EU'S NEW PROPOSED FINANCIAL TRANSACTION TAX

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I. Introduction

The financial crisis in the European Union (EU) has resulted in adverse effects on the Member States (MS) forcing several European bodies to search for various measures to mitigate and attenuate the current situation. One possible way for strengthening the EU zone that has been forwarded for implementation has been the introduction of a European-wide tax on the financial transactions. Similar taxes already exist or were implemented recently on a domestic law basis in several MS and internationally. Yet implementing this sort of tax within the Internal Market has attracted several debates in favour or against the intrinsic nature of the tax itself. The initial attempt to implement a common Financial Transactions Tax (FTT) proved unsuccessful, and subsequently the Commission's Proposal for a Directive implementing the FTT has been carried forward via the enhanced cooperation procedure among selected MS.[2]

The proposed FTT is an indirect tax levied on several financial instruments traded by a broad range of financial institutions. The Commission has estimated annual revenue of 57 billion Euro[3] from the tax payable by the financial sector industry, i.a. from institutes receiving substantial government support. For this purpose, the sector will be instructed to make a fair contribution to public finances, which will

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2 The abbreviation 'FTT' used in this paper and all Articles - apart from specific different mentioned statues - referring to the Financial Transaction Tax in the European Union, lastly proposed by the European Commission on the 14th of February 2013 and authorised by the European Parliament and the European Council. Proposal for a Directive implementing enhanced Council cooperation in the area of financial transaction tax, [COM(2013) 71 final – Not yet published in the O.J.].

3 Further to revenue expectations see Commission Staff Working Document, *Impact Assessment accompanying the document Proposal for a Council Directive implementing enhanced cooperation in the area of financial transaction tax: analysis of policy options and impacts*, SWD(2013) 28 final, 21.

ultimately benefit citizens, enterprises and Member States. At the same time, however, the tax itself can also have detrimental impacts on the Internal Market, in particular relocation resulting in negative macro-economic effects.

The purpose of this dissertation is to provide a brief historical background about the theoretical origins of the tax at stake explaining the rationale behind the FTT directive (Part II A). Subsequently, the current design features of the FTT as included in the current Directive are explained (Part II B 1-4). This will be followed by a short insight into the Enhanced Cooperation Procedure (ECP) and the difficulties surrounding it (Part II.B.5.). Thereafter, the potential negative impacts for the European financial centre will be illustrated, namely product substitution and relocation (Part III). The Pigouvian function, which is i.a. implemented to curb risky financial products, is then analysed together with the definition of High Frequency Trading, to point out the regulative elements of the FTT (Part IV A-C). This is accompanied by an analysis of other kinds of regulation methods in this field (Part IV D). Subsequently, a comparison between the FTT's Pigouvian function and ordinary regulation and supervision methods will be given (Part IV E). To conclude this study, I will examine whether FTT really meets its intended aims (Part VI).

II. Purposes and juridical arrangement of an European Financial Transaction Tax

A. Historical background and Purposes

Financial Transaction Taxes are duties levied on several monetary transactions for a specific purpose. In the past, several attempts to introduce such kind of taxes on a national level were made.[4] In view of the present financial crisis and the subsequent sovereign-debt-crisis in the EU and globally, calls for financial transaction taxes rose to the top of the agenda to raise revenue, regulate financial trading and to make sure that the financial sector makes a fair contribution.

The theoretical idea of an FTT started with Keyne in 1936 and his reflections on the stock markets following the Great Depression in the U.S. He recommended a substantial government transfer tax on all transactions to mitigate the speculative short term trading.[5] Later, in 1972, James Tobin proposed the 'Tobin Tax' on foreign exchange transactions.[6] Tobin developed his ideas during the breakdown of

4 I.a. ead. Tobin tax, stamp duty at the London Stock Exchange.

5 Thomas Hemmelgarn, Gaetan Nicodeme, *Can Tax Policy Help to Prevent Financial Crisis?* in Alworth, J. S. and Arachi, G. (ed.), Taxation and the Financial Crises, 132 (2012).

6 Id.; For a detailed analysis of the original Tobin Tax proposal: David Felix, *The Tobin Tax Proposal: Background, Issues and Prospects* (1994).

the Bretton Woods system. Erratic changes in foreign exchange rates and massive international flows of funds lead to instability of the world economy.[7] The original purpose of the 'Tobin Tax' was to discourage high speculative international financial transactions by a tax rate of 0.5%. Furthermore, the tax was designed to focus exclusively on spot currency transactions.[8] The current directive for a European FTT on the other hand pursues the same aim but explicitly exclude spot currency transactions from the scope of the tax.[9] Therefore, the designation 'Tobin Tax' for the current European FTT, as carried out by several academics and journalists, is only partly adequate in relation to the aim of tackling speculative trading. Basically, the European FTT cannot be seen as a 'Tobin Tax' in a narrow sense.[10] It is rather a genuine concept especially designed for the current circumstances and demands within the European supranational framework.[11] The original idea of Tobin to focus on currencies was becoming obsolete due to the introduction of a common currency within the EU. Nevertheless, the basic ideas of Tobin and Kayne to implement a financial transaction tax have been the basic foundations for the current discussion on the introduction of a European-wide FTT.

There are three major purposes that are being pursued by the present Commission proposal for an FTT.

Firstly, a harmonised approach for a financial transaction tax ensures the stability of the Internal Market avoiding its fragmentation via the numerous uncoordinated national taxation regimes, sometimes also leading to distortions of competition and double or non-taxation.[12] Currently, nine EU MS have already introduced a national tax on financial transactions.[13]

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7 Myron Frankman, *Beyond the Tobin Tax: Global Democracy and a Global Currency*, 581 The ANNALS of the American Academy of Political and Social Science 62, 67 (2002).

8 Id. at 67.

9 See European Commission fn. 1.

10 Clifford Chance, *The Financial Transaction Tax – 14 question and answers* 5 (2011), http://www.cliffordchance.com/content/dam/cliffordchance/PDF_2/Client_Briefing_The_Financial_Transaction_Tax.pdf.

11 See detailed under section II. B.

12 European Commission, supra fn. 1, 4; Commission Staff Working Document, supra fn. 2, 11.

13 Belgium, Cyprus, Finland, France, Greece, Ireland, Poland, United Kingdom. KPMG Global, *EU Member State Comparative Financial Transaction Tax Survey* (2013), available at https://www.kpmg.com/Global/en/IssuesAndInsights/ArticlesPublications/financial-transaction-tax-survey/Pages/Default.aspx.

For example, the UK's stamp duty has a long tradition as it was firstly introduced in 1986.[14] Stamp duty is a tax on the registration of ownership of a financial asset. Practically, this means that for any purchase of shares of UK companies a tax rate of 0.5% is levied on the purchase price, and is payable by the purchaser.[15] In the year 2008/09 the UK revenue raised 4.022 Million Euro by levying Stamp Duties on transactions of shares with a tax rate of 0.5%.[16] In terms of GDP and total tax revenue, the highest values have been reached during the boom years at the end of the last century, notably in 2000/01. For 2008/09 the value is back to the level of the mid 1990's which is around 0.2% of GDP.[17] The UK stamp duty is therefore a successful example of a national FTT.

In relation to the double or non-taxation issue, it is pertinent to point out that at the current stage it is not sure if the FTT will contribute to prevent distortion within the Internal Market as a whole.[18] The Commission's Impact Assessment (IA) itself considers double taxation problems with other national FFTs from non-participating Member States (NPMS) like the UK.[19] If a financial institution is deemed to be established in the FTT zone because of the Directive even so it is actually established in a MS with a national tax on financial products, double taxation may occur. The IA describes this as a "tiny friction", as the national FTTs are narrowly defined taxes on securities transactions, with generously defined exemptions or exclusions from the scope of the tax for financial intermediaries.[20] Nonetheless, it still raises uncertainty.[21]

The second main objective of the FTT is to attempt to force financial institutions to make a fair and substantial contribution to cover the cost of the recent financial and economic crisis. While the first objective to create a harmonised approach for a financial transaction tax is undisputedly worth aspiring (despite its difficulties) to

14 KPMG Global, *EU Member State Comparative Financial Transaction Tax Survey – UK* (2013), available at:
https://www.kpmg.com/Global/en/IssuesAndInsights/ArticlesPublications/financial-transaction-tax-survey/Pages/uk.aspx.

15 Id.

16 European Commission Staff working paper, *impact assessment - accompanying the document 'Proposal for a Council Directive on a common system of financial transaction tax and amending Directive 2008/7/EC'*, SEC(2011)1102 final 6.

17 Id.

18 Joachim Englisch, John Vella and Anzhela Yevgenyeva, *The financial transaction tax proposal under the enhanced cooperation procedure: legal and practical considerations*, British Tax Review 227 (2013), available at http://ssrn.com/abstract=2284733.

19 Commission Staff Working Document, supra fn. 2, 17.

20 Id.

21 Englisch et al, supra 227.

avoid competition distortions, the fair contribution argument includes wide subjective aspects and is therefore criticized. The argument is based on the view that the financial industries firstly have contributed to the crisis and secondly may participate from public encouragement to survive the crisis. Undoubtedly, several members of the financial industry put forward arguments against these assertions. The financial sector blames the governments to have been inactive for too long. By implementing a proper and sound regulation together with prudent supervision not only on a national basis, but also on a supranational or global field, the causes of the recent financial crisis would have been detected and avoided earlier - before negative contagious effects actually took place.[22] It is still arguable, however, that the FTT would not be the right measure as negative impacts, like price volatility and decreasing liquidity, may occur and damage the markets.[23]

On the other hand, it has to been pointed out that the arguments of the European Commission, the national governments and the major part of the public are prevailing, proving that the behaviour of several financial institutions contributed to the 2008 financial crisis and its aftermath. In fact, several financial institutions made use of public support and were "bailed out" with governmental money.[24] Referring to this argument, FTT promoters hold that the financial sector would be under-taxed because financial instruments are mainly VAT exempted.[25] As the majority of financial products are margin based, the implementation of the invoice-credit VAT system is very difficult.[26] However, as input tax is also not deductible, the favorable treatment is limited. It can therefore be said that a fair contribution to bear the cost of the recent financial crisis is adequate but has to be conducted separately from populist measures in order to aid the declining reputation of banks and create trust and confidence in the European financial sector.

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22 E.g. Prof. Reinhard H. Schmidt, a leading Professor for Finance in Europe i.a. in his interview with the newspaper Frankfurter Rundschau published on the 22th October 2011, available at http://www.fr-online.de/schuldenkrise/finanz-professor-reinhard-h--schmidt--die-schuld-fuer-diese-krise-tragen-nicht-die-banken-,1471908,11044428.html. In contrast, HSBC CEO Stephen Green e.g. examined at Yale University, School of Management, available at http://nexus.som.yale.edu/hsbc/?q=node/100. From an academic perspective e.g. see the simulation from Todd Feldman, *Portfolio manager behaviour and global financial crises*, 75 Journal for Economical Behaviour 192 ff. (2010).

23 For example Kenneth Rogoff, formerly the chief economist at the IMF and professor of Economics and Public Policy at Harvard University, *The wrong tax for Europe*, Reuters (2011), available at http://blogs.reuters.com/great-debate/2011/10/03/the-wrong-tax-for-europe/.

24 Overview about UK bailouts until 2011 Simon Rogers, *Bank reforms: how much did we bail them out and how much do they still owe?*, in the Guardian - data blog (2011), available at http://www.guardian.co.uk/news/datablog/2011/nov/12/bank-bailouts-uk-credit-crunch.

25 Council Directive 2006/112/EC of 28 November 2006 on the common system of value added tax, 2006 O. J. L 347, Art. 135 (1).

26 More to VAT in the financial sector Thomas Hemmelgarn Gaetan Nicodeme, supra 121 ff.

The third objective of an EU FTT is the attempt to have Pigouvian function. The purpose of this function is to make transactions less attractive which "…do not enhance the efficiency of financial markets but which might only divert rents from the non-financial sector of the economy to financial institutions and, thus, trigger over-investment in activities that are not welfare enhancing, nor does it contribute alongside ongoing regulatory and supervisory measures to avoid future crises in the financial services sector."[27] The main targets of this prescription are high frequency transactions undertaken by several financial institutes worldwide. The regulatory objective raises discussions and a margin for open questions. For example, which financial instruments fall under the above-cited definition and do not 'enhance the efficiency of financial markets'? To which extent are they harmful but entail at the same time positive effects in markets? And finally, is a tax the right regulatory instrument to solve a possible inefficiency?[28] The FTT as a Pigouvian tax aims to make the financial market in the EU more stable and sound by enhancing long-term investments.[29] This objective becomes even more relevant in view of the causes that led to the recent crisis but also to prevent future financial crises.

It has to be highlighted that an objective in the Commission's proposal that is not directly mentioned but is clearly an economic aim in times of empty coffers is the raising of revenue, valued at EUR 35 billion annually within the EU11.[30] Part of the revenue generated by the FTT will constitute an own resource for the EU budget.[31] Critics highlight the loss in GDP and in addition to it the impact of the market prices for financial products. As financial institutions are allowed to adjust the final prices of products, the burden will be transferred to the ordinary consumer. Banking will become more expensive and this, in turn has impacts on the real economy and the end-consumer.[32]

The Commission on the other hand examined the macroeconomic impacts of the policy changes via Dynamic Stochastic Equilibrium models in its IA. The result shows that under certain assumptions, the estimation of the possible deviation of

27 European Commission, supra fn. 1, 4.

28 See Part IV.

29 European Commission, supra fn. 1, 4.

30 European Commission, supra fn. 1, 14.

31 Id.

32 Detailed Deutsche Börse Group, Statement of Deutsche Börse Group at the Public Hearing at the finance committee of the German Bundestag 2-3 (2011), http://deutsche-boerse.com/dbg/dispatch/en/binary/gdb_content_pool/imported_files/public_files/10_downloads/11_about_us/Public_Affairs/Position_paper/20111219_DBG_statement_on_FTT.pdf. Contrary Zsolt Darvas, Jakob v. Weizsäcker, Financial Transaction Tax: Small is Beautiful 19 (2010), http://aei.pitt.edu/12 885/1/pc_tobintax_080210.pdf; Kenneth Rogoff, supra.

GDP established at 0.28%.[33] Assuming the revenues are used on growth-enhancing public investment, the Commission calculates an overall positive net effect.[34]

It becomes obvious, that the objectives pursued are not free from criticism. Opponents highlight a variety of drawbacks, whichwill be dealt with at a later stage within this contribution.[35]

B. Design and implementation procedure

The design of the FTT has the aim to reach a variety of transactions and institutions by having as few impacts as possible on the open market. The creation of negative effects in terms of GDP and reduction in the market volume of transactions should be avoided and on the other hand, a broad scope ensures to raise as much revenue as possible as well as tackling tax avoidance schemes like relocation or product substitutions.[36]

What follows is a presentation of some features of the European FTT based on the Commission's Proposal from 2013.[37] Subsequently, key aspects of the Enhanced Corporation Procedure will be outlined.

1. Personal scope

One requirement to ticker FTT is, according to Art. 3 (1), that at least one financial institution participates in the transaction.[38] The personal scope covers a wide range of financial institutions. Essentially it includes "*investment firms, organised markets, credit institutions, insurance and reinsurance undertakings, collective investment undertakings...*".[39] Besides these institutions, Art. 2(8)(j) includes a general clause.[40] As financial institutions will be considered entities with 50% or more overall average net annual turnover in financial transaction.[41] This ensures that even entities having not in general an appearance of a financial institution, they are treated as being one if they realistically act so. Thus, the

33 Commission Staff Working Document, supra fn. 2, 44 ff.

34 Id.

35 Detailed examining the purpose of regulating HFT in Part IV.

36 European Commission, supra fn. 1, 4 and fn. 2.

37 European Commission, supra fn. 1.

38 Id. at 23.

39 Id. at 9, 21; Commission Staff Working Document, supra fn. 2, 33 ff.

40 Id. at 21.

41 Id. at 10.

deliberate act of avoiding being one of the above-mentioned institutes is aggravated.

Yet it has to be pointed out, that this general clause poses its disadvantages. Firstly, the calculation in question is a further burden for financial institutes. Moreover, financial institutions which actually are not intended to be covered, could fall under the scope of the tax.[42]

2. Material scope

The material scope follows a similar concept as the personal scope covering a broad range of financial transactions.[43] The Commission proposed to include in the scope "*instruments which are negotiable on the capital market, money-market instruments, units or shares in collective investments*"[44]. Besides the trading in organised and regulated markets, over the counter trading is affected as well. Additionally, the proposal contains special provisions. For example inter-group transfer of financial products is treated in the same way as between separate entities, thus being liable to tax. Exchanges of financial instruments repurchase and reverse repurchase, as well as securities lending and borrowing agreements are common inter-bank trading activities and could be artificially created to circumvent the FTT if they would not be covered. Furthermore, structured products, meaning tradable securities or other financial instruments offered by way of a securitization, are comparable to any other traded financial instrument and are therefore included in the scope.[45]

The proposed and approved Directive provides in Art. 3(4) a negative catalogue for other several transactions. Undertakings with the European or national Central Banks are for example not covered by the scope of the FTT.[46] The rationale behind this is the undisturbed refinancing possibilities of financial institutions and States, also monetary policies in general or public debt management should be free from the tax.[47] Excluded from the scope are also primary market transactions, which are important for day-to-day financial activities. Mortgage lending, consumer credits, enterprise loans, payment services, amongst others, should not be taxed to preserve the real economy.[48] The Council Directive 2008/7/EC contains further

42 Andreas Ruckes, *Finanztransaktionssteuern – EU-FTT ante portas*, 7 IStR 255, 257 (2013).

43 European Commission, supra fn. 1, 8.

44 Id. at 8; further Commission Staff Working Document, supra fn. 2, 29.

45 Id.

46 Id. at 9, 23.

47 Id. at 9; Englisch et al, supra 224.

48 Id.

exceptions from the liability to tax.[49] Also, spot currency transactions are excluded to preserve a free flow of capital.[50]

3. Territorial scope

The territorial scope is directly related to the question of how many MS will implement the tax. The territorial implementation of the tax via an Enhanced Cooperation Procedure is discussed under Part C of the paper. Basically, the Directive includes an establishment principle. It consists of the "residence principle" and the "transaction principle" and is implemented in Art. 4.[51] The tax is levied if one of the financial institutions has its residency in one of the participating MS. If a counterparty of the transaction is not resident in a participating MS, this institution will be deemed to be established in the same participating MS and the transaction becomes taxable there.[52] Furthermore, if a financial institution wants to trade on a trading platform within the FTT zone or interact with European trading platforms, it has to be authorised by the authorities of that MS to do so. The tax is due in respect of transactions covered by these authorities.[53] Thus, also in its territorial configuration the tax tries to cover a broad range of transactions and has a kind of "contagion effect" on financial institutions established outside participating Member States (PMS).[54]

Concurrent with the establishment principle the Commission added a new design element, which was not included in the original proposal from 2011.[55] The issuance principle tries to avoid the still feared relocation problem. It extends the scope of the tax remarkable. Namely because none of the counterparties need to be established in a participating MS but they are nonetheless taxed as the issuer is situated in a participating MS.[56] The consequence implemented in the directive is a legal fiction. The persons involved in such a transaction will be deemed to be established in that MS where the issuer is located and taxed.[57]

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49 Council Directive 2008/7/EC from the 12th of February 2008 concerning indirect taxes on the raising of capital, 2008 O.J. L 46/11, Art. 5 (1)(e) and (2), Art. 6(1)(a).

50 European Commission, supra fn. 1, 24, 10.

51 Id.

52 Residence Principle, id.

53 Transaction Principle, Commission Staff Working Document, supra fn. 2, 39.

54 Englisch et al, supra 230.

55 Id. at 5; details about the changes in the establishment principle and their impact on relocation Commission Staff Working Document, supra fn. 2, 40 ff.

56 Id. at 11.

57 Id.

It is still questionable though if the extra-territorial effects contained in the issuance principle are in accordance with the TFEU[58] which will be examined under part II.B.5. Another highly-criticised difficulty associated with the implementation of the tax at stake is regarding branches, clearly laid down in Art. 4(1)(e). A branch of a financial institution is only taxable if it directly carries out the transaction.[59] The establishment principle can only be eliminated by the taxpayer, if he proves that there is no link between the economical substances of the transaction in question and the MS. According to the Commission, the economical substance should be interpreted in a narrow sense.[60] Therefore, Art. 3 of the Directive clearly shifts the burden of proof on to the taxpayer.[61] To which extent and how the proof has to be furnished is still open and depends of the implementation of the directive in national laws as well as on the tax administrations in each MS.

4. Taxable base and tax rate

According to Article 6(1), the purchase and sale of financial instruments is considered as the taxable amount.[62] This looks different when it comes to intergroup transactions where the market price applies. The market price is the value which would be agreed on an arm's length basis between unrelated parties, Art. 6(2,3).[63] With that the Commission sets the same standards as in the OECD Transfer Pricing Guidelines for Associated Enterprises.[64] This is practical for the taxpayers concerned. On the other hand, all the problems regarding the current Transfer Pricing rules and financial products could appear in relation to the FTT as well.[65] For derivatives the taxable base shall be the notional amount referred to in the derivatives contract at the time of the transaction. A creative design of

58 Consolidated Version of the Treaty on the Function of the European Union 2012 O.J. C 326/01 [hereinafter TFEU].

59 European Commission, supra fn. 1, 11, 25.

60 European Commission, *Technical fiche – the "residence principle" and the territoriality of the tax* 3 (2012), available at :

http://ec.europa.eu/taxation_customs/resources/documents/taxation/other_taxes/financial_sector/fact_sheet/ territoriality.pdf.

61 Id. at 25.

62 European Commission, supra fn. 1, 24.

63 Id.

64 OECD, *Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations* (2010).

65 Overview e.g. PWC, *Clarifying the rules: Sustainable transfer pricing in the financial services sector* (2012), http://www.pwc.com/gx/en/tax/assets/pwc-clarifying-the-rules.pdf.

derivative contracts can be a tool to artificially reduce the tax and in regard to administrative and compliance costs this is the only reasonable taxable base.

The tax rate for financial products as proposed in Art. 9 (2) (a) is 0.1%. Solely derivatives are taxed by 0.01% as they are normally short-time traded and riskier than other financial instruments.[66] The participating MS are free to raise the tax rate but considering possible relocation issues it is not expected that one of the participating MS are eager to do it.

5. Enhanced cooperation procedure

Given that several Member States oppose the implementation of an EU-wide FTT, the tax will not be implemented across all 28 Member States via the ordinary procedure for enacting legislation in the field of tax according to Art. 113 TFEU. In September 2011 the Commission originally proposed this approach.[67] It was based on a communication released in 2010 setting out ideas for the future taxation of the financial sector.[68] Accompanying were the thoughts by the G20 discussions in 2009 to create a global financial tax.[69] Although widely accepted that it was aiming to regulate the aftermath of the financial crises in 2008, the MS could not agree on a common configuration of the tax.[70] During the Ecofin Council meetings in June and July 2012, the views, especially those of the UK and Luxemburg on the one side, and those of Germany and France on the other, could not concur.[71] Subsequently, eleven MS requested permission for an ECP by the Commission according to Art. 20 TEU[72] to proceed their intention for a European taxation of the financial sector.[73] This kind of procedure was introduced via the Amsterdam treaty in 1997 and allows – under certain conditions – MS to integrate their

66 Id. at 26.

67 Proposal for a Council Directive on a common system of financial transaction tax and amending Directive 2008/7/EC [COM (2011) 594 final – Not published in the O.J.].

68 Communication for the Taxation of the Financial Sector [COM (2010) 549 final – Not published in the O.J.].

69 Detailed summarised Stijn Claessens, Michael Keen, Ceyla Pazarbasioglu, Financial Sector Taxation - The IMF's Report to the G-20 and Background Material (2010), available at http://www.imf.org/external/np/seminars/eng/2010/paris/pdf/090110.pdf.

70 Detailed the whole process Commission Staff Working Document, supra fn. 2, 9.

71 CEU Press Release, PRES/12/281 (2012).

72 Consolidated Version of the Treaty on European Union, 2012 O.J. C 326/01 [hereinafter TEU].

73 Belgium, Germany, Estonia, Greece, Spain, France, Italy, Austria, Portugal, Slovenia and Slovakia; alternative options examined in Commission Working Document, supra fn. 2, 13.

policies without other MS.[74] Ever since then, it was only used two times, in the area of divorce law and patent law.[75] Thus, the application of the procedural and substantive conditions that are stipulated in the EU Treaties are not really clear.[76] Enhanced corporation has never been used in the field of tax until now. The in October 2012 proposed ECP and the 2013 proposed Council Directive implementing enhanced cooperation in the area of financial transaction tax are based on the original proposal of the Commission from 2011 with some updates on the risks of relocation and product substitution.[77] The European Parliament and the European Council finally approved the use of ECP in the beginning of 2013.[78]

Several legal conditions that are laid down in Art. 20 TEU and Articles 326 to 334 TFEU need to be fulfilled for a validated enhanced corporation procedure. The present proposal is particularly based on the formal procedure in Art. 329 (1) TFEU.[79] According to Art. 20 TFEU the procedure can only be conducted in "one of the areas covered by the Treaties". This legal requirement is fulfilled through Art. 113 TFEU that tries to achieve harmonisation in the field of indirect taxation like VAT. It at least can be seen as corresponding to that area, as the European FTT will harmonise the structure of the tax and provide minimum rates. Furthermore, it will attribute taxing rights between the Member States and therefore avoid double taxation or double non-taxation.[80] Art. 113 TFEU, which ensures a proper function of the internal market, is furthermore a shared competence and therefore open for ECP.[81] Art. 20 (2) TEU also requires that the ECP is the "last resort" and only a "participation of at least nine Member States" is sufficient. As above-mentioned, the Ecofin meetings could not achieve a consensus between the different MS.[82] Thus, the eleven MS are enough and able to

74 Treaty on European Union (Amsterdam text) Art. 11, November 10, 1997, 1997 O.J. C 340.

75 In Detail Carlo Maria Cantore, *We're One, but We're Not the Same: Enhanced Cooperation and the Tension between Unity and Asymmetry in the EU,* 3 Perspectives on Federalism 5 (2011).

76 Some guidance Opinion of AG Bot from December 11, 2012, Spain and Italy v Council, Joined Cases C-274/11 and C-295/11 (pending).

77 See fn. 1 and 51 and the Proposal for a Council decision authorising enhanced cooperation in the area of financial transaction tax [COM(2012) 631 final/2– Not published in the O.J.].

78 European Parliament Press Release, REF 20121207IPR04408 (2013) and Council Decision No. 2013/52/ (Noonan), 2013 O.J. L 22/11.

79 Proposal for a Council decision authorising enhanced cooperation in the area of financial transaction tax [COM(2012) 631 final/2– Not published in the O.J.], 3.

80 Id. at 4; Critical referring to NPMS and double taxation Englisch et al, supra 238.

81 Id.

82 CEU, supra fn. 55.

make use of this last resort measurement – even if they would prefer an implementation within the whole EU. Moreover the Commission's proposal for a EU FTT was designed to "furthering the objectives of the Union, protecting its interests and reinforcing its integration process" as provided in Art. 20 (2) TEU. The establishment of an internal market is according to Art. 3 (3) TEU one of the most considerable and conspicuous objectives of the EU and is achieved by negative integration via the Fundamental Freedoms and positive integration e.g. via Directives like the one in question. Additionally, it can be again referred to Art. 113 TFEU, which provides for "the establishment and functioning of the internal market" and "to avoid distortion of competition".

Presently, several different national FTTs exist and therefore the EU FTT will create harmonisation and prevent relocation.[83] Furthermore, the ECP is still open for other NPMS to join and therefore is reinforcing the integration process.[84] Further, the ECP complies with the Treaties and Union law, especially with Article 326 (1) TFEU by respecting the existing acquis in the area and it does not stay in conflict with the Council Directive 2008/7/EC.[85] According to Art 326 (2) TFEU, the ECP should not "undermine the internal market or economic, social and territorial cohesion" and it should not "be a barrier to or discrimination in trade" and it should not create a "distortion of competition". As already mentioned-above the FTT is designed to create a common legal basis for the taxation of financial transactions and therefore abolishes distortions in competition.[86] Furthermore, the Commission highlighted that the bias of the EU FTT is based on objective criteria and the geographical connecting factors, hence not discriminative.[87] Lastly, the ECP has to respect the rights, competences and obligations of non-participating Member States in accordance with Art. 327 TFEU. The Commission's argument here is the possibility for the non-participating MS to keep or introduce an FTT on the basis of non-harmonised national rules.[88] Furthermore, the Commission points out that the attributed taxing rights only exist on the basis of appropriate connecting factors and therefore have no effect on non-participating MS if no economic link is existing.[89] As agreed at the European level, participating Member States will have to transpose the Directive into national legislation.

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83 European Commission, supra fn. 60, 6; Commission Working Document, supra fn. 9, 10.

84 Id.

85 Id. at 7.

86 European Comission, supra fn. 1, 2.

87 European Parliament, supra fn. 61, 8; critical Englisch et al, supra 237.

88 Id.

89 Id.

The aim of the Commission is to set this common framework for an FTT into force towards the middle of 2014.[90] Nonetheless, there are several problems that could lead to a delay. Firstly, already existing national FTTs have to be amended or abolished. Secondly, the administrations have to be provided with personal expertise and technical equipment and it has to be born in mind that the tax administrations in the PMS have not the same level e.g. in relation to efficiency.[91] Finally, although enhanced corporation creates a further integration, it also leads to asymmetries within the EU. In relation to the FTT, the adversatively opinions of NPMS, in particular Luxembourg and United Kingdom, have to be considered.[92]

In April 2013, the UK challenged the Council Decision authorising enhanced cooperation in the area of financial transaction tax.[93] The main argument is that the Council Decision would be contrary to Art. 327 TFEU by creating extraterritorial effects on non-participating MS.[94] Moreover, the extraterritorial effects would have no justification in customary international law.[95] Lastly, the UK argues that the Council decision would infringe Art. 332 TFEU as the implementation of a EU FTT will inevitably cause costs to be incurred by the NPMS.[96] Extraterritorial effects referred by the UK are especially created by the new-implemented issuance principle, which could impact financial institutes from NPMS sustainably.[97] For example, if a UK Bank is trading financial share with a U.S. Hedge Fund and this shares are originally issued by a French bank, the tax is still due in France for both financial institutes which are situated in NPMS. The economical link occurs via the issuance procedure in France. Furthermore, UK is concerned about the revenue aspects and how they will be implemented in the EU budget.[98] It has to be

90 According to the official webpage:

http://ec.europa.eu/taxation_customs/taxation/other_taxes/financial_sector/.

91 In relation to administrative costs Commission Staff Working Document, supra fn. 2, 47.

92 Detailed about UK views Christiana HJI Panayi, *Under the EU's proposed Financial Transactions Tax, non-participating member states may bear the burden of deeper tax integration without reaping the benefits* (2013), available at http://blogs.lse.ac.uk/europpblog/2013/05/28/eu-uk-ftt/.

93 United Kingdom of Great Britain and Northern Ireland v Council of the European Union, Case C-209/13, 2013 O.J. C 171/44 (pending case); Detailed the formal requirements Englisch et al, supra 237.

94 Id.

95 Id.; Detailed examination of public international law issues in Englisch et al, supra 230.

96 Id.; Englisch et al, supra 229.

97 House of Lords - The European Union Committee, Lord Boswell, letter from 26th of March 2013; Englisch et al, supra 226.

98 Id.; Englisch et al, supra 229.

highlighted, as government borrowing for NPMS will become more expensive, they will not be able to participate from the revenue benefits. Moreover when it comes to cost consideration, UK is ascertain how and on which legal basis the tax will be collected from UK financial institutes and how much administrative effort as to be made by the English tax authority.[99] In general the UK is disappointed about the insufficient impact assessment form the Commission and claimed a better and more careful examination of the question whether and to what extent NPMS will be affected.[100]

In view of the above related reasons, at this stage it is still unclear if the FTT will indeed be implemented and subsequently come into force with the current proposed design or if the PMS and the EU Institutions need to make amendments. The pending ECJ decision has to be awaited to answer this question but has no suspensive effect. Moreover, new critical voices continue to appear also from France and Italy about widening the tax beyond shares to government debt in the secondary market. According to the news service Reuters, officials reported about drastic changes in the Commission's proposal.[101] In addition, practical political considerations come into play. Just to mention Germany, the parliamentary elections for the German Bundestag in September 2013 will have an influence on the role of Germany as a leading PMS.

III. Possible risks of a European Financial Transaction Tax

Two main risks are always prominent in an examination of a Financial Transaction Tax - product substitution and relocation. Particularly, these risks occur in the financial sector, as financial products are highly moveable and can be relocated or substituted easily. In relation to the EU FTT, several measurements were taken to minimise the risk but could not stop the concerns. The failure of the first attempt to implement a FTT in whole Europe and the reservations of non-European states, are results of this unsolved area.

A. Product substitution

If two different financial goods could be used to achieve the same purpose but only one financial good is in the scope of the FTT, severe effects could result. Financial

99 Id.

100 House of Lords - The European Union Committee, Lord Boswell, letter from 26th of March 2013 and House of Commons. European Security Committee of the House of Commons - 26th Report of Session 2012–13: "Enhanced Cooperation and a Financial Transaction Tax (34372)" HC Paper No.86-xxvi (Session 2012/13), 37.

101 Reuters, *France wants changes to EU financial transaction tax* (2013), available at http://uk.reuters.com/article/2013/07/11/uk-france-tax-eu-idUKBRE96A0GH20130711.

products could be created to fall outside the scope and therefore circumvent taxation.

It is important tobear in mind how fast the market of financial products is developing. Before the financial crises in 2007, the annual turnover on main financial markets amounted to almost 70 times world GDP.[102] 88% of that turnover was based on derivative trading. During the financial crises it came to a sharp drop on trading of financial instruments.[103] Some may argue, that these figures in relation to the real economy could not be healthy and are the reason why the effects of the financial crises were spreading large and fast. It is clear, the development of market infrastructure contributed to this. In particular, improvements in information technologies, which substantially decreased transaction costs and lead e.g. to High Frequency Trading (HFT) which will be discussed under Part IV. Accompanying this fast financial innovation is the emergence of a variety of derivative products, which are, besides of a few specialists, becoming impenetrable.[104] Moreover, implicit government insurance, and excessively low interest-rate policy of some developing countries was setting wrong incentives and contributed to the boom in financial products.[105]

Market participants may substitute towards instruments taxed at a lower effective rate or to instruments, which are not taxed at all by inventing new untaxed business models. The FTT arranges a lower tax rate for derivatives than for other products. As it will be more difficult to avoid entirely to be taxed, trader may recreate their products and the use of derivatives will increase.[106] That the excessive use of derivatives is exactly contrary to the objective to make the financial market more stabile, was pointed out by *Warren Buffet* already long before the Crises in 2002 –

> "*The derivatives genie is now well out of the bottle, and these instruments will almost certainly multiply in variety and number until some event makes their toxicity clear. Central banks and governments have so far found no effective way to control, or even monitor, the risks posed by these contracts. In my view, derivatives are financial weapons of mass destruction, carrying dangers that, while now latent, are potentially lethal.*" [107].

102 Darvas, v. Weizsäcker, supra fn. 22, 5.

103 Id. at 6.

104 Id. at 7.

105 Id. at 8.

106 See to Derivatives and REPO agreements Commission Staff Working Document, supra fn. 2, 28 ff.

107 Warren Buffet, *Berkshire Hathaway's 2002 Annual Report,* 15 (2002).

As illustrated by the International Organization of Securities Commissions (IRSG), shareholders can exchange the cash flows of a bond by using total return swaps and thereby artificially reduce the tax rate.[108] Moreover, the redistribution of counterparty risk could increase by using product substitutions.[109] A limit occurs doubtless where the cost of the substitution exceed the tax due.

The FTT Directive tries to avoid product substitution via different design elements. Firstly, the broad scope and the limited negative catalogue basically ensure taxation. Secondly, every transformation of a financial instrument, the securitisation as well as lending or repurchase tickers a new tax liability.[110] Additionally, over-the-counter-trading is explicitly included.[111] Furthermore, the pure obligation to transfer the product is due to tax.[112] therefore, it is barely predictable how market and traders will be reacting. However, the above-mentioned market structures, which highlight the fast developments in the area of financial products, give reasons for concern.

B. Geographical Relocation

Geographical relocation can be seen as the transfer of a business with the purpose to fall outside the territorial scope of a tax and thus to circumvent liability to tax. Especially the UK fears a relocation of the financial industry from London, thus a weakening of its predominance between the worlds leading financial centres.[113]

1. Experiences on MS levels – Sweden and the United Kingdom

The concerns of opposing Member States are not unfounded. In the literature seen as an example for a big failure of FTTs caused by relocation was the Swedish tax on equities and stock options from 1984. The intentions of that tax were political driven; a regulation via the tax was not intended.[114] Indeed, the design of the tax

108 This and more examples IRSG, *The impact of a Financial transaction tax on corporate and Sovereign Debt,* 18 (2013).

109 Id.

110 European Commission supra fn. 1, 8.

111 Id.

112 Id. and detailed under II.B.2.

113 James Salmon, *Is the City losing its powerhouse status? Future threatened by reforms hatched in Brussels* (2013), available at:

http://www.thisismoney.co.uk/money/markets/article-2313153/CITY-FOCUS-Londons-status-global-financial-centre-challenged-abroad.html.

114 Stephan Schulmeister, Margit Schratzenstaller, Oliver Picek, *A General Financial Transaction Tax - Motives, Revenues, Feasibility and Effects*, 20 (2008), available at: http://www.wifo.ac.at/jart/prj3/wifo/main.jart?content-id=1298017551022&publikation_id=31819&detail-view=yes.

had several features, which can be seen as a bad example how FTT's should not be created. First of all, the tax rate, which firstly had been determined at 0.5% and later rose to 2.0% per round trip.[115] In view of the fact that the margin of an individual trade is rather low, the rate can be seen as too high. Nonetheless, revenues were widely under the expected amount mostly because tax circumvention was easy and common. Furthermore, the Swedish FTT had negative effects on other taxes, especially on the capital gains tax.[116] In relation to relocation, it was attractive for foreign investors to go abroad. As the tax was only due by using Swedish broker firms, foreign investors switched to the services of non-Swedish brokers. As a result, Swedish shares were traded in Stockholm, London and New York. In 1990, 52% of the annual Swedish trading volume was exercised in London.[117] Domestic trades on the other hand tended to substitute or to not trade at all. Substitution was an easy way for circumvention as e.g. gifts or inheritances of stocks were tax-free as well as swap instruments.[118]

Another explanation that can be considered is that the avoidance costs of setting up an offshore company including possible exit taxes exceed the costs arising due the Swedish transaction tax.[119] To sum up, the Swedish FTT was not only disappointing regarding revenue expectations; it also destroyed the financial service industry in Stockholm via relocation for a period of time.[120] Furthermore, the government itself was direct affected as public sector borrowing became more expensive.[121] All these lead to the abolishment of the tax in 1991.[122]

A contrary development to Sweden epitomises the stamp duty in the UK. Only once the tax is paid, the transfer of ownership is officially stamped. This principle provides traders with legal certainty and makes circumvention difficult.[123] If a seller wants to circumvent the tax by selling the financial instrument to a purchaser abroad, the stamp duty applies nonetheless to all overseas transactions of UK shares. Moreover, the design of the tax avoids relocation in a simple way by

115 Id. at 21.

116 Id.

117 Id. at 22, table 4.

118 Id. at 21 and John Y. Campbell, Kenneth A. Froot, *International Experiences with Securities Transaction Taxes*, in Frankel, J. A. (ed.), The Internationalization of Equity Markets, 7 (1994).

119 Id.

120 Detailed the recovering process of the financial industry id. 8 and Schulmeister et al., supra, 22.

121 Schulmeister et al., supra 22.

122 Id. at 23.

123 See to UK stamp duty part II.A.

charging exit transactions three times higher than domestic transactions.[124] If a financial institution wants to shift the financial assets abroad, a higher exit tax is due.

2. The European FTT and relocation

As the above explained examples show, the design of a transaction tax and their interplay with other taxes can mitigate the risk of relocation. In awareness of that, the current FFT Directive contains a variety of protective elements. The establishment principle accompanied with the new-implemented issuance principle makes it difficult to circumvent the tax territory. As soon as only one party is resident in a PMS the tax is due.[125] Therefore, a financial institution would have to both abandon to trade on trading platforms in the FTT jurisdiction and to abandon all its clients in participating Member States if it wanted to avoid paying the tax.[126] Moreover, if financial institutions try to avoid the tax by using e.g. their subsidiaries in NPMS but need to issue a product within the FTT zone, like for example German bonds, the new issuance principle comes into play. It ensures, besides the residence taxation elements, also features of source taxation. The issuance principle will indeed block avoidance strategies but will also have a sustainable effect on the NPMS.[127] Moreover, the explicit inclusion of branches avoids a circumvention of the tax by relocating the residency of the financial institution after setting up a branch to maintain the business in a PMS.[128] Considerable is also the low tax rate, which tries to make relocation unprofitable. From a standpoint of a rational investor, it would not be gainful to relocate the business if the tax due does not exceed the relocation costs e.g. exit taxes and possible risks involved in relocation.[129] *Darvas and v. Weizsäcker* examined the relation between tax rates and welfare impacts based on the assumption that financial transactions exert negative or no externalities.[130] The result showed that a wide range of positive but small financial transaction taxes would always lead to a welfare improvement – not to economic damage.[131] The general tax avoidance clause, laid down in Art. 13, can be seen as another weapon against possible

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124 Darvas, v. Weizsäcker, supra 10.

125 See for design elements more detailed Part II.B.3.; European Commission, supra fn. 1, 10-11.

126 Commission Staff Working Document, supra fn. 2, 18.

127 Critical Englisch et al, supra 226.

128 European Commission, supra fn. 1, 11, 25.

129 Darvas, v. Weizsäcker, supra 10.

130 Id. at 19.

131 Id.

relocation.[132] The design of the clause is based on the GAAR included in the Commissions recommendation on aggressive tax planning from December 2012 and is created wider as in the original proposal from 2011.[133] Although the clause tries to define in Art. 13 (2) - (5) vague legal concepts, e.g. "arrangement" or "artificiality", the prominent weaknesses of the structure of GAARs remain.

Highlighted can be especially the concept of commercial substance and the recharacterisation of transactions in accordance with their economic substance.[134] In view of the fact that financial transactions become more and more complex, it can create difficulties for tax administrations to apply the GAAR in practice. Surely, the GAAR will participate to tackling relocation but at the same time may create legal uncertainty and practical complications.

Nevertheless, it is questionable how realistic the fear of significant "emigration" really is, bearing in mind that eleven leading European MS participate on the FTT project. Even if still doubts are expressed about the final design of the tax, elven MS and the option for more participants, like the Netherlands, do not leave room for a wide range of substitute markets. In Sweden the situation were different as the tax was only due within Sweden and substitute markets could be founded within the EU area. Substitute markets require similar market conditions, especially regarding the time zone. Obviously, the financial capital London is leaping out immediately. Figures confirm that 97% of all financial transactions on exchanges in the EU are conducted in Germany and UK.[135] Thus, a simultaneously effectiveness of the Directive in both states would lead to the best protective shield against relocation within the EU. A wholly relocation to financial capital outside of the EU, e.g. to Singapore, Hong Kong or New York, is doubtful. This appears not only because they are not qualifying as substitute markets. The EU constitutes still a key factor in relation to real economy and will therefore remain to exist as a location for financial trade. Demonstrated is this by the EU-27 share of the world's GDP, which amounted 25.8% in 2010.[136] Furthermore, the Commission points out

132 European Commission, supra fn. 1, 28.

133 Recommendation on aggressive tax planning, 2012 O.J. L338/41, C (2012) 8806 final.

134 Englisch et al, supra 225.

135 Stephan Schulmeister, *A General Financial Transaction Tax: A Short Cut of the Pros, the Cons and a Proposal*, WIFO working paper, 1 (2009), available at : http://www.wifo.ac.at/jart/prj3/wifo/main.jart?content-id=1298017551022&publikation_id=37001& detail-view=yes.

136 European Commission - Eurostat, *The EU in the world 2013 – a statistical portrait*, 18 (2013), available at http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-30-12-861/EN/KS-30-12-861-EN.PDF .

that the economy of the PMS constitutes after all about two thirds of this economy activity within the EU-27.[137]

However, as the UK and other MS are not participating on the FTT, a variety of undeniable advantages arise especially for London and at the same time weakening the EU FTT.[138] To highlight is especially the possibility of setting up subsidiaries in non-participating Member States, or to convert branches in NPMS to subsidiaries.[139] As long as the subsidiaries trade and issue financial instruments in NPMS or in non-European countries, no tax liability occurs. Even if the financial institutions in question still remain trading within the PMS, they may relocate businesses to their subsidiaries abroad when it comes to trade with non-European or NPMS states.[140] For example, a French bank with a subsidiary in London is trading bonds with major financial centers like Hong Kong, New York or Singapore or with Sweden as a NPMS. Indeed the French bank will divert its activities to the UK subsidiary to avoid paying the FTT. As soon as the French parent would conduct the financial operation, one party falls in the sphere of the FTT and the tax is due for both parties according to Art. 4.[141] Furthermore, multinationals can structure their business in a way, that certain financial transaction within the group are carried out between their subsidiaries in NPMS and not between group members in the territory of the FTT. Moreover, even if a financial institution trade within the sphere of the FTT, they may choose to conduct the business through a subsidiary abroad as related transactions, such as hedging would be free from FTT. Furthermore, financial institutions may consider relocating their whole headquarters if the costs due to the tax would exceed the costs of relocation e.g. to London or Stockholm. An added positive effect for NPMS entities could be their ability to attract capital which might have otherwise flown to PMS institutions.[142] A Chinese fund which is choosing between investing in corporate shares issued by a German company or a UK company. Assuming the bonds to be identical in all respects save for their susceptibility to the FTT, the FTT could give the Chinese fund an incentive to favor the shares issued by the UK company. On the other hand, if the FTT is priced into the bonds, the FTT would not affect the Chinese fund's preference but it would increase the cost of capital for the German company relative to the UK company. This example shows, how the FTT may not only affect financial institutions, rather it can have a sustainable negative impact on the real economy. Another competitive advantage companies

137 Commission Staff Working Document, supra fn. 2, 47.

138 Englisch et al, supra 226.

139 Commission Staff Working Document, supra fn. 2, 43.

140 Id.

141 European Commission supra fn. 1, 24.

142 Englisch et al, supra 226.

from NPMS enjoy can be seen in relation to the use derivatives.[143] Companies in NPMS are able to hedge their risks free of the FTT burden, whereas companies in PMS have to face higher costs to hedge risks, e.g. for hedging currency difference. All in all it cannot be denied that these relocation risks exist and are included in the FTT impact assessment conducted by the European Commission.[144] Questionable though is still how Financial institutions will make use of the relocation opportunities in reality and consequently how huge the impact on the revenue expectations will be. Surely, the design of the FTT consistently has to be reconsidered and amended on new market developments.

IV. Financial Transaction Tax and High Frequency Trading

A. Definition and background of 'High Frequency Trading'

The term 'High Frequency Trading' is not exactly defined and because of the fast developments in the area of computer based trading has become even more difficult to determine. The U.S. Securities and Exchange Commission describes in its Report on Equity Market Structure from 2010 HFT as employing technology and algorithms to capitalize on very short-lived information gleaned from publicly data using sophisticated statistical, machine learning and other quantitative techniques.[145] HFT is therefore part of Algorithmic trading and uses computer algorithms to automatically make certain trading decisions, submit orders, and manage those orders after submission.[146] HFT mainly is conducted by specialized traders, like proprietary trading desks of a multi-service broker-dealers or hedge funds.[147] Institutional investors use HFT often to break large orders into small parcels so that markets do not move against them as they execute the order. The SEC defines characteristics often attributed to firms engaged in HFT. Firstly "*the use of extraordinarily high-speed and sophisticated computer programs for generating, routing, and executing orders*". Secondly, the "*use of co-location services and individual data feeds offered by exchanges and others to minimize network and other types of latencies*" and "*the submission of numerous orders that are cancelled shortly after submission*". Finally, *"ending the trading day in as close to a flat position as possible*".[148] Surely, not all firms solely fulfill these features cumulative and conduct a large number of trades within a short time.

143 Id.

144 Commission Staff Working Document, supra fn. 2, 18 ff.

145 SEC, *Report on Equity Market Structure*, 45 (2010), available at: http://www.sec.gov/rules/concept/2010/34-61358.pdf.

146 Terrence Hendershott and Ryan Riordan, *Algorithmic Trading and Information*, 2 (2011).

147 Sec, supra, 45.

148 not carrying significant, unhedged positions over-night.

Some may apply mixed approaches and are trading via long-term investments as well as HF methods.

Therefore, the Securities Exchange Commission (SEC) report and other examinations are based on the strategies used by these traders.[149] For example, momentum traders, riding the wave of a particular trend, whereas others arbitrage price differences. Others still are market makers providing liquidity to buyers and sellers. Zhang classified HFT strategies into two types: market making activities and more aggressive HFT strategies like statistical arbitrage.[150] For the purpose of this examination, the use of several arbitrage techniques, in particular statistical arbitrage, can be highlighted. Statistical arbitrage is the attempt to profit from predictable pricing inefficiencies between stabile statistical relationships of varieties of securities. These inefficiencies are identified through the use of mathematical models. Statistical arbitrage attempts to profit from the likelihood that prices will trend toward a historical norm.[151] This is not always secure and makes statistical arbitrage riskier than pure arbitrage. Statistical arbitrage strategies pursued by HFT is an example of the riskiness of HFT. Basically, via HFT traditional arbitrage methods are refined. They can be conducted in a faster way and with more complexity.

As there is no explicit definition of HFT, no consistent figures about the volume of HFT is available. Estimations mostly announce HFT represents a trading volume of 60% in the U.S. and 40% in the EU.[152] Thus, HFT plays an undeniable key role in current market structures. Looking backwards, HFT has an extremely short history.[153] Although time advance of trading have been all along an essential indicator for successful trading, HFT substantially appeared in the markets after the SEC authorized electronic exchanges in 1998.[154] At that time trading took place within several seconds. Since then, execution times dramatically decreased and are

149 SEC, supra 48 - passive market marking, arbitrage, structural, and directional; Further Irene Aldridge, *High-frequency trading: a practical guide to algorithmic strategies and trading systems*, ch. 3 (2010).

150 X. Frank Zhang, *High-Frequency Trading, Stock Volatility, and Price Discovery*, 5 (2010).

151 Andrew Pole, *Statistical Arbitrage: Algorithmic Trading Insights and Techniques*, 17 (2007).

152 For example the government office of Science London, *Foresight: The Future of Computer Trading in Financial Markets – Final Project Report* 43 (2012); Andrew G. Haldane (Bank of England), *Patience and Finance*, 17 (2010); Michael Chlistalla (Deutsche Bank), *High frequency trading – Better than its reputation?*, 9 (2011).

153 Detailed about the evaluation of HFT Aldridge, supra ch. 2.

154 Charles Duhigg, *Stock Traders Find Speed Pays, in Milliseconds*, New York Times (2009), available at http://www.nytimes.com/2009/07/24/business/24trading.html?_r=1& .

now add up to milli- or microseconds.[155] For example, the Nasdaq OMX INET quantified their average round-trip latency as 250 microseconds in 2011.[156] By comparison, an eye blink takes 400 milli-seconds. In 2011, the lowest limit of trade was 10 micro-seconds. This means in principle 40,000 back-to-back trades are possible during one eye watering. These days the new frontier, which has to be pushed back, is trading within nano-, or picoseconds. The highest aim embodies the avoidance of latency[157] until the highest natural limit is reached – the speed of light.[158] Self-learning systems, in which sentient algorithms mine the capital markets, spotting correlations that are too complex for humans to see and suggesting trading ideas, are the future of trading in this field. Humans will still be needed to validate these ideas but technical inventions will surely continue to develop.

Bearing in mind the previous figures, at a first glance, HFT seems to be unnatural. Nonetheless, it is still highly discussed if HFT really harms the market, more precisely if the disadvantages of HFT prevail over its benefits. Only if this is the case, a intensively regulation should be considered.

B. Rational behind a regulation

The rationale behind a regulation of HFT is the assumption that HFT harms the market and in general it is not enhancing welfare. This can be illustrated by recalling the market events during the 6th of May 2010. This day went down in history as the "Flash crash" and symbolizes the powerful influence of computer based trading in market structures today. The Dow Jones Industrial Average plunged about 1000 points and recovered within minutes. U.S.-based equity products, individual equity securities and exchange traded funds, as well as the major equity indices in both, the futures and securities markets, experienced an extraordinarily rapid decline and recovery.[159] The SEC and the CFTC published a common report identifying the causes of the flash crash with the result that HFT contributed in creating the crash via reinforcing the dramatically volatility in the

155 1 sec = 106 microseconds; Andrew G. Haldane in his speech for the International Economic Association Sixteenth World Congress, Beijing, China, *The race to zero*, 5 (2011), available at:
http://www.bankofengland.co.uk/publications/Documents/speeches/2011/speech509.pdf.

156 Id. table 1.

157 time between sending an order and their execution.

158 Haldane, supra, 5.

159 Thomas Boulton et al., *The flash crash: An examination of shareholder wealth and market quality*, Journal of financial intermediation, 2 (2013), available at:
http://www.sciencedirect.com/science/article/pii/S1042957313000272.

market.[160] The report firstly highlighted the unsettled political and economic environment in which the trading day started. News concerning the European debt crisis, in particular the Greek sovereign debts, weakened the market and the Euro began a sharp decline against both the U.S Dollar and Japanese Yen.[161] Hereafter, the report examines the influences of a large mutual fund, which executed a sell program via an automated execution algorithm to hedge its investment positions.[162] According to the report, HFT magnified the impact of the mutual fund's selling program. As the large mutual fund selling process wiped out all possible buyers, HFT begun to sell their futures as well.[163] Consequently, the price dropped even more. The report detected a second contribution to the flash crash through HFT – the 'hot potato' volume effect[164]. To maximise the diversification of risk, HF traders quickly bought and resold contracts to each other to absorb the large selling positions.[165] Hence, HF traders drove the price more down and a spillover into the equity market occurred. All this resulted in a lack of liquidity as automatic computerized traders, including HF traders, shut down as they detected the sharp rise in buying and selling. The HFT firms cannot be blamed for starting the cascade, but the SEC assigns them an important role in propagating it.[166]

The example of the Flash crash represents the influence of HFT on volatility[167]. Higher volatility deters investors and leads to a decrease in liquidity, which could have contagious effects on other market participants, thus to the real economy. Moreover, critics buttress this argument by pointing to the perceived increase in high frequency trading firms in the past year and assert that these new entrants can only profit by causing needless price swings at the expense of long-term

160 SEC and CFTC, *Findings regarding the market events of May 6, 2010*, 45.

161 Id. at 1.

162 Id. at 39 ff.

163 Id. at 40.

164 "Hot potato affect" is the swift transfers of securities between high-speed traders who appear willing to become involved in passing stocks around but who are unwilling themselves to hold on to them for more than a fraction of a second.

165 See for changes in HFT during the flash crash SEC and CFTC, supra figures 2.1 to 2.3; Contrary John Lowrey, *Social benefits of high frequency trading*, Financial Times (2012), available at:
http://www.ft.com/cms/s/0/7b1a0d2c-e207-11e1-8e9d-00144feab49a.html#axzz2apHNiS9k

166 So as well Haldane, supra, 8.

167 The principal way that academics and market participants evaluate the relative rate at which a stock price moves up or down. Higher volatility is associated with greater price movements and lower volatility as a signal for more stable prices.

investors.[168] Proponents on the other hand referring to the situations where short term trading were band and volatility remained stable or raised.[169]

Nevertheless, HFT also benefits the markets. Undeniable advantageous is the enormous reduction of transaction costs as the market became more competitive and efficient.[170] Moreover, HFT supporter argue this way of trading increases liquidity and therefore benefit the market. The dramatic increase in trading volume makes it easier for investors to buy and sell securities cheaply, especially if they need to sell a huge amount of shares, the market can absorb them easier because HFT divide the large orders in little sections and make them more tradable.[171]Critics interpret the high trading volume as a sign of speculation, whereas supporter point to the increasing demands of investors.[172] Furthermore, HFT participate in accelerating price discovery, which benefits all investors. As HFT acquire huge amounts of information in a very short time, they react earlier. Consequently, the most efficient price will be discovered.[173] On the other hand, HFT can also harm a purchase. If a buyer wants to make a purchase of several shares and HFT are faster to buy, the price will increase. Whereas the buyer suffers a higher price, other seller of the same share may participate from that.[174] All in all it is questionable if a free availability of information really disadvantageous the market or rather benefits it.

Two other points which always appear in relation to HFT, are the concerns of fair competition and the risk of market abuse. Fair competition in relation to HFT refers to the race for the fastest technologies and the best places of HF computers next to the servers of the stock exchanges. HFT always pursue the aim to be

168 Normally supporting HFT but referring to issues in competition and long-term investors Chlistalla, supra 14; contrary the Chicago Board Options Exchange, Emily Lambert, *High-Frequency Trading Good For Small Investors: CBOE* , Forbes Magazine (2010), available at:
http://www.forbes.com/2010/01/20/high-frequency-trading-personal-finance-cboe-flash.html

169 Karl Loomes, *Short Selling Bans: Are They Effective?*, Forbes Magazine (2013), available at:
http://www.forbes.com/sites/steveschaefer/2013/01/23/short-selling-bans-are-they-effective/

170 Duhigg supra.

171 Cameron Smith, *How High Frequency Trading Benefits All Investors*, Traders Magazine, available at:
www.tradersmagazine.com/news/high-frequency-trading-benefits-105365-1.html?zk Printable=true

172 Id.

173 Id.

174 Id.

microseconds faster than a competitor. This can undermine a fair competition, as the best places next to the machines that drive marketplaces like the New York Stock exchange are very limited. Exemplified is this by the new trading platform in Jersey City, which was founded for HFT to place their high technology computers next to the stock exchange machines which would had been impossible at Wall Street.[175] Goldstein, journalist at Reuters, highlighted the unclearness in how the desired positions are allocated. Surely, the major firms will have more influence and therefore competitive advantages.[176] When it comes to market abuse and HFT, situations occur where techniques are used to create a false impression of liquidity. This can be done by deliberately make and then cancel large amounts of orders. A US-based HFT Panther Energy Trading deliberated manipulation of commodities contracts via a practice known as layering over a two-month period in 2011. The technique involves the sending of multiple orders to an exchange with the purpose of artificially moving the price of a stock. The FCA stepped in. [177] However, generally regulators are concerned about these developments. In relation to market abuse as well as unfair competition are several questions unsolved. It embodies a typical example how regulators and legislators lag behind technical developments.

Over all, the question appears: If HFT is proofed as harmful, can we go backwards to the traditional market making system and trade without HF algorithms? As the Deutsche Boerse group points out, computer based HFT is a further technological development and improvement in trading. As it is new, people are reluctant like usual with new inventions.[178] However, the answer cannot be that easy. Even the creators of the algorithms used for HFT, mostly quant physics, warn for failures in implementing the algorithms. They highlight the fact, that these algorithms just absorb huge amounts of information in a very short time and reflecting the information via fast buy and sell orders.[179] What they cannot do is to predict future or protect for human failure. An example for a failure can be drawn from the Infinium Capital Management case.[180] Infinium Capital

175 Matthew Goldstein in the Documentation from VPRO Backlight, *Quants, The Alchemists of Wall Street,* available at http://www.youtube.com/watch?v=ed2FWNWwE3I.

176 Id.

177 Philip Stafford, Arash Massoudi, Gregory Meyer, *High-frequency trader fined in transatlantic clampdown* (2013), available at:

http://www.ft.com/cms/s/0/c0349552-f2d8-11e2-a203-00144feabdc0.html#axzz2apHNiS9k

178 Deutsche Boerse, explanatory video (German) available at http://deutsche-boerse.com/dbg/dispatch/de/listcontent/dbg_nav/about_us/30_Services/40_Know_how/15_Explainvideos/Explainvideo.htm.

179 Interviews of several specialists regarding the market structures in the Documentation from VPRO Backlight, supra.

180 The Economist - Special Report, *High-frequency trading -The fast and the furious* (2012), available at http://www.economist.com/node/21547988.

Management is a HFT. In February 2010 an algorithm used malfunctioned. Within three seconds this algorithm entered in 6,767 individual orders to buy light sweet crude oil futures on the New York Mercantile Exchange (NYMEX).[181] Consequently, the market dramatically plumed. A NYMEX business-conduct panel investigated the incident fined the firm $350,000. It came out that Infinium Capital Management made sustainable mistakes in their risk management as they implemented the algorithm by firstly testing the system one day before.[182]

The absence of a common definition as well as the lack of good and reliable data makes it difficult to measure the benefits of HFT and to assess, if HFT indeed sustainably harms the market and their participants. It can be summarized out of the above-mentioned considerations, that HFT should be regulated in certain ways. HFT had shown to be harmful in situations like the flash crash in 2010 and can create unfair competition and market abuse within the financial sector. Nonetheless, the good sides of HFT should not be forgotten and utilized to make markets more efficient.

C. Regulation of HFT via taxes on financial transactions

The FTT aims to regulate HFT. In view of the Commission, HFT may enhance the efficiency of financial markets but also might only divert rents from the non-financial sector of the economy to financial institutions and, thus, trigger over-investment in activities that are not welfare enhancing.[183] For example, whereas a spread of risk might be desired, over-leveraging is not. The cascade effect, shown in the current financial crises, makes clear that obscure artificial financial products can gain the upper hand on real economy. As financial intermediary growths, the financial sector may not only enhance real economy and need to be considered carefully.[184] Furthermore, the Commission has the opinion that long-term investments could be disturbed by HFT.[185] The commissions opinion is based on the overall assumption, that HFT should be curbed and that the FTT's Pigouvian function should contribute alongside ongoing regulatory and supervisory measures to avoid future crises in the financial services sector.[186]

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181 Id.

182 Id.

183 European Commission, supra fn. 1, 4.

184 Further Lukas Menkhoff and Norbert Tolksdor, *Financial Market Drift: Decoupling of the Financial Sector from the Real Economy* (2001).

185 See fn. 168; European Commission, supra fn. 1, 4.; John Plender, *Long-term investors would benefit from Tobin tax*, Financial Times (2011), available at http://www.ft.com/cms/s/0/39051e9c-e83c-11e0-9fc7-00144feab49a.html#axzz2b6fL6bRb.

186 European Commission, supra fn. 1, 4.

The FTT addresses the problem of HFT via making use of its nature. As explained above, HFT is a highly short-term investment. The traders conduct large numbers of trades within a short time by generating small margin profits. Considering the overall result of huge volumes of trades, HFT becomes profitable. The FTT, with a tax rate of 0,1% or 0,01%, would increase the transaction costs. Hence, HFT and similar business models would no longer be attractive.[187] According to the Commission, financial-sector fragility would decline.[188] In its IA the Commission tries to provoke a structural break in the sense that business models change to fewer transactions, hence more long-term investments.[189] Moreover, once again it can be highlighted, that the personal and material scope of the tax ensures broad coverage. Firms, which conduct HFT, are easily within the scope.[190]

In comparison, several national FTTs contain similar and more specified provisions regarding HFT. The French FTT can be highlighted as an example, which has been effective since August 2012.[191] The design provides, besides a general tax on the acquisition of shares of French listed companies, a specific tax on HFT. HFT is defined as activities relating to the passing of orders, in the normal course of business, through an automated mechanism and whose execution is extremely fast, with a reduced market access time-lag, meaning less than one second.[192] Any French taxable entity performing HFT, which is not acting on behalf of a client, is levied with a tax of 0.01%, if the rate of cancellation/modification of all orders in a trading day exceeds 80%, according to a circular issued by the tax authority.[193] By law, this rate is not allowed to be below two thirds. At the same time this cancellation/modification rate is the taxable base. Market makers are enjoying an exemption.

Similar structures can be seen at the Italian FTT, introduced in 2013.[194] As well as

187 European Commission, supra fn. 67, 5.

188 Id.

189 Commission Staff Working Document, supra fn. 2, 21.

190 European Commission, supra fn. 1, 8 ff.

191 Summarised PWC Belgium, *French Financial Transaction Tax and other Financial Related Taxes* (2013), available at:

http://www.pwc.be/en/financial-services-newsalert/2012/french-financial-transaction-tax.jhtml#2.

192 Id.

193 Id.

194 Summarised Vittorio Salvadori di Wiesenhof and Roberto Egori, *2013 Italian Financial Transaction Tax*, IBFD Derivatives and Financial Instruments (2013), available at: http://www.freshfields.com/uploadedFiles/2013%20Italian%20Financial%20Transaction%20Tax.pdf

in France, the Italian FTT entails specific provisions regarding HFT.[195] The tax is due for transactions executed on the Italian Financial markets over equities and equity derivatives. HFT transactions executed on the Italian financial market over equities issued by non-Italian issuers or derivatives over foreign equities are covered as well.[196] Also the Italian FTT ensures a market-maker exemption and further exemptions for e.g. smart order routing algorithms. Furthermore, a threshold provision as in the French FTT is created. If the ratio between the sums of cancelled and modified orders and the sums of entered and modified orders exceeds 60% with reference to a single financial instrument, the tax is due. The HFT tax will be paid, for each trading day, at the rate of 0.02%. The taxable base is the value of the cancellation/modification exceeding the threshold.[197]

As it can be seen, in comparison to the FTT within the EU, the national FTTs in general, have a narrower scope but address HFT more specific with an additional tax for factious orders. In relation to HFT, the above-illustrated national FTTs go further as the EU FTT. The regulative background is the avoidance of short-term cancellation/modification, which are likely used for abuse.[198] The low tax rate and the exception for market makers on the other hand, ensure not a general wipe out. Nonetheless, this seems questionable, as the general tax on the acquisition of shares and equity in France and Italy also affect HFT in a similar way as the EU FTT by making HFT non-profit able. If HFT would be wiped out entirely by making it nonprofit able, a special tax on HFT would be obsolete.

D. Other approaches to regulate

As a responds to the current financial crises numerous regulative and supervisory reforms took place on different levels and with different intense. With regards to HFT, three developments can be highlighted. Firstly, the IOSCO approach as a global level example by setting international standards. Secondly, the European measures, which can be summarized by the MiFID II Proposal and the MAD as well as the ESMA guidelines. Lastly, the new regulatory requirements for HFT in Germany have to be underlined, as they firstly attempt to introduce binding standards in the field of HFT on a national level.

195 Art. 13 ff. Treasury decree.

196 Salvadori die WIesenhof, Egori, supra 60.

197 Id.

198 See above IV.B.1.

The IOSCO was requested by the G20 states to develop recommendations to promote markets integrity and efficiency.[199] Central aim was to mitigate the risks posed to the financial system by the latest technological developments i.a. HFT. In October 2011, IOSCO published a final Report on 'Regulatory Issues Raised by the Impact of Technological Changes on Market Integrity and Efficiency', which seeks views on the risks to markets of new technological developments and possible future regulatory actions that could be taken to address those risks.[200] In relation to HFT the report, after setting out a definition, tries to examine the relevant strategies used by HFT.[201] Subsequently, the report gives regulative advises and recommendations to trading venue operators and trading participants as well as to regulators on how to deal with HFT issues.[202]

On the European level, first of all the proposed MiFID II can be highlighted as it will be the first legislation containing compulsory measures to slow down HFT for such as a 500 millisecond minimum resting times for orders, order-to-trade ratios, 'circuit breakers' to suspend trading on exchanges if necessary and order cancellation charges.[203] The exact configuration, which measures are going to be implemented, is not clear yet and widely discussed.[204] Furthermore, algorithmic trading firms are going to be licensed. Complementary, requirements for trading venues of HFT will be implemented.[205] At what time MIFID II is going to be into force is still unclear as the proposal is still subject to amendments from the EU Parliament and the EU Council within the EU legislative process. Moreover, the MAD has to be mentioned.[206] The directive is establishing a further development for a framework for the prevention of market abuse. This common EU legal framework seeks to prevent both insider dealing and market manipulation and to provide sanctions where the rules were breached. It also established a common

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199 International Organization of Securities Commissions, *Regulatory Issues Raised by the Impact of Technological Changes on Market Integrity and Efficiency, Final Report,* 7 (2011), available at http://www.iosco.org/library/pubdocs/pdf/IOSCOPD361.pdf.

200 Id.

201 Id. 20 ff.

202 Id. 33 ff.

203 Proposal for a directive of the European Parliament and of the Council on markets in financial instruments repealing Directive 2004/39/EC of the European Parliament and of the Council [COM (2011) 656 final – Not published in the O.J.], Art. 44 ff.

204 James Rundle, *In Mifid II Talks, HFT Curbs Still on the Table,* Waters Technology (2013), available at: http://www.waterstechnology.com/buy-side-technology/news/2262214/in-mifid-ii-talks-hft-curbs-still-on-the-table.

205 European Commission, supra fn. 203, Art. 44 ff.

206 Directive 2003/6/EC of the European Parliament and of the Council of 28 January 2003 on insider dealing and market manipulation, 2003 O. J. L 96/16. Now going to be revealed - MAD II and MAR - see European Commission, Press Release, MEMO/11/715 (2011).

framework for the disclosure of information to the market. As above-explained HFT is carrying risk for potential market abuse, therefore the European standards have an important regulative influence on HFT. Supplementary and more specific in regards to HFT, the Guidelines on systems and controls in an automated trading environment for trading platforms, investment firms and competent authorities, drawn up by the ESMA need to be highlighted.[207] They are playing a crucial role in regulating HFT. Even if the guidelines are soft-law, they are addressing specifically algorithmic trading, hence HFT. The guidelines are setting standards for the use of electronic trading systems, including trading algorithms of investment firms. More specifically the guidelines i.a. address an appropriate governance process for developing or buying algorithms. They rolling out the live use of the algorithm in a cautious way and urge for staff with necessary up-to-date skills and expertise to run and monitor the behaviour of their live algorithms.[208] Furthermore, the guidelines contain pre-trade controls such as pre-set risk management thresholds.[209]

In a national level, the German High Frequency Trading Act highlighted.[210] The Act became effective in May 2013 and is a forerunner of the planned MiFID II directive. It contains a license requirement for HFT. Irrespective of their location, if HFT participate directly or indirectly on the German regulated market, they have to register at the German Federal Financial Services Supervisory Authority (Bafin).[211] Further requirements are an initial capital of at least 730.000€ and the appointment of a reliable and appropriately qualified managing director. Furthermore, the Act constitutes conduct of business rules for trading venues and algorithmic traders. HFT is part of algorithmic trading, thus German HFT firms need to follow additional requirements regarding risk management and they need to comply with an Anti Abuse rule.[212]

E. Comparison

To say which approach should be favored in relation to regulate HFT - an FTT with Pigouvian function or regulative and supervisory tools - the ultimate aim has to be reconsidered. This aim can be described as the creation of a stable and sound

207 ESMA, *Guidelines on systems and controls in an automated trading environment for trading platforms, investment firms and competent authorities* (2012), available at http://www.esma.europa.eu/content/Guidelines-Systems-and-controls-automated-trading-environment-trading-platforms-investment-f.

208 Id. 17.

209 Id. 15.

210 Hochfrequenzhandelsgesetz (High Frequency Act), BGBl. I p. 1162 (7, May, 2013).

211 Id. § 32 KWG.

212 i.a. § 26b BörsG.

financial market, which serves the real economy that is resistant against future crises and provides a fair playing field for all competitors. Assuming that HFT builds a barrier for that, the question is, which of the approaches can be considered as the most appropriate one to realize the pursued objective. Following, based on the previous examinations to FTT and HFT some arguments will be pointed out.

In favor of the FTT the revenue aspects stand out. Further revenue would be a stabilizer for the National and EU budgets and can create a financial buffer if governmental intervention becomes necessary in future. Regulation and Supervision on the other hand are highly expensive and involve accelerated organizational effort from regulators and supervisory agencies. Assuming that the revenues of the FTT outweigh a potential welfare loss, as examined by the Commission, an FTT would be more profitable for authorities and public.[213] Questionable though is still, if the individual suffers more from a further tax burden from the EU for maintaining the supervisory functions or from additional costs for financial services as the costs occurring through the FTT will possibly be transferred to the end consumer.

Not only that regulation and supervision is more expensive, it is also more difficult to apply than a tax.[214] Finding a well functional legal framework needs time for creation and to proof as successful. This is in particular important in a fast developing and complicated market environment like for financial transactions. A regulation has to address new challenges but should also be understandable and create legal certainty. Furthermore, the typical problems in relation to supervision have to be considered, namely kind and intense of supervision. In-house supervision, side-by-side supervision or just disclosure requirements for HFT are only a view of supervisory tools with different intense which can be mentioned. Normally different measures are applied simultaneously. Supervision also bears the risk of human failure or abusive practices like fraud. On the contrary, once again agreed on a scope and a rate, a tax is easier to implement. Moreover, the oversight over taxability in an electronic environment like financial markets is feasible, as all transactions are recorded. When it comes to practicability, a tax should be favored.

At the same time an FTT may also be more risky than traditional regulation measures. As the FTT has a direct influence on the market, the tax may provoke unintended market reactions, such as a loss in trading volumes and liquidity. The IA of the Commission explained that with the abolishment of harmful trading

213 Commission Staff Working Document, supra fn. 2, 25 f and Darvas, v. Weizsäcker, supra fn. 22, 19.

214 In relation to regulation and supervision of financial institutions Rosa Lastra, *Central Banking and Banking Regulation* (1996).

practices, like HFT, assuming that other trading activities would be going on undisturbed.[215] A comprehensive certainty though may not exist at this stage rather the time will show.

Nonetheless, the direct effect on the market may also have its advantages. The FTT tries to regulate HFT via increasing the costs, thus making it non-profitable. As a result, the Commission is expecting a decrease of volatility and a more stable market. The regulation via the FTT is based on the assumption of natural market reactions with regulatory effect. In contrary, ordinary regulative and supervisory measures seems to be artificial complicated constructs. However, the drawback on these considerations is the uncertainty about the effects on volatility. Several examinations came to different results.[216] As an example, Umlauf's study regarding the market effects on the Swedish FTT.[217] He proofs an increase in volatility after the Swedish FTT was introduced. The same uncertainties can be drawn in relation to relocation.[218] Financial traders may relocate their business due the tax will be directly increasing their costs but may not just because e.g. new disclosure obligations. All in all, market reactions after introducing a FTT may occur more intensively and are more unpredictable than after implementing suitable ordinary regulative and supervisory measures. With regards to the objective of a stable financial market environment, these considerations are rather disadvantageous for a Pigouvian tax.

Lastly, it can be questioned if the FTT indeed addresses the problems of the latest crisis. HFT may enhance the fragility of financial markets, nonetheless it is proved that other issues, such as leverage and the connection of commercial and investment banks, created the crisis. Suggestions for special taxes on systemic risk and leverage were made.[219] Against these considerations there are several arguments. First of all, the causes of financial crises do normally not repeat. The next financial crisis will probably e.g. not be caused by over-leveraging undertakings. Moreover, in relation to taxes on i.a. systemic risks, these magnitudes are difficult to quantify.[220] Practical problems would surely occur.

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215 In relation to market reactions it can be referred to III.

216 Jones and Seguin (1997) show that the reduction in the commission portion of transaction costs in 1975 ed. to a decrease in volatility of stock prices in the US, but Liu and Zhu (2009) – by applying the same methodology as Jones and Seguin (1997) – find that a reduction of the commission in the Japanese equity markets has increased volatility.

217 Steffen Umlauf, *Transaction Taxes and the Behaviour of the Swedish Stock Market*, 33 Journal of Financial Economics 230 (1993).

218 See III B.

219 In comparison also to regulation via pollution certificates Francesco Passarelli, Donato Masciandaro, *Regulation and Taxation: Economics and Politics*, in Alworth, J. S. and Arachi, G. (ed.), Taxation and the Financial Crises, 258 (2012).

220 Id.

To sum up, clearly the FTT is not the best solution to regulate HFT. Both the FTT and ordinary regulation and supervision have advantages and drawbacks. Only time can proof if the FTT can render their service and regulate HFT in an appropriate way. The FTTs and the more specific taxes on HFT in the MS may give a hint. As long as no sufficient ordinary regulative and supervisory instruments are available, the tax could bridge this time. However, in the end the FTT cannot stay alone to regulate the challenges of HFT. The FTT and other regulative and supervisory measures need to be adopted simultaneously and should smoothly accompanying each other. In the forefront has to be the notion of making financial markets more stable and at the same time using the advantages of HFT in a prudent way.

V. Conclusion

The FTT has been proved to be a long-term project within the EU yet. Even if it only started several years ago, the idea can still not be realised. Even if the new attempt to introduce a FTT via Enhanced Corporation procedure is more likely to become reality, there are still undeniable uncertainties, embodied by the pending ECJ case.[221] Notwithstanding the veracity of thoughts spent on the design of the tax, amendments may still need to be done. It is questionable if uncertainties about possible negative impacts of the tax can be wiped away. Possibly, as the market in financial transactions and the relating technology is changing rapidly, there will never be the perfect design and the right time for a FTT. The broadness of impact assessments, surveys and other academic work with different results regarding the FTT reflect this uncertainty. The same can be said in relation to HFT and the regulation via the FTT. As often in economic and legal studies, the future cannot be predicted. Only after the subject of study proofs itself in reality, certainty occurs. In that case it means, only when the tax will be implemented we know if the FTT can be seen as rocket flare or misfire.

221 United Kingdom of Great Britain and Northern Ireland v Council of the European Union, Case C-209/13, 2013 O.J. C 171/44 (pending case).