Taxing Financial Transactions

Jean-Charles Rochet

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Based on a forthcoming book with Ivar Ekeland

and on-going research with Bruno Biais

MOTIVATION

- March 2010: European Parliament asked the Commission to study the implementation of a **Financial Transaction Tax (FTT**).
- Main objective: **discourage excessive financial speculation** that had contributed to the Global Financial Crisis of 2007-09.
- Tax was nicknamed «**Robin Hood**» because it would have been paid in large part by the **rich, who «consume» more financial transactions** than the poor.
- Incidentally, it could also have contributed to **finance energy transition and/or reduce the tax burden on labor.**

STANDARD ARGUMENTS IN FAVOR OF A FTT

All rely on presumption that financial markets are inefficient:

- Keynes (1936): it would **discourage «speculation**» (buy and resell quickly: trying to predict what others think) and **encourage «investment»** (buy and hold: trying to predict the long term value of projects).
- Tobin (1972): «**throw some sand in the wheels of our excessively efficient international money markets": ** discourage **"round-trip excursions",** reduce volatility of exchange rates, and allow governments to control on the value of their currency.
- Summers and Summers (1989): discourage **"noise traders",** reduce **volatility** of stock prices and **short termism** of investors.

WHAT HAPPENED IN THE EU?

Almost nothing:

- France (2012) and Italy (2013) did implement a 0.1 % (now 0.3%) tax on stocks trades **but the bulk of financial transactions are exempt**: High Frequency Trading, market making, derivatives, currencies,…
- Thus the revenues collected are tiny: less than 0.1% of GDP, 100 times less than VAT.
- Other countries have done exactly nothing.
- But in June 2019: 10 countries have agreed to implement (in 2021?) a 0.2% tax similar to the French FTT.

OPPOSITION TO THE FTT

«An answer without a question» (John Cochrane):

- No scientific proof that markets are inefficient and that speculation is «excessive».
- Not clear that a FTT would reduce price volatility.
- Only possible if all countries do it simultaneously: otherwise provokes relocation of financial activities (Swedish experiment).
- Can be easily avoided by financial engineering.

THIS PRESENTATION IN A NUTSHELL

- There is a **strong presomption** that financial **speculation might be excessive**.

- But it is **impossible to separate the «good»** speculation **from the «bad»:** prohibition would not work.

- **Regulation will not fully solve the problem**, because most speculators are not regulated (shadow banks).
- Taxation might be a way to reduce speculation while collecting sizable revenue for government.

THIS PRESENTATION IN A NUTSHELL (2)

Even neglecting speculation, it turns out that **taxation of financial activities is heavily skewed.**

Indeed, financial markets play **two distinct roles**:

- **Channel the savings** of households into productive investments
- Allow investors to **rebalance their portfolios** when they face liquidity shocks.

The **first activity is taxed** (often around 30%).

Why is the **second activity exempt** from taxation?

THIS PRESENTATION IN A NUTSHELL(3)

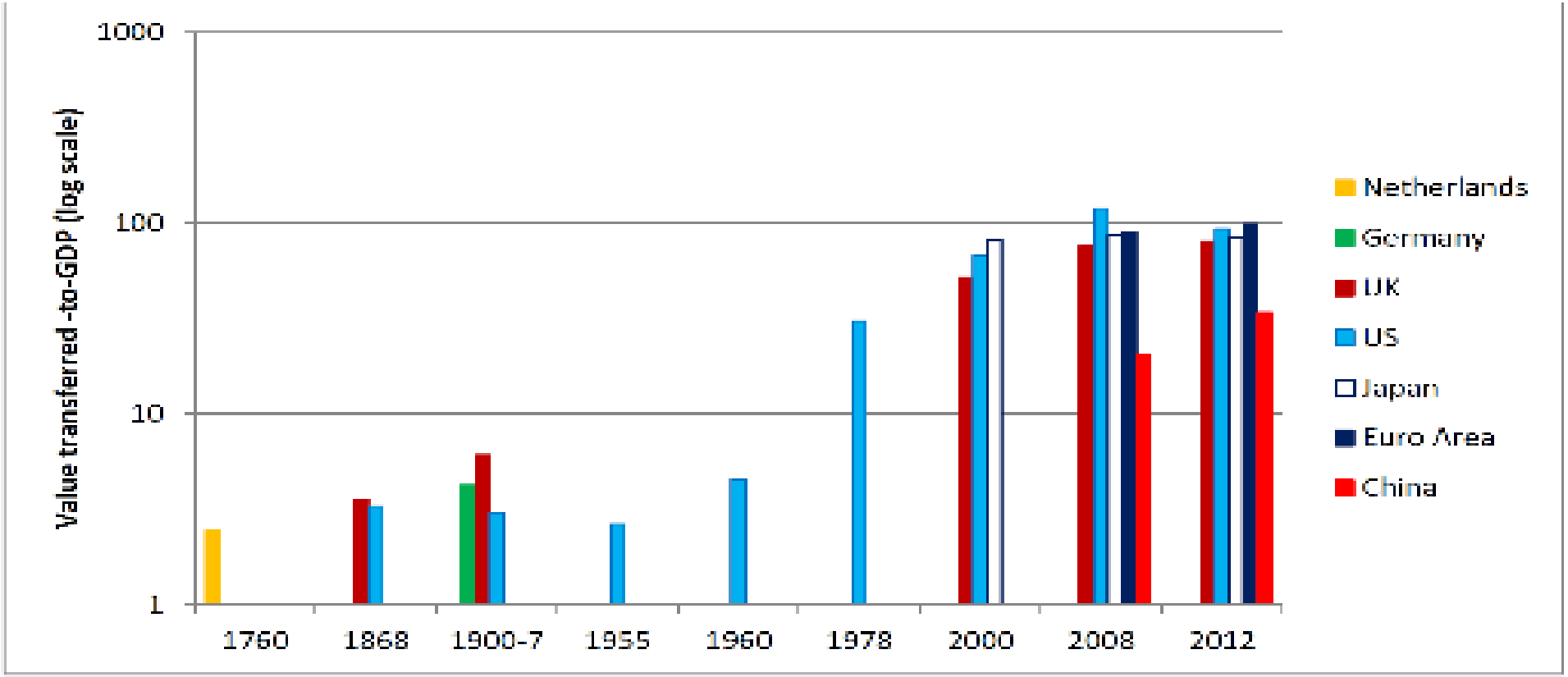
- But a standard **FTT can be largely avoided** by financial engineering.
- E.g. a Total Return Swap is a bilateral **contract that duplicates the pay-offs** of a market transaction but **avoids the FTT.**
- Banks can offer such contracts to their rich customers.
- The only way to eliminate such manipulations is to target the **lifeblood of the financial system**, i.e. electronic payments.

THIS PRESENTATION IN A NUTSHELL(4)

- One solution could be to **tax directly the cash flows**: a micro tax on all electronic payments.
- First proposed by Feige (2000), and adopted by several Latin American countries.
- Currently proposed for a popular initiative referendum by a group of Swiss activists.
- Why taxing **all** payments, including non financial ones? To avoid any lobbying to obtain exemptions and any manipulations to avoid the tax.

TAXING CASH FLOWS INSTEAD OF TRANSACTIONS?

Electronic payments have grown exponentially in the last decades (log scale: Kahn, Quinn and Roberds 2014)



THIS PRESENTATION IN A NUTSHELL(5)

- Ratio of payments to GDP has grown exponentially in the last decades: it is now between 50 and 150 in advanced economies!

- For most economic activities (production, consumption, investment) the ratio of payments to income is about 2 or 3.

- Only speculative activities like high frequency trading «consume» so many payments.

THIS PRESENTATION IN A NUTSHELL(6)

- Feige's original idea: replace all existing taxes by a micro tax on electronic payments.
- Too optimistic: volume of large value payments would plummet if such a tax was imposed.
- But a small tax on all payments would still generate a non negligible revenue (at least 5 to 10% of GDP) while eliminating highly speculative activities that threaten the stability of the financial system.
- This would allow to **decrease taxes on labor and consumption** and/or to **finance energy transition**.

FTT in G-20 countries (Burman et al 2016)

Argentina	0.60 percent on stocks, corporate/government bonds, and futures
Australia[1]	N/A at a federal level, states may levy transaction taxes
Brazil[2]	0.38 percent on foreign exchange, 6 percent on short-term foreign loan and bonds (180 days of less)
Canada	N/A
China[1]	0.1 percent on stocks
EU[3]	0.1 percent on stocks and bonds assessed on buyer and seller (total 0.2 percent), 0.01 percent on derivatives (total 0.02 percent) (forthcoming)
France[4]	0.2 percent on stocks, 0.01 percent on the value of stock orders modifie by high-frequency traders
Germany	N/A
India[5]	0.1 percent on stocks assessed on buyer and seller (total 0.2 percent), 0.017 to 0.025 percent on sale of options, 0.01 percent on sale of future
Indonesia[6]	0.1 percent on stocks

FTT in G-20 countries (2)

Italy[7]	0.1 percent on stocks, 0.2 percent for OTC transactions and stock derivatives, 0.02 percent on the value of stock orders modified by high-frequency traders
Japan	N/A
Mexico	N/A
Russia	0.2 percent on value of new share and bond issues
Saudi Arabia[8]	N/A
South Africa	0.25 percent on stocks
South Korea	0.3 percent on stocks and corporate bonds
Turkey	0.2 percent stock issuance fee, 0.6 to 0.75 percent bond issuance fee
United Kingdom	0.5 percent on stocks
United States[9]	0.00184 percent on stocks, $0.0042 per futures transaction

DIFFERENT DESIGNS (Burman et al 2016)

	United Kingdom (Current)	France (Current)	Sweden (Repealed)	European Union
Tax determined by				
Residence of issuer	Yes	Yes	No	Yes
Residence of buyer/seller	No	No	No	Yes
Location of transaction	No	No	Yes (brokerage)	No
Tax rate (%)[1]				
Equities	0.5	0.2	1.0[2]	0.2
Debt	N/A	N/A	0.002–0.03[3]	0.2
Currency	N/A	N/A	N/A	N/A
Derivatives	N/A[4]	N/A	2.0[5]	0.02
Value	N/A	N/A	Premium price	Notional value
Tax on original issuance?	No	No	No	No
Tax on secondary markets?	Yes	Yes	Yes	Yes
Market makers included?	No	No	Unknown	Yes
Government debt included?	No	No	Yes	Yes
International coordination?	No	No	No	Yes

ACADEMIC LITERATURE ON FTT

Academic literature generally supports the views of the industry.

Empirical studies find that FTT typically:

- reduces transaction volume: Umlauf (1993), Colliard and Hoffmann (2017),...
- lowers market liquidity: Kupiec (1996).
- hampers price discovery: Cipriani et al (2019).
- No sizable impact on volatility.

Very few papers on inefficient speculation:

Davila (2017), agent based models…

OPTIMAL TAX THEORY (Sorensen 2007)

Representative agent models:

- Ramsey approach: how to minimize welfare losses in collection of given tax revenue.
- inverse elasticity rule.
- distortions are minimized by taxing more less elastic commodities.

However if all agents are identical: lump sum taxes are optimal!

OPTIMAL TAX THEORY (2)

Heterogeneous agents and nonlinear taxes : Mirrlees (1971)

- Equity efficiency trade-off.
- Very complex formulas, with sometimes counterintuitive results (no distortion at the top).
- Literature has focused on unidimensional heterogeneity (unobservable talent or productivity).

Atkinson-Stiglitz (1976):

Separability of consumption and leisure: differentiated commodity taxes are suboptimal.

OPTIMAL TAX THEORY (3)

Heterogeneous consumers and linear taxes: Diamond (1975)

- Efficiency: higher taxes on commodities that are complements to leisure.

- Equity: lower taxes on commodities that weigh more heavily on poor consumers

Christiansen (1984) and Saez (2002) show that differentiated commodity tax rates can be optimal when tastes are heterogenous.

Same is true if home production is considered (Kleven, Richter, Sorensen 2000)

CAPITAL INCOME TAXATION

- Chamley(1986), Judd (1985): **capital income should not be taxed at all**, because such a tax would introduce a differentiated taxation of future/current consumptions.
- New Public Finance Theory (Werning, Fahri,…): in dynamic Mirrlees models where individual talents are subject to shocks, capital taxation can be optimal.
- Our approach (Biais-Rochet 2020) is **much simpler**.
- We introduce a **second dimension of unobservable heterogeneity: inherited wealth.**

Biais-Rochet (2020)

- **Inequality has two sources**: heterogeneity of labor productivity **and** inherited wealth.
- Both are **partially unobservable** by tax authorities.
- Then it is **optimal to tax both labor and capital** incomes.
- On top of this, **introducing a tax on financial transactions increases fiscal revenue and decreases distortions**.
- Intuition: **rich people «consume» more financial transactions**: additional proxy for unobservable part of inherited wealth.

Implementation problems

- The Swedish experiment of a FTT was a disaster: tax was based on location of trade. It provoked the migration of trade to London and Frankfurt (Umlauf 1993).
- By contrast ,the UK stamp duty works well (since 1694): tax is **based on the residence of the issuer**.
- For derivatives it would have to be **based on the residence of the buyer/seller.** (EU proposal)
- However, it is very difficult to prevent tax avoidance through OTC contracts.
- Similarly, it is not easy to avoid arbitrage between spot and future markets.

A MICROTAX ON ALL PAYMENTS

Feige (2000) proposed to introduce **a small tax on all electronic payments**: simple, cost-efficient, broadbased.

Immediately adopted by several Latin American countries, but the design was very imperfect:

- In Brazil, merchants used **non endorsed checks** as a substitute for electronic payments
- In Columbia, the **interbank market initially collapsed**, so they decided to exempt banks: still in place (0.30%) collects about 3% of GDP

ARGUMENTS AGAINST THE MICROTAX

- Encourages paper money: true in emerging countries, less so in EU
- Encourages other means of payments (foreign currency, bitcoin, libra,..): political decision. Government could prohibit such payments.
- Distorts technological choices: contrarily to VAT it is cumulative. Difficult to assess empirically.
- Discourages financial intermediation???
- Encourages netting by banks: tax could be based on gross transactions (also a political decision)
- Would eliminate HFT: not necessarily bad

ARGUMENTS FOR THE MICROTAX

- Simple
- Easy to collect
- No exemptions (except interbank transactions)
- Almost harmless to everyone, except speculators
- Provides information on large value payments: good for transparency and financial stability

CONCLUSION

- Electronic payments have grown exponentially in the last decades.
- For most of us they still amount to 2 or 3 times our incomes: a 0.30% tax on payments would not really harm us and would generate presumably a revenue of 10 to 15% of GDP
- But it would seriously harm speculative activities like HFT, which consume 100 times more payments for unclear social benefits.

CONCLUSION (2)

- The microtax would kill two birds with the same stone.
- It would reduce highly speculative activities and allow public authorities to monitor them better (recall: income tax controversy).
- It would generate non negligible revenue that could be used to finance energy transition
- It could well be the **tax of the 21st century!**