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**The Implementation of the Financial Transaction Tax
(FTT) – A financial sight on the potential influences on
European Financial Markets**

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Thesis abstract

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This work examines the potential influences of an implemented Financial Transaction Tax on European financial markets, based on the proposal of the EU Commission. Historical as well as current data have been analysed to ensure a logical prediction of potential consequences. Sights of proponents and opponents have been emphasised to guarantee an overall balanced argumentation. On the one hand several positive impacts have been stated, like the creation of a new source of income and a uniform level of taxation. On the other hand the negative impacts, like miscalculations and the outflow of capital, outweigh the positive ones, as the advantages could strengthen the disadvantages. The imbalances of arguments lead to the conclusion that an implementation, based on the analysed framework, would not be sensitive at this time.

Keywords: Financial Transaction Tax, FTT, Tobin Tax, Tobin, Keynes, Financial Markets, EU Commission

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Abbreviations

CTT	Currency Transaction Tax
ECB	European Central Bank
EU	European Union
FTT	Financial Transaction Tax
IMF	International Monetary Fund
NGO	Non Government Organisation
TT	Tobin Tax

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1 INTRODUCTION

1.1 Historical Background

The taxation of financial instruments is not a phenomenon of the modern ages, furthermore it has its origin at the time of the Great Depression in the United States. “It was the longest and most severe depression ever experienced by the industrialized Western world, sparking fundamental changes in economic institutions, macroeconomic policy, and economic theory” (Romer 2016). At this time John Maynard Keynes, one of the outstanding economists of the nineteenth and twentieth century, claimed that it would be necessary to implement a tax on the capital markets to stem speculations and stabilise the affected economy. (Kindler 2015, 5)

Almost 40 years later the economist James Tobin, one pendant of the Keynesianism, picked up the idea of a Financial Transaction Tax (abbr. FTT) named Tobin-Tax. His duty was to antagonize the consequences out of the disintegration of the Bretton-Wood-Agreement. He is seen as the pioneer of the currently discussed FTT. (Kindler 2015, 8) More details will be discussed in chapter two.

Nevertheless the topic, taxation on financial transactions, is prevailing more than ever. Most recently, since the crisis destabilized the financial markets in 2008, new regulations are necessary and entering the realm of public interest. This circumstance attracts the attention of opponents as well as proponents of the FTT, whom try to get the general public on their side to pursue their own economic aims. Both parties have consistent and coherent arguments, which is a showcase project for political and economic differences.

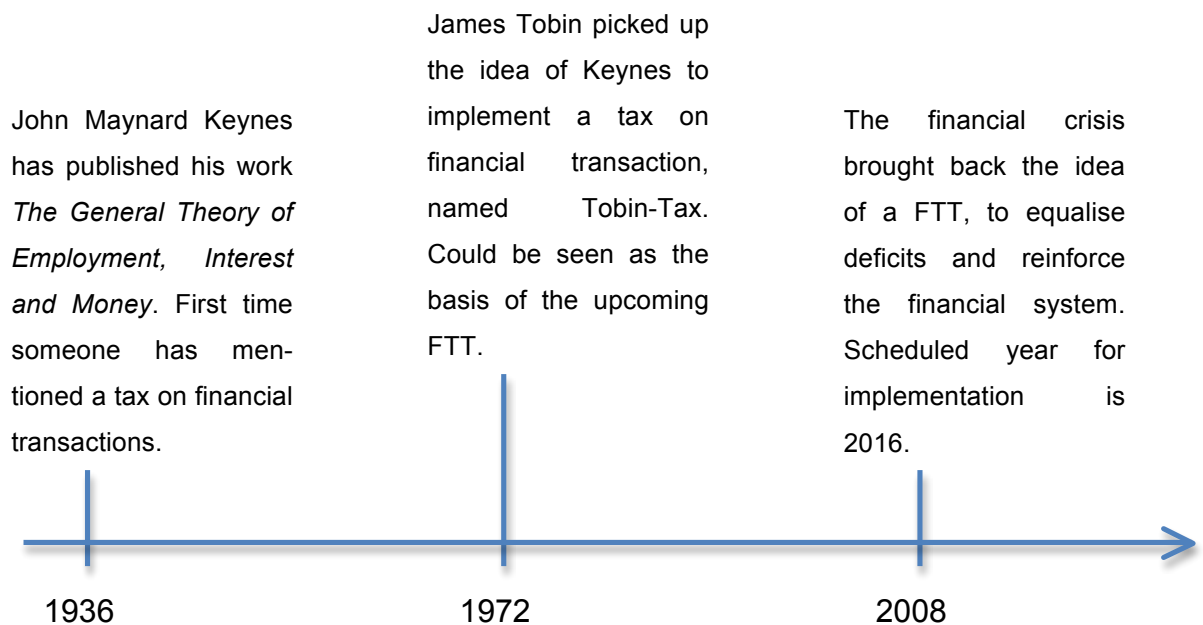


Figure 1. Rough timeline of the Financial Transaction Tax. (own illustration)

1.2 Significance of the Study

At least since 2008, where the crisis on the global financial markets has broken through, the idea of the taxation on financial transactions got back into the heads of everyone. In this way it is not remarkable, that discussions have arose not only inside the single governments, but also between the member states of the European Union. Furthermore, as it is a global crisis rather than a European, the G20 summit has put the issue of implementing a tax on financial transaction to their agenda. (Gruppe Deutsche Börse 2012, 142)

The financial system has suffered hugely through the effects of the financial crisis. Several member states of the EU had to be rescued by government grant. This is the reason why finding new regulations has a high level of importance. The wanted regulations should be usefully supplement and reinforce the current system. In addition to that it would be necessary to generate a new source of income to equalise the extensive deficits resulting from the crisis. Besides this the system-

relevant banks, which are clearly emphasise as the origin of the crises, should be held accountable. Through miscalculations in area of equity, they encouraged the instability of the current system. To prevent the banks from bankruptcy it was urgently to rescue them with an extensive state subsidy. This is why it would only be logical to let the banks pay for the financial damage they have caused.

One of those discussed regulatory tools is the FTT. In general it is a capital transfer tax, which would impose on the market participants by the government. Its functionality is comparable with a value added tax for on or off the stock market traded financial transactions. Normally the estimated tax rate is comparably low, in fact the determining factor is the high sum of transactions. (Erklärung Finanztransaktionssteuer 2016)

Primarily the FTT should regulate the markets in area of high frequency trading and speculations. (Schulmeister 2011,1) However there are several different opinions concerning the influences, which vary widely. This is the reason why the EU Commission did not provide a proposal until 2008, when the financial crisis started.

To understand such a complex regulation tool, it is essential to analyse the basics of the Tobin-Tax in the first place. As mentioned before, the actually discussed FTT is mainly based on the idea, which James Tobin has published in 1972. It may be possible to deduce potential influences for the economic and financial markets by analysing it.

There is an ongoing debate whether the FTT is a sensitive regulation tool and could lead to a more stable system or not. With this study I want to emphasise the positives and negatives effects on the financial markets, which an implementation could cause. In addition to that I want to discuss, if it is an appropriate solution or if it will strengthen the actual crisis.

1.3 Structure of the Study

The target of this paper is to name and explain possible arising impacts, as a consequence of the implementation of the FTT. In order to achieve this, this paper has to start at the beginning and goes step-by-step forward. The Theories of Keynes (1936) and Tobin (1972) are the foundations on which the later analyses are based. This work will put the approach of the taxation on financial transactions in context to the historical background. Furthermore, the theory of Tobin will be analysed in detail, as it the theoretical framework of the currently discussed FTT. Advantages as well as disadvantages of this theory will be compared and lead over to the current FTT.

The following chapter will start with some general information about the FTT and continues with the main objectives, the EU Commission want to ensure. The proposed tax rate and how the taxation should work receive its own section in this paper. However, facts and figures about the markets and single instruments form the basis for the later analyse. Therefore the paper will ensure a harmonious relation between text (facts) and numbers (figures) to give the reader the needed overview. In addition to that this paper will point out the positive as well as the negative impacts an implementation of the FTT could cause. In general, the named impacts could only be guessed or will be derived from the impacts of the Tobin Tax or already implemented taxes from the same kind, as something like the FTT never has been implemented before. Chapter 4 will examine the potential influences on the market structure in particular, especially on the market of high frequency trading. In the following the paper will be responsive to the practical example of Sweden to showcase what an implementation could look like. In addition to that and to get some professional advice there will be a interview in chapter 4.5. The paper will maintain a balance of theoretical as well as practical work. To bring this paper to an end, it gives ideas of improvement as well as a conclusion.

2 THEORIES

2.1 The Theory of Keynes

In the following chapters I want to point out the connection between the idea of the FTT and Keynes. To get a better sense of the situation at the time of Keynes, we need to have look at the given economic circumstances in 1936.

2.1.1 Historical context

As mentioned before, Keynes came up with the idea of taxing financial transactions during the time of the Great Depression. To identify the connection between Keynes and the FTT, the following chapter will give a short overview over the historical context.

The Great Depression lasted from 1929 to 1939 and looked like an ordinary recession at the first sight. After the stock market crash in October 1929 the Wall Street was led into panic, which was the start of the Great Depression. As a result many investors tried to save their money vainly and investments moved towards zero. The industry slowed down their production. As a consequence of that workers got fired and those who have kept their jobs had to deal with fewer wage, which led to a decreased buying power. (History.com 2009) As you can see the chain reaction ended up in a vicious circle.

The so-called gold standard was/is an instrument for fixing the currency exchange rates in a network for all countries around the world, on these grounds the crisis has spread all over the world and did not just effect the American economy. The Great Depression has enlarged from a national crisis to a global one. (Romer 2016)

TABLE 1. Unemployment rate USA. (United States History)

Year	Population	Labour Force	Unemployed	Rate
1931	90,710,000	50,680,000	8,020,000	15.82%
1932	91,810,000	51,250,000	12,060,000	23.53%
1933	92,950,000	51,840,000	12,830,000	24.75%
1934	94,190,000	52,490,000	11,340,000	21.60%
1935	95,460,000	53,140,000	10,610,000	19.97%
1936	96,700,000	53,740,000	9,030,000	16.80%

As you can easily see from the table above, the unemployment rate in the US increased immeasurably in only 6 years. The current unemployment rate stagnates around 5% for the last years (United States Department of Labor 2016). Of course you cannot compare the relative numbers of labour force and unemployed workers from then and now, but at the height of the crisis almost one quarter of the labour force in USA were unemployed. In other words, every fourth had no workplace and money to live, which is incredibly high. To keep it short and sum it up, the Great Depression caused enormous damage in all relevant sectors, in monetary as well as humanely sight all over the world.

2.1.2 Keynes the Economist

John Maynard Keynes, born in 1883, was an English economist, politician and mathematician. He was one of the most important economists of the nineteenth and twentieth century and he fundamentally changed the theories and practices of the economic and political world. (Henderson 2008)

Keynes was literally ahead of his time, which is reflected variously in his work. Due to his views he could assemble followers as well as people whom disagree with his theories, as he has shaken the foundations of the economy at that time.

Very roughly speaking: his general statement was that, in times of crisis, the economy could be regulated and strengthened by state interventions if needed. One of those theoretical interventions was the idea of a tax on financial transactions to stop short-term speculations and considering long-term investments. (Kindler 2008, 7) For him, the FTT was a possible instrument to regulate and rescue the American economy and lead them out of the crisis.

TABLE 2. Selected works of Keynes. (Library of Economics and Liberty 2008)

Year	Title
1913	Indian Currency and Finance
1919	The Economic Consequences of the Peace
1923	A Tract on Monetary Reform
1925	The Economic Consequences of Mr. Churchill
1930	A Treatise on Money. Vol. 1: The Pure Theory of Money
1930	A Treatise on Money. Vol. 2: The Applied Theory of Money
1936	The General Theory of Employment, Interest and Money

2.1.3 The Approach of the Financial Transaction Tax

If you want to discuss or analyse contents of the FTT, you have to mention Keynes at the same time as Tobin. With his ideas, Keynes has presented the starting signal for a FTT. On the one hand it would cost too much time and space to present all of Keynes theories in detail, but on the other hand it would be fatal to ignore him. For that reason the topic in the following section will be the approach of the FTT in Keynes's Magnus Opus.

In the previous chapters the origin of the FTT, in the historic and economic context, was clarified. In times of global economic downturn, unemployment and fun-

damental changes in macroeconomic theories, Keynes found a possible solution for ending the global crisis.

“The introduction of a substantial government transfer tax on all transactions might prove the most serviceable reform available, with a view to mitigating the predominance of speculation over enterprise in the United States.”

(Keynes 1936, 144)

The above extract from *The General Theory of Employment, Interest and Money*, written by John Maynard Keynes, were the first published thoughts about a taxation on financial transactions. It was a short part at the end of his work. He suggested that through the taxation on financial transactions companies would reduce their speculations and increase their long-term investments in return. This was in his point of view a possible solution to bring back the economy to old strength.

According to Keynes (1936, 145) he also had doubts, whether the speculations could be a neutral or rather a positive side product of real economic processes. Furthermore it could be the other way around, what if speculative trading at the financial markets has the potential to effect the real economic decisions in a negative way to cause economic damage?

In addition to that Keynes has spoken about a dilemma, which could result out of taxation. He had the apprehension that the taxation could lead to less trade volume as well as less liquidity. In other words, the instrument, which should rescue the economy, could cause additional damage instead. (Keynes 1936, 145)

All his efforts and thoughts about supplementing and reinforcing the current economic system petered out over time. Nevertheless, 40 years later James Tobin picked up the theories about a Financial Transaction Tax and formed the skeletal structure of the currently discussed FTT.

2.2 The Theory of Tobin

In the upcoming chapters the significance of James Tobin in the context of the currently discussed FTT will be pointed out.

As already mentioned before, the theories of Tobin or in other words the Tobin Tax (abbr. TT) could be seen as the most popular groundwork of the FTT. The idea of Tobin was to implement a Currency Transaction Tax (abbr. CTT) to deal with the impacts of the breakdown of the Bretton-Woods-System. This was a stabilisation system for the most important currency rates around the world, which were held and passed at the venue Bretton-Woods in the USA. (Patomäki 2001, 44)

Indeed the TT is known as the groundwork for the FTT in the first place, but it also should be considered that it is just covering a small part of the whole markets. According to Kindler (2015, 8) the TT focused on currency trading, its associated currency rate fluctuation and the potential resulting currency rate risks. The CTT of Tobin should particularly strengthen instable international finance flows in area of short-term capital movements.

2.2.1 Speculative Currency Trading

The following chapter shows why it was necessary to think about the implementation of the TT, thus how speculative currency trading has a negative impact on the economy.

Many different economists share the same point of view: general economic factors (fundamental data) have a long-term impact on the currency rates, but in a short-term perspective they are overshadowed by speculations on currency transactions. Currency speculators orientate themselves towards the expectations at the potential price developments on the market, for instance they will buy Euros in expectation of increasing prices. Those trades based on specific rumours and faulty information is defined as noise trading. If many noise traders are located at one

market, there will be an arising trend, on which new market participants will accompany, due to their lack of information. This is the so-called herding and entails a direct influence on the currency rate. (Noise Trader Risks 2009)

Furthermore the volatility of currency rates responds to news and information from the world economy. For example, if the head of the European Central Bank (abbr. ECB) would publish a negative statement about the future world economy, the speculators are going to sell their currencies at the market. This is the reason why the currency rate would sink extensively. Also important factors for the Euro-Currency-Rate are imports and exports. In case of decreasing exports, the currency rate will decrease as well. This currency decline will be stronger than a consciously brought about decline without prior speculations. This consciously caused decline of currency rates is known as destabilise speculation. (Sperber & Sprink 2012, 178) It could be represented graphically as shown below:

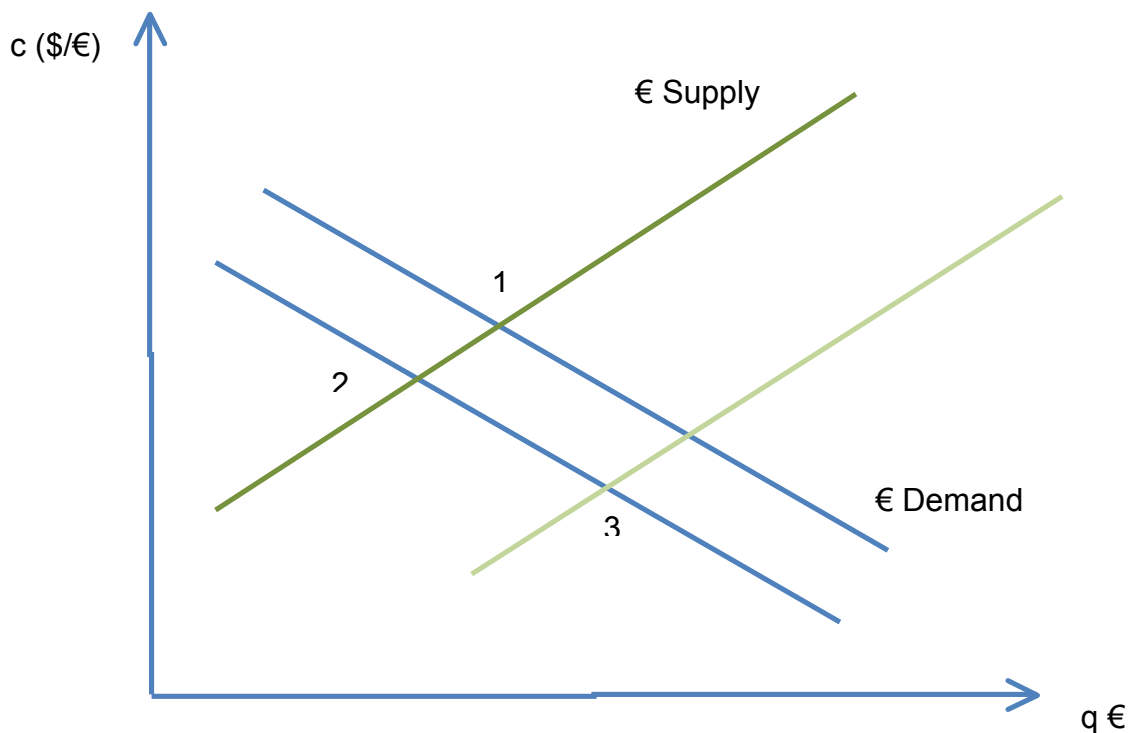


FIGURE 2. Destabilised speculation (Sperber & Sprink 2012)

In the figure above a decline in exports between Germany and USA will be shown. Starting situation is at number 1. Let us assume that the exports from Germany to USA decrease, so the Euro-Demand-Curve will shift to the left (2) and the currency rate \$/€ will depreciate. As the logical consequence the speculators will sell their Euro investments on the market, the offered Euro-Demand-Volume will increase (3) and the depreciation gets stronger. In extreme cases those capital drains could cause enormous damage to countries.

To showcase how fundamental data, in contrast to noise trading and herding, affects the trend of prices in different time horizons, the following result of an interview given by different British foreign currency traders will be evaluated. The question was *“select the single most important factor that determines exchange rate movements in each of the three horizons listed”*.

TABLE 3. Interview of British foreign currency traders. (International Journal of Finance and Economics 2004)

	Intraday	Within Six Months	Over Six Months
Bandwagons effect	29.3	9.5	1
Over-Reaction to news	32.8	0.7	0
Speculative forces	25.3	30.7	3.1
Economic Fundamentals	0.6	31.4	82.5
Technical Trading	10.3	26.3	11.3
Other	1.7	1.5	2.1

From the questionnaire, it can be clearly stated, that fundamental data does not play any role in short-term price developments. The pricing is dominated by the described processes of noise trading (here “Over-reaction to news” and “Speculative forces”) as well as herding (here “Bandwagons effect” and “Technical Trading”). The long-term perspective of the pricing process could lead to efficient pricing.

es, whereas this could not be said for the short horizon as it is overshadowed by the high proportion of noise and herding. Especially the dominance of Speculative forces and Technical Trading in a mid-term perspective is worrying, as the hypothetical damage for the economy could be occurred before the prices will re-orientate to the fundamental data.

2.2.2 Effects of The Tobin Tax

The destabilising effect of speculations on the currency trading market was explained in the previous chapter, thus it should be analysed what kind of effect a TT would have on those.

Tobin was looking for an instrument to curtail speculations and the resulting currency shifts on the market. The so-called Tobin Tax should be added on all foreign exchange swaps, which were traded on cash as well as on forward markets. The defined assessment base for the tax-rate should be the face value of every single transaction. Since the TT never has been established the tax-rate was just a theoretical proposal. The suggested rate was placed between 0.05% and 1% per transaction. In addition to that, the TT should be mandatory for all participants on the market, with the exception of central banks, governments and international organisations like IMF or world banks. (Sperber & Sprink 2012, 180)

The main target was to stop the speculations and the associated currency shifts, so that possible arising risks could be minimized. But how could an insignificant tax-rate stop speculators? If you put a tax on every single transaction, the short-term and unnatural procured exchange rate fluctuations were less profitable. According to that, a tax would increase the transaction costs for speculative investments in a way, that participants with the intent to realise profits will lose their main target. The exchange rate fluctuations would no longer be affected by short-term speculations, but rather by real economic factors. Tobin's intention was to create an instrument to stabilise currency markets, with first priority on risk minimisation.

2.2.3 Pros and Cons of the Tobin Tax

In this part of the work the advantages and disadvantages of the TT will be specified. In the same way I want to point out the reasons, why a CTT never has been established by now.

First of all the advantages of the TT will be addressed. Those advantages are mainly foregrounded by so-called NGOs (Non Government Organisation). The NGOs are critically against globalisation, since the developing countries suffer under the supremacy of the leading economies in particular.

In times of globalisation and technological development, the foreign exchange trading is increasing continuously. For example is the way how you can buy or sell currencies an import factor. The possibility of electronic trading speeds up the whole process, in case of reacting time to respond to increasing or decreasing prices. These circumstances lead to enormous currency rate fluctuations, which is the chance to make profit for the speculators. One of the most popular organisations against speculative currency trading is the, in France located, Attac. It was established in 1997 and has many supporters across the world.

Pros of the Tobin Tax: Organisations, politicians, boards as well as economists recommend the general idea and the implementation of a TT on the market. Primarily they see the reduction of currency rate fluctuations as the main argument for offering at least equal or possibly better safeguards for weaker economies. The positive effect of the TT is to curtail additional and unnecessary currency rate risks. With a tax on foreign exchange trading it would be less profitable for all market participants to speculate. For instance, Attac especially finds fault the discrimination of developing countries in contrast to other nations. They could not keep up with those nations, which include a “safe currency” like the USD or Euro.

Cons of the Tobin Tax: There are a lot of arguments, which speak against the TT. that is the reason why it was not implemented until now. Especially banks and stock markets have prevented the implementation of a tax on foreign currency

trading so far. It might be possible that the proposed tax could lead to lesser transactions as they will increase the costs for ever single transaction. Furthermore it could affect the volatility of the currency rate and this is a contrary effect to the desired one. It would end up in more risks in area of foreign currency trading, thus a decreasing amount of transactions could lead to a destabilisation of the market. Very likely it seems to be the case that with an implementation of the TT the amount of transactions would sink. The consequence would be a reduced offer of supply and demand, which can be dealt on the market. Continuing the same vein, the conclusion drawn from this is that the trade margin between supply and demand would increase (Bid-Ask-Spreads), faulty information transmitted or market maker could be dropped out.

Another counter-argument, especially one against the benefits outlined by Attac, is the preference of investors to invest in domestic markets. If you take the hypothetical case of an implemented TT, the amount of transactions on the foreign currency market would decrease with a simultaneously increase of transaction costs. In such a scenario no one would invest in foreign markets but as listed above in domestic markets. In particular it would create advantages for currency areas like USA or the EU and not for the desired emerging markets.

Tobin himself recognised, that his idea of a CTT could not be realised in the way he has proposed it. There are too many ways and possibilities, which could be used by the market participants to avoid the given tax, for instance, the shifting of capital into other markets. In general, the tax has to be established worldwide to pretend the shifting and to be effective. Nevertheless it is self-explanatory that it would be quite hard to achieve, because certain nations will disagree with a global launch. The displacement to so-called offshore centres or tax haven is possible. This would implicate more disadvantages than advantages for those nations, which would accept a CTT on their markets. We should not only concentrate on the regional alternatives, furthermore we should implicate alternative products, like interest rate swaps, as well.

To conclude, there are advantages as well as disadvantages for implementing a CTT to stop the speculations and the associated currency shifts. However, it is clearly that the proposed tax by James Tobin would not be useful because it would involve too many disadvantages and workarounds. After Tobin has presented his idea of a CTT, different economists tried to develop an improved version. Nevertheless they failed, this is the reason why a TT never has been established until now.

2.2.4 The Transition from Tobin Tax to the Financial Transaction Tax

With his proposal, Tobin merely focused on the currency markets and its volatility. Through further discussions, Tobin's ideas were transferred to other markets. This is possible without any problems, as the currency rate represents nothing but the price for a currency quoted in another currency. The trade-off "foreign currency for foreign currency" at a certain price is in principle the same as the trade-off "investment for money" at a certain price.

Tobin and other economists stated that the reason for the excessive speculations on the financial markets is to find at the low transaction costs. This would mean that the trading volume is significantly higher than the real economy actual needs.

As already mentioned before, it is obvious that the transaction costs have been reduced, due to the fact of progressive globalisation and technological development. In the same time the trading volume has been increased, which could be seen in the table below. The statistic showcases the average trading volume or rather the daily turnover at the global foreign exchange markets in a three-year period.

TABLE 4. Global foreign exchange markets turnover. (Bank for International Settlements 2013)

	Daily Average (In billions of \$)	Change (In %)
2013	5,345	34.60%
2010	3,971	19.45%
2007	3,324	71.87%
2004	1,934	56.09%
2001	1,239	- 18.86%
1998	1,527	

At the same time, it should be noted that a high trade volume per se should not be seen as harmful for the economy. Moreover, it does not mean that the markets has disconnected from the real economy. (Honohan & Yoder 2010, 39)

The previous chapters have dealt with Tobin's idea of a CTT. His proposal leads us to the next topic, the currently discussed FTT.

2.3 The Currently Discussed FTT

Nowadays, a wide variety of different regulatory measures are discussed throughout political and economic circles as well as in general public. Those are mainly derived from the ideas of James Tobin, the so-called Tobin Tax. Some variants of those regulatory measures have been already introduced in different markets, and others only exist in theory. First and foremost, the persistent global financial crisis triggered new discussions.

2.3.1 General Information

Firstly the implementation of the FTT was suggested for the year 2014. At that time eleven of the originally planned 27 member states of the EU wanted to establish the tax. The group named enhanced cooperation in area of financial transaction tax had been Belgium, Germany, Estonia, Greece, Spain, France, Italy, Austria, Portugal, Slovenia and Slovakia. (EU Commission 2013, 16) However, no substantial outcome has been reached up to now, this is the reason why Estonia does not want to be a part anymore and has stopped collaboration with the other member states in that case. The remaining ten states will pursue the original intention until end of June 2016. (Die Welt, 2015)

The actual guideline is fundamentally based on the first proposal from 2011, which has been designed for the whole European Union. The aim of the draft is in general to tax all financial transactions, in which one of the transaction-involved parties is at least a financial institution registered in the territory of one of the participating countries. (Kindler 2015, 10) Initially the tax should be established based on the CTT Tobin proposed several years ago. A couple of states already had introduced a stock exchange tax on their markets without success. This will be exemplify at some practical examples later on, for instances for Sweden. The discussed FTT should be implemented in a wider range, but protests from banks and states, which opposed the proposal, consistently stop the process. They want that the concept get revised to adapt better to the current situation. Because of that the original date of implementation could not be realised in 2014, whether they could comply the new date in mid of 2016 is questionable and depends on different factors in particular. Current debates about deletions or modifications of contents and furthermore planned exceptions for tax liability are increasingly becoming a major focus. Initiated by Banks and stock markets, the commission is discussing how and in what manner the current proposal could be improved and changed. It might be the case that the FTT will be implemented in diluted form. In addition to that the FTT could contain so many exemptions at time of introduction, whereby the tax would lose its regulative effect and this is the exact opposite of what the commission originally had planned. (FAZ.net 2013)

In the following chapters the differences between the TT and die FTT, the objectives, planned spheres of action and additional important information will be pointed out. There will be an appropriate overview over the current situation and the FTT itself.

2.3.2 Differences between FTT, CTT and Stock Exchange Tax

To get a better understanding and arrangement in groups there will be a short overview on the differences between the taxes named above.

The CTT could be seen as the theoretical framework for the currently discussed FTT, however they differ considerably in form and range. It is the same for the stock exchange tax, which was tested by Sweden as well as Germany of its efficiency. In contrast to the CTT, the FTT would not only concentrate on speculations on foreign currencies. Related to the guidelines of the EU commission (2013, 21) the FTT should also be valid for transactions like:

- Sell/buy of financial instruments
- Derivative contracts
- Exchange of financial instruments
- Repurchase agreements
- Security lending transactions

Here financial instruments are defined as transferable securities, money market instruments or options, swaps and forward pricing in cases of securities and foreign currencies. (EU Commission 2004, 41) As it was already mentioned in a previous chapter, the CTT is exclusively focusing speculations in area of currency trading. In contrast the stock exchange tax, which is for example already imple-

mented in Belgium, Brazil and Greece, concentrates only on stock trading and ignores derivatives completely. This is why this kind of tax has a barely impact on speculative trading. In the past several nations tried to implement a stock exchange tax successfully, however they displaced it after a short time as it has caused more damage than benefit. One of the most popular examples was the testing in Sweden, which will be exemplified later.

To summarise, it seems that the FTT could be seen as a combination of the CTT and the stock exchange tax. Moreover, other additional instruments will be integrated in the concept of the FTT. For the EU commission a simple CTT or stock exchange tax have not been sufficiently large to cover all-important aspects to realise their objectives. For instances the FTT should also regulate the high frequency trading market, as the other two taxes could not be this effective in those areas. (Cortez & Vogel 2012)

2.3.3 Objectives

The states, which are planning to implement a FTT, pursue a number of different objectives. First of all they want to create a new source of income to generate higher tax revenues. With the received money they want for instance to balance the state budget and reduce their debts, especially those, which were caused by the latest financial crisis. In addition to that they want to stabilise the affected financial markets in order to create a balanced basis for the rebuild. They want to have a closer connection between the stock markets and the real economy, as the original idea of the stock markets was to collect money to support people, whom have new business ideas. On this basis businesses should be founded or expanded.

You cannot deny the fact that the gap between poor and rich is still widening across and within the countries. According to the EU Poverty report from 2014 almost 25% of the EU citizens are actually experiencing poverty and social exclusion. (eurostat 2016) Nevertheless 85% of the financial instruments are traded

between financial institutions. This is why the FTT would focus primarily on the institutions and not on the remaining 15%, which were held by the private households. For this reason the EU Commission targeted, with their proposal, a fair distribution of income and wealth.

Next to the previous objectives the EU Commission pursue the target to decrease the high frequency trading. Jonathan Brogaard defines it as follow: *“Subset of algorithmic trading where a large number of small-in-size orders are sent into the market at high speed, with round-trip execution times usually measured in milliseconds”* (Kindler 2015, 18, according to Brogaard 2010) The speculations in area of high frequency trading is the problem, which the EU Commission is facing. In 2014 the percentage of high frequency trading in Europe was about 43%. If we take a closer look on the number of transactions, the percentage is at 76% and even higher. (ESMA 2014) It is now clearer that through the high percentage the decrease of speculations on the high frequency trading market is of high importance for the EU Commission.

After the crisis the affected states have adopted several different regulations, including the discussed FTT, to dispose of the spill over effects. This implicates the contribution to the costs of the relevant banks and stock markets. This is perceived subjectively one of the biggest objectives the EU Commission is pursuing, as in public perception the financial sector is solely responsible for the crisis. Taxpayer exclusively finances the necessary rescue packages for the single financial institutions, for this reason there is upraising protest from the EU citizens, as they have to bear the cost indirectly on their own. (Kindler 2015, 36)

During the financial crisis, the single governments supported the financial sector with a total volume of 1.6 trillion Euros. This is equal to 13% of the EU gross domestic product. Especially the system relevant major banks had occupied the financial assistance. Those banks had to be rescued by the government, otherwise a possible collapse of the banking system would be the result. A bank, which entails the collapse of the banking system, if it will get insolvent, is named “too-big-to-fail”. It does mean, that everything will be done to rescue the stumbled bank. In

conclusion, more than half of the monetary support was spent for financial institutions located in the United Kingdom (19%), Ireland (16%) and Germany (16%). (Kindler 2015, 37)

With those planned objectives, the proponents of the FTT are trying to lobby for support, especially from private persons as well as from new nations, which are currently against the implementation. However, the question still remains, whether the FTT can fulfil the desired objectives or not? Concerning this, different opinions exists, especially stock markets has militated against the tax. They are afraid of the flow of capital in nations where no tax exists, whereby the trade and the economy could be critically weakened, in their own country. (Bortenlänger 2013, B9)

2.3.4 Tax-rates, Tax Revenues and Exceptions

In their guideline the EU Commission proposed the minimal tax rate for all participating countries. The EU Commission does not dictate a binding tax rate, furthermore the participating countries can individually determine the rate in one's sole discretion, which is already set down in written form in Article 9 of the EU Commission Draft. (EU Commission 2013) In general it should be differentiated between:

A distinction will be made between transactions with derivatives contracts and transactions without derivatives contracts. There is a minimal tax rate proposed in both cases. On the one hand, transactions without derivative contracts should be taxed with a minimal rate of 0.1%. The assessment basis includes all relevant components of the single transaction. On the other hand, transactions with derivative contracts should be taxed with a minimal rate of 0.01%. In this case the assessment basis is defined as the nominal amount, which exists at the time of the transaction. The participating states are committed to set down a tax rate for both cases, whichever they have to impose for all in the guideline defined transactions. (EU Commission 2013, 27)

One of the reasons why the tax rates are set up this low, is that on the one hand the value of the effected transactions are comparably low but on the other hand they are traded with a high frequency. Those transactions mostly incur in cases of high frequency trading, which insist a lot of transaction with small nominal value. The EU Commission calculates with additional receipts of 31 billion Euros if you add the revenues of the tax on financial transactions. This is how the banks should indirectly be involved at the cost coverage of the crisis. Besides this, the EU Commission tries to obtain a cushioning of the high frequency trading, for what a low tax rate is required.

The question is where should the money, which is coming from the revenues of the tax, be invested? At the beginning of the discussion the EU Commission wanted embed the tax revenues in the budget of the European Union, but at once the national finance ministers make a claim to put it in their country for their own use. If it the case that the tax will have to be paid directly to the EU, it would be the first of its kind. However, it is not clear yet, who will get the money and where it should be invested.

At least we should also consider shortly the exceptions. Who will be except from the tax? In general you can say that all transactions, which are relevant for the states and the economy as well as typical transactions of the private households, will not be taxed. In addition to that there will be no taxation on transactions of the central banks of the participating countries, the ECB and the European Financial Stability Facility. Another exception will be transactions in cases of reorganisations or at issuances of securities.

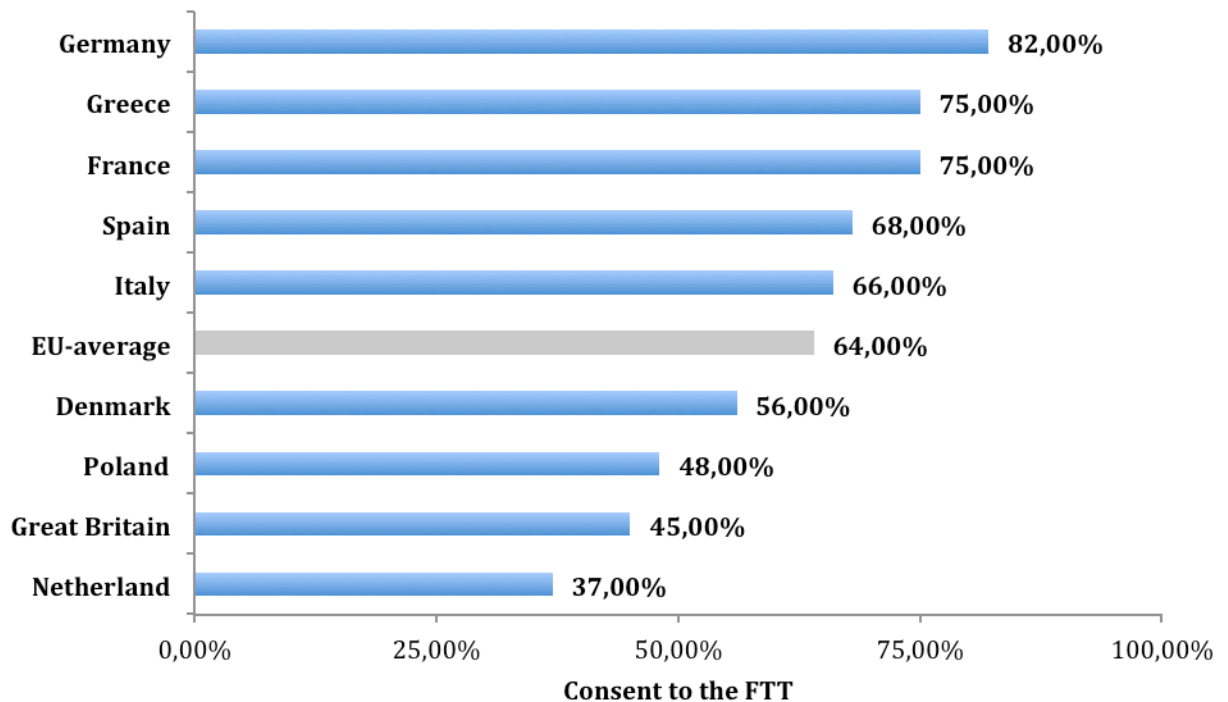


FIGURE 3. Consent to the FTT in selected EU countries. (Statista.com 2011)

This statistic shows the consent to the implementation of the FTT in selected EU countries. Therefore a survey was made, in which the general public of the surveyed countries has been interviewed. As you can easily see from the above graph, 82% of the respondents in Germany have a positive attitude towards the implementation of the FTT. The EU average is at 64%, so you can say that the majority throughout the European Union have a positive attitude as well. In contrast to that, the general public of certain single countries have a reserve opinion. For instance, Netherlands with 37% is more or less ranked towards the bottom. The question is why some people have a positive and others a negative attitude towards the implementation of the FTT. This is what will be shown in the following chapter, the FTT in facts and figures.

3 THE FTT IN NUMBERS

To examine the possible arising consequences of the implementation of the FTT we should take a look on the different markets in particular. The data and charts are chosen from the time when all the analyses have been made concerning the implementation of the FTT. It gives a better overview about the situation and it is easier to predict the consequences for these days. The following chapters will concentrate on facts and figures about the various volumes of transactions as well as the trade volume of the EUREX, including a short introduction of the single elements.

3.1 Transaction Volume of the single instruments

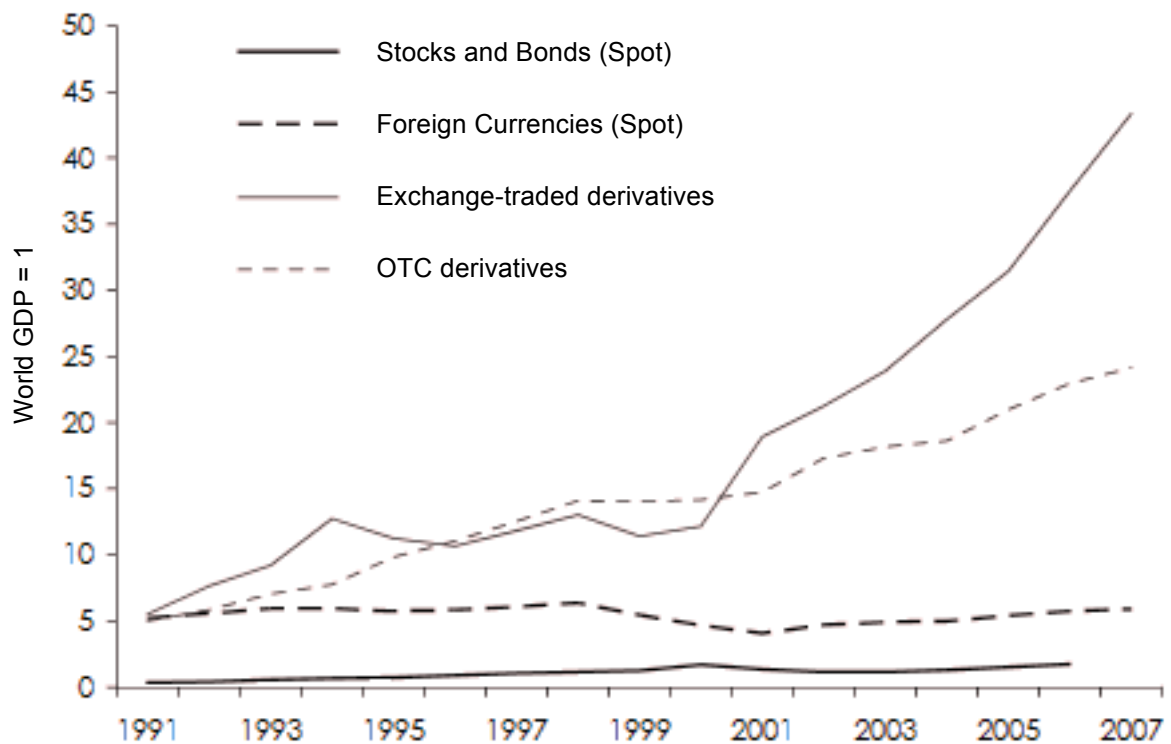


FIGURE 4. Global transactions of single instruments (Feuerbach 2013 according to Schulmeister)

The above figure shows the volume of global transactions subdivided in single instruments. They are differentiated in Stocks and Bonds, Foreign Currencies, Exchange-traded derivatives and OTC derivatives with a timeline of 1991 to 2007, which emphasise the beginning of the world financial crisis. Nevertheless, it is important to define and explain the single instruments to get a better understanding of what each instrument stands for.

Stocks represent a paper, which offers an ownership stake in a certain company, in other words an equity instrument. In comparison to that, bonds just represent a debt paper, in which the authorised issuer owes the holders a debt. The above figure shows that the volume of transactions for those has stagnated over the years. The value is twice as much as the world GDP and is in comparison to the other instruments very low.

Here Currency is the money of a foreign country traded on the spot market. Derivatives are divided into exchange-traded (Futures and Options) and OTC derivatives. *Exchange-traded derivative is a financial instrument whose value is based on the value of another asset* (Investopedia 2016). They are traded at the stock market, which offers some important advantages compared to OTC derivatives. OTC or in other words over the counter derivatives are not standardised financial instruments, which are directly traded between market participants. So in comparison to exchange-traded derivatives they are not traded at the stock market. The volume of those financial instruments increased extremely over the past years. In the timeline of the graph, their highest point were set around 43 times of the world GDP (exchange-traded derivatives) and 23 times of the world GDP (OTC derivatives). The graph shows the high importance of currencies and derivatives, which are the financial instruments mainly covered by the FTT.

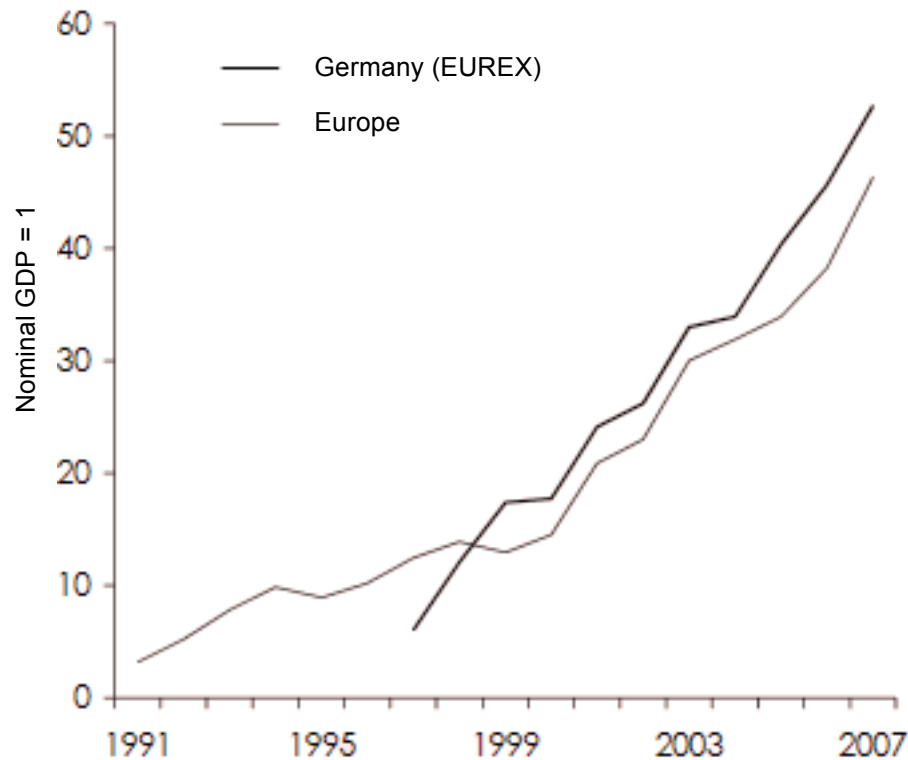


FIGURE 5. Transactions of derivatives traded at the stock market (Schulmeister 2008)

This graph represents the transactions of derivatives traded on the stock market in contrast to the regarding GDP. For both, the German as well as the European market, derivatives became a financial instrument with high importance over the years. The value increased steadily over the observed period for both markets. At the beginning the increase was more slightly and started to get larger with the introduction of the EUREX. It is comparable with the developing of the values of the single instruments, which has been shown in the figure before.

In addition to the single instruments, the situation on the different markets also matters, especially those markets, which are relevant for the FTT. Furthermore, the trade volume of the EUREX in time of the crisis should also be considered.

3.2 The Global Transaction Volume

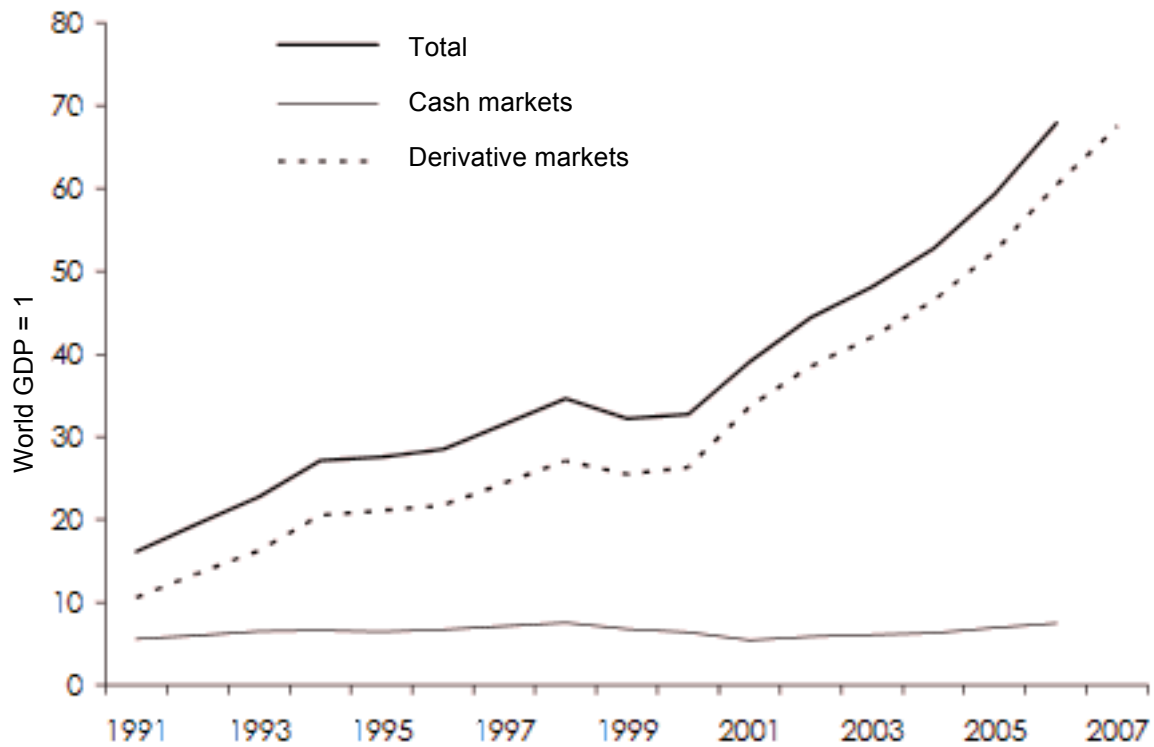


FIGURE 6. Transaction volume on the global financial markets (Feuerbach 2013 according to Schulmeister)

The figure above shows the transaction volume on the global markets compared to the world GDP. The timeline is set in the same way as in the graph for the single instruments. It is grouped into cash markets, derivative markets and the total volume. The value for the transaction on the cash markets nearly stagnates over the whole observation period. In comparison to that, the value of the derivatives markets increase steadily and at the end of the observation period it is several time higher than for the cash markets. This figure represents, as well as the one before, the high importance for derivatives and its related market for the financial sector.

It might be reasonably assumed that the general transaction volume is decreased during the financial crisis, especially in fields of speculations. It will be shown in the

following table about the trade volume of the EUREX, before, during and after the crisis.

TABLE 5. EUREX trade volume in number of contracts (Feuerbach 2013 according to EUREX)

EUREX Trade Volume	Jun 08	Nov 09	Nov 10
Total volume	197,709,869	131,908,906	158,949,064
Speculation	60%	20%	20%
	118,625,921	26,381,781	31,789,813
Hedging	40%	80%	80%
	79,083,948	105,527,125	127,159,251

EUREX is the short form for European Exchange and this is one of the biggest forward markets worldwide. The registered office is in Eschborn and there were around 2.1 billion contracts traded in 2014.

The table above clearly shows that the slump of the total number of contracts is caused through the breakout of the financial crisis. Nevertheless, the amount recovers after the crisis, which is shown by the steadily increasing numbers of contracts.

The trade volume of speculations decreased during the financial crisis, which is not a surprise. The number of contracts is four times lower than before. In detail, 86,836,108 less contracts in area of speculated trading, recorded by the crisis. However, the trade volume of hedging transactions increased comparatively strong during that time. There were 48,075,303 more contracts in hedging transaction throughout the crisis. The proportion for speculation and hedging at the total volume switched on behalf of the hedging transactions.

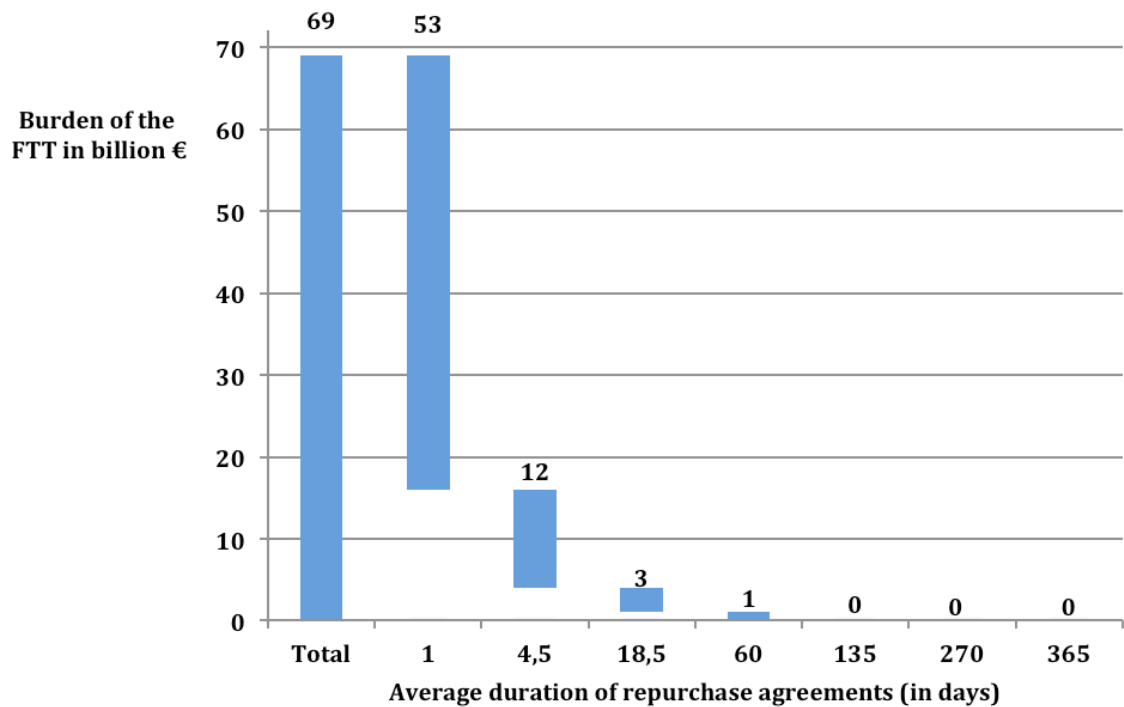


FIGURE 7. Expected burden of the FTT for repurchase agreements by duration (Kindler 2015 according to Wyman)

Repurchase agreements are one of the most important instruments for financial institutions to finance themselves. A repurchase agreement is a short-term financial instrument with a general term of not more than one year. Often it is even shorter and lasts only a few days or only one night, the so-called overnight repo. From the perspective of a seller the agreement combines the sale and the repurchase of the same financial instrument at once. The process is shown in appendix 1.

The figure above emphasizes, that most of the tax-income would be generated by the repos with a term of one day. Those short-term agreements are mainly seen as speculative and this is where the FTT should intervene.

4 POTENTIAL IMPACTS OF THE FTT

4.1 Positive Impacts

Anti-globalists are proponents of the FTT and promote the tax based on its advantages. Furthermore, several governments of the EU member states argue for the implementation as a result and solution after the crisis. On the first sight they emphasize that the FTT is a new source of income and could stop the risky speculations on the high frequency trading market. The following chapters point out the potential positive impacts of the FTT.

4.1.1 Additional Source of Income

On the one hand the taxation of financial transactions represents a new source of income for those nations, which are going to implement it. On the other hand the FTT could be used for cost-recovery in the context of the crisis. Since the crisis has started, the average debt-GDP ratio in Europe is at 80%. Especially through the rescue measures the quote increased about 20% during that time. (Horn & van Treeck 2010, 3)

In addition to that the governments do not only want to create a new source of income, but also want to call those who have caused the crisis to account. This is possible as banks mostly use the affected transactions.

Whether and to which extent the revenues could harmonise the national debt level is questionable. The table below shows the potential income subdivided into the named above instruments based on the actual number of transactions.

TABLE 6. Potential revenues by instruments. (EU Commission 2010)

Instrument	Revenues (in billion €)
Equity trading	7,237.2
Bonds trading	13,432.7
Exchange traded derivatives	468,171.1
OTC derivatives	312,926.7
FX Spot	162,186.4
FX Swaps	225,170.7

4.1.2 Regulatory Function

Another advantage of the FTT is the possibility to regulate and stabilize the financial markets. How the FTT should do it, is described by the EU Commission (2011, 3) in four substantial points:

- Improved observation on the financial markets
- Increased transparency
- Security for recipients of a transactions
- Optimized protection for the recipients of transactions

Especially the speculative trading on the high frequency markets should be covered by the new regulation. It is often seen as the trigger for strong up- and downturns on the markets of foreign currencies and stocks. Those up- and downturns should be stopped through the taxation of every single transaction, so that no profit can be made at the cost of others. An improved observation on the financial

markets has to be achieved, in order to prevent the economy from a financial crisis.

The FTT should on the one hand help the governments and the EU Commission to regulate the markets and on the other hand it should guarantee the security of private investors. In addition to that the FTT should increase the transparency on the markets for everyone, especially for the private investors, as it could be difficult for them to look behind the scenes. The traders get forced to handle the money of their customers more sensitive, as costs accrue for them as well. (EU Commission 2013, 2)

4.1.3 Uniform Level of Taxation

In the course of the financial crisis several nations wanted to implement a tax for the financial sector. This decision was made before the EU Commission has published their resolution for their enhanced cooperation. (EU Commission 2013, 3)

France already implemented a tax in 2012, which cover the taxation on stock purchases as well as the high frequency trading. In 2013 Italy followed the example of France and implemented the tax as well.

The enhanced cooperation in implementing the financial transaction tax pursue the objective to prevent investors from double- or non-taxation, as it is a possible case at the irregularly tax collections in Europe. Italy and France would adapt their system to the one of the EU Commission to guarantee a homogenous FTT-System. The standardisation on the European tax basis would make it easier for the nations to collect taxes as well as it would prevent investors from double-taxations.

4.1.4 Reduction of High Frequency Trading

The current system should be stabilised by the new regulations. Especially the reduction of speculations on the high frequency trading market is one of the main objectives the EU Commission pursued. The planned minimal tax rate could lead to a reduction of high frequency trading. In general the revenues of those trading are only worth several Cents, this is why the transactions would not be profitable anymore, if you put a tax on it. (Horn & van Treeck 2010, 2) The impacts on the high frequency trading market and other markets will be described in a subsequent chapter.

4.2 Negative Impacts

Banks and stock markets are against the implementation of the FTT. They try to disprove the advantages named above with disadvantages. These include the impairment of the market patterns, the liability of the customers, the miscalculation of revenues and the outflow to other markets. Strictly speaking it might be the case that the disadvantages outbalance the advantages.

4.2.1 Avoiding Crisis

An existing FTT could neither prevent from a crisis nor could it have a positive impact on it. The latest crisis was not caused by speculations but by the miscalculated rating of financial instruments. Special emphasis should be placed on CDO (Collateralised Debt Obligations) and CDS (Credit Default Swaps), which were connected with mortgage loans. Either the break down of the CDO market or the break down of the CDS market was caused by high frequency trading.

A crisis could not have been prevented, although the EU had have implemented a FTT before. Furthermore it is more likely that an existing tax would have implicated more risks and negative impacts on the markets. The FTT affects the real econo-

my investments in a negative way, as the available capital would not longer be invested optimally. Investors would switch to second-rated investments, which are not covered by the tax. From the perspective of the market participants, a tax is an additional cost factor in general, which reduce the profit and distorts prices.

In addition to that a FTT could not help to avoid the systematic risks. In this context a systematic risk is a risk, which is caused by natural catastrophes, Inflation or political developments. In contrast to unsystematic risks a systematic risks could not be strewn or eased by risk diversification. As a result of it, most of the risks will still remain.

4.2.2 Miscalculation of Tax Revenues

The EU Commission calculates with an extra income of around 30 billion Euros from the remaining ten nations. However, it is very likely that banks and especially traders try to bypass the taxation of their transactions by changing the market place. It can therefore reasonably assumed that the revenues will not be as high as calculated, which can lead to a miscalculation of the liquid funds for the single nations.

This characteristic can be clearly recognised in France. As mentioned before the French government implemented the taxation on financial transactions in 2012. At that time it was calculated with an overall income of 1.6 billion Euros. According to current forecasts the real amount accounts to 300 million Euros and is thus much lower than predicted. Through this difference a miscalculation arises and planned investments could not be realised in the distant future. (Bortenlänger 2013, B9)

4.2.3 Outflow of Capital

Should the tax be implemented only in the planned ten nations and not in all 27 EU member states, an outflow of capital is very likely. Traders will switch their

market place to those nations where no tax exists. A significant example for the outflow of capital is the attempt of Sweden in 1984. At that time Sweden had to struggle against the drop of their trading volumes of about 85%. After seven years they have stopped the attempt, to save whatever can be saved. This will be exemplified in a separate chapter.

Another important example is the actual case of France. Since they have established their vision of the FTT, the volume of transactions decreased. This is because the market participants switched to other markets. Basis of the tax are companies, which are located in France and whose shares can be dealt on the stock exchange. The companies have to have a market capitalisation equal or superior 1 billion Euros. If it is the case, every transaction is taxed with 0.2% on the corresponding value. In contrast to the decreased volume of French stocks, the transaction volume of non-French stocks increased during that time. (Bortenlänger 2013, B9)

The graph below shows the relative changes of exclusive stocks traded at the French market place, to illustrate the problems outlined above.

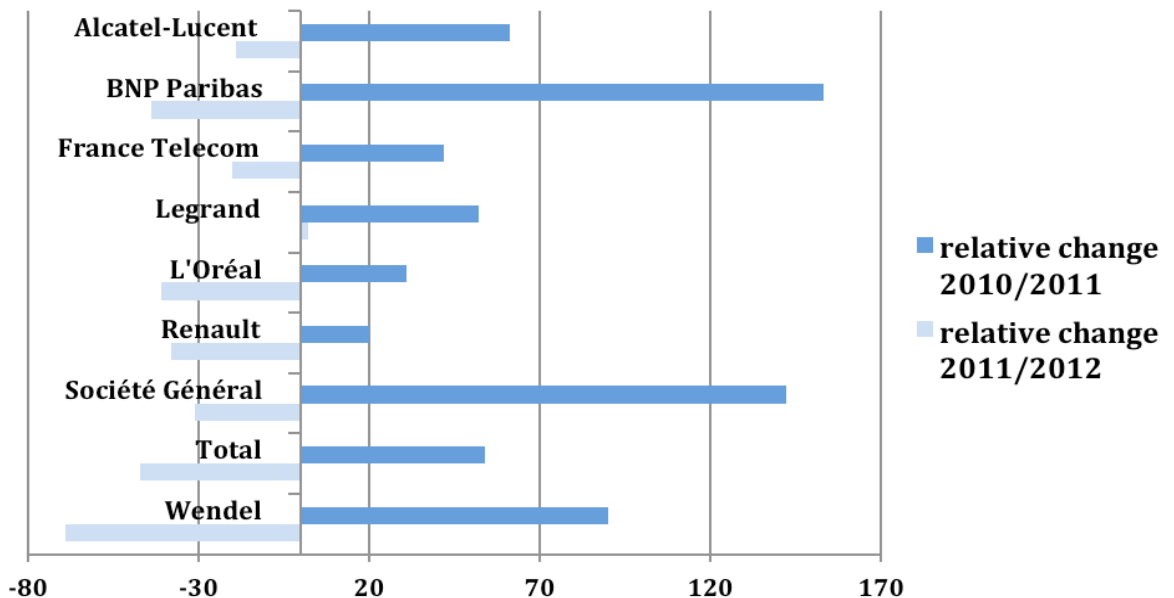


FIGURE 8. Relative changes of French stocks percentagewise (own illustration according to Schmallowsky & Schmallowsky 2012)

As it is easily to see, the transaction volume decreased after the implementation of the tax. The traders likely switched to other market places on which their transactions are not taxed. This includes regulated market places like USA or Singapore as well as non-regulated market places, the so-called offshore markets. Those markets are tax havens for companies as well as for private investors. Examples for those places are Liechtenstein, Isle of Man and the Cayman Island. (Schmallowsky & Schmallowsky 2012, 16)

You can transfer those outcomes easily to the planned implementation for the ten member states of the enhance cooperation. If it is the case, the EU has to deal with a significant loss of liquidity on the European financial markets. This would implicate more problems, as growth declaration, complicated company financing, and difficulties in obtaining a credit. Companies could take this opportunity to relocate their companies in other countries and this would result into a changing market structure.

4.2.4 The Contradictories to other Regulations

The FTT is contrary to other regulations like Basel 3 and the CRD IV (Capital Requirements Directive IV). These agreements declare the necessity of the short-term availability of liquid assets, which are mainly based on repos and stocks lending. As already mentioned before, the FTT should stop those deals and this is the reason why the FTT could be seen contrary to other regulations. Basel 3 only accepts highly liquid stocks as securities but this could only be provided by a functional repo and secondary market. Therefore the FTT contradicts indirectly the instructions of Basel 3. (Die Deutsche Kreditwirtschaft 2013, 17)

4.2.5 The Liability of the Customers

Another negative impact of the FTT could be the liability of customers. The banks are definitely going to transfer the arising costs to their customers. In this case, the

objective, banks should share the costs of the financial crisis, could not be achieved. It is depending on how the money is invested, as savings books, insurance contracts, consumer credits and mortgage loans are excluded from the tax. Nevertheless, long-term saving plans could be taxed by the FTT, if they invest for instance in funds for private old-age provision. It depends on the composition of the fund. A fund, which is investing in stocks as well as in derivatives, will be more taxed as a fund, which is not investing in derivatives. However, even if the banks are not going to transfer the costs to their customers obviously, they will do it in an indirect way by hiding them.

4.3 Impacts on the Markets

The former chapters explained the historical background of the FTT, which is based on the theories of Keynes and Tobin. In addition to that it has been mentioned and analysed the theoretical framework of the currently discussed FTT and the given market structures of the single instruments. Based on that information the advantages and disadvantages of an implementation have been examined. The impacts on the market structures should not be forgotten, especially on the high frequency trading market and it should give a good overview in connection with the former chapters.

4.3.1 Potential Changes of the Market Structure

First of all it should be divided between the money market and the credit market. The impacts of taxation on the money market could be seen as the basis for the impacts on the credit market. As a result of the FTT, the usual market structures in Europe could be changed. One of the main objectives of the EU Commission is to strengthen the Buy-and-Hold-System of market participants. It means that customers should hold their purchased financial instruments for a longer time, comparable to a long-term investment. But the usual case is that the customers invest in short-term instruments, which are mainly based on repos. Essential elements of the

secondary market would switch to the primary market, through the limitations of those financial intermediaries. In addition to that, short-term market activities will be prevented and this would lead to a change of the market structure, which will have a negative effect on several different areas as well. (Die Deutsche Kreditwirtschaft 2013)

One of those negatives impacts will also affect the money market. The named market is a part of the financial market, on which short-term investments are traded. Especially companies and banks are often using these kinds of borrowing and investments to ensure high liquidity. A higher liquidity of financial institutions does mean, on the one hand more flexibility for the institutions and on the other hand an increase in security for the market participants. Repos are popular instruments to obtain short-term liquidity. Those transactions are subject to the same phenomenon as the high frequency trading. Decisive factor is the frequency of turnovers and not the nominal value of the transaction. An implemented FTT would strongly affect this kind of instrument, as it will be taxed by it. As a consequence, it could lead to a disturbed granting of credits and this will affect private as well as institutional investors. Especially small and medium-sized enterprises would suffer from this, because it would end up in an enormous competitive disadvantage against those enterprises, which are not affected by the tax. (Die Deutsche Kreditwirtschaft 2014, 4)

Another important negative effect is the limitation of repos on the capital market. Mid- and long-term investments are traded on this market. At the first sight, the market should serve as a market place for enterprises, households and governments and can be subdivided into the primary market and secondary market. The primary market will not be taxed, because it is responsible for the emission of new papers and this is the reason why essential elements of the secondary market would switch to the primary market. To guarantee a functional capital market, it is indispensable to have a liquid and active secondary market. (Die Deutsche Kreditwirtschaft 2012)

As already mentioned in the chapter 4.2.3 about the outflow of capital, an implementation of a FTT would have an effect on the economy as well. The corporate financing is affected by the FTT, due to the decreasing liquidity on the secondary market. The decrease leads to higher costs in cases of capital procurement, as among these, the value and attractiveness of corporate bonds will decrease. All this could end up in higher interests and in associated higher costs. As a result, companies could relocate their business and the vicious circle will follow its naturally.

To sum it up, it is necessary to mention the general impacts on the financial markets. The FTT could frighten investors to invest in investment funds, as most of the transactions are taxed. They will invest in alternatives, which would not correspond to the optimal portfolio strategy. They will try to save as much tax as possible, what would limit the investors in their investment possibilities. Furthermore it could lead to a competitive disadvantage for those investment companies, which are located in nations affected by the FTT. (Die Deutsche Kreditwirtschaft 2013, 17)

The table below shows the potential decrease of the trading volume of different instruments percentagewise. It is subdivided into low, medium and high fluctuation of the market participants as well as into different tax rates. In general it emphasises that no market will be spread from the decrease as well as from the outflow of capital. Strong changes could be realised on the market of exchange-traded derivatives.

TABLE 7. The potential decrease of the trading volume of different instruments percentagewise. (Feuerbach 2013 according to Schulmeister)

	0.10%			0.05%			0.01%		
	low	me- dium	high	low	me- dium	high	low	me- dium	high
Spot transactions on exchange									
Stocks	5%	10%	15%	3%	5%	8%	0%	0%	5%
Bonds	3%	5%	10%	0%	3%	6%	0%	0%	3%
Exchange traded derivatives									
Foreign exchanges	65%	75%	85%	50%	65%	75%	15%	25%	35%
OTC	70%	80%	90%	60%	70%	85%	20%	30%	40%

4.3.2 Impacts on High Frequency Trading

The following chapter examines the potential impacts on the high frequency trading market in detail. The topic high frequency trading was frequently mentioned in this paper and will also be analysed besides the general market structure.

As already mentioned before, the high frequency trading market is targeted mainly by the FTT, because it is a significant location for economical and financial businesses. The participants are afraid of the break down of the named market or at

least of the movement to non-taxed markets, which would mean an enormous loss of capital. For this reason we will have a closer look on positive as well as on negative impacts of high frequency trading.

High frequency trading is defined as the cumulative independent trade of financial instruments at the stock market by high-performance computers. This special way of trading was developed in the course of the on-going technical development and covers 40% of the trade volume at the European and 70% of the trade volume at the American stock markets nowadays. Thus it contributes an extensive part to the total trade volume. Basis of calculation is the cumulative sum of the total volume of transactions of the electronic trading system for the spot market. Nevertheless, these kinds of high-speed transactions do not only entail advantages. Arising risks are increased volatility and market manipulation as well as technical failures. (Deutsche Börse 2012, 175)

In Germany the trade volume on the stock market XETRA is around 1,505.8 billion Euros. If it comes to a reduction of the high frequency trading, through expected lower return on investments, the trading volume on the European market places would befall heavy losses. If you take this example and apply it for Germany, with an average reduction of 40-50%, it would end up in a loss of around 600 billion Euros. It is questionable if such heavy losses could be balanced by the potential incomes.

An additional important factor, next to the financial loss, is the outflow of capital to other markets where no tax exists. More devastating than a movement to European markets is the movement to in transparent and less regulated OTC markets. Hereby the stability will be negatively influenced, although the stability is one of the main objectives the EU Commission is targeting.

4.4 The Example of Sweden

The Swedish version of the FTT was implemented in 1984. At this time the Swedish financial sector increased enormously as well as the paid salaries. This led to displeasure in the general public. From their point of view, the usage of resources was incommensurate with the benefit for the society. At the first step the purchase and sale of stocks and derivatives were taxed with 0.5%, thus 1% per round-trip. However, the prerequisite was that the transaction has to be done by a domestic trader. At the second step in 1986 the tax-rate was increased to 2% per round-trip. In 1987 the assessment basis for the tax was extended and the transactions between traders were taxed with 1%. In 1989 the assessment basis was extended again and fixed-interest securities were included, but in turn the extension was reversed again one year later. Nevertheless, at the beginning of 1991 the remaining taxes were halved and at the end of 1991 the Swedish FTT was abolished. (Feuerbach 2013, 55)

The reason for the swift failure of the Swedish FTT was the possibility to easily avoid the tax. Foreign investor just had to do their transactions with non-Swedish brokers and domestic investors just had to do their transactions on foreign markets. The outflow of capital to other markets, mainly to Great Britain and New York, was the logical consequence. In 1991, more than 50% of the Swedish trades have been taken place in London or New York and investors, which stayed on the home market, have decreased the transaction frequency enormously. (Feuerbach 2013, 56)

The consequences for the market of fixed-interest securities were even more dramatic. The transaction volume dropped about 85%, although the tax-rate was significantly lower. The trading with derivatives almost stopped, as the transaction volume on the forward market decreased about 98% and options were no longer traded. The source for this enormous drop was the possibility to obtain tax-free substitutes. The revenues earned from the taxation were directly and totally compensated by the decrease of the capital returns tax, so the net effect was practically zero. Relevant numbers are shown in the table below.

The example of Sweden shows lasting the negative impacts of a wrongly implemented FTT. Primarily, the possibility to easily avoid the tax declined the whole guidance for the market. Because of these catastrophic experiences the Swedish society is not ready yet to give the FTT a new chance.

TABLE 8. Tax revenues and movement of trading in Sweden. (Feuerbach 2013 according to Schulmeister)

	Revenues of Turnover Tax on Securities	Revenues of Turnover Tax on Securities	Transaction tax-rate	Annual Swedish Trading volume	Trading of Swedish stocks inside Sweden	Trading of Swedish unrestricted shares inside Sweden
	In % of GDP	In % of total tax Revenues	On equity traded per round-trip	Executed in London	Average of 19 large Swedish companies	
1984	0.10	0.21	1%	NA	NA	NA
1985	0.13	0.27	1%	NA	NA	NA
1986	0.26	0.53	1% - 2%	NA	NA	NA
1987	0.35	0.66	2%	30%	NA	NA
1988	0.34	0.66	2%	48%	61%	47%
1989	0.45	0.85	2%	51%	57%	42%
1990	0.43	0.81	2%	52%	56%	42%
1991	0.25	0.50	1%	NA	52%	40%
1992	0.02	0.04	0%	NA	56%	50%

4.5 Interview

First of all I would like to introduce my interview partner Prof. Dr. Martin Schulz. He is professor at the University of Applied Sciences in Aschaffenburg and has finished his PhD-Thesis in quantitative finance at the University of Augsburg. Afterwards he worked for a small subsidiary of Allianz Global Investors, which is also located in the USA. He was responsible for asset and risk management. In 2013 he started to work as a professor at the University of Applied Sciences in Aschaffenburg and teaches students in quantitative methods, statistic, math as well as finance and investment.

How and in what extent did you get in contact with the topic “Financial Transaction Tax”? Was it more job-related or rather out of personal interest? Is it a topic covered by your teachings?

During my professional experience I got mainly in contact with this topic, as the implementation of the FTT was already on the agenda in 2011. At that time the FTT has been close to its introduction for the first time. My task was to give our customers advice in questions of how they should handle with the upcoming FTT. Is it sensible for the customers to change the location of their transactions? What kind of consequences could be expected? Those are some questions I had to deal with.

Currently the FTT is a side issue in my teaching program. So far it has been addressed marginally in seminars in form of presentations and discussions.

As you have mentioned before, you had to work intensively with the topic FTT because of job-related issues. What kind of mediums did you use to inform yourself? Were the information provided directly by the EU Commission or rather in-house information?

Both. We had the possibility to get information out of both sources. As already mentioned I have worked for a subsidiary of the biggest insurance company in Europe, which is well connected economically as well as politically. Therefore we received all necessary information directly and unfiltered. In addition to that we had in-house training courses, which covered this topic over a long period of time.

In general, what is your opinion about taxation on financial transactions? Should it be necessary to cover more financial instruments as those, which are discussed right now?

Basically I do not support the idea of taxation on financial transactions. In my view the government should prescind from the implementation. To understand this opinion you have to see things through the eyes of a private investor. Those had suffered enormously by the effects of the financial crisis. The continuing low level of interest rates prevents the younger generations to accumulate a large fortune through the effect of compounded interest, which was possible for nearly all former generations. We should ask ourselves: How can young people save their retirement provisions?

From my point of view, this can only be done by switching to financial instruments, which go beyond the traditional asset classes, like savings and call accounts. In my point of view it is necessary to give those generations, especially yours, the possibility to set up an adequate and suitable retirement provision. This cannot be achieved if the named transactions are high taxed. This is the reason why I personally see the FTT and capital returns taxes in general very critical. Probably this opinion is not shared by the younger generations nowadays but in the near future they will understand what I mean. They are forced to switch to financial instruments, which are taxed by the FTT. My opinion is, and I am not the only one, that the present-day generation has paid enough for the financial crisis. It is time to abolish the capital return taxes or at least to prescind from the implementation of the FTT.

The FTT should generally cover transactions from banks and bigger companies. Do you think it is realistic, that the banks are going to transfer indirectly the costs of the transactions to their costumer?

Definitely, everything else would be very surprising. My experience has shown that banks are very creative in hiding costs.

As mentioned before, the FTT should target banks and bigger companies and not the single costumer. The general idea was to contribute banks to the costs of the crisis and to create a new source of income. Could it be seen as contradictory that it is possible for the banks to transfer the costs to their customers?

It is definitely a good development that customers are involved in the bailout of banks. However, you should take into account that the banks are strongly interconnected, what could be seen extremely well in the financial crisis. This is why costumers of other banks are going to bear bailout costs anyway.

What implications do you see for the European financial markets? Could it lead to a breakdown or at least to an outflow to other markets?

The outflow to other markets is realistic and very acute. The percentage of tax-rates is indeed very small, but in absolute numbers we are talking about significant amounts of money. I am sure that several investors will not process their transactions on the European financial markets anymore. Singapore is a popular region to switch. I don't believe that there will be a breakdown of the European financial markets at all but they will have to handle at least with significant outflows.

One idea of the EU Commission was to keep down speculations on the high frequency trading market. Do you think the FTT is a possible solution to pursue this target, as Tobin had tried several years ago?

My personal opinion is that the high frequency trading should not be seen as critical. It helps to increase market efficiency, as arbitrage opportunities. This leads to fair prices which is the reason why even private investors benefit through high frequency trading in an indirect way.

It is under discussion, that the income of the tax should be directly send to the EU. What is in your opinion more significant? Should the tax be send to the EU or leave it at national level?

In general a harmonisation within the EU would be more than desirable. If the whole union benefits from the tax, the whole union should contribute.

The implementation of the FTT was planned for this year. Do you think that this plan could be realised, even as the early attempts failed in 2011 and 2014?

The due day was set down for 30.06. this year, which could not be fulfilled. I cannot imagine that the plan would be extended to the end of this year, as no one is missing the tax right now. The EU has by far more controversial topics on their agenda, like the BREXIT referendum.

I have noted that you have a critical stance towards the FTT. Nevertheless, what kind of attributes should the FTT entail, so that the implementation would be sensitive for you?

On the first sight the FTT should be implemented globally. To eliminate the named problems it is not enough to introduce it all over Europe – in fact a global coverage is needed. This is why a FTT is neither sensitive nor realistic.

Throughout the financial crisis, banks are confronted with a lot of new regulations, like Basel 3. I do not think it is necessary to restrict the markets with even more restrictions.

Great Britain decided to leave the European Union. At the beginning of this year Estonia has left the enhanced cooperation for implementing the Financial Transaction Tax. Do you think it is possible for the EU Commission to acquire new nations to join the enhanced cooperation?

I think that the EU Commission cannot convince more nations to join the FTT initiative, neither Europe-wide nor globally. In 2011 and in 2014 the EU Commission already tried to convince the governments of potential nations but why should it work nowadays, when it did not work at a time where the negative effects of the financial crisis were more present than today.

Especially after the BREXIT referendum, London will leave no stone unturned to keep attractive in the competitive field of financial markets.

4.6 Possible Improvements

Looking at the positive as well as the negative impacts of an implemented FTT, you can easily say, that the currently discussed proposal is still far away from optimum. The disadvantages outbalance the advantages, leading to the assumption that an implementation could cause more damage than benefit. But what could be done to improve the current proposal?

First of all the impacts on the market structure should be focused. They are the most dangerous as well as the objective with the most impact on the economy. As it is mentioned in the previous chapters an outflow of capital and a change in the general market structure could cause massive damage. The example of Sweden shows lasting that a solo run of single nations could end up in a catastrophe. The market participants will definitely try to avoid the tax by changing the market place to non-taxed places. This is the reason why an implementation in only ten nations is not sensitive. In general a harmonisation within the EU would be more than desirable, in other words there is no getting around to implement the FTT in all 27 EU member states. Furthermore, it would be more practical to launch the FTT on a

global stage to ensure no outflow of capital and to create global and harmonised basis for all market participants all around the world.

The next point, which should be discussed, is the liability of customers. The bank will transfer the arising costs to their customers and this is contrary to the form the EU Commission desired objectives. The EU Commission has the task to ensure their own set objectives. They have to force the banks to more transparency to guarantee the security for all market participants.

The proposed tax-rate and assessment base is a theoretical framework. If it is practical and could lead to higher revenues is questionable. The possible impacts are form theoretical nature, as a tax never has been established in such a scope until now. It remains to be seen whether the revenues could balance the loss of transaction volume or not.

5 CONCLUSION

In the context of this work, the Financial Transaction Tax has been introduced, which is based on the idea of the Tobin Tax. The advantages as well as the disadvantages should be pointed out, especially those which are targeting the financial markets. Therefore, the ideas of Keynes and Tobin have been examined to set up the groundwork for the subsequent analysis. In spite of its popularity, it was made clear that the FTT includes some significant risks, which could unravel the good intentions of the EU Commission. This is the reason why this work pointed out the positive and negative impacts of the FTT, especially those on the financial markets, to ensure a logical prediction of potential consequences.

It was emphasised that on the one hand the FTT is seen as a new source of income from which the EU Commission is expecting high revenues. However, on the other hand it is not clear if the arising revenues could balance the potential loss of transaction volume. It is possible that the net effect will go towards zero, or in the worst case it will become negative. Based on those unpredictable results, this work identified the possibility of miscalculations in the field of liquid funds.

In addition to that, this work has covered the outflow of capital to other markets, which will be not affected by the FTT. It would not be surprising if the market participants were going to invest in non-affected markets to avoid the tax and save money. This part of the work includes the impacts and changes of the current market structure. It showed the real economic consequences, which could result out of the changed market structure. It has been outlined that not only the governments are affected but also banks, companies as well as private investors. Every single market participant would suffer through the changes.

The Swedish attempt showed significantly the negative consequences of a wrongly implemented tax with a not harmonised tax base. This practical example and the interview with a professional underlined that the implementation of the FTT would neither be sensitive nor is it safe that the desired objectives could be achieved.

To sum it up, it should be mentioned that the positive as well as the negative consequences are mainly based on theoretical analyses. How and in what extent the market and its participants react to the implementation are in general speculations and experiences from former examples. Basically it could be said that the disadvantages are outbalancing the advantages. It is questionable, if the FTT will be implemented in the distant future, as Estonia left the enhanced cooperation at the beginning of this year and Great Britain voted for the BREXIT referendum. The unsuccessfully attempts in 2011, 2014 and June 2016 underline the opinion that the EU Commission is not yet ready to implement such a tax. It remains to be seen, whether the EU Commission will be doing itself a favour with the implementation of the FTT in only ten EU member states. To answer the question from the beginning: if the FTT is an appropriate solution or if it will strengthen the actual crisis. This work has shown that an implemented FTT would on the one hand not necessarily strengthen the crisis but on the other hand it would definitely create new challenges the EU Commission has to face.

This work has significantly shown what potential consequences could arise out of an implemented FTT. The achievement or better speaking the intention of this work is to show the reader that the consequences would affect everything and everyone. Many people falsely claim that the FTT would not affect them in the daily life. At least when the affected banks will transfer the costs of the tax to their customers it will have an impact on them. Furthermore, the consequences for the economy will affect the general public in a way they could not imagine yet. The FTT is a complicated and non-transparent topic, which is examined by very few people. This work should familiarise the reader with the FTT and allays the fear of them to handle topics like it.

As already mentioned before this research is based on theoretical analyses of professionals in the times when the topic of the FTT was more relevant than ever. Those analyses are based on facts and figures, which were up-to-date at this time. You could assume that the data themselves changed over the time but it will not change the outcome of the potential consequences. Therefore, the validity and reliability of this research is given nowadays and will continue to exist in the future.

The research process extends over a long period of time as the topic is could be seen as complicated. It was important to limit it and concentrate on certain topics, as otherwise you could write a thesis over several hundred pages. It was quite difficult to find adequate literature and to filter the important information out of it. If I would write a similar research work again I would further refine the topic and research base. Although I have limited the topic on influences on the European financial markets beforehand, there are still issues which could be addressed in such a research work. It is important to find an adequate balance between text and figures. On the one hand figures can strengthen your argumentation, but on the other hand it could lead to an overflow of unnecessary information, which could not be handled by the reader. This work provides a logical order of content and strengthens the argumentation with fitting facts and figures. All in all I would do the things similar as it went very well for me in context of my personal working and writing behaviour.

This work could be taken as a basis for future researches. It is a general overview about potential influences on European financial markets by an implemented FTT. On this basis it is possible to do research in different fields. For instance it would be beneficial to have a closer look on the single consequences and issues the FTT is causing and facing. Therefore a closer look on the single markets and their specialised characteristics is desirable. It could be differentiated between single products but also between different market places. In addition to that it would be beneficial to research about what would be necessary to create a harmonised tax base Europe-wide or globally. Furthermore it would be interesting to research about an adequate substitute for the FTT. Is it possible to find a similar regulatory tool, which can substitute the FTT without the potential negative consequences? As you can see there is a wide variety, which could be beneficial researched.

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APPENDICES

Appendix 1. Repurchase Agreement

