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ESTIMATION OF ECONOMIC IMPLICATIONS OF FTT ON THE CROATIAN FINANCIAL SYSTEM[1]

PROCJENA EKONOMSKIH IMPLIKACIJA UVOĐENJA FTT-A NA HRVATSKI FINANCIJSKI SUSTAV

ABSTRACT

Financial transaction tax (FTT) is one of the most controversial and most discussed form of taxation in recent decades. The growing interest for the introduction of new tax regulations of the financial sector was triggered by the outbreak of the financial crisis. The idea of implementation of FTT is to generate significant fiscal revenues, to properly share the cost of the crisis with the financial sector, and to reduce the possibility of a new crisis. Therefore, nine European Union countries have agreed to adopt a unified FTT along with enhanced cooperation which should come into force during 2018.

The aim of this paper is to investigate the possibilities of introduction FTT in EU, with special reference to the question of the potential application in the Republic of Croatia. Preliminary analysis suggests the conclusion that the economic and fiscal effects of the introduction of FTT in Croatia could not justify the cost of its implementation. Due to the underdeveloped, illiquid and highly concentrated capital market, introduction of the new tax burden might repel potential investors. Furthermore, tax base for the Croatian capital market is very narrow, because there is no trading in derivatives, which in the initial proposal for introduction of FTT, made up the largest part of the tax base in securities trading.

Key words: *financial transaction tax, effects, tax revenues, capital market, Croatia*

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SAŽETAK

Porez na financijske transakcije (FTT) jedan je od oblika oporezivanja koji je izazvao najviše kontroverzi te bio predmetom rasprava znanstvene i stručne javnosti. Rastući interes za uvođenjem nove porezne regulative u najvećoj je mjeri potaknula financijska kriza. Razlozi za implementaciju FTT-a sastoje se u generiranju značajnih fiskalnih prihoda, pravednijoj raspodjeli troškova krize s financijskim sektorom te smanjenju mogućnosti izbijanja novih kriza. U skladu s navedenim, 9 zemalja EU dogovorilo je prihvaćanje jedinstvenog FTT-a u sklopu mehanizma pojačane suradnje, koji bi trebao stupiti na snagu tijekom 2018. godine.

Cilj rada je istražiti mogućnosti uvođenja FTT-a u EU-i, s posebnim naglaskom na potencijalnu implementaciju u Republici Hrvatskoj. Preliminarna analiza ukazuje na zaključak da ekonomski i fiskalni efekti ne mogu opravdati trošak uvođenja FTT-a u Hrvatskoj. S obzirom na nerazvijeno, nelikvidno i visoko koncentrirano hrvatsko tržište kapitala, novo porezno opterećenje bi moglo odbiti potencijalne investitore. Štoviše, porezna baza za hrvatsko tržište kapitala je vrlo uska, jer ne postoji trgovanje derivatima, koji prema inicijalnom prijedlogu za oporezivanje financijskih transakcija, čine najveći dio porezne baze u trgovanju vrijednosnim papirima.

Ključne riječi: *porez na financijske transakcije, efekti, porezni prihodi, tržište kapitala, Hrvatska*

1. Introduction

The financial market collapse of 2007 has pointed out the shortcomings in the regulatory and supervisory framework of the financial system and the tendency of financial institutions to speculative behaviour and excessive risk taking. The public interest was particularly focused on reforming a financial sector to ensure fair contribution to public finances and to provide fair and long-term growth. Therefore, in addition to improvement of supervisory and regulatory structures and new legislation with aim to strengthen the European Monetary Union, the European Commission (EC) has prompted the question of changes in the system of indirect taxation.

This idea has gained undeniable support from the public and the scientific community.[2] After its implementation was repeatedly postponed, some EU states have maintained their existing taxes while others including France and Italy, independently introduced new ones (in 2012 and 2013 respectively). The first formal initiative for unification of levying the financial transaction came with the EC proposal in September 2011. Due to the lack of unanimous Member States' support for this initiative, eleven European Union countries (EU) have agreed to continue work on unified financial transaction tax (FTT) implementation under the procedure of enhanced cooperation. Discussions on this proposal are still ongoing in the Council. In parallel, the proposal to use some of its proceeds as an own resource to the EU budget has been abandoned. Presently, FTT legislation has been tabled by the EC and 9 EU states are preparing to adopt a FTT during the 2018, namely Austria, Belgium, France, Germany, Greece, Italy, Portugal, Finland and Spain[3]. However, taking into account the previous changes in the agenda, delays in implementation are likely.

This paper investigates the possibilities of implementing a FTT in EU, with special reference to the question of the potential application in the Republic of Croatia. It will assess the impact and effects of a hypothetical implementation of FTT in Croatia which include revenue estimates and

[2] The FTT was endorsed in 2011 by 1,000 leading economists, including Joseph Stiglitz and Paul Krugman, and 1,000 parliamentarians from 30 countries. More than 200 economists signed an open letter published by Center for Economic Policy Research (CEPR) (Šramko 2015, 53).

[3] Slovenia finally rejected introduction of FTT in 2016, while Belgium ongoing participation is in doubt.

the impact on the domestic capital market performance. Although the Croatian Ministry of Finance announced in 2016 that it does not plan to participate in the implementation of EU FTT's, we hope that this paper will contribute to the interest of the scientific community for participation in researching new opportunities that would contribute to financial stability and crisis prevention. The structure of the paper is as follows. The introductory remarks provide insight into the subject and the research problem, followed by the designing issues of the proposed European FTTs. The next section reviews the estimated effects of FTTs on revenues and economic efficiency in the EU. Prior to the conclusion, authors conducted a preliminary analysis of the effects on the growth of tax revenues as well as the level of Croatian GDP. The impact of FTT's has been analysed in terms of a financial system, especially for the domestic capital market. The last section offers conclusion.

2. Characteristics of proposed FTT in the EU

In most general, financial transaction tax represents a turnover tax which covers transactions with different types of financial instruments. European FTT is based on a so called "AAA approach" (*all institutions, all markets, all instruments).* It refers to a broad fiscal framework, proposing a unique tax burden on trading in all financial instruments by all financial institutions within the EU, which takes place on organized financial markets (exchange and OTC markets). Nevertheless, according to the last proposal from February 2013 (EC, 2013), FTT would apply to the purchase of a equity or derivatives for a exchange-based transactions but also to over-the-counter transactions. Tax rates for basic financial instruments are 0.1% of the value of buying and selling transaction (except the primary market for shares and bonds), whereas the tax rates of 0.01% of nominal contract value are defined for derivative products (Olgić Draženović, Maradin, Buterin, p. 1067).

The tax will be triggered by either issuance or residence principle. In other words, all transactions done by financial institutions based in the EU as well as by those based outside the EU are to be taxed as long as the transaction takes place in the FTT region. The scope of FTT is primarily aimed at financial transactions made by financial institutions. It is limited to financial industry, while it excludes the impact on daily citizens' and small and medium enterprises transactions. Furthermore, the proposal of the single European FTT leaves out of its scope traditional bank lending, deposit taking, currency trading, investment banking activities and the transactions carried out by the central banks of participating nations and the European Central Bank, with the European Financial Stability Facility and the European Stability Mechanism, and transactions with the European Union.

Arguments in favour of FTT were presented by the work of numerous authors (Stiglitz 1989; Summers and Summers 1989; Spahn 2002) who stand out the view about trading and price dynamics in asset markets and the effects of a transaction tax. A general FTT with a low and uniform tax rate will most probably reduce excessive liquidity in financial markets and, hence, will mitigate the instability of asset prices (Schulmeister 2010).

Some of the first arguments for the introduction of FTT were elaborated by Keynes (1936), who argued that speculation based on psychology drives market prices rendering them unable to allocate capital efficiently. These arguments were later also used by Tobin (1984), who originally proposed the idea of FTT on foreign exchange markets (Šranko 2015).

Taxing gross transactions on secondary financial markets at relatively low rates in general would prevent crises in the future and ensure safer and more stable financial markets. Besides reducing speculative behaviour of market participants and decreasing risk by disincentive to high frequency trading[4], FTT should reduce the fragmentation of internal market and pay attention of the financial sector to the long-term activities rather than being focuses on the fees from short-term investments[5]. It will also make the finance fit for the purpose of long term financing small and medium-sized enterprises instead of being focussed on the fees that they get from short-term investments (Griffith-Jones, Persaud 2015).

However, one of the main pros arguments for introduction of unifed European FTT is revenue raising which could be used for the achievement of political goals, particularly on the supranational level. Matheson (2011) argue that collecting levies on exchange-based transactions in general would be easy and inexpensive to administer. Additionally, FTTs are meant to discourage financial transactions that do not enhance efficiency of financial market and as a consequence to curb excess volatility observed in financial markets (Šranko 2015). Davilla (2014) has paid attention to welfare implications of taxing financial transaction.

The opposite view, in the light of disadvantages of FTT, points to lower market liquidty and higher capital acquisition costs. Impact of FTTs on trading volume and market liquidity suggests that a narrowly based transaction tax would provide a strong incentive for traders to migrate to foreign markets and furthermore, a reduction in trading volume would widen the bid-ask spread while decreasing market liquidity (Wang, Yau Jot 2012). Critics of the most fundamental assumptions suggest that market efficiency will be reduced by introducing a new tax burden. In addition, it would increase capital cost, shrink investments and consequently hinder economic growth. Findings for volatiliy change suggests either mixed or absent effect of FTT, while impact on returns is relatively straightforward and negative.[6]

Without any doubt, FTT can be seen as supplementing regulatory tools for limiting undesirable market behaviour and. FTT will help create economic disincentives for speculative transactions as a means to stabilize capital markets and reduce the frequency of crises. Also, there is an issue of FTT significant importance in political sense and as a matter of economic justice.

3. Effects of introduction of FTT to the European financial system

FTT is a policy tool that can raise a substantial amount of revenue and also reduce the size of financial trading relative to the economy’s level of productive activity. The revenues that could be raised are in fact quite significant, despite the deceptively low tax rates.

European Commision estimated the macroeconomic effects of introduction of FTT using Dyanimc Stochastic General Equilibrium Model (Lendvai, Raciborki 2010). The initial version of the European Commission model calculated a long-run loss of GDP of -0.53% from the FTT. In updated model by the same authors of the study (Lendvai, Raciborki, Vogel 2012) a far lower estimate of negative effect on growth was given, equal to only -0.2%. New estimations considered that only 15% investments by credit institutions in EU are funded via the stock market (10%) or by debt securities (5%), while the rest of the external funding of European companies is done by the bank loans and retained profits. Research findings point to lowering financial market volatiliy. Also, FTT would couse significantly reducing of high frequency trading, which represents 40% of EU financial transactions. This would imply significant breakthrough for

[4] There is a remarkable discrepancy between the levels of financial transactions and the levels of the "underlying" transactions in the "real world". Trading in derivatives markets has expanded significantly stronger than trading in spot markets. As a consequence, derivatives trading in Europe was already in 2006 84 times higher than nominal GDP, whereas spot trading was "only" 12 times higher (Schulmeister 2010, p. 5).

[5] It is estimated that 70% of the profitability of banks comes from short-terming clients and as a result, they do not invest in their long-term clients (Griffith-Jones, Persaud 2015)

[6] Comprenhensive empirical literature review was given by Šramko (2015) .

financial stability and growth without any costs to the real economy. Furthermore primary markets would be excluded as would be financial transactions that do not involve financial institutions. If we take account of these additional effects, the net impact on long-term GDP would be only -0.1%.

According to Griffth-Jones and Persaud (2012) the introduction of FTT could benefit even more to the European financial system, considering its contribution to reducing the risk of a future crises. They estimated a positive effect on growth of 0,25% GDP. Table 1, below is an estimate of the effect on revenues and turnover, using the elasticity measures of the proposal for a 0.1% tax on equity and bond transactions alike. The table shows that at this tax rate, reductions in equity volumes would be modest and the taxes raised still significant and the effect on turnover will be greater in the bond markets, but because of their size, the tax take would still be highly significant.

Table 1 *Revenue matrix – The FTT calculator*

Countries	Current Turnover, $ millions		Assumed max. loss of turneover (3) (4)		FTT revenues		
	Equities (1)	**Bonds (2)**	**Equities**	**Bonds**	**Equities**	**Bonds**	**Equities & Bonds**
Argentina	2,567	52,920	8%	33%	2	36	38
Australia	1,013,594	811,188	8%	33%	933	547	1,480
Brazil	859,258	763,560	8%	33%	791	515	1,306
Brazil	1,395,994	1,143,072	8%	33%	1,285	771	2,056
China	8,068,722	1,781,892	8%	33%	7,425	1,203	8,627
France/Netherlands/Belgium	2,010,284	3,847,284	16%	42%	1,691	2,230	3,921
Germany	1,467,487	2,032,884	16%	42%	1,234	1,179	2,413
Hong Kong	1,488,664	75,600	13%	42%	1,302	44	1,346
India	1,059,712	369,684	8%	33%	978	249	1,227
Italy	972,649	1,663,200	16%	33%	818	964	1,782
Japan	3,980,240	8,070,300	16%	42%	3,348	4,679	8,026
South Africa	251,365	91,476	6%	33%	236	62	298
South Korea	1,596,275	690,228	5%	33%	1,520	466	1,986
Spain	1,351,791	1,108,296	16%	42%	1,137	643	1,779
Switzerland	785,234	505,008	11%	42%	696	293	989
Taiwan	894,685	9,072	6%	33%	844	6	850
UK	2,505,677	3,031,560	7%	42%	2,335	1,758	4,092
US	27,540,235	23,566,032	16%	42%	23,163	13,662	36,825
G20	52,724,059	47,915,280	10%	37%	45,757	28,321	74,078
Less countries with FTT	40,517,508	42,747,264	9%	26%	34,303	24,968	59,271
Euro-6	5,802,211	8,651,664	16%	42%	4,062	5,016	9,896
Emerging	12,732,584	3,758,832	7%	33%	11,796	2,537	14,332

Assumptions	**Equities**	**Bonds**
FTT rate	**0,10%**	0,10%

Elasticity	**-0,6**	-0,6
Current transaction costs in most liquid markets		
Institutional	**0,20%**	0,04%
Retail	**0,50%**	0,18%
Average	**0,30%**	0,07%
Current transaction costs in less liquid markets		
Institutional	**0,45%**	0,09%
Retail	**1,13%**	0,18%
Average	**0,67%**	0,11%

Source: Griffth-Jones, Persaud (2012)

Schulmeister (2010) findings appointed that FTT main consequence would be expected to reduce excessive liquidity stemming from transactions which are very short-term oriented and that can be destabilizing at the same time. a general FTT would affect the (relative) profitability of different types of activities within the financial sector. Financing, insurance and risk transformation would practically remain unaffected by a FTT whereas short-term trading would become more costly (in particular derivatives transactions).

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. Most of these revenues would stem from derivatives trading at EUREX. Tax revenues from spot transactions of stocks and bonds would be small (less than 0.1% of GDP even at a tax rate of 0.1%). In Europe, tax revenues at a rate of 0,01% are estimated to lie between 0.59% and 0,78% of GDP.[7]

Effects on the financial system could be wide-ranging and difficult to assess. However, some include cascade effects, sectoral shifts, geographical shifts, the possible impact on the ISE, and on selected financial markets such as sale and repurchase agreements markets and sovereign debt markets. For financial intermediaries, introduction of FTT could lead to lower volumes of transactions and less liquid markets. The proposal may mean that intermediaries also face additional costs due to the administrative burden of collecting the tax (ESRI 2012).

4. Reflections on the possibilities of introducing tax on financial transactions in Croatia

Croatian financial system is underdeveloped as compared with financial systems in developed countries. Banks are the most important financial institutions and bank loans represent the most important source of external financing of the economy. The main characteristic of the Croatian bank market are high market concentration, foreign ownership of the banks, high spread of interest margins and prevalence of universal banking. The banks are statutorily authorized to offer a wide range of financial services. The non-deposit sector is relatively small and not enough diversified and it mainly consists of financial institutions like pension funds, insurance companies, investments funds and brokerage houses in the money and capital market (Prohaska, Olgić Draženović 2005, p. 26).

Croatian capital market can be defined as underdeveloped, narrow and low liquid. It is characterized by low standards of corporate governance, inadequate application of accounting standards and concentrated ownership structure in the medium and large companies. In addition, corporate governance, reporting to the investment public and the role of supervisory boards, are not developed to the extent that would upgrade investor confidence in the domestic capital market. Croatian institutional investors do not invest significant funds in non-domestic capital markets. Most of the investments are extremely conservative structured and focused in long-term

[7] For estimation of FTT revenues for the world economy as a whole as well as for the main regions, see Schulmeister (2010); Table 10: Hypothetical transaction tax receipts in the global economy In % of GDP, p. 52.

government bonds and to a lesser extent in domestic equities. For all these reasons, introduction of FTT in Croatian regulatory framework wouldn't be opportune because the realized costs would exceed benefits from the introduction of the new tax burden. Furthermore, taking into account the stability of financial institutions, along with the regulatory measures of the Croatian National Bank, state interventions in the financial sector have not been necessary after the emergence of financial crises.

Table 2 *Revenue matrix – The FTT calculator for Croatian capital market*

Countries	Current Turnover, $ millions		Assumed max. loss of turnover		FTT revenues		
	Equities	**Bonds**	**Equities**	**Bonds**	**Equities**	**Bonds**	**Equities & Bonds**
Croatia	446	99	7%	33%	0,415	0,092	0,507

Source: own calculation; Griffth-Jones, Persaud (2012); http://zse.hr/UserDocsImages/reports/ZSE-2016.pdf

According to Griffith-Jones and Persaud FTTs revenue matrix, total revenues for Croatia as an emerging country would be 0,507 mil. USD. Given the fact that the in the Croatian capital market trading with derivatives doesn't exist and that speculative trading is minor in importance, the main reason (raising revenues) for the introduction of FTT for the Croatian capital market is not acceptable. Preliminary analysis of the possibilities of FTT in Croatia, according to this proposal, leads to a conclusion that Croatian capital market is not developed enough to generate substantial tax revenues. This simplified approximation of FTT revenues doesn't take into account the possible impacts on the liquidity, cost of capital and market efficiency, by which results would be much worse.

It can be concluded, then, that by taxing transactions on the Croatian capital market would be generated relatively small amounts of tax revenue and that the taxation of turnover in securities on the Zagreb Stock Exchange would be insufficiently effective, esspecially with taking into account the essential administrative costs involved in the collection of the tax. This form of taxation, then, would be insufficiently productive. On the other hand, non-taxation of financial transactions in Croatia would impose a fiscal burden for domestic financial institutions when transactions take place in Member States of the FTT jurisdiction or when trading in financial instruments issued in these countries. Such a provision would cause an outflow of tax revenue outside Croatian borders (Milevoj, 2013, p. 34).

5. Conclusion

The financial market collapse of 2007 has caused to frequent calls for the taxation of financial transactions. The main premises for the planned introduction of FTT as a form of indirect taxation recommended by the European Commission, is that the financial sector has benefited most from the globalisation and liberalisation but it is still one of the most under taxed industries. At the same time it has been excessively publicly subsidized in the recent crises.

Undeniable advantage of introducing the FTT is in limiting high frequency trading and disruptions which should lead to improvement of system stability. Moreover, it will ensure and generate substantial public revenues. However there is no consensus about macro-economic well-being considering GDP growth and tax revenues.

Croatian capital market can be defined as underdeveloped, narrow and low liquid. Introduction of FTT in Croatian financial system would generate relatively small amounts of tax revenue and the taxation of securities turnover on domestic capital market would be insufficiently effective. One can conclude that introduction of FTT in Croatian regulatory framework wouldn't be opportune because the realized costs would exceed benefits from the introduction of the new tax burden.

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