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The European Financial Transaction Tax

A Stabilizing Force or a One-dimensional Solution to the Problem of Excessive Risk Taking?

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Abstract

In the wake of the financial crisis, the movement advocating for a financial transaction tax gained considerable support, culminating in the presentation of a proposal for such a tax by the European Commission on September 28, 2011. This thesis researches and analyzes the use of a financial transaction tax in light of the stated purpose of the Commission's proposal. The primary goals of the tax are to (1) raise revenue, (2) curb excessive volatility, and (3) harmonize the internal market. Taxes are most commonly implemented for their revenue-raising qualities rather than as tools for remedying market distortions. In contrast, many view the primary function of the financial transaction tax as a regulatory tool to minimize excessive risk taking in financial markets. Although this thesis will analyze the potential effects on revenue and the tax's ability to contribute to harmonization of the internal market, the primary focus is on the volatility-reducing effect regulatory authorities can expect from implementing such a tax.

Although the thesis will use the European Commission proposal for a financial transaction tax as its starting point, it will also review other variations on the financial transaction tax. The thesis will also present alternative measures that should be considered for achieving the goals set forth by the European Commission in lieu of, or in addition to, a financial transaction tax, and evaluate these measures in light of the advantages and disadvantages of the financial transaction tax. The thesis concludes that while a financial transaction, in theory, may seem like a dynamic solution that could accomplish several different goals, a multifaceted approach tailored to each individual issue is likely to create a more strategic solution in the long run. A more narrowly tailored strategy is also less likely to negatively affect GDP and trading patterns than a financial transaction tax.

PREFACE

The motivating factor in my choice to write about the financial transaction tax is that the theory of taxation straddles the boundaries between law and finance. Having recently completed a degree in law, I wanted a topic where I could research both the legal and economic implications of a hypothesis. My choice of topic, however, has not proven unproblematic. The concept of a financial transaction tax is currently subject to a lot of attention, and there have been many new developments to account for during the four months of writing. Most significantly, the European Commission proposal changed significantly halfway through the process. Instead of a proposal presented before the entire European Union for a vote, a few countries chose to proceed using the enhanced cooperation framework provided for by the Treaty of Amsterdam amending the European Union Constitution. I have, to the best of my ability, tried to incorporate these changes into the thesis, but because the enhanced cooperation proposal is not yet available the thesis had to proceed using the Commission proposal. However, this likely makes very little practical difference since the enhanced cooperation countries will probably use the Commission proposal as a basis for their framework. Moreover, due to the specificity of the proposal, the thesis at times deviates from the Commission framework, and instead analyzes the broader concept of the financial transaction tax. The most significant limitation of this thesis is the small focus on empirical analyses. Instead, the thesis analyses the notion of a financial transaction tax on a more conceptual, theoretical level. The rationale supporting the stronger focus on the theoretical side is that taxes have a broader effect than most other regulatory measures. Moreover, because the financial transaction tax has yet to be implemented, obtaining data to support or oppose its implementation is difficult. Overall, the thesis concludes that due to the distortive effects of the tax, and in particular, its effect on company financing, the financial transaction tax should not be implemented. Rather, the European Union should develop a broader scheme of regulation, which more precisely targets the various causes of the financial crisis.

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1. Introduction

With the advent of the recent global financial crisis, governments have started looking for new ways to raise revenue and reverse the trend of rising government debt. In the United States alone, the federal government spent more than 12.1 trillion dollars to bail out struggling companies after the financial crisis (New York Times, 2011). In comparison, the United States faced a federal budget deficit of 1.4 trillion dollars for the 2009 fiscal year (Fox News, 2009). During this period public sentiment against the financial sector grew stronger, and many believed that the banks were unfairly prioritized over private individuals and small businesses, despite playing an imperative role in creating the financial crisis. Similar scenarios took place outside the United States, and the European Union member states contributed more than 4.6 trillion euros to the financial sector, which equals 39 percent of EU-wide Gross Domestic Product (GDP) in 2009 (Sadakova, 2012). Following the crisis, public debt in the EU states rose from around 60 percent of GDP in 2007 to 80 percent in 2010 (Eurostat, 2011). Under these circumstances, it is not difficult to see why the concept of a tax targeted toward the financial industry has gained traction in the public eye, especially because the financial sector was a significant cause of the crisis in the first place. One governmental response to the financial collapse was the move toward a financial transaction tax. On September 28, 2011, the European Commission presented a proposal to institute a financial transaction tax within the European Union. The tax would take effect in 2014 and would impose a 0.1 percent tax on equities and debt securities and 0.01 percent tax on derivative transactions involving a European Union financial institution. Although the prospects for implementation are dim due to UK opposition to the tax, the proposal has given new wind to the movement favoring a tax targeted at the financial sector.

The term “financial transaction tax” is a generic term that encompasses several types of financial taxes. Most prominent among the various financial transaction taxes are the securities transaction tax and currency transaction tax. In addition, other financial taxes are often offered as alternatives to a transaction tax, including the bank balance sheet tax and the financial activities tax. The focus of this thesis will be on a securities transaction tax, in particular a tax on equities, bonds, and derivatives as set forth in the Commission proposal. The motivation for introducing a financial transaction tax is two-fold. First, authorities need to increase revenue to counteract the increasing national budget deficit and to avoid a debt crisis. The tax

may also on some level penalize the financial sector, and make the financial sector contribute a fair share to the economy. Second, the tax discourages financial market speculation by raising the costs of financial trading, and thereby reducing the probability of a new crisis of the same magnitude. Although the two motivations are distinct, they do not operate in a vacuum from one another, and commentators have with greater frequency questioned the role of the financial sector, the dire economic consequences that resulted from inadequate risk management in the industry, and the large government expenditures that have been necessary to remedy the wide-reaching effects.

This thesis applies fundamental theories on tax policy and financial markets to determine the likely consequences of implementing a tax on financial transactions. Both proponents and opponents have raised many arguments in favor and against the proposal. This thesis will further develop some of the concerns that have been raised by critics of the tax, and analyze whether alternative structures to the Commission proposal can mitigate the negative effects of a financial transaction tax. Pragmatically, the thesis will use the recent European Commission proposal as a starting point, but will also review other financial taxes in place or under consideration in various countries. Thus, the substantive analysis portion of this will thesis will proceed based on the stated goals of the European Commission. First, the thesis will review the revenue-raising abilities of the tax. The financial transaction tax's capacity to raise fiscal revenue is undisputed; however, there is possibility that the undesirable consequences from imposing the tax will overshadow the revenue raising quality of the tax. In fact, some even go as far as claiming that because the tax will negatively affect GDP through a reduction in investment in trading, any revenues created by the tax will be more than offset by the loss in GDP. Second, this thesis will assess whether a financial transaction tax is a proper tool for curbing volatility in financial markets, or whether more aptly suited methods should be considered instead. Although the tax seeks to minimize market volatility by making short-term speculative trading more expensive, it is unlikely to truly remedy harmful volatility that exists in the market. Essentially, the tax is not a suitable solution because it only targets one possible source of volatility—speculative trading. Indeed, during the recent financial crisis it became clear that speculative trading was not the sole cause of the crises, but other issues also contributed to the crisis, including excessive leverage and misaligned invectives. The structure of the financial tax would not remedy these sources of volatility. Moreover, the financial transaction tax will likely lead to unintended and undesirable consequences in financial markets.

Most prominently, the tax will increase the cost of capital, which will make it more expensive for companies to finance real economic activity. Furthermore, the tax will reduce trading, which in turn will impede market liquidity. This is problematic because market liquidity plays a critical role in price discovery. Consequently, the financial transaction tax may in fact exacerbate volatility stemming from errors in market prices because the tax would make it more costly for market participants to restore prices to their fundamental values. Moreover, the tax will likely reduce the capital base of financial institutions at a time where the economic crisis has led to increasingly stringent regulations on capital requirements. Although the proposal attempts to prevent disruptions to company financing through the exclusion of primary markets, the tax will still affect the company financing through its effect on the secondary markets. Lastly, the tax will harmonize financial taxes within the internal market because the proposal would require the member states to repeal financial taxes currently in place, and instead, impose a minimum transaction tax in accordance with the proposal.

The thesis will also analyze other alternative proposals, including the financial activities tax, that could be alternative regulatory measures in lieu of the financial transaction tax. The thesis also makes a final recommendation regarding the Commission proposal. The final recommendation that this thesis advocates for is to develop alternative regulatory structures to address the issue of excess volatility. Although a more comprehensive regulatory scheme will not by itself raise revenue for the EU countries, the Commission can consider other taxes for accomplishing this goal, such as the financial activities tax. The financial activities tax may also have some of the same effects of the financial transaction tax, but causes less of the negative externalities. Overall, choosing a more multi-faceted approach would minimize the distortions that would result from implementing a financial transaction tax.

2. BACKGROUND

2.1 What Is a Financial Transaction Tax?

A financial transaction tax is a monetary charge placed on transactions in the financial sector. Although the concept by itself is straightforward, its application is anything but simple. First, the applicable "transaction" must be defined, that is, the authority imposing the tax must specify which types of transactions should be subject to the tax and which ones should not. This includes a determination as to which instruments should be covered by the tax. Second, taxing authorities must decide on the proper timing for imposing the tax. One of the most valuable concessions that taxpayers receive is the ability to defer the payment of taxes to a later date. Due to the time value of money, when a tax is due at an earlier time, the relative burden borne by the taxpayer is higher than if the time for payment is later. As a result, the perceived burden of the tax may vary based on the timing of the payment of the tax.

Although the financial transaction tax has received a significant amount of attention lately, transaction-based taxes are not a new concept. In 1936, John Maynard Keynes proposed a levy on Wall Street transactions to curb excessive speculation that, in his view, caused excess volatility in financial markets. The goal of Keynes' tax was to restore the balance between speculators and long-term investors, and to prevent long-term investments and enterprises from "becom[ing] the bubble on a whirlpool of speculation"[1] (Keynes, 1936). He stated:

> "When the capital development of a country becomes the by-product of the activities of a casino, the job is likely to be ill-done. The measure of success attained by Wall Street, regarded as an institution of which the proper social purpose is to direct new investment into the most profitable channels in terms of future yield cannot be claimed as one of the outstanding triumphs of laissez faire capitalism . . . ."

Moreover, in 1972, Nobel Prize winning economist James Tobin suggested a levy to reduce volatility in currency exchange rates. The charge, which later came to be known as the "Tobin tax," consisted of a percentage-based tax levied on the volume of spot conversions of currency (Tobin, 1972). Tobin suggested each government carry the responsibility for implementing

1. Keynes's comment in full provides: "Speculators may do no harm as bubbles on a steady stream of enterprise. But the position is serious when enterprise becomes the bubble on a whirlpool of speculation" (Keynes, 1936).

and administering the tax, with the effect that each country would tax all currency exchanges within its borders, regardless of the type of currency involved. Tobin's proposal suggested that the tax would be levied when the transaction occurred, as opposed to when the cash flow took place, and therefore transactions would be subject to the tax even if the parties later voided the transaction. This structure would prevent speculators from entering into a transaction merely to influence or manipulate exchange rates. The proposal was eventually abandoned due to the perceived difficulties of implementation, and because of the concern that a tax on currency transactions would undermine the liquidity in exchange markets, and thereby exacerbate volatility problems. The notion of a tax on currency transactions gained additional traction following the Peso and East-Asian crises in the late 1990s, wherein policymakers became aware of the high exposure domestic economies had to external events in the international monetary markets. In Mexico, high exposure to the U.S. dollar, combined with the government printing a large amount of new money caused excessive pressure on the Peso, which led to its eventual devaluation in December 1994 (Whitt, 1996). After the Peso collapse, several economists researched ways in which the crisis could have been avoided. Most prominently, the German economist Paul Bernd Spahn proposed a currency transaction tax in 1995 to curb extreme volatility in the currency market (Spahn, 1995). Although the proposal was based on Tobin's theories, Spahn (1995) reasoned that the Tobin tax, in its proposed form, was infeasible stating that "it is virtually impossible to distinguish between normal liquidity trading and speculative 'noise' trading." Instead, Spahn suggested a two-tier rate structure with a low-rate currency transaction tax, and an exchange surcharge at prohibitive rates. A modern advocate for a tax on all financial transactions is Nobel laureate and former Chief Economist of the World Bank, Joseph Stiglitz. While Tobin drew the conclusion that a global currency transaction tax was infeasible in practice, Stiglitz thought that with the advent of modern technology, this was no longer the situation (Conway, 2009). Stiglitz argues that regulatory failure and the lack of proper alignment of incentives in the financial sector warrants imposing a financial transaction tax to remedy these problems (Stiglitz, 2009). These are just a few of the prominent economists that have favored a financial transaction tax, and many more have expressed support for the tax, including Paul Krugman, Jeffrey Sachs, and Paul Volcker.

2.2 Recent Developments

In the aftermath of the financial crisis, governments around the world, as well as various international organizations, have considered the financial transaction tax as a tool to create more equitable distribution of government funds. Today, forty countries impose financial transaction taxes, and ten of those countries are members of the European Union (Griffith-Jones & Persaud, 2012). Table 3 of the Appendix provides a short summary of some of the financial transaction taxes that are currently in place. Moreover, many countries have had proposals pending to introduce various types of financial transaction taxes, including France, Germany, the United Kingdom, and the United States. The details of these proposals are summarized in Table 2 of the Appendix and discussed in Part 2.3. Moreover, following the financial crisis, an extensive movement began to implement a so-called "Robin Hood Tax" in the United Kingdom. This proposal has generally received wide support and extensive media coverage.

One of the first discussions concerning the feasibility of a global financial transaction tax was conducted during the Group of 20 Heads of State (G20) meetings. The initial discussions took place at the 2009 Pittsburgh meeting, where the finance ministers of the world's leading economies addressed methods for stabilizing the economy (G20, 2009). At this meeting, the G20 asked the IMF to research various options for taxing and repaying some of the government expenditures made during the financial crisis (International Monetary Fund, 2010). The results of this report were presented at the 2010 Toronto meeting, but the members would not engage in more detailed discussions until the next meeting. At the 2011 Paris meetings, the G20 finance ministers discussed the need to stabilize the financial sector, to implement reforms on over-the-counter instruments, and strengthening supervision of the sector. The participants also debated options for innovative financing, as well as the prospects for a financial tax. At the subsequent G20 meeting, held in Cannes, France in November 2011, the leaders made little progress with respect to the potential of a financial transaction tax, and simply noted that such a tax had been implemented several places. However, at a subsequent meeting in Paris, the G20 explicitly stated that a global tax on financial transactions was no longer being considered. Instead, the G20 encouraged individual countries to implement such a levy on a national level. In the aftermath of this meeting, several countries began

to research the feasibility of implementing a tax on financial institutions as suggested by the G20.

In 2010, the International Monetary Fund (IMF), upon request by the G20, issued a report titled *A Fair and Substantial Contribution by the Financial Sector*, for the purpose of "prepar[ing] a report . . . with regard to the range of options countries have adopted or are considering as to how the financial sector could make a fair and substantial contribution toward paying for any burden associated with government interventions to repair the banking system" (International Monetary Fund, 2010). The driving motivation behind the G20 request were the significant contributions made by various governments to financial institutions during and in the aftermath of the financial crisis. The IMF (2011) estimated that fiscal contributions during the crisis averaged around 3 percent of GDP for G20 countries, and reached almost twice this level in the most severely affected economies. Moreover, the report found that the total amounts pledged, including guarantees and other contingent liabilities, averaged approximately 25 percent of GDP. The report concludes that the perceived more favorable treatment of the financial sector stems from two primary causes. First, the report argues that economic distortions exist due to the more advantageous tax treatment of loan capital, and that the tax deductibility of interest payments leads to significant reliance on debt as opposed to equity. Indirectly, this leads to an outcome where ordinary consumers subsidize corporate investment through cheaper loan capital. To solve this problem, the report suggests reducing taxes on equity capital to incentivize corporations to lower the debt–equity ratio, which subsequently would contribute to stabilizing the economy since equity financing takes less of a toll on financial institutions. Second, and more importantly, the report addresses the idea of a global financial tax. The tax analyzes two different tax structures: a transaction-based tax and an activities-based tax. Instead of a tax levied on each financial transaction, the report ultimately advocates for a tax levied on the profits of financial institutions, so-called "Financial Activities Tax." This type of tax was also proposed by the Norwegian Financial Crisis Commission (Finanskriseutvalget, 2011).

2.3 Financial Taxes Around the World

2.3.1 *The United States*

U.S. legislators have implemented a variation of a financial transaction tax, through which the financial sector funds its own regulatory agency, the Securities & Exchange Commission (SEC). The tax is levied on the volume of transactions traded on U.S. exchanges, and is authorized by the Securities Exchange Act of 1934 § 31 ("Section 31 fees"). The size of the Section 31 fee is 0.00257 percent—raised from 0.0017 percent in 2010—and it raises nearly $1 billion annually (Griffith Jones & Persaud, 2012). However, the SEC is not unique in imposing this type of tax, in fact, many clearinghouses impose fees similar to that levied by the SEC, including the Automated Clearing House. Interestingly, this tax is levied even though the U.S. government has clearly expressed its opposition to a global financial transaction tax. Moreover, the Section 31 fees have been lowered and raised multiple times since its implementation in 1934 without creating any significant debate (SEC, 2011). This shows that the opposition to the tax may be premised on a misapprehension of how the tax would work in practice. It must be assumed that if U.S. legislators truly opposed a financial transaction tax, they would not have passed the amendments to Section 31. Admittedly, many of these amendments came about before the financial sector reached its current prominent position in the economy, and many legislators may now feel more strongly about protecting the financial industry, but this nevertheless lends some credence to the fact that the United States could potentially agree to a global financial tax.

In addition to the Section 31 fees, U.S. legislators have presented two prominent proposals for a tax on the financial sector: the Financial Crisis Responsibility Fee and the Let Wall Street Pay for the Restoration of Main Street. On January 14, 2010, President Obama presented the Financial Crisis Responsibility Fee. The Financial Crisis Responsibility Fee targets high debt-to-equity ratios, and its stated purpose is to make "the largest and most highly levered Wall Street firms . . . pay back taxpayers for the extraordinary assistance provided so that the TARP program does not add to the deficit" (White House Press Release, 2010). The proposal would assess a 0.15 percent levy on liabilities of financial firm with assets exceeding 50 billion dollars. The outline of the proposal ties the fee directly to the Troubled Asset Relief Program (TARP), enacted to aid with recovery during the financial crisis. The enabling statute of TARP specifically provides that the funds are subject to repayment at a later date. Accord-

ingly, the stated goal of the fee is to raise at least 117 billion dollars over a ten-year period, which equals the projected cost of TARP. Moreover, in December 2009, U.S. Representative Peter DeFazio, co-sponsored by twenty-five other representatives, introduced the bill "Let Wall Street Pay for the Restoration of Main Street Act of 2009[2]" (H.R. 4191) in the House of Representatives. Although ten bills for a financial transaction tax had previously been introduced in the House of Representatives, and four in the Senate, this bill is by far the one to receive the most attention. The proposal provides for a 0.25 percent levy on the value of equity transactions and a 0.02 percent tax on covered transactions involving futures, swaps, credit default swaps, and options. However, the bill exempts any securities held by pension funds or mutual funds, and any transaction conducted by taxpayers who incur less than one hundred thousand dollars in transaction value in a year. The proceeds of the tax would be used "to fund job creation and deficit reduction" (H.R. 4191). The bill estimates that the tax will raise close to 150 billion dollars annually, and 75 billion dollars of this amount would be targeted toward deficit reduction. However, because the bill did not pass prior to expiration of the congressional session, the bill was cleared from the books (Govtrack.us). In November 2011, Representative DeFazio introduced a similar act, "The Wall Street Trading and Speculators Act" (H.R. 3313). But contrary to its predecessor, the bill defines the tax base more broadly, and changes the levy to 0.03 percent uniformly applied to all financial instruments. Moreover, the new bill does not include the exemption for mutual and pension funds, or traders amassing less than one hundred thousand dollars in transaction value over the course of a year. Currently, this bill, along with the companion bill introduced in the Senate, is pending before Congress. However, due to the stark opposition to financial transaction taxes in the U.S. financial industry, it is unlikely that either bill will pass.

2.3.2 *The United Kingdom*

In 1694, the English Parliament introduced a fixed amount stamp tax on transactions in various goods for the purpose of "carrying on the war against France" (Stamp Act, 1891). In the beginning, the tax was not levied on financial instruments but started as a tax on "Vellum, Parchment and Paper for 4 years . . . ." (*Ibid.*). The stamp duty was not expanded to financial instruments, including transfers of shares, until 1808, at which time, the tax was changed to

2. This Bill was later reintroduced under the name Let Wall Street Pay for Wall Street's Bailout Act of 2009.

an ad valorem tax (HM Revenue and Customs, 2001). A companion tax—the Stamp Duty Reserve Tax—a stamp duty on financial transactions was introduced as a part of the Finance Act of 1986, and exists in addition to the original stamp tax (Finance Act, 1986). The stamp duty imposes a 0.5 percent levy on the value of a conveyance of uncertificated shares of companies located in the United Kingdom, however, a higher amount of 1.5 percent is charged if the purchaser of the shares is a person who operates a depositary receipt or a clearance service. Moreover, the Finance Act excludes qualifying intermediaries such as market makers in large financial institutions form the scope of the tax. Currently, the Stamp Duty Reserve Tax and the Stamp Tax are imposed in the same size (0.5 percent), and in certain circumstances, a transaction may trigger liability under both taxes, but the charge under the Stamp Duty Reserve Tax may be cancelled at a later time to avoid double taxation. The tax is primarily collected automatically by various stock market participants, including brokers, at the time the transaction takes place. One significant feature is that most of the revenues from the Stamp Duty Reserve Tax is raised from non-UK investors. In fact, in 2008 of the 3,673 billion euros raised by the Reserve Tax, nearly 40 percent of those revenues came from outside the United Kingdom (Staff of the European Commission, 2011). Although the scope of the Stamp Duty was significantly limited by amendment in 2003—the tax currently only applies to around 30 percent of transactions—the two taxes combined still contribute upwards of 1 percent of total tax revenue for the United Kingdom (Spratt, 2006). Notably, the United Kingdom is not alone in imposing a stamp duty tax, and similar taxes have also been present in Singapore, Switzerland, the Netherlands, and many other countries.[3] Unlike the outstanding proposal for a financial transaction tax in Europe, it seems as though the primary function of the stamp duties in the United Kingdom has been to raise revenue. Nevertheless, the centuries-long history of the stamp duty aptly demonstrates that there is a long history of imposing not only transaction-based taxes, but also those specifically levied on financial instruments. As such, the strong opposition by the United Kingdom toward the European financial transaction tax may be strongly exaggerated.

Moreover, the United Kingdom introduced a bank levy in January 2011. This tax is levied on the end-of-the-year balance sheet position of financial institutions, as opposed to on

3. Markedly, some countries also impose stamp duties on original issuances on equity.

each transaction as the financial transaction tax proposal suggests. The basis for assessing the balance sheet consists of a number of factors to determine the amount of risk-weighted liabilities that a bank owns, and the purpose is to impose a greater tax on risky activities. Because many have suggested this type of tax instead of a financial transaction tax, this tax will be discussed in more detail later on.

2.3.3 *France*

France was one of the early advocates for a financial transaction tax, and together with Germany, launched the initial idea of a European proposal for the tax on August 16, 2011. Following the introduction of the proposal in the European Commission, French lawmakers presented draft legislation before the French Parliament. The draft legislation, known as "*Taxe systémique sur les banques*," was narrower than the EU proposal, and would apply a tax of 0.1 percent only to equity securities issued by a company listed in France with a size of at least 1 billion euros. Additionally, the proposal would apply a tax to high frequency trading, that is, speculative, high volume trading, of 0.01 percent, and a 0.01 percent tax on credit default swaps on EU sovereign bonds. The French legislature hoped that the tax could generate upwards 1 billion euros, and would contribute to reducing the budget deficit. The proposal became effective on January 1, 2011.

2.3.4 *Germany*

The German proposal resembles the French proposal in many ways, which comes as no surprise since the French lawmakers explicitly stated that they would draw inspiration from the German proposal. Like the French proposal, the German proposed "*Bankenabgabe*" took effect on January 1, 2011. The financial transaction tax applies to all credit institutions and would apply progressive rates on various liabilities. For liabilities under 10 billion euros, the rate would be 0.02 percent, and for liabilities exceeding 100 billion euros, the tax would be 0.04 percent. Moreover, the tax would apply a 0.00015 percent tax on any off balance sheet derivatives.

3. The European Union Directive

3.1 Background

The failure of the G20 discussions at the Pittsburgh and Toronto meetings was a catalytic force behind the European Union's decision to pursue a financial transaction tax. On September 28, 2011, the President of the European Commission, Jose Barroso, launched an official plan to implement a financial transaction tax in the European Union. The proposal would become effective on January 1, 2014, and the Commission estimates that the tax could raise close to 57 billion euros annually. Indeed, in its long-term budget from 2014 to 2020, the European Commission included a financial transaction tax as part of the funding of the European Union (EU Budget 2014–2020). The Commission states its motivations as: (1) to ensure that the financial sector contributes to the cost of the financial crisis; (2) to harmonize taxes on financial transactions in the European Union; (3) to discourage risky trading activities and implement regulatory measures for the purpose of avoiding future crises; and (4) to provide an additional source of income for the European Union (Commission Proposal, 2011).

The legislative basis for the European Union to impose taxes on the financial sector stems from Articles 113 and 115 of the Treaty on the Functioning of the European Union. Article 113 permits the European Council, acting unanimously, to "adopt provisions for the harmonisation of legislation concerning turnover taxes, excise duties and other forms of indirect taxation to the extent that such harmonisation is necessary to ensure the establishment and the functioning of the internal market and to avoid distortion of competition" (TFEU, 2008, art. 113). Article 115 echoes this sentiment, but with broader application, and provides "the Council shall, acting unanimously . . . issue directives for the approximation of such laws, regulations or administrative provisions of the Member States as directly affect the establishment or functioning of the internal market." This provision guarantees "the four freedoms" of the European Union—the free movement of capital, goods, services, and people. Consequently, the main justification for European Union intervention is that the functioning of the internal market would be impeded if member states fail to coordinate taxes on the financial sector. Currently, ten European Union member states impose financial transaction taxes, and more member states have active legislative proposals to introduce such taxes. The lack of coordination for these taxes fragments the internal market, and may distort competition and in-

crease the risks of relocation of financial activities outside the European Union. Moreover, a related risk is that an unconcerted effort would make European companies more prone to double taxation (Staff of the European Commission, 2011).

For the proposal to become legislation the member states must unanimously vote in favor of the proposal, which essentially renders any dissenting vote a veto. Currently, seven countries have expressed their support for the proposal, while five countries, including the United Kingdom, oppose the proposal. The primary criticism that underlies the opposition is the fact that the proposed tax only applies to the European Union, and many argue that so long as the tax is not introduced globally, the tax will harm the competitiveness of the countries that implement the tax. The proposal states that it intends "to pave the way towards a coordinated approach with the most relevant international partners." However, the likelihood of a global financial transaction tax is low, especially because the United States, one of the most prominent members of the G20, opposes the tax. Owing in large part to the British opposition to the Financial Transaction Tax Directive, it became clear during the Commission meeting on June 28–29, 2012 that there would not be unanimous support for the proposal. Nonetheless, the proposal had garnered strong support within the European Union and the governing commission, and therefore it seemed unlikely that supporters would abandon the proposal completely. Moreover, the financial transaction tax commanded wide support among the general population. Opinion polls showed that nearly 65 percent of residents of European Union countries support a financial transaction tax (European Commission Memo, 2011).

Because of the dim prospects for the proposal, many member states began to consider alternative methods of implementation. One such strategy is to establish the tax within an area of "enhanced cooperation." European law provides that, in the absence of support by all member states, a minimum of nine member states may apply to the European Commission to introduce legislation, and allow other countries to join later (Treaty of Amsterdam, 1999). Initially, some suggested that the tax only be implemented as an enhanced cooperation within the euro-zone, which would eliminate any concerns from non-euro countries such as the United Kingdom and Sweden. However, on September 28, 2012, eleven member states, including France and Germany, requested that the European Commission allow these countries to implement the tax as a part of the enhanced cooperation framework (Boston, 2012). In a joint statement the German and French finance ministers stated "[b]y taking this joint step and

making the application, Germany and France state the necessity of European integration on the issue of taxation of financial markets with an eye toward alleviating the consequences of the financial crisis" (*Ibid.*). The Austrian Deputy Finance Minister, Andreas Schieder, echoed this sentiment: "This is a small step for 11 countries but a giant leap for Europe . . . [t]he way is now clear for a just contribution from the banking and financial sector for financing the burdens of the crisis" (O, Donnell & Papachristou, 2012). According to the Austrian Finance Minister, the eleven countries intend to present a model for the tax by the end of the year, and expect to implement the tax by 2014 (*Ibid.*). One point of contention that has yet to be resolved by the parties to the enhanced cooperation is how the income from the tax should be spent. Moreover, proceeding with enhanced cooperation may cause additional issues. First, the European Council must consent to the enhanced cooperation prior to implementation. Although all member states may participate in the discussions and vote on the authorization to proceed, only the members of the enhanced cooperation group may vote on the implementation itself. Essentially, the enhanced cooperation framework provides the sole basis for proceeding with the proposal as a multinational group. Granted, the countries may choose to implement the tax on a national basis, but this does not carry the same force or signal effect as a joint implementation would. Many of the countries that currently oppose the proposal may contest the enhanced cooperation initiative. Even if the tax is only implemented in a small area, the proposal will still affect the opposing member states because other European countries are among their primary trading partners. At the same time, the opposing countries would not receive any of the revenue. Consequently, the enhanced cooperation solution could face significant issues in the authorization process.

3.2 Scope

The primary characteristic of the proposed financial transaction tax is the broadness of the proposal. The design of the proposal specifically aims to eliminate any weaknesses commonly associated with a financial transaction tax. There are three important facets to the scope of the tax: (1) the parties to the transactions must be subject to the tax, (2) the traded asset must be subject to the tax, and (3) the transaction must occur within the geographic scope of the tax. As mentioned previously, the tax would apply to any transaction in financial instrument where at least one party is a resident of a country within the European Union. As a result, the tax covers a broad range of financial instruments, including those exchanged over-the-

counter (OTC) outside organized markets. This model has been dubbed the "residence plus issuance model," and the focus on location of the parties rather than the transaction itself could render any financial transaction conducted anywhere in the world subject to the tax. The purpose of the residence plus issuance model is to close loopholes that allow tax avoidance. By covering a wide range of products, financial institutions will not be able to use alternative financial products that may substitute instruments subject to the tax.

Moreover, the European Commission has defined the scope of the tax broadly to hinder tax avoidance. The tax is levied on all transactions involving spot and derivative assets, whether traded on organized exchanges or over the counter. The tax would apply to financial transactions carried out by financial institutions, and the institution must be a party to the transaction on its own account, a party to the transaction for the account of another person, or acting in the name of a party to the transaction. The definition of "financial institution" is broadly drafted to encompass a wide range of institutions, including investment firms, credit institutions, insurance companies, pension funds, undertakings for collective investments in transferable securities, alternative investment funds, and special purpose entities (Commission Proposal, 2011, art. 2.1(7)). If one of the parties is a financial institution and the other party is a natural person or a nonfinancial institution, and either party is established in a member state, then only the financial institution is subject to the tax in the member state where either party is established. Conversely, the proposal excludes some transactions from its scope. The exclusions can be divided into two types: exclusions of a party and exclusion of the transaction altogether. The first category covers certain financial market intermediaries, such as central securities depositories and the European Financial Stability Facility or similar funds established by two or more member states to support members in financial difficulties. The second category applies to the European Bank, central banks of member states, and other international organizations. Moreover, currency transactions in spot markets would not be subject to the tax. Additionally, activities relating to citizens or businesses would not be affected by the tax, including insurance contracts, mortgage lending, consumer credit, and payment services. Conversely, the proposal would not apply to primary issuances of shares and bonds. Notably, intra-group transfers are still subject to the tax, and the Directive specifically provides that "[transfers] of the right to dispose of a financial instrument as owner any equivalent operation implying the transfer of the risk associated with the financial instrument" are subject to the tax (Commission Proposal, 2011, art. 2.1(1)(b)). This means that it will be more difficult to try to

avoid the tax by conducting a financial transaction through a subsidiary located outside the European Union, and then transferring the security internally within the company.

Moreover, to fall within the scope of the financial transaction tax, at least one party to the transaction must be established in a member state. A financial institution is deemed established in a member state if it has been authorized by a member state or if it has its registered seat, permanent address, usual residence, or a branch in a member state if the transaction is carried out by that branch, or the member state where the counterparty to the financial transaction is established (Commission Proposal, 2011, art. 3.1). If both parties are financial institutions but only one is a financial institution established in a member state, both parties to the transaction are subject to the tax. A non-financial institution is established within a member state if it has its registered seat or a branch in that member state if the transaction is carried out by that branch. However, even if the transaction falls within the scope of the tax under the previous analysis, the transaction may nevertheless be excluded if the taxpayer can prove that "there is no link between the economic substance of the transaction and the territory of any Member State" (Commission Proposal, 2011, art. 3.3). Although it is unclear exactly what "economic substance" means, it probably includes factors such as location of assets and the location of financial activities of the institution. Alternatively, one can look to the "economic substance doctrine" as defined by the Internal Revenue Service (IRS) in the United States. The IRS defines "economic substance" as a transaction which changes the taxpayer's economic position in a meaningful way and which has a substantial purpose, other than tax effects (IRC, § 7701(o)).

For the size of the tax, the proposal applies a dual system where shares and bonds are taxed at a rate of 0.1 percent and derivatives at 0.01 percent. However, this amount is just a minimum, and each member state is free to set a rate higher than those proscribed in the proposal so long as the member state does not discriminate in its application of the tax. The important point for reaching the Commission goal of reducing excess volatility is that the ideal size of the tax is where only high frequency trading becomes more expensive due to the tax. In that case, the tax will not significantly alter the behavior of those market participants that are deemed to conduct desirable market activities. The tax burden is divided between the buyer and the seller, and each party to the transaction must pay their share of the tax to the member state where the party is domiciled. The tax base is the value of the underlying asset being trad-

ed, and in the case of bonds and derivatives their notional value. If the transaction is not conducted at arm's length, for example a transaction between two related entities, and occurs at a value below market, the tax base will be the market value at the time of the transaction. In a report conducted by the European Commission, researchers estimated that the tax could increase revenue by 57 billion euros annually. However, this result will likely vary significantly based on even small changes in the tax.

4. Assessing the Impact of a Financial Transaction Tax on the European Union Economy

4.1 Rationales for a Financial Transaction Tax

The rationales underlying the Commission proposal are multi-faceted. One major rationale behind the Commission's proposal is harmonization of taxes and regulatory regimes within the European Union. In a press release accompanying the proposal, the Commission stated that the proposal would "help to reduce competitive distortions in the single market, discourage risky trading activities and complement regulatory measures aimed at avoiding future crises" (European Commission Press Release, 2011). Another goal for the Commission is to ensure that the financial sector makes a fair contribution to the economy. This second motivation is best regarded as the Commission's way to soothe public outrage following severe economic crises in many European countries. The financial sector received significant contributions from European governments, which contributed, in part, to the economic problems caused by excessive public debt. According to the IMF, government debt in G20 countries is projected to rise by nearly 40 percent of GDP between 2008 and 2015 (International Monetary Fund, 2011). The tax would generate substantial revenue that could contribute to reducing budget deficit and reducing public debt. Moreover, the financial sector has benefited from a lower taxation level worth around 18 billion euros annually due to exemption for financial services from Value Added Tax (VAT) (European Commission Technical Fiche, 2011). The financial transaction tax would be a substantial step toward leveling the scale of government assistance, and eliminating the favorable treatment afforded to the financial sector. Additionally, the Commission hopes that the tax will curb speculative trading by increasing transaction costs, which in turn would stabilize financial markets and reduce volatility. Most of the negative reactions relate to the concern that the proposal will likely be detrimental to the financial sector by increasing the cost of capital and impeding market liquidity. Additionally, many argue that the tax fails to target the true causes of market instability, and the factors that most significantly contributed to the financial crisis. This section will analyze in more detail the rationales underlying the Commission proposal as well as some of the criticisms that have been raised in opposition to the proposal.

4.2 Increasing Revenue and Securing a Fair Contribution from the Financial Sector

4.2.1 *Raising Revenue*

The foremost goal for most taxes is to increase revenues for the taxing authority. A tax that levies a cost on one party should provide revenues to the party levying the tax, most commonly, the government. This holds especially true in light of the economic downturn and the large budget deficits looming in many EU countries. As a result of the current fiscal crisis many governments have sought alternative revenue-raising measures. The benefit of a financial transaction tax is that it would be targeted toward a specific part of the economy—a sector which incidentally received an overwhelming majority of the bailout funds that contributed to the deficit in many countries. Moreover, there is a general consensus that the payment capacity of large financial institutions is high, and thus, a tax on these transactions will have a relatively less detrimental effect on the economy. Yet, because of the sheer size of the financial sector, even a small tax would create large revenues. Several scholars advocate for the revenue-raising effects of a financial transaction tax, and Feige (2001) even controversially suggested that a transaction tax—the Automated Payment Tax—replace all existing sources of tax revenue. The Commission proposal focuses on the revenue-raising objective in three different ways. First, the proposal seeks to secure that the financial sector contributes to the costs of the recent financial crisis. Second, the proposal wants to create a level playing field with other sectors from a taxation point of view. Third, and most significantly, the proposal aims to create additional revenue for the European Union and reduce national contributions from the member states. However, using the financial transaction tax as a means to achieve this latter goal is not unproblematic. In particular, the Commission proposal fails to adequately account for the negative effect on GDP from changes in tax policy. To properly evaluate the revenue-raising potential of a proposed tax policy, legislators need to balance the revenue raised by the tax with the reduction in GDP. Admittedly, it is difficult to estimate the economic effect of a new tax with precision. The tax may influence the way transactions are made, the parties involved in the transaction, as well as the amount of transactions. These effects may be positive or negative depending on whether the changes are made to desirable or undesirable activities.

In the seminal case *McCulloch v. Maryland* (1819), Chief Justice of the Supreme Court of the United States John Marshall described the critical role of taxes to the economy, observing that "[t]he power to tax involves the power to destroy." Although the European Commission

has estimated that the tax would raise about 57 billion euros a year from its intended implementation date of 2014, it is uncertain whether the additional revenue raised from the tax will be more than offset by the negative effect it would have on the financial sector. The primary negative effect of the financial transaction tax is a reduced number of transactions in the financial sector. Moreover, by increasing the cost of financial trading activities, the tax will encourage a shift in investment away from the financial sector to other areas of the economy. Other concerns relate to the negative consequences to volume and liquidity, and the projected flight of several businesses to outside the European Union. Notably, due to the difficulties of assessing the future loss of GDP, revenue estimates for financial transaction taxes are not necessarily reliable. When Sweden implemented a financial transaction tax in 1984, the annual revenue the tax was expected to raise was SEK 1.5 billion, but the actual revenues raised turned out to be only around SEK 80 million.

Because taxes reduce the marginal payoff to the taxpayer, almost all taxes have negative effect on production due to the elasticity of taxable income. This effect is illustrated by the so-called "Laffer curve," named after its creator Arthur Laffer, which represents the relationship between tax rates and the corresponding level of government revenue (Wanniski, 1978). The European Commission estimates a long run loss in GDP of 0.53 percent as a result of the tax (Staff of European Commission, 2011, p. 10). But the staff report also conducts an alternative analysis by altering the assumption for funding investments by increasing the relative debt share. This altered assumption resulted in a change in GDP of negative 0.2 percent, because the tax primarily affects the equity component of the investment. However, Griffith-Jones and Persaud (2012) argue that the Commission report overlooks several key factors, and when accounting for these factors, the authors instead estimate a positive 0.25 percent effect on GDP as a result of the introduction of a financial transaction tax. To estimate the effect on GDP, the Commission used a Dynamic Stochastic General Equilibrium model whereby the Commission simulates the effect of the tax by increasing the corporate income tax. This model, however, has several disadvantages. Most importantly, this approach explicitly assumes that the financial sector is similar to other corporate sectors and ignores different holding period applied by various investors. The first of these assumptions is flawed because a corporate income tax is fundamentally different from a transaction tax. Traditionally, the corporate income tax is viewed as the most distorting of all taxes. In the current economic environment where European countries are struggling and investors are shying away from the financial sector due to

a lack of confidence, investment in equity assets, derivatives, and other financial instruments subject to the tax will likely drop. Instead, investors will tend to opt for more stable, long-term investments. As a result, the corporate income tax is more likely to reflect the effect of a financial transaction tax under normal economic prosperity, but not in recessionary times. Additionally, Griffith-Jones and Persaud (2012) emphasize that if the tax was fiscally neutral, that is, if the financial transaction tax merely replaces another tax, the tax could have a positive effect on consumption because the shift in taxation structure would lower overall taxation of consumers, thereby allowing them to consume more. This is premised on the fact that consumers, generally, have a higher propensity to consume extra income than other, wealthier, groups, and this increase in consumption would contribute to an increase in GDP. Another shortcoming with the Commission's model is that is assumes that all private investment is financed by securities that are traded in equity markets, and that the traders pay the tax to the government. Lendvai, Raciborski, and Vogel (2012) offer a revised model that assumes that only part of private investment is financed by equity raised in the stock market, and the remainder is financed by debt or retained profits. Under this assumption, the negative effect on GDP was relatively smaller (-0.2 percent) than under the first assumption. This is because a financial transaction tax will not affect debt or investments funded by retained earnings. Even though the revenues may be difficult to estimate under the current scenario, it is also important to note that even minor changes in the tax will have large effects on the revenues raised. For example, if the tax was applied equally on all financial instruments, the tax would raise revenue by between 16.4 billion and 43.4 billion euros annually if the flat percentage level was set to 0.01 percent. Alternatively, if the percentage tax was 0.1 percent, the revenue increase would be between 73.3 and 433.9 billion euros. As a result, the tax will undoubtedly have negative effects on GDP, however, most likely this reduction in GDP will be more than offset by the revenue the tax will create. Consequently, the elasticity effect of the tax would not be large enough to push the tax over to the wrong side of the Laffer curve, and the Commission could probably increase the rates even more and still gain a net positive effect from the tax. Nevertheless, because of these distortive effects, it is not certain that the financial transaction tax is the best suited method for raising revenue.

Conversely, if the financial transaction tax contributes to reducing systemic risk, and consequently the likelihood of future crises, the cost benefit to society will likely be great. In recent years, the risk of financial crises has grown even higher, and furthermore, the cost of

handling economic crises has increased tenfold. Reinhart (2009) estimated a 9 percent fall in GDP as a result of major financial crises. Similarly, The Institute of Fiscal Studies (2011) found that the projected decline in median household income in the United Kingdom from 2010 to 2013 is 7.4 percent. Griffith-Jones and Persaud (2012) estimates that if the financial transaction tax could decrease the probability of a crisis by 5 percent, with a corresponding cost of reduction in GDP due to a crisis is 7 percent, the tax would effectively increase GDP by 0.35 percent. Therefore, the impact of a lower risk of financial crises would further contribute to the revenue-raising ability of the financial transaction tax. Moreover, the fact that the costs of financial crises are increasing, makes it even more important to stabilize market conditions to prevent future crises. Obviously, a lower risk of financial crises is likely to correspondingly reduce the likelihood and frequency of booms. Nevertheless, booms tend to have less of a long-term positive effect on the economy than the negative effect of a crisis, and therefore, the reduced probability of booms is not very problematic.

4.2.2 *Redistribution of Tax Burden Levied on the Financial Sector*

One of the fundamental characteristics of sound tax policy is that taxes should be fair. This is an important consideration underlying the financial transaction tax, and many believe that the tax will be an important tool to "make the financial sector pay its fair share." One of the most vocal campaigns for a global financial transaction tax goes by the name of "the Robin Hood Tax Campaign." Like the classic tale itself—wherein Robin Hood and his group of outlaws would famously steal from the rich and give to the poor—supporters of this campaign envision themselves as a modern-day version of the celebrated outlaw by redistributing wealth from profitable financial companies to the general public. Authorities increasingly recognize the penalty function of taxes. Many are calling for penalties for the financial sector, which basically single-handedly caused the recent financial crisis due to excess risk taking and the trillions of dollars paid in bailout funds.

One perspective of fairness is that taxpayers should be taxed in accordance with their ability to pay. The ability-to-pay principle states that tax burdens should be allocated in accordance with a taxpayer's wealth. The rationale for this principle is the declining marginal utility of income, that is, relatively poorer taxpayers tend to consume more of their extra income than relatively wealthier taxpayers. In turn, this will contribute to growing the economy. For

the financial transaction tax, this principle holds true because financial institutions are generally profitable corporations with a large asset base. A related principle of fairness is the level-playing-field principle, which seeks to create equal opportunities for all taxpayers. This is relevant for the financial transaction tax to the extent it creates equal ability for companies, both financial institutions and non-financial institutions, to attract investment. If the financial industry is under-taxed relative to other industries, investment in the financial industry should yield higher returns, which will make it easier to attract investments and capital. Consequently, the financial transaction tax would create a more level playing field by reducing profits in the financial sector.

Imposing a tax targeting the financial industry is perceived as fair, and overdue, by many. This industry has long been viewed as being relatively under-taxed compared to companies that produce goods and services. Part of the explanation for the relative under-taxing compared to other industries is that many financial services are exempt from VAT. Consequently, a common argument is often made that a further tax on the financial sector is required to avoid distortions of capital distribution in favor of the financial sector. The VAT exemption stems from Article 135.1 and extends to most financial and insurance services (VAT Directive, 2006). The primary purpose of the VAT exemption is to reduce the tax burden on services offered to consumers. However, some argue that the redistributive effects and tax advantage of the VAT exemption have yet to be proven conclusively. In fact, the Staff of the European Commission (2011) notes in its *Impact Assessment* of the financial transaction tax that the tax advantage stemming form the VAT exemption is in the range of 0.017 and 0.11 percent of GDP. Nonetheless, the authors of the report caution that the estimates are "rough" and should be interpreted carefully. The Commission further states that "[the VAT exemption] results in a preferential treatment of the financial sector compared with other sectors of the economy as well as in distortions of prices" (Staff of the European Commission, 2011). But even if empirical analyses could demonstrate under-taxation of the financial sector, this does not necessarily mean that the financial transaction tax is the proper method of correcting this distortion. First, the primary motivation behind the exemption is to protect banks that receive deposits and providing credit, and therefore the rationale is to benefit consumers. Moreover, the financial transaction tax as suggested by the European Commission specifically excludes transactions involving consumers from its scope. Instead, many suggest that a financial activities tax, which this thesis will address in more detail later, is the preferred method for

replicating the effect of a VAT on financial services. Second, the more intuitive solution to the distorted distributions is simply to end the exemption. Instead of imposing a new tax, which could cause additional distortions, authorities could take advantage of an already existing tax, which eviscerates much of the administrative concern, including legislative actions to create a new tax and costs of administrations.

However, one inherent risk of many taxes with a penal purpose is that the effect of the tax will not reach its intended target. For the tax to possess the redistributive effect and to make the financial sector repay some of the funds it received, the tax should be narrowly tailored to impact the financial sector. Many have expressed this concern as it relates to a financial transaction tax, and a common fear is that the financial sector may simply shift the effect of the tax onto consumers, or, alternatively, the tax may in practice directly tax consumers by taxing large financial institutions such as retirement funds. Similarly, the tax could also disproportionally affect charitable trusts, money market funds, and other non-financial businesses. Matti Leppälä, the Secretary General of the European Federation for Retirement, noted the need to design the tax narrowly to avoid such unintended and counterproductive consequences: "A tax that tries to shoot at everything that moves will most likely not hit the intended target, but it will kill or wound many innocent bystanders . . . this new tax would disproportionately impact pension funds and other institutions which provide retirement income." The idea that the majority of the cost of the tax would be borne by pensioners is the primary reason why the Netherlands initially opposed such a tax. A survey conducted by the Dutch Central Bank estimates that a European Union financial transaction tax would cost Dutch financial institutions 4 billion euros annually, and 42 percent of this amount would fall on pension funds (Van Gaal, 2012). Nevertheless, the premise underlying the Dutch Central Bank study is questionable. Although the financial transaction tax will clearly create costs for pension funds, this burden will fall substantially less on pension funds as compared to other financial institutions. Because pension funds are typically long-term investors, they will also less frequently engage in financial trading. In fact, in an article published in the *Financial Times*, John Plender (2011) argues that a financial transaction tax may actually benefit pension funds because high frequency traders deprive long-term investors of profit in the market. Buckley and North (2012) support this argument and note "[a] tax levied against the value of the underlying asset places most of the burden on traders with a short time horizon rather than on pension funds. Many institutional pension and mutual funds aim to limit the turnover of their portfolios." Pension

funds hold a stock on average for two years. Under the European Commission tax scheme, a pension fund that turns over 50 percent of its equity portfolio would pay 0.05 percent tax on the total value of the transactions over the two years. On the other hand, a speculator often turns over the entire portfolio in a day, and would pay a tax of 50 percent per year. Buckley and North (2012) note that if the financial transaction tax leads to a 5 percent reduction in the risk of financial crashes, the pension funds would be financially neutral toward the tax, provided that the reduction in financial crises led to higher long-term profit. Moreover, the reduced risk for financial turmoil will also decrease the need for risk-reducing measures such as hedging. This will further reduce the cost of engaging in trading for pension funds. Consequently, although some of the cost of the financial transaction tax will fall on pension funds, this burden will be, at least in part, be countered by the positive consequences of eliminating destabilizing speculative trading.

Moreover, Buckley and North (2012) express a related concern and note that "[a] large part of the tax burden may well be passed on to the users of financial services in the form of reduced return to savings, higher costs of borrowing and/or increases in final commodity prices." Because the European Commission proposal specifically exempts consumer transactions from its scope, this argument essentially assumes that financial institutions will pass the cost of the tax onto the consumers. Although private investment in financial instruments will be affected, most private investors infrequently turn over their portfolios and will therefore not likely be significantly impacted by the tax. Nevertheless, if the financial institutions are able to pass the cost of the tax onto consumers, the financial transaction tax could potentially have large effects on consumers through decreasing rates on deposits or increasing the costs of loans. This could also influence the savings rate for consumers since the return on savings would decline. This effect, however, has not been studied in much detail.

Similarly, the desire to use the financial transaction tax to penalize the financial sector is further problematic because not all players in the financial industry are alike. First of all, banks in only a few countries primarily contributed to the financial crisis, and as a result, it is unreasonable to impose penalties on all financial institutions. One example of this is Canada where the banks remained stable and well capitalized (Atlantic Council & Thomson Reuters, 2011). Furthermore, there is no certainty that the financial institutions themselves will carry the burden of the tax. Moreover, many of the worst offenders have since exited the market, including

Bear Stearns and Lehman Brothers. Therefore, using the financial transaction tax as a penalty may be a double-edged sword, which ends up hurting financial institutions that acted responsible prior to the financial crisis or consumers when financial institutions pass the tax onto them.

4.2.3 *Implicit State Guarantee*

The objective of raising revenue may also be justified on the ground that certain financial institutions enjoy an implicit state guarantee. A moral hazard problem exists because governments implicitly guarantee financial institutions through government bailout arrangements. Moral hazard means that financial institutions tend to take greater risk than they would otherwise take because they know that they enjoy implicit protection through the bailout guarantee, and therefore will not suffer the entire downside loss. Because the failure of large financial institutions may lead to system-wide contagion, governments view the implicit state guarantee as a better outcome than letting a financial institution fail, which could potentially create wide-ranging economic consequences. Through the implicit state guarantee, these financial institutions will also enjoy a lower cost of capital because investors will require lower returns due to elimination of large portion of the downside risk. The financial transaction tax would be one option for the financial industry to pay for the implicit guarantee provided by the government. But similar to the issues with imposing a penalty on the sector as a whole, participants in the financial industry will perceive making an entire industry pay for a guarantee that only a few institutions benefit from as unfair. In response, however, one could argue that the financial transaction tax would be akin to an insurance policy. That is, financial institutions would pay the tax today for the possibility of receiving a bailout in the future. Therefore, it is less relevant which institutions have received bailout funds in the past, because it is not possible to predict which institutions will receive such funds in the future.

Although, many governments are currently trying to reduce the scope of the guarantee to make the threat of failure more credible, the programs will certainly remain in some scope. During the recent financial crisis, the U.S. government refused to rescue Lehman Brothers from bankruptcy—an act viewed by many as setting a new precedent for state guarantees. On the other hand, the U.S. government chose to intervene to help other institutions, including mortgage institutions Freddie Mac and Fannie Mae. The different strategies used by the U.S. government in these cases may very well lend credibility to the threat of withdrawing the state

guarantee, which in turn will reduce the risk of moral hazard. Vella, Fuest, and Schmidt-Eisenlohr (2011) mention the Vickers proposal in the United Kingdom, which aims to ring-fence and limit the extent of losses for capital by reducing the funds available for bailouts. However, the fact that the UK Banking Act of 2009 expressly deals with bailouts, further reinforces the expectation that government bailouts will always be a factor in the financial industry. Consequently, it seems unlikely that government bailout programs will decline anytime soon, and therefore the financial transaction tax may be an effective tool to recapture some of these expenditures.

4.2.4 *Reduction in National Contributions*

If the financial transaction tax is passed, the funds from the tax could is scheduled to reduce the individual contributions from each member state to the EU budget. The EU budget is used for administrative expenditures and to fund policies carried out at the European level. The net contribution from each member state varies over time, and there is no fast and steady formula to calculate these contributions. However, the contributions are a function of three different components: a fixed percentage of gross national income, customs duties collected on behalf of the European Union, and a percentage of VAT income (European Commission, 2012.). The European Union argues that the financial transaction tax will significantly reduce the national contributions, and estimates a total reduction of 54 billion euros by 2020 (European Commission Press Release, 2012). In its 2014–2020 budget, the European Commission specifically included the financial transaction tax as an individual source of financing, and the Commission stated that by implementing the tax, "[the financial transaction tax is a] possible candidate[ ] for own resources to gradually displace national contributions, leaving a lesser burden on national treasuries" (*Ibid.*). It is questionable, however, whether the distributive characteristics of the tax are in line with those intended by the European Union. Due to the structure of the tax, the countries with significant financial centers will collect relatively more tax than those countries with less prominent financial sectors. Although this distribution scheme is more likely to ensure that the countries that suffer the most financial hardship from the tax, it also requires that the European Union reevaluates its future revenue plans to account for the higher revenues received by these countries due to the European financial transaction tax.

In the proposal, the Commission suggests that two-thirds of the revenues from the tax go into the general budget for the European Union, and this amount would directly reduce the contribution from gross national income. The last third would be retained by each member state (European Commission Press Release, 2012). The reduction in national contribution is based on projections of the revenue from the financial transaction tax. In 2010, the European Commission estimated revenue from the financial transaction tax based on that year's data would be 57 billion euros. By 2020, this total would rise to 81 billion euros, of which, 54.2 billion euros would be used to fund the EU budget. In a similar vein, the European Union estimates that the national contributions based on gross national income in 2020 would be 110 billion euros. Consequently, the reduction in national contributions would be nearly 50 percent. The estimated reductions in national contributions are illustrated in the table below, and are included in the European Commission Press Release (2012).

Reduction in National Contributions by 2020 for EU Member States Total €54226 (in millions)							
Belgium	€1.588	**Greece**	€896	**Luxembourg**	€154	**Romania**	€634
Bulgaria	€176	**Spain**	€4741	**Hungary**	€423	**Slovenia**	€166
Czech Republic	€658	**France**	€8768	**Malta**	€27	**Slovakia**	€338
Denmark	€1.026	**Italy**	€6457	**Netherlands**	€2634	**Finland**	€834
Germany	€10.753	**Cyprus**	€80	**Austria**	€1248	**Sweden**	€1664
Estonia	€67	**Latvia**	€81	**Poland**	€1813	**United Kingdom**	€7692
Ireland	€534	**Lithuania**	€131	**Portugal**	€645		

Table 1. Source: European Commission Press Release, 2012.

Based on this table, it is evident that a successful implementation of the financial transaction tax could potentially reduce the national contributions from each member state. The reduction in contributions would be proportionally related to the tax amount raised by each country. A reduction in national contributions could positively impact the national economy of each country because this would free up funds that were initially targeted toward national con-

tributions. Instead, the freed-up funds could be used to reduce national debt, or for other public finance purposes. Conceivably, this effect could be replicated by instead implementing taxation on a national level, rather than by the European Union centrally, however, by levying the tax on the EU level, the Commission would have more control the use of the funds for national contributions compared to a unique resource. Consequently, the European Union could reduce the national contributions in solid economic conditions and use the funds as an individual resource when the European Union requires additional funding.

4.3 Curbing Excess Volatility and Combatting Pervasive "Short-Termism" in Markets

In general, taxes are collected for one of two non-exclusive purposes: to collect revenues and to discourage activities that have undesirable effect on the market. Taxes that are intended to discourage certain activities by internalizing negative externalities are commonly referred to as "Pigou taxes" or "sin taxes." Prominent examples of sin taxes are taxes on cigarettes, alcohol, and gasoline. The purpose of these taxes is to increase the cost of engaging in the undesirable behavior. One of the key goals of the European Commission is to reduce speculation that leads to undesirably high volatility. In light of the recent financial crisis, where excess risk taking nearly brought national economies to the ground, governments are desperately trying to find ways to align the incentives of the financial sector with those of the economy at large. Although the financial transaction tax cannot be described as a pure "sin tax" because the purpose for introducing the tax is multifaceted, the tax certainly possesses a sin tax component. By levying the tax on financial institutions, legislators seek to minimize risk taking, and in particular high frequency trading, by making financial transactions more expensive. However, sin taxes are usually imposed on activities that are universally perceived as negative, whereas market participants still disagree whether high frequency trading is solely negative.

A dual effect of a tax is its ability to either induce distortions, or in the alternative, correct a market failure. The direct consequence of a tax is to change the price or cost of a good or service, and thereby altering the equilibrium of that good. For the financial sector, it is even more important to take into account efficiency factors because the relatively smaller costs will lead to larger effects in the market equilibrium. Consequently, this also presents an opportunity to correct current market failure if there are inefficiencies. In fact, Keynes's proposal of a financial transaction tax was largely based on a motivation to correct mispricing in securities

markets. Various empirical studies suggest that a financial transaction tax may lower the price of the asset subject to speculation, yet these studies do not draw any conclusions as to whether the tax would affect volatility. This raises the question: Will a financial transaction tax limit the probability, or scope, of future financial crises? And relatedly, could such a tax have changed the fate of the economy over the last few years?

4.3.1 *A Primer on Market History*

When James Tobin presented his proposal for a transaction tax on currency exchanges, the intent was to put "sand in the wheels of finance" to reduce speculative activities in foreign exchange markets to curb volatility in those markets (Eichengreen, Tobin & Wyplosz 1995, p. 163). Summers and Summers (1989, p. 263) early argued in favor of a financial transaction tax due to concerns about "excess volatility caused by destabilizing speculation" and the movement of human and capital resources from socially productive activities to the financial industry. The authors reasoned, "[s]uch a tax would have the beneficial effects of curbing instability introduced by speculation, reducing the diversion of resources into the financial sector of the economy, and lengthening the horizons of corporate managers" (*Ibid.*). The attack on the financial services industry is not only a reaction to the financial crisis, but also an attempt to highlight which role the industry should play in the economy. Many commentators argue that the current size of the industry is both unsustainable and too large for its optimal social function. Lord Turner, Chairman of the Financial Services Agency in the United Kingdom, labels many of the activities in the financial services industry as "socially useless activity" (Monaghan, 2009). The issue is the tipping point where the financial industry goes from producing and contributing to enhanced overall wealth to just being a tool for redistributing wealth among the actors in the industry.

The global economy has changed profoundly over the last few decades due to the growth of globalization. Forty years ago, capital for goods and services far exceeded capital used for investment. Today, capital flows for investment outweigh trade flows by one hundred to one (Arner & Buckley, 2010). Levels of global market activity has grown rapidly over the last twenty years, and as a result, the ratio of financial transactions to GDP in 2007 was more than 75.3, in contrast, the same ratio was 15.3 in 1990 (*Ibid.*). Matheson (2011) notes that the decline in transaction costs over the last thirty-five years is the primary cause of the higher increase in financial activity as compared to other types of economic activity. He further argues

that the primary increase has been for short-term trading, and especially in derivative markets because transaction costs in these markets are lower than for spot markets. The level of financial integration across markets is constantly increasing—a scenario, which increases the flow of information and contributes to efficient price setting, but also creates dependency between markets through their inherent interconnectedness. Moreover, the *nature* of investment has also changed dramatically over the last twenty years or so, and trading has become much more dependent on technology. Furthermore, large institutional investors have grown to prominence, and assets managed by U.S. mutual funds more than quadrupled in the 1990s (Buckley & North, 2012). Similarly, with the advent of more information, investors are also maintaining a shorter perspective, and often require companies to deliver staggering returns over short time periods. This phenomenon is commonly referred to as "short-termism." The short-term focus and extreme expectations for high returns led financial market participants to take even greater risks, and began using high leverage and complex derivatives to satisfy investor expectations of exorbitant returns. In 2007, 88 percent of the total volume of transactions was derivative based (Darvas & Weisäcker, 2010). During this time period, high frequency trading also became more common. High frequency trading generally refers to computer-based trading that generates a large number of orders at quick speeds. These traders mostly use algorithms to analyze market conditions to determine which orders to execute. Correspondingly, algorithmic or computer-driven trading contributed nearly 60 percent of the U.S. equity trading, and 30–40 percent of European and Japanese equity trading in 2009. The volume of computer-driven trading was almost 40 percent of futures trading, 10–20 percent of currency trading, and 20 percent of options trading in the United States (New York Times, 2012). Algorithmic trading is often associated with high frequency trading, which is often blamed for rapid changes in the price of various financial instruments. The purpose of high frequency trading is to use the speed of computers to take advantage of minor pricing errors in the market. Illustrative for this purpose is the fact that Goldman Sachs chose to move the location of its computers closer to NASDAQ because, according to the company's calculations, each millisecond gained could add more than one hundred million dollars of profit (Williams, 2008). One common strategy of high frequency trading is to generative a large volume of orders over a short time period, and then later cancel these transactions. Some estimates of the magnitude of high frequency trading suggest that high frequency trading constitute between 50 and 75 percent of all transactions (Buckley & North, 2012). Hedge funds, in large part, contribute to this statistic. These

changes in investment and trading patterns has caused the focus of investors to shift from fundamental valuation considerations to trying to identify even the smallest pricing discrepancies so that they can take advantage of these market errors. Additionally, these traders often bet against market trends, which may further skew market conditions away from fundamental values. At the same time, the trend of liberalized financial markets and less government regulation has had a significant impact on market stability. Today, financial crises are occurring with higher frequency, while at the same time the average costs of financial crises have increased dramatically. Therefore, excess volatility has a much larger impact on the economy than in earlier times.

4.3.2 *Will the Financial Transaction Tax Help Reduce Volatility?*

Although the risk of high frequency trading may be significant, the financial transaction tax may not be the ideal tool for controlling that risk. In its proposal for a financial transaction tax, the European Commission repeatedly emphasized the hazards of short-term trading and its detrimental impact on market stability. However, speculators were not the sole cause of the recent financial crisis, but rather other factors contributed to destabilization as well, including pervasive misallocation of risk in the market, misaligned incentives in financial institutions, and excess debt–equity ratios. This section of the thesis will review in detail each of the possible causes of the financial crisis and determine whether the financial transaction tax would remedy these sources of volatility.

4.3.2.1 Impact on Speculation and High Frequency Trading

To curb future financial crises, or the effects thereof, it is important to reduce speculation. Speculation is harmful to market stability because speculators may artificially drive up prices in the market, which will alter the information available to other investors in the market. Proponents of the tax argue that by making short-term trading more costly as compared to more long-term trading, speculative activities would become less profitable, which in turn would reduce volatility from high frequency trading. Keynes (1936) argued that the pursuit of short-term profits is essentially a zero-sum game for society, and should therefore be discouraged. Notably, high frequency trading and speculation is the foremost target of the European Commission's proposal for a financial transaction tax. In 2010, the staff of the European Commission researched and published a report on the prospect of implementing a financial

transaction tax in the European Union. The report noted that "[e]ssentially, the debate on financial transaction taxes boils down to the question of the influence of transaction costs on trade volume and price volatility, and whether they can serve as a corrective device to reduce the number of allegedly harmful short-term traders" (Staff of the European Commission, 2010). Interestingly, the report rejected the premise that the tax would reduce high frequency trading and link financial market activity more closely to fundamental market information (European Commission, 2012). Notably, the report also questioned the oft-cited assumption that short-term trading is purely negative. Another report, published by the International Monetary Fund, reaches similar conclusions. In essence, the IMF report argues that the financial transaction tax is not the proper tool for targeting financial market instability because it fails to address the fundamental factors that create volatility. This reinforces the concern that the financial transaction tax is the legislative equivalent of "firing a cannon at a sparrow." It emphasizes that it is problematic to "distinguish 'undesirable' from 'desirable' short-term trading," and that the tax would disadvantage non-speculators such as pension funds, and indirectly, consumers. Despite the contrary conclusions of these two reports, there is reason to believe that the financial transaction tax could be well suited to address these challenges. In essence, the financial transaction tax makes it more costly to perform each individual transaction. Speculators try to gain from minor mispricing of assets by quickly identifying errors through the use of algorithms, then beating the market through ultrafast trading. Because the profit margin of each of these transactions is so small, engaging in this type of trading may no longer be profitable. The fact that speculators mostly target temporary misalignments, rather than reviewing fundamental information to determine long-run price developments creates a divide between speculative or noise trading, and more long-term, desirable trading. Moreover, the fundamental distinction between high frequency trading and long-term trading also allows the financial transaction tax to implicitly differentiate between these types of transactions. The tax could indirectly separate high frequency trading transactions from "normal" transactions if the level is set to render the first category unprofitable under the new tax scheme. Furthermore, the tax could have a desirable effect by dampening short-term sales. One dominant issue during the financial crisis was the dumping of equity securities, especially bank shares, and the value of bank shares fell significantly over the course of the financial crisis. By imposing a tax on these transactions, the cost of dumping these shares would be higher, and therefore quick sales of equities would be less attractive. On the other hand, the tax could disproportionally

affect portfolios that invest in shorter-term, safe assets, compared to longer-term portfolios. For example, fixed income instruments commonly have shorter-term horizons, however, many fixed income assets are also considered to be very safe. Nevertheless, the financial transaction tax would discourage investment in these assets. However, overall, the financial transaction tax should be well suited to combat short-term price volatility stemming from high frequency trading and runs on securities.

4.3.2.2 Volatility due to Misallocation of Risk

Moreover, the initial trigger of the crisis was the collapse in the housing market, which in turn had a significant effect on the structured products tied to this market. Through the use of securitization, financial institutions pooled the risk of the underlying instruments, such as mortgages, and sold those products to investors. The Bank for International Settlements (2007) estimates that at its highest level in 2006, annual issue of credit derivatives constituted about 400 billion dollars per quarter, and the estimate of the nominal value of outstanding credit derivatives peaked at 58 trillion dollars at the end of December 2007. This securitization effectively separated the risk from the underlying investment, which created agency issues between the initial holder of the mortgage and its purchasers. Furthermore, these products were notoriously difficult to price correctly. Thus, the misallocation of risk was largely caused by distortions in the valuation of structured financial products, such as collateralized debt obligations (CDOs) and credit default swaps (CDSs). Moreover, mispricing of risk was further enhanced by errors in risk rating. Nearly 60 percent of the structured products held an AAA-rating (Fitch, 2007). In comparison, less than 1 percent of corporate bonds are given AAA-ratings.

In contrast to speculative activities, which may be discouraged by increasing transaction costs and where part of the problem is the volume of transactions, increasing transaction costs rarely cures misallocation of risk or valuation issues. Although a transaction tax would arguably have some effect on the movement of these financial instruments between investors, these instruments are usually buy-to-hold securities not suitable for speculation. As such, a tax whose sole effect is to increase the cost of trading in the instrument would do little to remedy the risk of structured financial products. Consequently, while a financial transaction tax may be properly suited to combat short-term price volatility and price misalignment, the tax is not an apt tool for controlling long-term mispricing which may develop into a financial crash or bub-

ble.

4.3.2.3 Hedging and Other Risk-Reducing Measures

Additionally, the tax may in fact increase volatility by reducing investment in risk-reducing measures such as hedging because the tax would increase the cost of engaging in these transactions. Moreover, the tax would penalize complex transactions more than simple ones. This is because a complex transaction will involve more individual transactions. Because the tax does not apply to a deal as a whole, more complex transactions will face a higher tax burden. McGowan, De Boynes, and Thomson (2012) illustrate this weakness the following way:

> [A] floating-to-fixed interest-rate swap hedging a floating-rate loan would be chargeable, where a simple fixed-rate loan would not. Hedging an equity derivative for a customer by buying the relevant equities would incur an additional charge. Synthesising one derivative by combining others would give rise to multiple charges. Underwriters of share issues would need to consider how the subscription arrangements should be structured.

This feature of the financial transaction tax may be unfortunate because hedging transactions may be relatively complex. Consequently, the financial transaction tax may disincentivize hedging, which could result in lesser ability to manage risk by financial institutions. If companies spend a certain amount on risk management annually, those institutions may be reluctant to increase the overall budget due to the financial transaction tax. Therefore, if the cost of each hedging transaction increases, the institutions may engage in fewer individual transactions, and therefore lessen the total risk coverage. The International Swaps and Derivatives Association (ISDA) expressed this concern for the proposal, and argued that the proposed tax would increase the costs for engaging in hedging and other risk-reducing measures (ISDA Press Release, 2011). The ISDA press release raises another important concern. Financial transactions such as derivatives may have a very productive and desirable purpose. This relates to the problem of distinguishing speculative and unnecessary transactions, from productive and necessary transactions. Most often, hedging transactions will fall into the latter category, but because speculators will use those same instruments to derive short-term profit, it would be extremely difficult to single out only the undesirable transaction for tax purposes. For example, a financial institution may use derivatives to *reduce* the risk of an investment. The risk-reducing

transactions may be entered into to offset undesirable commercial risks on regular transactions, for example through the use of currency swaps or credit default swaps. Moreover, companies may enter into derivatives contracts to hedge future costs, thereby making future expenditures more predictable and less risky. This is common in the airline industry because airlines make significant expenditures on fuel, and the cost of fuel is directly tied to the cost of oil, which is often subject to large price swings. The increased cost would equal the cost of the financial transaction tax multiplied by the notional value of the asset to be hedged. Consequently, if a company chooses to hedge 15 percent of its commodity costs, this would lead to an increase in cost of 0.0015 percent. Consequently, the financial transaction tax may have undesired effects that have nothing to do with the desire to reduce unnecessary risk taking by financial institutions, and it may actually increase the risk because the higher cost disincentivizes companies from entering into such risk-reducing transactions.

Admittedly, because hedging transactions are usually entered into on a longer-term basis than what high frequency traders do, the effect of the tax may not be as great as one would think. These costs may end up being negligible because a hedging entity is holding an asset, not trading it, and it is the latter behavior that is penalized by the Commission proposal. Also, because these types of transactions usually involve holding the instrument to maturity, the tax would be imposed only once, in contrast to most other instruments where investors realize gains or losses through the sale of a security. Nevertheless, the failure to address the disincentives for hedging is a shortcoming of the proposal. However, the only practical option for addressing this shortcoming would be to exempt derivatives transactions altogether. The practical challenges of exempting just derivatives transactions entered into for hedging purposes would be immense. This would entail that the tax includes some type of mechanism for determining which transactions are entered into for hedging purposes and not—a classification system. Another way to remedy the increased costs of hedging as a result of the financial transaction tax could be to impose the tax in a fixed amount rather than on the notional value of the derivative instrument. Both these present logistical challenges, and it is unlikely that the Commission will amend the proposal to include any of these exemptions. Consequently, the effect on hedging will be a significant shortcoming of the proposal.

4.3.2.4 Increased Volatility due to Shift in Investment Patterns

Moreover, the tax may also implicitly increase volatility by encouraging a shift to investments in more risky derivatives. This effect is due to the more favorable rate of derivatives under the tax scheme. Under the Commission proposal, equities and bonds are taxed at a rate of 0.1 percent, while derivatives are taxed at 0.01 percent. Today, the level of substitutability between financial instruments is high. Substitutability refers to the ability to replace one financial instrument with another, yet produce similar results. The risk from derivatives stems from multiple sources. First of all, these instruments are often complex, and can require extensive calculations to understand the proper valuation of the instruments. This prophecy came true during the recent crisis when mispricing of the risk associated with certain derivatives such as CDOs and CDSs led to huge losses for many financial institutions. Second, many derivatives operate on an "all-or-nothing" basis, that is, if an investor bets that the underlying instrument will move in the wrong direction, that investor loses his entire investment. In contrast, an equity security or a bond will still retain some value despite an adverse price change. This creates high exposure risks for investors that transact in derivative instruments. Third, derivatives instruments are usually subject to less regulatory supervision, which creates more counterparty risk. Although most derivatives today are subject to some regulation and are often traded through central clearinghouses, many derivatives are still traded in the shadow of regulatory supervision. For derivatives that trade through central clearinghouses, the counterparty risk is much smaller since the clearinghouse will facilitate collection and distribution of payments between the parties. For other derivatives, the parties would essentially just have a private contract that could only be enforced through the court system. Litigation is an expensive, impractical, and lengthy process for resolving disputes, and the process is even more complicated if the two parties to the transaction are located in different countries. The risk of significant exposure to derivative instruments is illustrated in two particularly prominent collapses: the Orange County bankruptcy in 1994 and the fall of Long-Term Capital Management in the late 1990s.[4] Consequently, a move from equity and bond investments to deriva-

4. Orange County, California, famously suffered the largest municipal bankruptcy in the United States after a rogue treasurer borrowed fund to invest heavily in interest rate derivatives (Public Policy Institute of California, 1998). The treasurer believed that a long trend of the Federal Reserve raising interest rates must undergo an eventual reversal, however, the treasurer's bet failed and the county was unable to service its debts and declared bankruptcy (*Ibid.*). Conversely, Long-Term Capital Management, a fund founded by Nobel winning economists Myron Scholes and Robert Merton, collapsed after the Russian government defaulted on its government bonds (Lowenstein, 2012).

tives may create higher risks for individual investors, and therefore, a collective move between these assets could create more systemic risk in financial markets. Moreover, as discussed previously, investment in derivatives may also increase because derivatives essentially provide a tool for tax avoidance. Contrary to company stock, there are no rules governing who may issue derivatives. Consequently, derivatives can be issued by anyone, in any jurisdiction. A derivative issued on the underlying share may therefore constitute a substitute to investment in the security itself.

4.3.2.5 Excessive Leverage and Agency Costs in Financing Decisions

Another factor that contributed to the crisis was the high debt-to-equity ratios of financial institutions and excess leverage used to fund investments. The use of short-term financing was also a significant cause of the crisis. Financial institutions commonly use short-term financing over longer-term loans because it is cheaper. However, this type of financing is also much risker than long-term loans. During the crisis, financial institutions would use short-term financing, including interbank loans and commercial paper, to finance investments, but when the markets deteriorated and the value of assets fell, the financial institutions were unable to service these loans as they became due. Moreover, when forced to continually refinance short-term loans, financial institutions were unable to obtain financing once the short-term credit markets dried up. The financial transaction tax could facilitate a reduction in reliance on short-term financing. The tax would make it more expensive to use short-term debt arrangements because this would facilitate more frequent refinancing, which would result in more frequent exposure to the tax. Because short-term financing would become relatively more expensive, institutions would have an incentive to increase their portion of long-term debt. In turn, by reducing reliance on short-run financing, the financial institutions would have been better equipped to handle the crisis since they would not have fallen victims to the credit crunch and lack of available financing to the same extent.

In contrast, the financial transaction tax is unlikely to have a positive impact on volatility stemming from high debt–equity ratios. Under the traditional Modigliani–Miller theorem (1958) regarding corporate structure, the value of a firm will not depend on the sources of financing, assuming that there are no agency, bankruptcy, or transaction cost, and markets are efficient. However, in practice, companies rely on debt financing because it is cheaper than equity, and that leverage carries with it a tax advantage due to the deductibility of interest

payments. The tax deductibility of interest payments creates a value for the company in the form of a tax shield, which equals the value of the debt times the corporate tax rate. The reason why interest payments are generally exempted is because it is commonly viewed as a legitimate cost of doing business. However, in addition to the tax shield created by the deductibility of interest payment, companies also face bankruptcy costs as a result of using leverage to capitalize the company. Hence, the optimal capital structured of a company is where the marginal value of the tax shield equals the marginal value of increased bankruptcy cost as a result of an added unit of debt. The tax deductibility of interest payments creates risk because it incentivizes high leverage. In turn, high leverage ratios can limit the flexibility of financial institutions by causing liquidity constraints. Furthermore, high leverage also creates agency and moral hazard issues. Because equity owners will only bear part of the losses in case of a bankruptcy, yet still just be limited to interest payments in case of large gains, financial institutions are incentivized to undertake risky investment in hopes of getting large payouts. This incentivizes the use of debt because the residual equity owners will be able to shift part of the bankruptcy cost over to the debt holders. While the financial transaction tax could discourage short-term financing by making short-term loans more expensive, it probably would only have a negligible effect on high debt–equity ratios. In contrast, a better approach for remedying distortions due to excessive leverage would be to make changes to the income tax, including removing or reducing the tax deductibility of interest payments. This would eliminate or decrease the value of the tax shield. Alternatively, regulators could increase capital adequacy requirements. Similarly, regulators could implement stricter thin capitalization rules, which limit the deductibility of interest for corporations that have high debt–equity ratios. All of these options would be better suited to combat volatility derived from high leverage.

4.3.2.6 Executive Compensation and Misaligned Incentives

However, agency cost in financing decisions was not the only factor creating risk due to misalignment of incentives. Some argue that corporate governance problems, such as the structure of executive compensation and separation of ownership and control, were also to blame for the recession. For example, Bebchuk (2012) claims that the performance and risk choices of firms depend largely on the incentives of the firms' executives. In the financial industry, many executives had an overwhelming majority of their compensation tied up in stock options. By its very nature, stock options encourage risk taking, and as a result, this compensa-

tion structure encourages risky investments. Under this pay arrangement, executives enjoy the full potential of upside gain, but are not exposed to the downside risks. Consequently, executives had incentives to increase risk taking beyond optimal levels. The extent of this issue came to light in the aftermath of the Enron scandal. Following the Enron collapse, lawmakers in the United States implemented the Sarbanes–Oxley Act of 2002 to remedy the issue of executive compensation and misaligned incentives. However, the Act failed to properly deal with the issue of executive compensation through stock options, and therefore, during the financial crisis this risky compensation structure was still in place for most of the executives at large financial institutions. The financial transaction tax would have little ability to remedy distortions in incentives for agents such as executives. Moreover, because most executive stock options have transfer restrictions, the tax would not even apply to these types of instruments. Although a financial transaction tax could limit the profitability of a division, it would not directly change the incentive structure of the agents.

4.4 Effect on Asset Prices and Liquidity in Capital Markets

4.4.1 *Is Speculation Always the Enemy? High Frequency Trading and Liquidity*

Conversely, speculation or high frequency trading is not uniquely harmful to the economy, but also brings about positive consequences. Indeed, some even argue that a financial transaction tax may not contribute to decreasing volatility in financial markets, but in contrast, could actually increase market volatility. Most empirical studies conclude that the relationship between the financial transaction tax and market volatility is inconclusive and that "higher transaction costs are associated with more, rather than less volatility" (McCulloch, 2010). Matheson (2011, p. 20) reached similar conclusions and stated "if a [financial transaction tax] reduces trading volume, it may decrease liquidity or, equivalently, may increase the price impact of trades, which will tend to heighten price volatility." However, it is nearly undisputed that an increase in transaction cost will reduce trading volume. Most importantly, high frequency traders contribute to creating critical liquidity in financial markets. Trading is one of the primary creators of liquidity, and as a result, the high numbers of transactions that high frequency traders enter into facilitate the creation of liquidity in financial markets. However, although these trades do increase liquidity, it is not granted that this liquidity is essential to the proper functioning of financial markets. Matheson (2011) notes that the quality of li-

quidity depends on several factors including (1) the nature of the security, (2) the time period over which liquidity is measured, (3) market conditions, (4) momentum factors, and (5) investors confidence. The nature of the security means that a blue chip stock has more liquidity than a share in a privately held, small company. This is due to several reasons, including the fact that investors have access to more information concerning larger companies, and the risks associated with investment in large companies is usually lower. Moreover, liquidity tends to be higher when measured over a longer period of time because the time frame is less likely to reflect temporary liquidity downturns. The tree remaining factors, in some sense, all relate to general market conditions. In normal market conditions, lack of liquidity issues rarely arises, and as such, any marginal liquidity changes to the already liquid security markets will reflect the law of diminishing returns. Some argue that increasing levels of computer generated trading for extremely short holding periods can make the security more liquid and lower the company's cost of capital. In these non-crisis times, markets are already liquid, but during crisis times, high frequency traders tend not to increase, but rather deprive, the market of liquidity. This scenario came true with the so-called "Flash Crash" on May 6, 2010. The Flash Crash notably illustrated the contagion characteristics of market liquidity. On this day, concerns about the Greek debt crisis caused the Dow Jones to drop by more than 1,000 points at one point during trading (Lauricella, 2010). Moreover, a large sell order placed on the Chicago Mercantile Exchange led to similar pressure to sell due to computer generated algorithms that eliminated buy orders on the exchange. During the turmoil of this crash, it became clear that high frequency traders did not contribute the critical liquidity that the high frequency traders adamantly claim they provide to the market. In contrast, market makers commit to remain active regardless of the state of the markets. Therefore, Plender (2011) argues that rather than relying on high frequency traders and speculators to generate liquidity, the market makers should play the role of supplying liquidity. Moreover, large volume trading is not the only activity that creates liquidity; liquidity is also dependent on investors having different valuations or investment strategy. That is, if all investors had the same perception of an asset's value very little trading would occur because the primary driver of transactions is that the two parties to the transaction have a different opinion of future value. Here, high frequency traders do not play an important role in creating liquidity because they do not significantly affect other investors' expectations of value. Overall, it is clear that high frequency traders play some role in

creating liquidity in financial markets, however, it is questionable whether this liquidity is essential to the proper functioning of markets or merely constitutes excess liquidity.

4.4.2 *The Financial Transaction Tax and the Cost of Capital*

The financial transaction tax will also affect the cost of capital. The effect on the cost of capital will stem from multiple sources. First of all, the tax is likely to reduce investment on the macroeconomic level, which in turn will increase competition for capital, thereby raising the cost of capital because limited amounts of a resource will force investors bid up the price of that resource. Moreover, the cost of capital is likely to increase due to inferior liquidity in the market due to the reduction in trading volumes that will result from the implementation of the tax. Lastly, the tax will directly affect transaction cost—a development that is directly tied to lower asset prices. The introduction of the tax would increase transaction costs, which will cause investors to require higher returns on their investment to compensate for these higher costs. In essence, the effects of the financial transaction tax is a balancing between the desire to deter excess speculation and the increased cost of financing which may impede financing of real enterprise. Nevertheless, proponents of the tax argue that because the transaction tax is not directly taxing assets or dividends of assets, but merely the trade, the tax will not contribute to raising the cost of capital. While this argument facially holds up, the effects of the tax will indirectly contribute to raising the cost of capital.

4.4.2.1 The Effect of Increased Transaction Costs on the Cost of Capital

One significant factor in determining the cost of capital is transaction costs. In theory, higher transaction costs are associated with lower asset prices. Kenneth Rogoff (2011), former Chief Economist of the IMF, found that higher transaction taxes increase the cost of capital, eventually lowering capital investments. A lower investment amount would in turn reduce government revenues by largely offsetting the gain from the tax. In fact, multiple research reports support the contention that the tax will increase the cost of capital. Matheson (2011) found that a financial transaction tax of 0.05 percent would have an effect on the cost of capital, although only a minor one. Similarly, the Staff of the European Commission (2011) noted that "[t]he tax can thus generate adverse effects on investment and the level of economic activity," and argues that these effects will increase the cost of capital. Matheson (2011) concludes that a financial transaction tax of 0.02 percent reduced turnover on the S&P 500 to 0.8 years,

stock values would decline by 1 percent, which in turn would raise the cost of capital by 0.03 percent. Moreover, empirical studies have suggested that the stamp duty in the United Kingdom negatively affected share prices (Staff of the European Commission, 2011). This is further evidence that the financial transaction tax may directly affect the financing of companies.

Transaction costs can include a variety of different expenses, including brokerage commissions, taxes, exchange fees, and bid-ask spreads. The bid–ask spread is a significant indicator of transaction costs and consists of three primary components: order processing costs, inventory risk, and information asymmetry (Pomeranets & Weaver, 2012). Reductions in transaction costs over the last few decades have resulted in a dramatic increase of trading activity, in particular high frequency trading. The decrease in transaction costs is primarily due to improvements in technology, deregulation, and innovation in financial markets. In fact, bid–ask spreads on the New York Stock Exchange today average about 0.1 percent, compared to 1.3 percent in the mid-1980s (Pomeranets & Weaver, 2012). The financial transaction tax will increase the cost of capital because the tax imposes additional transaction costs on the investors. The size of the effect on cost of capital will depend on many factors. First is the nature of the instrument. Some shares are typically associated with long-term ownership, and these instruments will be less affected by the tax because these tend to be traded less frequently. On the other hand, there exist more volatile shares, typically associated with short-term ownership. Such a stock will likely see a higher effect from the tax. For example, if the average holding period of the first company is one month, while the second company is one day, the effect on these companies will vary greatly. For the first company, investors will face a financial transaction cost, associated with investment in this company of 2 x 12 x 0.1% x Enterprise value. The second company will have an effect of 2 x 250 x 0.1% x Enterprise value. Thus, the reduction in one year cash flows would be 2.4 percent and 50 percent, respectively, based 250 trading days per year and the tax charged on both buying and selling the security. As such, in this sterilized scenario, the first company should experience a 2.4 percent fall in enterprise value and the second should fall by 50 percent. Similarly, because equity securities are generally traded more frequently than corporate bonds, the impact of the financial transaction tax will likely be higher for equity markets than debt markets. Another reason why more frequently traded securities will have a more significant impact due to the imposition of the tax is because these securities tend to have narrower bid–ask spreads. Assets with narrower bid–ask spreads, such as blue chip companies, are typically more prone to high frequency trading, and

would also be more severely affected by the tax. The implementation of a financial transaction tax will disincentivize trading for narrow spreads because investors will not benefit from reallocating assets in their portfolio to respond to minor instances of mispricing because the transaction cost incurred would be higher than the benefits received. This effect will be especially pronounced for investors with short holding periods, such as high frequency traders. As a result, the tax would have a much greater effect on equities with a high turnover such as large capitalization and blue chip stocks. Moreover, the tax would also constitute a relatively higher increase in cost compared to less frequently traded securities.

Moreover, the financial transaction tax has two time-dimensions: the cost is incurred when the investor buys the asset and when the investor sells the asset. The effect of these additional costs will essentially be the same as taxing future dividends. Thus, one should be able to view the effect of these costs by utilizing Gordon's Dividend Growth Model (1959). This model provides that the current price of an asset is a function of its future revenue streams. For an equity security this means that the share price can be determined by adding all future dividends. The model is summarized as follows:

$$P = \frac{D_1}{r - g}$$

Here, P is the current share price, D_1 is next time period's dividend payment, r is the cost of equity capital for the company, and g is the annual growth in dividend. Based on the model, it is clear that if the price of an asset is viewed as a function of a long stream of cash flows, a reduction in those cash flows will decrease the current price of the asset. Obviously, the tax would not have exactly the same effect as a tax on dividends because, while a tax on dividend imposes a frequent tax whenever the company gives dividends, the financial transaction tax would only affect the purchase and sale of that asset. Moreover, under this model, it is implicitly assumed that the investor's capital requirement does not account for taxes and that the financial transaction tax would constitute a net loss for the investor, that is, absent other tax consequences, the price of the asset falls. Similarly, because the present value of the cash flows decline, investors will demand a higher return on their investment to make up for the lower amount of cash flows they will receive. One criticism against using the dividend growth model is that speculators are usually focused on identifying even minor mispricing in the asset. Therefore, it is not certain to what extent speculators even consider the discounted future cash flows in making investments. Various types of investors look to different factors when they

analyze the potential of an investment. Long-term investors try to evaluate the potential for growth, future cash flows, strength of the organization and the products or services it provides. If these investors do not consider such costs in investment, the effect of the financial transaction tax on cost of capital will only be a function of the effect on long-term investors. Nevertheless, because the tax would reduce future cash flows, the dividend growth model still provides a useful analogy. Thus, the financial transaction tax will certainly impact firms on a micro-level, but the existence, and extent of, an effect on the macro-level would depend on the size of the tax and how investors respond to the implementation of the tax.

4.4.2.2 A Revised Model – Considering Holding Periods

In theory, under the Gordon Dividend Growth Model (1959), an investor has a perpetuity view of ownership in an asset. Under this scenario, the value of a financial instrument should fall by the size of the tax, 0.1 percent for equity securities and bonds and 0.01 percent for derivatives. As demonstrated previously, nature of and typical holding period of a security will dictate the magnitude of the impact of the tax on the cost of capital. Consequently, in order to give a full view of the effect of the tax, it is necessary to expand the model to account for holding periods.

$$P = \frac{D_1(1 - e^{-(r-g)N})}{(r-g)(1-(1-T)e^{-(r-g)N})}$$

In this revised model, D_1 is still next year's dividend payment and P is the current share price. Similarly, r is the cost of equity capital for the company, N is the holding period, and g is the annual growth in dividend. Due to the additional elements, this model is less intuitive than the previous set-up. However, Matheson (2011) rearranges the equation to show the actual change one could expect from the financial transaction tax on the price of the asset:

$$\Delta = 1 - \frac{(1 - e^{-(r-g)N})}{1-(1-T)e^{-(r-g)N}}$$

Leaving all other factors unchanged, based on this model, the simple effect of the implementation of the tax would be to increase the size of the denominator. If T = 0, the parenthesis part of the denominator will fall away, and the price of the asset will remain unchanged. On the other hand, if the tax is above zero, the denominator will be higher, and thus, the value of the

fraction will go up. As a result, the delta factor will be less than 1, signifying a decrease in the share price. However, the assumption that all other factors remain unchanged is questionable.

One potential way in which investors will try to adapt to the tax would be through an increase in holding periods. The effects on market prices and on the cost of capital are diminished with longer holding periods. By raising transaction costs, the tax would incentivize a longer holding period. This holds especially true for companies that are more prone to the effects of the tax, particularly blue chip companies with narrow bid–ask spreads. By holding longer-horizon assets, investors will benefit in two ways. First, assuming that the investor has a limited amount of resources to invest, a longer-term horizon means that the investor will have less free funds to invest and will therefore have a lower portfolio turnover. Lower portfolio turnover implies that the tax will be incurred with less frequency, thereby minimizing the overall tax burden. Second, because the tax is paid in two stages, a longer holding period would allow the investor to defer the second tax payment until disposing of the asset. Under our model, a longer holding period would decrease the size of the Euler element. For both the numerator and denominator the implementation of the tax will lead to an increase in those numerals. The overall effect will be to increase the size of the fraction, which means that a longer holding period would lead to a relatively smaller fall in the price of the asset.

The "longer investment horizon effect" stands in contrast to a general corporate gains tax, where the generally increasing value of the investment necessitates that the tax burden will increase over time. That is, because the value of the investment will go up, the corresponding tax payment will also increase. The extent of this change would depend on an assessment of the cost of the financial transaction tax versus the cost of holding relatively longer-term securities. As such, the fall in share prices due to an increase in transaction costs may be partially offset by a change in investor behavior.

4.4.2.3 Liquidity Effects on the Cost of Capital

Moreover, the potentially inferior liquidity that may result from imposition of the financial transaction tax may, as discussed previously, increase the cost of capital. Increased trading leads to enhanced liquidity and lower transaction costs, which in turn, has a direct effect on the cost of financing for companies. If the financial transaction tax is imposed, the increased cost of financial transactions will contribute to reduced liquidity and higher cost of transac-

tions. Although the Commission's proposal exempts primary issuances of securities, trading in secondary markets is equally essential to creating liquidity for a security. Regardless of the status of a security in the primary market, an investor will not be willing to put capital into the market if the investor has no way of extracting return on capital at a later time. Therefore, lower liquidity in the secondary markets will directly affect capital investors in the primary markets. Moreover, under the liquidity preference hypothesis, investors will prefer liquid investments to illiquid investments. Consequently, lower liquidity investments should, under this hypothesis, have lower prices in the market. This further reinforces the argument that a financial transaction tax may negatively affect share prices.

4.4.3 *Price Discovery Mechanisms*

Moreover, the implementation of a financial transaction tax may also impact the price discovery processes and market prices. A fundamental theory of finance is that prices are set by market participants through the process of trading assets. Price discovery refers to the process by which the market incorporates new information into market prices. In perfectly efficient markets prices immediately reflect new information as it becomes available. Without transaction costs, investors are able to continuously update and rebalance their portfolios—and this rebalancing is inhibited by the presence of transaction costs, which in turn will make it more costly for the market to reflect new information. By engaging in various transactions, market participants with different beliefs of the value of an asset will drive the asset to its fundamental equilibrium. Here, the volume of trading plays an important role as the more frequently an asset is traded; the more likely the market is to correct deviations from the equilibrium. If the financial transaction tax lowers the volume of trading, even that performed by high frequency traders, the price discovery in the market will be constrained. Under the theory of market efficiency and rational expectations, lower transaction costs and a higher level of transactions will lead to superior price discovery and more efficient markets. When price discovery is impeded, this may cause a greater autocorrelation of returns, which in turn could contribute to creating bubbles in financial markets. This is because the process helps restore prices toward their fundamental values, and inferior price discovery would lead to persistent mispricing in the market.

Moreover, mispricing of asset may impede the efficiency of markets by slowing down price corrections, thereby preventing the allocation of resources to their most efficient use.

However, the effect of the financial transaction tax may be even more complex. Financial markets do not function in such a way that an asset has "one" equilibrium price, but rather, investors' expectations change with time and tend to follow swings of growth followed by a decline in market prices. These trends are known as "bull" for rising markets and "bear" for declining markets. Market participants adapt to these trends and try to take advantage of the fluctuations by seeking to identify the trends, and acting in accordance with those trends. In practice, this means that investors will buy early on an uptick trend, and sell at the onset of a downward trend. In the last few years, these trends have become more distinct, and more aggressive. There are several factors that suggest that markets are not efficient, yet the policy of the financial transaction tax essentially relies on the assumption that markets are efficient and that traders act rationally. This assumption is questionable because these types of transactions are usually computer generated and performed in milliseconds. Therefore, it is unlikely that investors even have sufficient time to develop rational expectations of value. One situation that illustrates this issue is that trading has increased significantly over the last few decades, and high frequency trading is a relatively recent concept as well. At the same time, volatility has increased substantially. If a corresponding relationship existed between trading and price discovery, one would not expect this inverse result. Therefore, the argument that the financial transaction tax will impede price discovery in financial markets will not necessarily be correct.

Moreover, there is evidence that lower trading and higher transaction costs do not necessarily contribute to asset mispricing. Commonly, financial crises evolve from fundamental mispricing in the market. During times of economic expansion, prices increase, and the price of credit and collateral requirements usually decline. As more capital flows to the market, the market becomes saturated and as investors end up with lower quality investments, eventually a reversion of market prices will occur. For example, real estate markets traditionally have much higher transaction costs than financial markets, yet, the financial crisis erupted in large part due to severe mispricing in the real estate market. In this situation, it is clear that transaction costs is not a decisive factor in creating volatility. Consequently, it is not certain that an increase in transaction cost through the financial transaction tax would actually contribute to eradicating or minimizing the risk of dramatic asset mispricing and bubbles. Instead, by imposing a financial transaction tax, the reverse effect may occur, and the tax could actually slow down a correction in case of asset mispricing.

4.5 Lack of Globality

Perhaps the most vocal criticism of the Commission proposal is that the proposed tax will only affect financial transactions involving EU financial institutions. In fact, the lack of global implementation has been the most significant obstacle for other previously proposed financial transaction taxes, including the Tobin Tax on foreign currency exchanges, which by its very definition must be implemented internationally. The three primary effects of the lack of global implementation are the issue of fiscal arbitrage, reduced competitiveness of EU economies, and risk of double taxation.

4.5.1 *Fiscal Arbitrage*

The first effect ties into the issues with implementation. Fiscal arbitrage is a way of "exploiting imperfections in the political and legislative processes by disguising spending measures as tax provisions," in order to reduce taxation (Dean, 2011, p. 422). Whenever a measure is not implemented uniformly throughout the world, there is a risk of fiscal arbitrage. The proposed EU financial transaction tax would apply a residency principle, which means that the tax applies if either party to the transaction is a financial institution "established in the territory of a Member State" (Commission Proposal, 2011, art. 3.1). Because the proposed EU financial transaction tax would not be adopted globally, it is susceptible to tax avoidance through relocation. Although the residency principle provides some protection against relocation, because one party moving out of the jurisdiction is not sufficient to avoid the tax, the protection is by no means comprehensive. In part, globalized financial markets help create avoidance opportunities. Today, most large financial institutions have subsidiaries in the most important financial markets, including New York, Hong Kong, and Tokyo. The parties to the transaction may simply route the transaction through one of these jurisdictions, instead of via European Union countries where the transaction would normally take place. Because the tax does not apply based on the location of the security itself, but rather on the location of the parties, the same transaction could be conducted from anywhere in the world. Rerouting the transaction to a jurisdiction that does not impose the tax would be simple and would allow these companies to avoid the tax altogether. Moreover, many investors may simply restructure the transaction to make it seem as though the investor is located elsewhere. For example by moving capital outside the European Union, and investing via intermediaries in non-European Union jurisdictions.

To illustrate one hazard of lack of globality, the international consulting firm KPMG summarized some of the basic differences between financial transaction tax proposals in France, Germany, the United Kingdom, and the United States. The result of this work is summarized in a table, replicated as Table 2 in the Appendix. The primary problem with these taxes is that they all use different systems. Individual companies could simply choose to forum-shop between these different jurisdictions. As mentioned previously, none of these companies will have to physically relocate, most likely they will be able to circumvent the tax simply by restructuring the transaction or by using a straw man in a different jurisdiction.

4.5.2 *Effect on Competitiveness of European Economies*

A related issue driving opposition to a financial transaction tax is concern that the levy will reduce competitiveness of the nation's economy and create an uneven playing field with other nations. This holds particularly true for financial centers around the world that derive a high proportion of GDP from international financial market activities. The interconnectedness of financial markets around the world also leads to increased competition between financial centers. For example, in the situation above, a financial institution may initially be located in the European Union, however, upon implementation of the tax, and with the knowledge that the institution will be able to conduct nearly identical operations from a different jurisdiction, the institution may conclude that the benefits of relocating outweigh the disadvantages. Similarly, if regulation or other operative conditions become less favorable in one jurisdiction, investors will choose to move their money elsewhere due to the high mobility of capital. Currently, most of the world's financial transactions are channeled through only a few markets, and competitive advantages may easily shift in favor of some financial centers. This explains the opposition of many countries to the Commission proposal, for example Malta, Luxembourg, and the United Kingdom—which all have significant financial centers, and rely greatly on the financial industry to create economic activity. In fact, nearly 75 percent of European financial transactions are channeled through the City of London (BBC, 2012b). The governments of these countries are reluctant to impose additional costs on the financial services industry because this could drive investors to other financial centers that do not impose such a tax. For example, the House of Lords has announced that it will oppose any proposal that is not implemented globally (House of Lords Press Release, 2011). The Press Release from the House of Lords recited concerns from City of London officials "that up to 80% of income

raised from the financial transaction tax could come from transactions based in London" (*Ibid.*). This concern received further legitimization when Michael Spencer, CEO of ICAP, the world's largest interdealer broker, stated that if the proposal succeeds, the company would move their operations away from the European Union (BBC, 2012a). Similarly, CEO of Sampo Bank, the Finnish Subsidiary of Danske Bank, Johanna Lamminen, also threatened to relocate if Finland is one of the early adopters of the tax (Yle Uutiset, 2012). As such, this would not only deprive those countries of tax revenues from the financial transaction tax, but also other taxes, including the corporate tax. Moreover, these institutions also provide valuable jobs to the economy. In the long run, the decline in jobs could lead to a fall in wages. Consequently, companies relocating due to the financial transaction tax may have much larger impact beyond the mere loss of revenues from the financial transaction tax.

Nevertheless, proponents of the tax argue that critics should not focus on the lack of global implementation, and state that Europe must set a precedent with the financial transaction tax, and then other countries will follow. In fact, the proposal states that it intends to "pave the way towards a coordinated approach with the most relevant international partners" (Commission Proposal, 2011, p. 3). The German Finance Minister, Wolfgang Schaeuble, and Nicholas Sarkozy, former President of France, insist that the financial transaction tax is an important step for Europe. Schaeuble stated "[if] we go ahead with a FTT a lot of other parts of the world economy will follow us" (Dow Jones, 2011). Sarkozy expressed similar sentiments, "I remain convinced [the financial transaction tax] is possible [and] that it's indispensable financially given the crisis and that morally it is absolutely necessary" (Wroughton, 2011). Moreover, the IMF report (Matheson, 2011) specifically concluded that the tax could be implemented in a smaller area, without necessarily failing. Overall, if the European countries implement a tax that is set at a reasonable level, the cost of having to restructure transactions or relocating companies will exceed those of complying with the tax. Because of the structure of the tax, simply moving the transaction offshore will not allow a party to avoid paying tax on that transaction. Therefore, the current scope of the proposal where the rate of the tax is set relatively low, should not present significant issues for implementation.

4.5.3 *Double Taxation*

Additionally, the tax could lead to double taxation issues. Usually, double taxation is governed by bilateral agreements between countries. Each such agreement prevents a taxpay-

er—an individual or a corporation or other business entity—from paying excessive tax for the same taxable activity to two countries. These tax treaties would not normally cover the financial transaction tax, and consequently they would have to be revised to properly address the new double taxation issues that would arise due to the implementation of the Commission proposal. Revising tax treaties is both a time-consuming and complicated process, and would create extra costs for the countries implementing the tax. The issue with double taxation for the financial transaction tax pertains to determining the residency of one of the parties to the transaction. For example, a country that maintains multiple offices throughout the European Union could potentially be liable for tax to different countries. Under the definition of "established in," a financial institution is deemed established in a member state if it has been authorized by a member state or if it has its registered seat, permanent address, usual residence, or a branch in a member state, if the transaction is carried out by that branch, or the member state where the counterparty to the financial transaction is established (Commission Proposal, 2011, art. 3.1). This definition could plausibly lead to a financial institution having multiple residences within the European Union. Although the proposal further provides that taxation burdens are determined through a hierarchical order, disagreement can easily arise as to which conditions are satisfied (Commission Proposal, 2011, art. 3.2). In practice, however, the double taxation issue might not be too problematic because most institutions located in the European Union require authorization by the primary country they are located in, and because the country of authorization maintains first priority, any other issues regarding residence will be moot because of lower priority. Notably, the situation where the parties are both located within the European Union, and residence is easily identified, does not present double taxation issues. The Commission proposal clearly states that in the case of different financial institutions, each institution is individually liable to its country of residence for the tax incurred (Commission Proposal, 2011, art. 9.1). Nonetheless, if a new tax is implemented in both countries that are parties to the agreement, this would force the parties to renegotiate the bilateral agreement, or else the tax might have a disproportionate effect on financial institutions dealing between these two countries due to double taxation issues. Moreover, the provisions of the proposal do not adequately account for the situation where one party is located outside the European Union. In contrast, the French and German proposals reduce double taxation by cutting the tax in half where one party to the transaction is not located within the European Union, provided that the country maintains a taxation treaty with either country. Conse-

quently, one significant weakness of the European Commission proposal is the failure to properly account for double taxation issues that will result from imposing the financial transaction tax.

4.5.4 *Shift of Economic Activity to Jurisdictions with Lack of Transparency*

Another risk of introducing a financial transaction tax is that the implementation of the tax could lead to increased prominence of tax havens. Although tax havens were long viewed as a type of "necessary evil" to facilitate tax competition among nations, leading to increased mobility and efficiency in international capital markets, that attitude changed in the wake of the financial crisis. Following the recent economic downturn, many question whether tax havens should be subject to a stricter regulatory scheme because the harmful consequences significantly outweigh any benefits the tax havens might produce. Offshore tax havens hold trillions of dollars in assets—including more than half of all banking assets and a third of foreign investments by multinational corporations. As long as the financial transaction tax is not introduced globally, investors will have incentives to relocate outside the European Union. If investors have to incur costs of relocating, the likelihood that they will choose a jurisdiction that can offer even more cost-savings is high. Therefore, tax havens are likely to attract a lot of new activity. As a result, many believe that a financial transaction tax would increase the capital that flows through tax havens. Moreover, even in the absence of full relocation, tax havens are likely to see an increase in capital flows. Although tax havens account for only 3 percent of the world's GDP, more than half of world trade passes through them. Between 1982 and 2003, the economies of these countries grew at an annual average rate of 2.8 percent, more than twice the rate of the rest of the world (1.2 percent). The sheer size of the economic activity in tax havens demonstrates that it is not necessary to maintain a physical presence in order to channel financial transactions through tax havens. The problem with increased capital flows through tax havens is that while tax havens claim to offer potential investors financial privacy, limited regulation, and low tax rates, these jurisdictions have also become sanctuaries for tax evasion, financial fraud, and money laundering. The undesirable activity that takes place in the shadow of regulatory authorities is likely to increase should the financial transaction tax be implemented in the European Union. Therefore, a financial transaction tax may indirectly encourage higher activity in tax havens, which would also take these transactions outside the overview of other important regulations, including protections for fraud or other taxes. This

could contribute to an increase in risk due to the inferior supervision. On the flip side, if the tax is introduced globally, this could be an important tool in limiting the number of transactions that flow through tax havens. If such a tax was made global, companies and investors cannot migrate the funds to tax havens to avoid the tax, and thus, would reduce the incentives for using tax havens. Consequently, a global financial transaction tax could in fact contribute to minimize erosion of tax bases caused by the use of tax havens.

4.6 Harmonization of the Internal Market

In a memorandum accompanying the financial transaction tax proposal, the European Commission also emphasized the need to harmonize and establish minimum standards for taxation of financial transactions within the European Union. In arguing why the tax was necessary, it stated: "to avoid fragmentation in the internal market for financial services, bearing in mind the increasing number of uncoordinated national tax measures being put in place" (Commission Proposal, 2011). Ten countries in the European Union have implemented some variety of the financial transaction tax. The Commission argues that this type of unilateral action distorts competition in the internal market. The proposal would require the member states to repeal existing financial transaction laws, including the stamp duties currently in place in the United Kingdom. The proposal will prevent capital flight from European member states that have already implemented such a tax to those states that have not. Moreover, the proposal will ensure that the taxes within the European Union are somewhat uniform, and thus provide more consistency across the internal market. It is important to note that the proposal only gives a minimum base line for what each member state must charge, and therefore, complete consistency will not be achieved through this proposal. The need for harmonization of the internal market is a two-prong consideration: (1) avoiding double taxation and (2) distortion of competition (Staff of the European Commission, 2011). Both the need for harmonization to avoid double taxation and to avoid distortion have been discussed previously. Importantly, the necessity of avoiding distortions is clear from the wide range of taxes that are currently imposed by EU member states. However, the wide array of taxes tends to show that the proposal really is more of a complement, rather than a substitute, to the current scheme.

Moreover, the recent development with the European Commission proposal permitting several countries to proceed under the enhanced cooperation framework may pose addi-

tional problems for harmonization of the internal market. While the Commission has previously emphasized the necessity of EU-wide implementation to ensure conformity across the member states, it is questionable how this rationale plays into the enhanced cooperation. Potentially, allowing these eleven member states, in addition to the member states with taxes already in place, to levy a financial transaction tax may seem like a way to pressure the holdout states into joining the cooperation. However, the logic behind that argument easily fails. The member states currently holding out are unlikely to join for two reasons. First, these countries tend to be those with large financial centers that do not want to impose the tax because it might harm the financial industry. Whether other countries introduce the financial tax is unlikely to affect those member states' desire to protect the financial industry. Second, if only a few countries within the European Union introduce the tax, the non-joining member states may see an increase in financial transaction from investors that want to avoid the tax. Because of the open market, these investors will retain most of the advantages of operating within the European Union, yet will be able to avoid the tax by conducting the transaction from a country that does not utilize the financial transaction tax. Consequently, this recent development may negatively impact the harmonization of the internal market. Nevertheless, it is likely that the European Union permitted these countries to introduce the tax for the simple reason that most of the prominent politicians within the European Union have a strong desire that the financial transaction tax be implemented throughout the Union. Although the holdout states are unlikely to introduce the tax on their own, the fact that a large number of member states will now have a financial transaction tax may be an important bargaining chip further down the road to ensure that all member states eventually introduce the tax. As a result, the goal of harmonization of the internal market may not be immediately reached, but could potentially be accomplished once all member states join the proposal.

4.7 Implementation Issues

Another major issue is how a financial transaction tax should work in practice. A common criticism of the financial transaction tax is the perceived difficulty of implementation. Critics argue that the structure of a financial transaction tax makes it difficult to monitor compliance with the tax, and will make it easy to avoid the tax burden. However, some version of a financial transaction tax is currently implemented in forty countries, a fact which not only demonstrates the feasibility of such a tax, but may also work as a model for how the tax should

be implemented. Additionally, the Commission intends to use the financial transaction tax to close various loopholes in the current taxation system. First, the tax would aim to reduce relocation effects. Second, by excluding the primary market the tax would isolate the effects of the tax on the financing of companies. Third, the tax would only target transactions by financial institutions, but exclude instruments that are designed for financing companies such as bank lending and retained earnings.

4.7.1 *Consolidation of Taxes and the Fiscal Balance*

Financial transaction taxes can be imposed in three different ways. First, the tax can be an addition to existing taxes. Under this method the tax would, as a policy matter, contribute to fiscal consolidation by reducing fiscal deficits and accumulation of debt. The benefit of fiscal consolidation is that it would reduce the cost of new borrowing—a feature that is particularly important today when many European countries are struggling with increasing amounts of public debt and high fiscal deficits. The reason why borrowing becomes less expensive is analogous to why wealthier individuals receive better rates for their loans than relatively poorer individuals. By increasing the fiscal revenues, countries will have more sources of revenues to repay the loan, thereby reducing the risk to the lender who will then extend a loan at a lower rate to reflect that lower risk. Second, the tax could be fiscally neutral, meaning that the government would remove or reduce other taxes such that the financial transaction tax would have no effect on net aggregate demand. However, finding a balance to implement a fiscally neutral financial transaction tax would likely be difficult due to its inherently progressive nature. The financial transaction tax would primarily affect higher-income individuals and business entities, and therefore the government policy to even the fiscal balance would likely benefit household income. In general, relatively poorer households spend a higher proportion of their marginal income, which in turn would cause aggregate demand to rise. Third, the proceeds of the tax could be spent at the European level, for example through investment in infrastructure, which could also contribute to increasing aggregate demand for consumption. Based on the European Commission proposal, the tax will at least in part be implemented using method three. In contrast, whether methods one or two will depend on the individual implementation in each country.

4.7.2 *Characteristics of a Sound Implementation of the Financial Transaction Tax*

The key to successful implementation is two-faceted. First, legislators must seek to minimize tax avoidance. Second, the tax should be implemented in such a way to ensure efficiency and low cost of compliance. For the first point it is important to note that no tax will ever have a 0 percent avoidance or evasion rate,[5] and the key will be to maximize the revenue from increased compliance over the cost of enforcement. An efficient tax should seek minimize deadweight losses and opportunities for avoidance. The U.S. Government Accountability Office (2005) defines a deadweight loss as when "tax rules cause individuals to change their behavior in ways that ultimately leave them with lower-valued combinations of [choices] than they would have obtained if the tax system did not affect their behavior." For the financial transaction tax, this scenario could take place if the tax discourages productive activities, including regular trading and hedging activities. In the worst scenario, this could lead to lower GDP and poorer corporate risk management. This result could be further reinforced if the participants that engage in undesirable activity manage to avoid the tax, either through relocating or restructuring transactions. Additionally, there is a risk that implementation of the tax could lead to capital flight outside the European Union, and consequently, the implementation strategy must be developed in such a way to minimize the possibilities for avoidance.

For the second point, it is important that the tax does not impose significant costs of administration. Moreover, the tax should not be unduly burdensome or costly to administer for the taxing authority, or impose high costs of compliance on taxpayers. The European Union has not yet clarified the details of collection and implementation, however, there exists a broad consensus that collection of the tax through clearinghouses would be both simple and inexpensive, and would also facilitate a high compliance rate. Schmidt (2010) argued that "it is technically easy to collect a financial tax from exchanges . . . transactions taxes can be collected by the central counterparty at the point of the trade, or automatically in the clearing or settlement process." Nobel Prize winning economist, Paul Krugman (2009), similarly stated "modern trading is a highly centralized affair . . . . while traders are all over the place, a majority of

5. To a certain extent all taxes create incentive for avoidance. Any taxpayer, whether an individual or a corporation, universally pursues two fundamental goals: to reduce taxable income and to defer tax liabilities. One can achieve these goals through both legal and illegal actions, giving rise to the distinction between tax avoidance and tax evasion. Tax avoidance represents the use of legal resources to achieve the lowest possible tax burden or to defer a tax burden until a later time (Black, 2009, p. 1599). Tax evasion, on the other hand, is the act of not paying taxes that one is legally required to pay (Black, 2009, p. 1599). Although there is a distinction between evasion and avoidance, this thesis will only use the term tax avoidance.

their transactions are settled . . . at a single London-based institution. Most of these transactions are already subject to reporting requirements, and central clearinghouses already collect various fees. This centralization keeps the cost of transactions low . . . . [and] makes these transactions relatively easy to identify and tax." The only part of the proposal that may prove challenging for collection is derivatives because these tend to be subject to fewer requirements and are thus more difficult to identify. However, there is a growing trend of centralization, even for derivatives, which would make efficient collection of the financial transaction tax even greater over time. Although the European Union has yet to clearly state how the tax will be collected, based on the overwhelming practicality of the clearinghouse method, it seems likely that the European Union would use this method.

Although many critics argue that the difficulties of implementation will be the primary obstacle for a financial transaction tax, there is no substantive basis to believe that a financial transaction tax is more difficult to implement than most other taxes. In order to successfully impose a financial transaction tax, authorities must be able to identify three characteristics of a transaction: (1) the taxable event, and whether a taxable event has occurred; (2) the tax base; and (3) the person executing the taxable event. A "taxable event" is an event that triggers taxation for the party who executes the event (Klein, Bankman & Shaviro, 2006). The financial transaction tax is applied on an individual transaction basis, and because these transactions are subject to a legal duty to record, identification of the taxable event, the tax base, and the taxable party should be straightforward. Consequently, identifying the necessary transaction information would be easier than for many other taxes. The IMF report (Matheson, 2011) specifically looks at the tax as it would apply to three different instruments: (1) exchange-traded instruments, (2) over-the-counter instruments, and (3) foreign exchange instruments. The paper notes that for exchange-traded instruments, the financial transaction tax would be beneficial due to the comprehensive regulation that already apply to these transactions, both from national regulatory agencies as well as listing exchanges. This would provide taxing authorities with a record of the taxable event, the size of the tax base, and the date of the transaction. Additionally, the clearinghouses themselves could collect the tax, similar to the functioning of the VAT. Category (2) over-the-counter instruments, on the other hand, may be slightly more difficult to implement. Because these transactions are generally subject to fewer regulatory requirements, the record of these transactions is also inferior. However, the report notes that several countries already levy taxes on OTC transactions, including the Swiss stamp tax.

Moreover, new regulatory requirements often mandate reporting of all trades, whether they occur on an exchange or not. As a result, the practical difficulties may not be greater than what any other tax would present. Although category (3) is less relevant because it is not included in the Commission proposal, the IMF report finds that a tax on these transactions could easily be facilitated through international settlement organizations such as the continuous linked settlement (CLS). One should, however, be aware that new innovation in financial instruments might facilitate tax avoidance through increasingly complex structures developed for the purpose of avoiding taxes. Nevertheless, it appears that any claims regarding the difficulties of collecting the tax would be strongly exaggerated.

Additionally, if the European Commission makes the transaction contingent on the payment of the tax, investors will find the tax more difficult to avoid. By denying the transfer of ownership, the investor will not receive title to the security, and therefore will not be entitled to dividends or voting rights while the tax remains unpaid. In response, some argue that this would make investors purchase the derivative of a security instead, and because many derivatives are not traded on exchanges, the tax would be easier to avoid. Moreover, because anyone can issue a derivative instrument on a security, there is no requirement that they are issued in the same country as the underlying company is domiciled. This creates a disconnect between the derivative and underlying security, which gives rise to avoidance opportunities, and needs to be addressed. The sheer size of the derivatives market—and the significant role speculative activity using derivatives plays in creating financial instability—mandates that the tax should be applied to these instruments as well as the European Commission proposal does. But it should be noted that there is a problem with taxing derivatives for the purpose of reducing instability. Investors often take different positions in a derivative and the underlying security to protect against downside risk. By taxing both the derivative instrument and the underlying security, a risk-minimizing hedging investor will be liable for tax on both transactions, and consequently the cost of hedging risk would be increased. Although the cost may seem *de minimis* for large companies that trade in high volumes, the tax could have a significant impact on risk-reducing measures. One way to address this inconsistency could be to tax derivatives on an investment basis rather than a transaction basis. This would allow the taxing authorities to mitigate some of the effects of multiple transactions by not taxing every transaction. However, this approach would likely eviscerate any effects such a tax would have on high frequency trading. Moreover, many large financial institutions, including pension funds, in-

surance companies, and international banks, are subject to strict regulatory requirements, which prohibits ownership of securities through subsidiaries, and therefore, owning securities under a legal title would be an impossibility.

4.7.3 *Lessons from Past Financial Transaction Taxes*

Conversely, the various financial transaction taxes that have been implemented thus far may also offer advice on *improper* methods for implementation. In 1984, Sweden tried to implement a tax on financial transactions. The issue with this tax was that it was designed in such a way that tax avoidance was unproblematic. The Swedish financial transaction tax was a 0.5 percent levied on the purchase or sale of any equity security, and later fixed-income instruments, by Swedish residents (Aldridge, 2009). The tax was collected through brokers, and the tax could easily be avoided by directing the transaction through a foreign market. Moreover, because the size of the Swedish tax was very high, much higher than the one proposed by the EU Commission, investors had added incentive to try to avoid the tax. The prevalence of tax avoidance was perceived as unfair by the Swedish brokers because the government was not receiving tax from the transactions now channeled through foreign countries, and the relocation significantly hurt the brokerage industry. Over the course of the life of the tax, trading volume in Sweden declined by 30 percent, futures trading and options trading fell to nearly zero, and bond trading fell by 80 percent (Aldridge, 2009). The issues with implementation eventually forced Sweden to discontinue this tax. Similarly, Hungary's recent experiences with the financial transaction tax may also be illustrative of some of the issues with revenue raising using the tax. Hungary implemented a financial transaction tax in 2010. Although the measure was initially intended as temporary for two years only, the tax has since been doubled and is not likely to be removed anytime soon (Holmes, 2012). The tax assessed a 0.5 percent levy on the assets of financial institutions. However, the tax turned out to cause large financial trouble for Hungarian financial institutions. In March 2011, OTP bank, Hungary's largest lender, reported a fourth quarter profit decline of 15 percent, and that amount was 12 percent over the entire year. The bank's report stated that but-for the financial transaction tax, the bank's profits would have increased by 4 percent. Other banks reported similar woes as a result of the financial transaction tax, and bank credit growth rates in Hungary fell sharply. As such, is clear that lessons should be drawn from previous failures of the financial transaction

tax, and that a plan that seems desirable on paper may not yield the intended effects in practice.

The primary lesson to be learned from the Swedish failure is that incentive to avoid a tax will be present whenever the cost of paying the tax is higher than the cost of avoiding it. Therefore, one key to successful implementation will be to avoid setting the tax too high. Moreover, avoidance costs are lower when it is difficult to identify the taxable event or person liable for the taxes. For example, in order to levy personal income taxes on an individual, tax authorities must be able to identify and locate the person, and have a method for determining whether a taxable event has occurred, and the amount of the tax base. Generally, taxes levied on the basis of location or domicile of the taxpayer are easier to avoid than taxes based on a specific activity. Therefore, one method of avoiding the failure of the Swedish tax is to make the tax applicable to all purchases of securities, and this tax could only be avoided by setting up actual foreign entities to trade in the securities—a much more expensive way of avoiding tax liability. Moreover, although many fear that financial institutions will move outside the European Union, it is highly unlikely that a company would choose to reincorporate solely based on the financial transaction tax alone. This holds especially true in light of the fact that corporate taxes, which represent a much larger portion of corporate tax liability, are generally much higher in Europe than the rest of the world. Therefore, financial institutions would be much more likely to relocate on the basis of those taxes. Nevertheless, there is a risk that more financial institutions may channel transactions through subsidiaries located in other countries, especially tax havens. In 2007, Citigroup had 427 subsidiaries in tax havens, Morgan Stanley 273, Bank of America 115, Lehman Brothers 57, JP Morgan Chase 50, Goldman Sachs 29, and AIG 18 (Klinger, Collins & Sklar, 2010, p. 4). It would be easy for these large financial institutions to direct more trades through these subsidiaries. However, a similar argument could be made for individual tax liability and personal or capital income taxes. Consequently, to evaluate the extent of the risk of avoidance, and to design a tax structure to minimize the risk, legislators should look to past effects on relocation due to implementation of previous financial transaction taxes.

5. Innovative Financing and the Financial Transaction Tax

The concept of innovative financing was introduced at a United Nations conference on developing counties in 2002 (Douste-Blazy, 2011). Innovative financing has been described as a "range of non-traditional mechanisms to raise additional funds for development aid through innovative projects such as micro-contributions, taxes, public-private partnerships and market-based financial transactions" (World Health Organization, 2011, p. 85). The first initiative was a result of efforts by the campaign Action Against Hunger and Poverty—an organization formed by President Jacques Chirac, President Ricardo Lagos, and President Luiz Inácio Lula da Silva (Douste-Blazy, 2011). This cooperation led to the launch of UNITAID in 2006, a cooperative between the French Foreign Minister Philippe Douste-Blazy and President Jacques Chirac, President Lula of Brazil, and the governments of Chile, Norway, and the United Kingdom. UNITAID's first act was to establish a minor tax on airline tickets, with the proceeds going to HIV/AIDS, tuberculosis, and malaria treatments. Today, that tax raises approximately 350 million dollars annually and is viewed as a large success with respect to supporting various causes (Douste-Blazy, 2011). The purpose of these initiatives is to allow the United Nations to meet its Millennium Development Goals—a collection of goals that the United Nations and other international organizations have aimed to achieve by 2015. The goals comprise eight different categories: eradicating extreme poverty and hunger, universal primary education, promoting gender equality and empowering women, lowering child mortality rates, improving maternal health, combating, HIV/AIDS, malaria, and other diseases, furthering environmental sustainability, and developing a global partnership for development (United Nations, 2012). Chairman of UNITAID, Philippe Douste-Blazy, recently expressed that an international tax on financial transactions should be another policy tools for funding developmental objectives such as the Millennium Development Goals.

Similarly, many commentators are now focusing on the role that a financial transaction tax might play in combating adverse climate change. Sixty-three charities, including Friends of the Earth and Greenpeace, joined forces to encourage U.S. Secretary of State Hillary Clinton to introduce a financial transaction tax where the profits would go to fight climate change (Morales, 2012). The address to Hillary Clinton is a continuation of a previous proposal presented to a UN-appointed panel, and the group urged the Secretary to support a financial transaction tax "to pay for international public goods at climate change negotiations . . . ."

(*Ibid.*). The UN panel summarized its findings in a 2010 report, where it suggested that the tax could create revenues of around $27 billion per year, and auctions of climate quotas could generate another $38 billion (UN High-Level Advisory Group on Climate Change Financing, 2010). Additionally, the panel discussed the potential for implementing taxes on shipping, aviation, and electricity consumption.

Moreover, in the United States a proposal has been set forth in The Inclusive Prosperity Act (H.R. 6411) to use the proceeds of a financial transaction tax to fund job creation. The bill was introduced in 2012 by Representative Keith Ellison, and would tax the sale of stocks, bonds, and derivatives by U.S. financial institutions. The size of the tax would be 0.5 percent on stocks, 0.1 percent on bonds, and 0.005 percent on derivatives. The preamble states that the purpose of the bill is "[t]o impose a tax on certain trading transactions to strengthen our financial security, expand opportunity, and stop shrinking the middle class." The bill was mostly launched as a response to the significant bailouts paid by the U.S. government in the aftermath of the financial crisis, and the bill notes that "[t]he global financial crisis cost Americans $19 trillion in lost wealth," and that American citizens contributed $600 billion to troubled companies. Furthermore, the bill attributes the crisis to financial firms and their "[d]eceptive, illegal, and speculative financial practices." Because the crisis led to a high rate of unemployment and a decrease in disposable income, Representative Ellison argues that a financial transaction tax should be imposed to even out the benefits received by the financial institutions (Congressman Keith Ellison, 2012). He further argues that the tax could be used to invest in education, health, and communities throughout the United States.

Although some challenges exist to using the proceeds of a tax on financial transactions to benefit social goals, proponents point out that proceeds of taxes are frequently used on causes other than the original source of the tax. For example, in the United States property taxes are used to fund expenditures on the educational system (PBS, 2008). However, many argue that tax revenues are usually more properly served when they fund the overall budget, which allows more efficient allocation of tax expenditures. In fact, the European Commission proposal would use two thirds of the revenues of the tax to fund the overall EU budget, thereby reducing the national contributions. The last third would be retained by each member state (European Commission Press Release, 2012). Nevertheless, using the funds of a financial transaction tax to subsidize or support social goals could provide a method of aligning the in-

centives of the financial sector with international and social development. Such a distribution would ensure that growth in the financial industry also guaranteed contributions to other sectors that are perceived to be more "deserving" by the general public. Therefore, even though it is not in the current European Commission plan, using at least parts of the proceeds of the tax to fund development goals could potentially contribute to higher support for the proposal, and may be the key to securing international cooperation regarding a financial transaction tax.

6. Alternatives to a Financial Transaction Tax

Based on the foregoing analysis, it is clear that a financial transaction tax is not necessarily well suited to accomplish the stated goals of the European Commission. Commentators argue that a financial transaction tax is not the proper method because such a tax would create significantly less income than other methods. They further argue that because the patterns of high frequency trading are so well entrenched, a financial transaction tax is unlikely to change the behavior of market participants. Consequently, any thorough critique of the financial transaction tax must evaluate the feasibility of alternative solutions. Moreover, the financial transaction tax is an autonomous proposal and exists in a vacuum from other proposed approaches. The inherent complexities of the financial system makes an independent proposal such as the European Commission proposal improperly suited to present a comprehensive solution to the regulatory challenges that exist with the financial transaction tax. Consequently, a proper response will require a wide range of policies—both fiscal and regulatory. This section of the thesis will present a few alternative options that should be considered for remedying the problems that the financial transaction tax aims to correct. The section will divide these alternatives into two categories: taxes and regulatory reforms.

6.1 Alternative Tax Structures as an Option to the Financial Transaction Tax

A tax levied on financial transactions is not the only tax policy tool that could be helpful in reducing systemic risk, and indeed, many argue that the financial transaction tax would not be the most appropriate form for a taxation of the financial sector for this purpose. The IMF report that argued against the introduction of a financial transaction tax, instead suggested two other types of taxes: a "Financial Stability Contribution" and a financial activities tax. Notably, the financial activities tax has also been discussed in the context of a Norwegian tax on financial institutions. Additionally, the stamp duty tax, which is currently implemented in several European countries, may prove a realistic alternative to the financial transaction tax.

6.1.1 *Financial Activities Tax*

One alternative that may be superior to the financial transaction tax is the financial activities tax, a tax levied on profits and remuneration of financial institutions, and this tax may

be a preferable means of taxing the financial sector. The financial activities tax is a tax levied on revenue and wages in order to approximate the value of financial institutions. The IMF report advocates for a financial activities tax levied on profits of financial institutions, with a varying rate depending on the individual risks of the financial institutions. This type of tax is currently levied in several countries, including, Israel, Italy, parts of Canada, and France (Matheson, 2011). The two primary arguments in favor of a financial activities tax is (1) it would be able to generate more revenue at a lower cost and it is less susceptible to avoidance through relocation and. In essence, the primary difference between the financial transaction tax and the financial activities tax is that the latter seeks to increase the tax burden on the financial sector only in times of excess profits. Moreover, contrary to the financial transaction tax, the financial activities tax is imposed on general income, while the financial transaction tax is only imposed on trading activities.

First of all, proponents argue that the financial activities tax may be much better suited for raising revenues, while simultaneously reducing systemic risk in the financial industry. For example, Matheson (2011) estimates that even a 5 percent financial activities tax in the United Kingdom would raise about 0.3 percent of GDP. In fact, even the Staff of the European Commission's (2011) *Impact Assessment* of the financial transaction tax recognizes some of the benefits with the financial activities tax over the financial transaction tax:

> The analysis of macroeconomic impacts . . . suggests that the economic distortions related to raising revenue could be lower with a FAT compared to an FTT. Model simulations indicate that the short-term effect of a 5% FAT on GDP could be limited to around 0.10% while the long-term effect is simulated to reach about half a per cent (deviation of GDP from its long-run baseline), against annual tax revenues of around 0.2% of GDP.

In contrast, the proposed financial transaction tax would create annual revenue of 0.1 percent of GDP but could cause distortions as large as 1.76 percent in the long run (European Commission, 2011). Moreover, the European Commission (2011) found that in order to match the revenue-raising abilities of the financial transaction tax, the financial activities tax would have to be set at a minimum of 10 percent. This level may be so high that it would encourage tax avoidance.

Second, proponents of the financial activities tax argue that a financial activities tax is superior because the consequences of the tax are more likely to be borne by those operating in the financial sector. In contrast to the financial transaction tax, the financial activities tax is much more difficult to avoid or pass onto third parties. Moreover, the financial activities tax more closely resembles the effect of the VAT. This is preferable because the financial activities tax would have no direct effect on the structure of financial activities since the tax would be levied on profits. However, in contrast to the VAT, the tax would only be applied on excessive economic rents, not all profits. When the tax is levied on the number of transactions, the financial institutions may simply try to find alternative ways of restructuring trades, but companies will always seek to maximize profits. Therefore, a tax levied on profits, or a proxy thereof, is less likely to be subject to avoidance. In practice, there are three types of financial activities taxes. The revenue and likelihood of avoidance of the tax would depend on the scope of coverage for remuneration and profits. The more closely the tax base resembles profits, or economic rents, the less likely is it that financial institutions will try to avoid it or try to pass it on to others. In its report, the IMF (2011) distinguishes between three different levels: a broad FAT, which would tax the total sum of profits and wages; a FAT that taxes the rents of financial institutions, that is, profits in excess of the "normal" level; and a FAT that taxes excessive returns. Of the three taxes, the first FAT most closely resembles VAT. Moreover, in times where financial institutions are not earning excess economic rents, the tax will not be charged. This also reduces the chance of avoidance, as financial institutions are less likely to worry about the tax if it is only imposed on extraordinary profits. Conversely, for large financial institutions that present a risk to the stability of the financial system by presenting a "too-big-too-fail" risk, will be taxed proportionally more due to their high profits. However, the financial activities tax is not immune to avoidance opportunities, and the risk for avoidance may be considerable for certain financial institutions. Most large financial institutions have subsidiaries throughout the world, and therefore, the financial institution, which would be subject to the tax, may simply shift the profits to a subsidiary or parent located in a country that does not impose the tax. Obviously, such transfers would be closely scrutinized by taxing authorities, however, large amounts of capital flows internally in a financial conglomerate and therefore monitoring each transaction to determine whether it is a legitimate transaction not solely aimed at avoiding taxation would be extremely difficult and costly. As a result, it is evident

that the financial activities tax may in fact present more significant issues of implementation than the financial transaction tax.

One significant question is how the financial activities tax is distinct from the income tax. Unlike the income tax, the financial activities tax would not seek to tax *all* profits, but merely *excess* or *extraordinary* profits over the ordinary cost of capital. Because of the structure of the tax, it would mitigate excessive risk taking by financial institutions since after-tax returns would go down, reducing incentives to take extraordinary risks. Moreover, the financial activities tax would be easy to implement since it mimics already existing taxes. It is common that authorities tax profits and withhold remuneration. The financial transaction tax also appears to receive more support from the financial sector. In expressing support for the proposal, Peter Sime, Head of Research for ISDA noted "the FTT would be indiscriminate, whereas with a [financial activities tax] you are looking more at the bank's specific balance sheet and earnings" (House of Lords, 2012, Q69).

The primary criticism of the financial activities tax is difficulty of implementation. In order to properly comply with the goals of the tax, the taxing authority would need to find a way to distinguish "regular" profits from "excessive" profits. Moreover, because there is no distinction between the types of "excessive" profits, desirable activity may also be subject to the tax for the simple reason that the financial institution is making money. Others contend that the financial transaction tax is superior to the financial activities tax because the former would discourage risky high frequency trading, and promote stability in financial markets. Economist Sony Kapoor argued that a combination of bank levies and financial transaction taxes would be a better solution because it would provide a more comprehensive strategy (House of Lords, 2012, Q87). Similarly, many argue that a financial activities tax would impede growth, and that it would in fact be passed onto consumers, but instead of a direct pass-through like the financial transaction tax, it would likely be passed on to consumers via higher pricing of services. Another key reason why the European Commission prefers the financial transaction tax to the financial activities tax is that the former would more effectively address the problems of high frequency trading (House of Lords, 2012, Q124). If the European Commission truly wants to limit excessive risk taking and hazardous trading in the economy, effectively dealing with this type of trading will be imperative. Similarly, neither tax would remedy distortions in

financing decisions or incentives to take on excess leverage among financial institutions created by the favorable treatment of debt capital.

6.1.2 *The Norwegian Efforts for a Financial Activities Tax*

In 2009, Norwegian legislators created the Financial Crisis Commission (Finanskriseutvalget) for the purpose of stabilizing the financial sector, increasing its contribution to the overall economy, limiting its size, and to prevent harmful activities in the sector. Among the options, the Crisis Commission discussed various taxes, and eventually proposed the implementation of a "stability fee"—a fee that would represent the reduced risk creditors face as a result of government bailouts. Moreover, the Commission suggested that Norwegian authorities look further into the prospects of implementing an activity tax on financial transactions. This type of tax would be similar to the UK bank levy and would be a tax on the profits and salaries achieved within the financial sector. This step is in large part a reaction to the fact that the financial sector is exempted from the VAT. The Crisis Commission also brought up the possibility of a financial transaction tax, but expressed concern, however, that this type of tax could cause a distortion of market activity and reduce the competiveness of the economy (Prop. 1 LS (2012–2013)). It should be noted that Norway already has legislation in place for transaction-based taxes. This law currently imposes a transaction fee on the sale of real property; however, the rate for transfers of stock is currently set at 0 percent (Dokumentavgiftsloven, 1976). In the Norwegian national budget for the year 2012 (Prop. 1 LS (2011 – 2012)), the Ministry of Finance analyzed two primary methods for taxing the finance sector using the financial activities tax: the addition method and the subtraction method. Under the addition method, the tax base is the salary and profit of the financial institution. Under the subtraction method, income is subtracted the external "vare- og tjenesteinnsatsen"—a method that more closely resembles a value added tax. Primarily, the Norwegian focus has been on a tax of the second type. The final conclusion from the Ministry of Finance was to plan to undertake further analysis of the structure and consequences of an activity tax.

Due to the Ministry's conclusion that the tax closely resembles a value added tax, it became key to identify which structure of implementation could most closely mimic the characteristics of the VAT. Among the issues the Ministry planned to evaluate further was how to avoid that businesses already subject to the VAT would be affected twice through the purchase of financial services. Because this tax would not be levied on individual transactions, it would

be more difficult for the business to deduct the tax when purchasing financial services; rather the tax would be applied cumulatively. This could affect production. The Crisis Commission further stated that the destination principle should be applied to avoid distortions based on the location of the taxpayer. As a result, for the Crisis Commission's future analysis of this tax it is likely that the foregoing model would dominate that research.

6.1.3 *Financial Stability Contribution*

The "Financial Stability Contribution," would be a tax levied on assets of financial institutions. This type of tax has been adopted in France, Germany, and the United Kingdom (European Commission Technical Fiche, 2011). The financial stability contribution is a balance sheet tax that would be based on the bank's total liabilities minus equity, insured deposits, and insurance policyholder reserves. Most of the proceeds from the tax would go to a type of bailout fund, and thus the tax is akin to an insurance payment to fund future bailouts. Consequently, the tax would only provide substantial revenues in times where profits of the financial industry significantly exceed those of the economy in general. As a result, economic rents in the financial sector will decline, and investors will move capital to other industries. In contrast to both the financial transaction tax and the financial activities tax, the Financial Stability Contribution is more focused on the value of the financial institution's balance sheet, and is commonly referred to as a "bank levy." Many argue that taxing individual transactions is less effective than the balance sheet tax. The main purpose of the financial stability contribution would be to support the fiscal expenditures used to support the financial industry. Moreover, commentators believe that taxing individual transactions is a less efficient way of curbing excess risk taking than the balance-sheet approach. Under the model analyzed by the IMF, the financial stability contribution would be a flat rate levied on all financial institutions, but then the rate would be revised to reflect the individual risk of each financial institution (Matheson, 2011). The financial stability contribution would have two different components: a levy to reflect the fiscal costs used to support the financial sector and a smaller component to fund the availability of credit lines. The first component would raise revenue specifically targeted at future bailout costs, while the second component would go into general revenue. Although the primary purpose of the financial stability contribution is to cover the government costs of bailouts, the fee could be designed to have corrective effects on systemic risk as well by tying the rate into the structure of bank liabilities. This would happen by making the smaller com-

ponent dependent factors that contribute to systemic risk, including size, leverage, and capital structure. Nevertheless, it is clear that the financial stability contribution would be a much smaller step than any of the other proposals. Moreover, the fee would be targeted towards a specific purpose, covering the costs of government bailouts, and would not raise as much revenue as the other proposals. Consequently, the financial stability contribution would probably only be a partial solution to the issues the Commission tries to address with the financial transaction tax.

However, the financial stability contribution is not without flaws. First, the financial stability contribution would increase the cost of financing. New investment tends to increase the value on the balance sheet, and because the tax would be imposed on the balance sheet of a financial institution, the financial institution would have to pay taxes of that additional capital. Second, because the tax is imposed on the size of the balance sheet it would not target risky assets in particular. Relatedly, because risky assets tend to have higher probabilities for large gains, the value of those assets may be lower on the balance sheet due to common use of historic values for assets in balance sheets. Moreover, because the tax would be imposed at a singular point in the year, most likely at the end, the tax would in fact penalize long-term investors. The investors that engage in more speculative activities tend to turn over portfolios and assets more frequently. Financial institutions may therefore choose to time the turnover so that the balance sheet is temporarily depressed at the time the tax is imposed. The financial institution may then choose to realize the gain, and distribute the proceeds to its investors. As such, there are many ways in which a financial institution would be able to avoid the financial stability contribution.

6.1.4 *Stamp Tax*

Another option that has been proposed as an alternative to the financial transaction tax is a stamp duty similar to the one imposed by the United Kingdom. Many view the stamp duty as a compromise between the introduction of the financial transaction tax and a *laissez-faire* approach. Moreover, the prospects of introducing an EU-wide stamp duty would be much higher than the financial transaction tax. Because the most prominent opponent of the financial transaction tax, the United Kingdom, already levies a stamp duty, the Commission could simply develop a proposal for a stamp duty based on the UK structure. In fact, Mark Hoban,

the Financial Services Secretary for the United Kingdom, stated that Britain was "happy for member states to follow the stamp duty model if they chose to do so" (Barker, 2012). Similarly, the German Federal Minister of Economics and Technology stated, "if the British aren't willing to get closer to the European model of a financial transaction tax, it would make sense to talk with the British and other European states about the British model" (Pignal, 2012). Therefore, it seems that a stamp duty may be the easiest solution to implement, but would it accomplish the goals set forth by the European Commission?

Indeed, many argue that the stamp duty is a superior model to the financial transaction tax. One major issue with the financial transaction tax is that it often targets market intermediaries, except for central clearinghouses, which are exempted under the proposal, rather than the market participants. In contrast, the stamp duty is levied on market participants, regardless of where the participant is located. Therefore, the stamp duty may be less susceptible to avoidance because the current model applies to any purchase of UK shares regardless of where the party is located. The financial transaction tax would only apply to parties located within the European Union, which incentivizes avoidance through relocation. The financial transaction tax is levied on each party engaging in a transaction, and as a result, the total tax paid far exceeds the absolute amount per transaction. Furthermore, the stamp duty tax would not be susceptible to issues of equitable distribution because each country takes what takes place within their borders, regardless of where the original transaction is conducted. This, however, may be a double-edged sword. Because the stamp duty taxes the country where the equity is located, it may collect taxes from non-UK citizens. In fact, nearly 40 percent of UK stamp duty revenues come from abroad. It may be perceived as unfair, especially by the EU countries without significant financial centers of their own, that that country's residents are paying significant taxes to another country. The United Kingdom's unwillingness to let go of revenues tied to activities in the City of London, is probably the primary reason why the United Kingdom accepts a stamp duty tax yet staunchly opposes a financial transaction tax.

Nevertheless, the experiences so far with the stamp duty have not been uniformly positive. Several investment companies, including BlackRock, have expressed concerns that the stamp duty caused a shift from pure equity investment to equity derivatives that are exempt from the stamp duty (House of Lords, 2012, ¶ 12). Many investors also use Contracts for Difference, which allows the investors to avoid the tax but delays the realization of the gain. Con-

sequently, it appears that if the stamp duty were to represent any realistic alternative to a financial transaction tax, the stamp duty must be extended to derivatives as well. Moreover, currently nearly 70 percent of the total volume in UK stock markets is exempted from the stamp duty (Spratt, 2006). As a result, any European Commission action to introduce a stamp duty should be carefully re-crafted to avoid the loopholes that currently exist in the UK system. Moreover, the tax can be avoided by purchasing duplicate securities listed on foreign exchanges, such as American Depositary Receipts, instead of the UK security. Overall, it seems like the stamp duty has a great advantage in the higher likelihood of implementation, however, before such a proposal could be taken seriously there must be in-depth debate regarding the tax base, rates, and how to properly avoid the downfalls of the currently implemented stamp duties.

6.2 Reforming Financial Regulation

The European Commission should also consider stricter regulatory requirements to address excessive risk taking and high frequency trading. In the wake of the financial crisis, many different strategies have been suggested for restructuring regulation of financial markets to ensure proper alignment of incentives between the financial sector and the economy at large. Notably, it appears that increased regulation is gaining notoriety, and that the financial crisis has significantly changed attitudes about the proper scope of government intervention. In financial markets the most typical form of regulations pertain to the following areas: executive compensation, restrictions on ownership, disclosure of information, capital adequacy requirements, and limits on investment activities. The need for market regulation arises from the fact that markets are not perfect, and inefficiencies develop for several reasons, including asymmetrical information that exists between market participants, transaction costs deter optimal behavior, and misalignment of incentives such as moral hazard.

One country that has significantly increased its level of regulation following the financial crisis is the United States. In the United States, the comprehensive Dodd-Frank Wall Street Reform and Consumer Protection Act (H.R. 4173) was enacted. Even though the Act had many vocal opponents, it gained traction with the general population as the wide-rippling effects of the financial crisis became known. The Dodd-Frank Act is the greatest overhaul of financial regulation in the United States since the Great Depression. The goal of the legislation as stated in the preamble is

> [t]o promote the financial stability of the United States by improving accountability and transparency in the financial system, to end "too big to fail," to protect the American taxpayer by ending bailouts, to protect consumers from abusive financial services practices, and for other purposes.

The Act contains changes to the regulatory structure of the financial sector by creating several new agencies, either with completely new supervisory responsibility or taking over responsibilities from an existing agency. Among these agencies are the financial Stability Oversight Council, the Office of Financial Research, and the Bureau of Consumer Financial Protection. These agencies are required to report to Congress on either an annual or biannual basis to update legislators on the progress of current plans and future goal setting. While the two latter agencies are primarily focused on "monitoring systemic risk and researching the state of the economy and clarif[ying] the comprehensive supervision of bank holding companies by the Federal Reserve," the Financial Stability Oversight Council focuses on identifying threats to financial stability of the United States, and responding to these threats. In the course of pursuing these goals, the council maintains several duties: (i) to enhance the integrity, efficiency, competitiveness, and stability of the United States financial markets, (ii) to promote market discipline, and (iii) to maintain investor confidence (U.S. Treasury, 2012, p. ii). The Act also aims to increase oversight of the industry by increasing supervision of institutions that are perceived as creating systemic risk, and increasing reporting requirements. Additionally, the Act tries to create a "warning system" to enable regulators to predict when the economy is on the brink of a recession. Moreover, the Act imposes stricter restrictions on executive compensation, which would remedy the agency issues explained previously.

Thus, the Commission should also look into potential changes to the regulatory structure. Currently, monitoring and regulation of the financial sector primarily takes place on a national level. The European Union could make a greater effort to increase regulation on an EU-wide basis. Alternatively, the European Union can encourage changes to the member states' regulation. The specific regulatory measures could pertain to stricter disclosure requirements or higher capital adequacy requirements. A higher requirement of capital or a minimum equity capitalization ratio would make financing more expensive for companies because equity is relatively more expensive than debt. However, if this regulatory change could reduce the risk of future crises, this cost will be partly offset by the lesser likelihood of fall in share prices as a result of a financial recession. Furthermore, currently many types of financial

transactions, including a large portion of OTC trading, takes place in the shadow of regulatory oversight. To more effectively combat systemic risk, regulatory authorities should expand the scope of monitoring so as to include these transactions as well. Additionally, by increasing the level of detail for required disclosure for each transaction, regulators may be able to single out market participants that consistently engage in transactions without economic substance, but merely exist for the purpose of "beating the system." Although many parts of finance are viewed as "zero-sum games"—where one party to a transaction loses, while the other wins—the outcomes of these games should be determined based on fundamental analyses of market conditions, rather than strategic bets against the market. The key to aligning incentives between market participants will be to restore the focus to long-term, fundamental values. The goal should therefore be to encourage socially useful transactions that contribute to restoring prices towards equilibrium. Conversely, because high frequency trading generally disregards fundamental information, such trading will tend to destabilize prices and should be discouraged. As such, regulators should ensure that computer-driven or algorithmic trading would not pay off as a long-term strategy. Moreover, regulations should be focused on maintaining proper capitalization of companies, including a healthy balance of debt-to-equity. This can be accomplished by implementing stricter capital adequacy requirements for financial institutions. Similarly, current tax structures and mark-to-market arrangements encourage financial institutions to realize gains early and defer losses, which gives outside parties a skewed picture as to the true condition of the financial institution. Exactly which regulatory measures should be implemented to accomplish these goals is uncertain, however, it is undisputed that a tax on financial institutions alone will not accomplish the stated goals, but should be accompanied by proper regulatory measures.

7. Conclusion

In many ways, the financial transaction tax shows significant potential for providing a one-step solution to several issues plaguing the European Union. The tax could serve several regulatory objectives while simultaneously raising revenues—two effects that are tremendously important for the current recovery from the financial crisis. Overall, the largest downfall of the financial transaction tax is that its public image significantly differs from its practical implications. While the public at large views the financial transaction tax as a "Robin Hood" replica that will ensure that the financial sector finally contributes its fair share to the economy, the practical implications of the tax may be that the tax instead affects "the poor" in the form of regular consumers and businesses. Although, the prospects of EU-wide implementation of a financial transaction tax in its current state are dim, this does not mean that the debate is likely to die down anytime soon, especially in light of the fact that many citizens of European countries are struggling with the aftermath of the financial crisis, such as austerity measures.

As described earlier, the Commission's primary goals for the tax are to (1) raise revenue, (2) curb excessive volatility, and (3) harmonize the internal market. The most prominent argument in opposition to the financial transaction tax is that the tax inefficiently addresses multiple problems because of the broad scope of the tax. Although the financial tax will undoubtedly raise revenue and reduce national contributions to the EU budget, it is uncertain whether the overall effect after accounting for the negative externalities of the tax will be positive. The tax imposes a fee on the trade of financial instruments, and because trade in these assets will not cease completely, the tax will create revenue for the European Union. However, due to the cost of the tax, trading may decline, an effect that will directly impact the GDP of these countries. Moreover, in order to avoid the tax, taxpayers may relocate outside the European Union. This change in behavior will not only deprive the European Union member states of revenue from the financial transaction tax, but from other taxes and jobs as well. Therefore, governments should set the tax at a low rate to minimize the distortive effects of a financial transaction tax, and develop a structure for the tax that will minimize avoidance opportunities. Currently, the Commission proposal uses broadness in definitions to combat the risks of avoidance, which minimizes avoidance opportunities, but may also cause the tax to "aim too widely," thereby affecting other parties such as consumers. On the other hand, it is

unsettled whether the tax would actually contribute to reducing excess volatility. The underlying rationale is to increase the cost of engaging in trading activities, and indirectly the cost of speculation, which is commonly perceived as a driving factor in creating market instability. A counterargument, however, is that the tax would actually increase the cost of engaging in risk-reducing measures such as hedging. Moreover, high frequency trading is not exclusively negative. In fact, high frequency trading may facilitate liquidity in the market. If liquidity worsens in the market, the cost of capital may increase. Additionally, because the tax will increase transaction costs for investors, the tax will certainly contribute to increasing the cost of capital for companies. Furthermore, pervasive mispricing, insufficient allocation of risk, and misaligned incentives, including executive compensation structures that essentially rewarded excessive risk taking, were also significant causes of the crisis. Because the financial transaction tax only seeks to reduce the number of financial transactions, the tax would not remedy those issues. Finally, there is a legitimate argument for using the financial transaction tax to harmonize the internal market. Currently, ten different European Union member states impose financial transaction taxes, which could create issues of double taxation. Notably, the need for harmonization of the internal market is closely tied to the issue of global implementation. Many EU countries oppose the tax because tax because they argue that it will result in a competitive disadvantage for European Union economies. If only a few countries impose the tax, companies may easily transact through another EU country via the open market. This in turn could create a competitive distortion in favor of the European Union member states that do not impose such a tax. Additionally, some argue in favor of the financial transaction tax due to its redistributive qualities. In the aftermath of the financial crisis, public outrage against the financial industry increased significantly. Many believed that greedy financial institutions whose sole concern was limited to the institution's bottom line, was the driving cause behind the recent financial crisis which has plagued the world over the last few years. Therefore, a common argument in favor of the tax emphasizes that the tax would directly affect the financial industry, and would lead to a higher contribution from the financial sector to the rest of the economy. Moreover, the contribution would also be a form of repayment for previous bailout funds provided by governments, and could be akin to an insurance premium to cover future bailouts.

Overall, it seems evident that, in its current state, the financial transaction tax has too many uncertainties, yet not enough confirmed benefits. Instead of using one tax to combat

many problems, legislators would be able to better address the various issues, with fewer distortions, by taking a multi-prong approach. Therefore, instead of passing the financial transaction tax, authorities should evaluate a range of options. This could include a variety of measures, including a fiscal approach such as a variant of financial tax. However, this comprehensive approach should be more rooted in a regulatory framework, which could more aptly remedy the underlying distortions that exist in the market. To address the issue of excess volatility, authorities should focus on stricter regulatory measures, including capital requirements, and closer monitoring of the risks borne by financial institutions. Additionally, regulatory authorities need to exercise broader oversight of the financial industry, and should follow the recent direction of countries such as the United States. Moreover, any regulatory measures should eliminate moral hazard issues, and focus on realigning the incentives of the financial industry with the economy at large. The fact that the spotlight is being directed toward the misalignment of incentives in the financial industry is important as it may finally force legislators to take steps to correct the fundamental misalignments in the industry because the public voice has finally become louder than that of the financial industry. For revenue-raising measures, other taxes, or increase of current taxes, could be considered. These taxes could have a regulatory effect as well, and could be a fiscal tool for realigning the incentives of the financial industry with the rest of the economy by imposing some of the costs of state guarantees on the financial industry. One method for accomplishing this goal would be to implement a bank levy similar to the United Kingdom, and targeting the funds raised from a tax to a central bailout fund. The important consideration here would be to assess a tax that would have less of a negative effect on GDP than the financial transaction tax. One alternative would be to implement a financial activities tax, which has less of the negative effects of the financial transaction tax, but also possesses some of the risk-curbing qualities of the financial transaction tax. Admittedly, for harmonization of the internal market, the enhanced cooperation framework that was recently authorized by the European Union will pose challenges for the open market. However, the most obvious solution to this problem would be to either disallow the enhanced cooperation framework, as a full implementation within the European Union is highly improbable. Consequently, authorities should consider alternative approaches for addressing the stated goals of the European Commission, even if that would create some disharmony within the internal market.

APPENDIX

	France	Germany	UK	USA
Name	Tax on Banks ("Taxe systémique sur les banques")	Bankenabgabe ("Bank levy")	Bank Levy	Financial Crisis Responsibility Fee
Proposed start	1 January 2011, based on figures of calendar year 2010.	1 January 2011, but by reference to prior year balance sheets.	1 January 2011	Uncertain
Expected duration	Permanent	Permanent	Permanent	10 years, or until TARP is repaid.
Bank definition	Broad definition, which includes credit institutions, investment companies, market operators, members of a clearing house, payment institutions, regulated financial companies and bank holding companies.	s.1 of the German Banking Act, including all credit institutes which have a permission according to s.32 of the German Banking Act.	Banking groups, building societies; definition wide enough to include broker dealers.	Broad definition: bank holding companies, insured depository institutions, thrift holding companies, insurance or other companies that owned insured depository institutions, or securities broker/dealers.
Local bank	Local entities on a consolidated basis including subsidiary and foreign branches.	Local entities only (but may capture foreign branches of local entities).	Levy based on global consolidated accounts for banking groups/building societies.	Levy based on global consolidated accounts.
Branches of foreign entities	If regulated in France, except if the branch's head-office is in the EEU (EU + Norway, Iceland and Liechtenstein).	Only if regulatory permission under s.32 of the German banking act (i.e. German activity only).	Levy based on the UK attributed activity (aggregate all relevant the UK subsidiaries and branches), plus entities held/branches under the UK.	If regulated in the US, but the fee is only levied on the US based liabilities.
Rates	0.25%	Progressive rates for "relevant liabilities": ≤ €10 bn = 0.02% > €10 bn ≤ €100 bn = 0.03% > €100 bn = 0.04% 0.00015% for off balance sheet derivatives.	0.07% and 0.0375% for longer maturity funding; lower rates 2011 calendar year rescinded (for December 2011 year end, the effective rates are also 0.07% and 0.0375%)	Not set, but expected to be 0.15% of "covered" liabilities.

Table 2. Overview of Proposed Financial Transaction Taxes. Source: KPMG, 2011.

Country	Tax Revenue (in billion $)	Tax Rate for Different Securities				
		Equity	Bonds	Options	Futures	Capital Levy
Hong Kong	$2.79	10 basis points				
India	$1.22		Local stamp duties may apply	0.017% on premium; 0.125% on strike	0.017% of delivery price	
South Korea	$6.08	0.5% on value of shares in corporations or partnerships				0.1–0.4% tax on capital formation
South Africa	$1.41	0.25% of value; new share issues excluded				
Switzerland	$2	15 basis points on domestic shares; 30 basis points on foreign shares	6–12 basis points on bond issuance			1% on share issuance in excess of CHF 1M
Taiwan	$3.3	30 basis points	10 basis points on corporate bond principal	10–60 basis points on premiums	Up to 0.025 bps on interest rate futures; up to 6 basis points on	
United Kingdom	$5.86	Stamp duty 0.5% on secondary sales of shares and trusts holding share		50 bps on strike price, if executed	50 bps on delivery price, if delivered	
Total	$22.66					

Table 3. Source: Griffith-Jones & Persaud, 2012.[6]

6. Authors note that the data is drawn from IMF Working Paper *Taxing Financial Transactions: Issues and Evidence* and World Bank GDP Data. Data is for 2009 for Hong Kong and Taiwan, 2008 for India, South Africa, and the United Kingdom, and 2007 for all other countries.

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