its real burden may fall largely on final consumers" (IMF) or "the burden might be shifted to consumers and companies using services of the financial sector" (EC).
- In addition, a FTT "poses also a risk of increasing the cost of capital for business and the cost of financial risk distribution" (EC), particularly if the notional value of derivatives is taken as tax base (this would increase hedging costs).
- If the FTT "is not introduced on the global scale it has the potential to divert economic activity.....therefore,....the tax has to be as comprehensive as possible"(EC) - to put it directly: If a FTT cannot be introduced globally, forget about it.

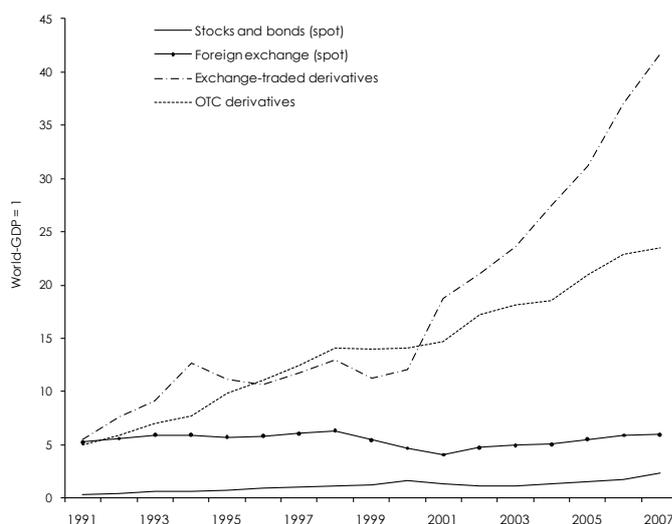
The conclusions are much less based on the empirical evidence than on the perception ("Weltanschauung") of how financial markets (should) work in (equilibrium) theory:

- The tax base of a BL consists necessarily of some balance sheet positions ("stocks"). Hence, a bank levy is by construction not appropriate to increase the costs of risky/detrimental activities ("flows"). A BL can at best comprise the *holding* of risky assets.
- The bank levy would have only concerned those banks which were *holding* MBSs. At the same time, however, a BL would also increase the costs of financing *real investment*. If, e.g., a bank consortium intends to finance a huge project in the real economy and would raise capital through a bond issue, then this would be considered as risky leveraging and taxed by the BL. In other words, a BL cannot differentiate between essentially different types of leverages and risk, and, hence, different types of banking businesses.
- Below I give some examples of detrimental activities which would remain unaffected by a bank levy.
  - Example 1: Before the subprime mortgage crisis broke out, Deutsche Bank together with Goldman Sachs, Morgan Stanley etc. ("finance alchemy banks" – FABs) created a new derivative, the ABX index contract, and used this instrument to speculate for a decline in the value of mortgage backed securities (MBSs). The respective speculative profit of Deutsche Bank for the first 6 months of 2007 is estimated to up to 540 mill. \$ (see Bloomberg report of July 30, 2007). At the same time, Deutsche Bank earned millions in fees from securitizing and selling MBSs.
  - Example 2: Between September 2007 and June 2008, FABs together with "trend-following hedge funds" drove commodity prices up by heavily opening long positions in derivatives markets. When the "bull market" tilted into a "bear market", shorting derivatives positions strengthened the fall in commodity prices.
  - Example 3: In the same way, these actors strengthened both, the booms and the busts of stock prices. In particular, opening short positions in stock (index) futures and options after the collapse of Lehman accelerated the fall of stock prices enormously (short selling in the spot markets - at that time restricted by authorities - did not play any significant role because any kind of short-term speculation is carried out in derivatives markets).
  - Example 4: Through incurring and trading credit default swaps (CDSs) FABs and hedge funds engage increasingly in speculating against certain debtors, in particular governments (even if the same actors had organized the issuance of the government bonds in the first place). By doing so, risk premia are driven up which in turn raises the value of the CDSs. {One should keep in mind that the boom of stock prices, mortgage backed securities and commodity prices had built up the potential for the steep fall of these asset prices. The related devaluation of wealth was the

main reason for why the financial crisis developed into a global crisis of the real economy}.

- All activities mentioned above cannot be affected by a bank levy due to its construction, i. e., being based on balance sheet positions ("stocks"). The second reason is as follows. The most important leverage potential is not represented by certain balance sheet components but is provided by derivative instruments. The cash (margin) requirement to acquire a futures or an option or to do a swap is only a (very) small part of the contract/notional value of the instrument. Hence, to make use of this leverage, one does not need funds in excess of equity and savings deposits (as taxed by a BL).
- Since a bank levy is based on *holding* assets/liabilities, the value of these balance sheet components has to be assessed on a specific day (usually December 31). Even if open derivatives positions ("off-balance sheet items") should be included, any (FAB) bank or hedge fund could easily close the positions on December 30, and open them on January 2.
- As the above examples already have shown, a bank levy would not concern asset *trading* like stock, bond, foreign exchange, and commodity trading, in particular in the respective derivatives markets. Hence, exactly those transactions which destabilize the most important prices over the short run as well as over the long run, would remain untaxed ("bull markets" and "bear markets" result from the accumulation of short-term price runs, strengthened by high-frequency trading systems – Schulmeister, 2010).

Figure 1: Financial transactions in the world economy by instruments



Source: BIS, WFE, WIFO.

- For these reasons, a bank levy should not be called a "Financial Stability Contribution" (IMF) or "a measure of pricing leverage and risk-taking" or a "stability levy". Such a levy has to be considered and appreciated as a – hopefully substantial - contribution of the financial sector to the costs of the crisis. Or it might be considered as a fee for the free-of-charge implicit state guarantee in case of crisis ("too big to fail"), given that banks take excessive risks because they expect government bailouts ("moral hazard").
- In any case, a bank levy does not represent a means for mitigating destabilizing speculation. In other words: *A bank levy is not an alternative to a general FTT as asserted by the IMF and by the EC.*
- Short-term transactions in derivatives markets, mainly driven by trading systems (i.e., unrelated to market fundamentals), not only destabilize asset prices, but also account for 90% of trading volume in financial markets (roughly 70 times world GDP - figure 1). For both reasons, a general FTT must comprise all transactions in order to earn the "double dividend", i.e., raising substantial revenues and reducing market inefficiencies.
- The assertion of the EC paper that "under realistic assumptions" one should/could tax only spot transactions but not derivatives, is by no means warranted:
  - Most transactions are carried out on derivatives exchanges (figure 1) where commissions are paid through electronic settlement systems. In the same simple way, a FTT could be collected.
  - As regards OTC transactions, the FTT can be implemented through the electronic settlement and information systems like Fedwire, TARGET, CLS Bank, CHIPS, SWIFT, etc.
  - The costs of capital or of hedging would not rise substantially due to a FTT because the former refers to *holding* a liability or a derivatives contract whereas a small FTT of, e. g., 0.05% is only felt by traders *changing* open positions frequently (if an airline hedges fuel costs of, e. g., 10 mill. \$ through buying and holding an oil futures contracts with a notional value of 10 mill. \$, it would pay 0.05% or 2.500 \$ in FTT).
- By excluding derivatives transactions (i.e., 90% of all transactions) from the potential tax base of a FTT, the EC paper arrives at a (biased) estimate of FTT revenues for EU-27 of only 20 bn. €. By contrast, if one would tax all transactions by a uniform rate of 0.05%, revenues would amount to roughly 290 bill. \$ (215 bill. €) or 1.6% of GDP in Europe (including Norway and Switzerland - table 1).
- The estimates assume that trading volume would decline by roughly 65% if a FTT of 0.05% is implemented. Even then, however, transaction volume in advanced economies would still be 35 times higher than GDP. This should be sufficient to enable an efficient price discovery process and provide enough liquidity for hedging purposes.
- Over the past 25 years, trading in financial markets has almost exploded. At the same time also the volatility of stock prices, exchange rates and commodity prices has

dramatically increased. Hence, there exists a great deal of excessive trading which *destabilizes* asset prices. This type of liquidity would be substantially reduced by a FTT.

Table 1: Hypothetical transaction tax receipts in the global economy 2007

Tax rate: 0.05%

	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	0.11	60.9	0.12	21.2	0.18	28.3	0.16	10.3
Derivatives transactions on exchanges	0.65	358.1	0.69	122.7	1.28	198.7	0.51	32.8
OTC Transactions	0.44	242.0	0.82	145.1	0.33	50.8	0.67	43.6
All transactions	1.21	661.1	1.63	289.0	1.79	277.8	1.34	86.7

Source: Schulmeister (2010)

- A general FTT would not only yield revenues which are 10 times higher than the EC estimate but it would also dampen destabilizing transactions, i.e., extremely short-term oriented trading in derivatives markets with high "built-in" leverage. This type of trading is unrelated to market fundamentals due to its "speed" and due to the models used ("algorithm trading" based on high frequency data).
- There are two reasons for why a general FTT would specifically affect destabilizing transactions. First, a FTT makes trading the more costly the more frequently a speculative position is changed ("day trading"). Second, a FTT will dampen specifically derivatives trading since the tax rate refers to the notional/contract value (e. g., the effective tax on the margin "invested" is by the leverage factor higher than the tax relative to the notional value).
- Since long-term asset price trends ("bulls/bears") are brought about through the accumulation of (very) short-term runs, a FTT would also dampen the "long swings" of exchange rates, commodity prices and stock prices. At the same time, hedging as well as "real-world-transactions" (this would only concern foreign exchange transactions stemming from international trade) would hardly be affected by a FTT of 0.05%.
- For these reasons, the assertion of the IMF paper, that a FTT "is not focused on the core sources of financial instability" does not seem to have a solid foundation in the empirical evidence. The same holds for the EC statement that a FTT "would affect the price finding mechanism and could have negative effects on the allocative efficiency of financial markets". It is consistent with the "Weltanschauung" of the IMF and the EC that both papers do not deal with the empirical literature on the destabilizing role of non-

fundamental technical trading which has become the *most important trading technique in practice*.

- Because of this lack of empirical foundation, some statements in both papers remain mysterious. E. g., the IMF asserts: "Because it is levied on every transaction, the cumulative, 'cascading' effects of an FTT.....can be significant and non-transparent". Here, the IMF makes implicitly an analogy to a turnover (sales) tax as compared to a VAT. Such an analogy simply does not exist: If on a futures exchange millions of positions are opened and closed during a trading day, there is no chain of values added - nothing is produced but only millions of bets are done, each bet being independent from the other bets (what is adjusted, is the futures price). Also the assertion in the EC paper that a FTT poses "a risk of increasing the cost of capital for business" remains unclear (why should higher costs of *trading* very frequently increase the costs of *holding* a liability?).
- The difference between a FTT and a bank levy is particularly pronounced with respect to tax incidence. As the latter taxes financial institutions to the extent that their overall asset value exceeds equity and savings deposits, the banks could/would easily shift the tax burden on their clients. By contrast, a FTT would tax certain activities, irrespectively of who carries them out. Banks which do not engage in proprietary trading, would pay no FTT at all (if they carry out the order of a customer, the latter pays the tax). Hedge funds which use trading systems based on high frequency data would shift the tax burden onto their clients. Amateur speculators (there are millions in advanced economies nowadays) would pay the tax, their (internet) brokers would not.
- A general FTT - based on the (notional) value of the transaction - burdens specifically short-term and destabilizing speculation with higher costs. It would therefore set new incentives in favour of longer-term investment in the real economy as compared to short-term speculation in the financial economy. Some examples may illustrate this fundamental point (at a FTT of 0.05%):
  - Example 1: A corporation raises 10 mill. € in capital through an IPO (initial public offering) of stocks: No FTT.
  - Example 2: The government (or a corporation) raises 10 mill. € through a bond issue: No FTT.
  - Example 3: 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 10 mill. €. Additional hedging costs: 0.025% of 10 mill. €, i.e., 2.500 € (practically irrelevant).
  - Example 4: A hedge fund ("trend-follower") uses a "fast" automated trading system based on high frequency data. This system changes open positions on average 50 times a day, involving 100 transactions (one for closing the former position and one for opening a new one). Daily transaction volume based on the notional value: 1 bn. €, FTT: 250.000 €. At a margin of 5% (500.000 €) the cash requirement would rise by

50%, reducing the profitability of this kind of "gambling" significantly or making it even unprofitable.

- It is clear that primarily trading activities of the type sketched in example 4 are responsible for the tremendous rise in financial transactions. Nowadays, their overall volume in the advanced economies amounts to roughly 100 times GDP. It is clear that a FTT would dampen specifically this type of destabilizing and, hence, excessive liquidity.
- It is shown empirically that the increasingly short-term oriented, non-fundamental speculation contributes strongly to the overshooting of asset prices (*Schulmeister, 2010*). Hence, a small FTT would dampen not only the volatility of stock prices, exchange rates and commodity prices over the short run but also but also the wide swings over the longer run.
- Such a "sedative" effect might contribute to preventing future crises. This can be presumed when looking at the recent crisis in the context of the "manic-depressive" fluctuations of asset prices: The transformation of a mortgage crisis in the US into a global crisis was in large part a result of sharp devaluations of stock, housing, and commodity wealth. The potential of stock, house and commodity markets to undergo protracted declines had "built up" during the boom phases in these markets between 2003 and 2007.

The implementation of a FTT would technically feasible because one could make use of the electronic settlement and information systems. Reaching a political consensus is much more difficult because the idea of taxing transactions in the "freest" markets calls implicitly into question that "Weltanschauung" which has become mainstream in economics and politics over the past decades. For the same reason, it does not seem a coincidence that the International Monetary Fund and the European Commission arrive (independently) at similar conclusions as regards the implementation of a general financial transactions tax.

*Vienna, April 2010.*

## References

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