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The Global Architecture of Financial Regulatory Taxes

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THE GLOBAL ARCHITECTURE OF FINANCIAL REGULATORY TAXES

Carlo Garbarino and Giulio Allevato** ****

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INTRODUCTION

This Article endeavors to broaden the analysis of available policy tools to address the problems created by financial crises and discusses how, in addition to direct regulation, certain tax measures having a regula-

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tory nature may operate to address the so-called “negative externalities” often associated with those crises.

There is a negative externality when an economic agent making a decision does not pay the full cost of the decision’s consequences. In such cases, the cost to society as a whole is greater than the cost borne by the individuals creating the economic impact. In practice, negative externalities result in market inefficiencies or failures since in most cases individuals do not fully take into account the costs of the negative externalities created.

According to the Coase Theorem, if transaction costs are sufficiently low and the individuals impacted by the negative externalities own property rights, an efficient outcome will prevail through negotiation.¹ However, in real situations when these assumptions are not met, negative externalities can be addressed by taxing the agents who create them, so that the agents’ marginal cost will be increased and, correspondingly, their output will be reduced.

Those measures that indirectly regulate agents’ behavior through taxation can be used to address the failures of the market resulting from negative externalities, such as those created by the recent financial crisis. In the turmoil of 2008, negative externalities percolated from the financial industry to other sectors of the economy and to society as a whole, not only directly in the form of economic damages, but also indirectly through governmental use of general tax revenue to fund the bank bailouts and other crisis management measures.

Assessing causal relationships in complex evolutionary phenomena, such as the economic crisis which began in the United States in 2008 and migrated to European countries, is an arduous task. However, a consistent strain of research points to the conclusion that one of the main contributing factors to the crisis was a lack of effective regulation of financial institutions.² Had a more established and internationally-coordinated

1. See the seminal work of R. H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1 (1960).

2. See, for example, in the vast literature on the causes of the financial crisis: Phillip Swagel, *The Financial Crisis: An Inside View*, BROOKINGS PAPERS ON ECON. ACTIVITY, Spring 2009, at 14-15; Markus K. Brunnermeier, *Deciphering the Liquidity and Credit Crunch 2007–2008*, 23 J. ECON. PERSPECTIVES, Winter 2009, at 80-81 (discussing how certain factors amplified the effects of the housing market collapse into other markets); RAGHURAM G. RAJAN, *FAULT LINES: HOW HIDDEN FRACTURES STILL THREATEN THE WORLD ECONOMY* 31 (2010) (pointing to a complicity amongst regulators and bankers as contributing to the financial collapse); Peter J. Wallison, *Cause and Effect: Government Policies and the Financial Crisis*, 21 CRITICAL REV.: J. POL. & SOC’Y. 365 (2009) (arguing that regulatory standards were lowered); Joseph E. Stiglitz, *The Anatomy of a Murder: Who Killed America’s Economy?*, 21 CRITICAL REV.: J. POL. & SOC’Y 332-33 (2009); VIRAL V. ACHARYA, THOMAS COOLEY, MATTHEW RICHARDSON, & INGO WALTER, *MANUFACTURING TAIL RISK: A PERSPECTIVE ON THE FINANCIAL CRISIS OF 2007–2009* (2010) (asserting that there is a consensus around the collapse being caused by the credit boom and housing bubble); Viral V. Acharya & Matthew Richardson, *Causes of the Financial Crisis*, 21 CRITICAL REV.: J. POL. & SOC’Y 195 (2009) (arguing that regulations were not adequate to stop the banks’ behavior); Maurice Obstfeld & Kenneth Rogoff, *Global Imbalances and the Financial Crisis: Products of Com-*

regulatory framework been in place for accountability and transparency, the sudden collapse of financial markets would have not occurred, or its effect would at least have been mitigated.³

Therefore, among the manifold dimensions of causal analysis of the 2008 financial crisis, it is necessary to identify how the negative externalities created by the financial industry can be mitigated, both to prevent another crisis of such dimensions from reoccurring and to prevent the public from bearing the ultimate costs of the bailouts.

Direct regulation, which the United States pursued through the Dodd-Frank Wall Street Reform and Consumer Protection Act (the “Dodd-Frank Act”) in 2010,⁴ is one possible approach. Regulatory taxes provide another means of coping with negative externalities,⁵ and they are discussed in the next Section. This shows that the taxing power in a broad sense has both a revenue-raising function and a regulatory function.⁶ This

mon Causes (Ctr. For Econ. Policy Research, Discussion Paper No. DP7606, 2009), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1533211. A different view is found in Keith Hennessey, Douglas Holtz-Eakin & Bill Thomas, *Dissenting Statement to Financial Crisis Inquiry Comm’n, The Financial Crisis Inquiry Report: Final Report of the National Commission on the Causes of the Financial and Economic Crisis in the United States*, 413-38, at 414 (2011), available at <http://www.gpo.gov/fdsys/pkg/GPO-FCIC/pdf/GPO-FCIC.pdf> (listing ten essential causes, with lack of regulation not among them).

3. We draw here on the analysis developed by Michael S. Barr, one of the architects of the Dodd-Frank Act. See Michael S. Barr, *The Financial Crisis and the Path of Reform*, 29 *YALE J. ON REG.* 91 (2012). An approach that essentially looks at the failure of regulation can be found in most of the analysis that has been produced in the aftermath of the crisis. See, e.g., FIN. CRISIS INQUIRY COMM’N, *THE FINANCIAL CRISIS INQUIRY REPORT: FINAL REPORT OF THE NATIONAL COMMISSION ON THE CAUSES OF THE FINANCIAL AND ECONOMIC CRISIS IN THE UNITED STATES* 114 (2011), <http://www.gpo.gov/fdsys/pkg/GPO-FCIC/pdf/GPO-FCIC.pdf>; U.S. S. PERMANENT SUBCOMM. ON INVESTIGATIONS, COMM. ON HOMELAND SEC. & GOVERNMENTAL AFFAIRS, 112TH CONG., *WALL STREET AND THE FINANCIAL CRISIS: ANATOMY OF A FINANCIAL COLLAPSE* 143-55 (2011), http://www.hsgac.senate.gov/public/_files/Financial_Crisis/FinancialCrisisReport.pdf; DEP’T OF THE TREASURY, *FINANCIAL REGULATORY REFORM: A NEW FOUNDATION: REBUILDING FINANCIAL SUPERVISION AND REGULATION* 7 (2009), http://www.treasury.gov/initiatives/Documents/FinalReport_web.pdf.

4. Pub. L. No. 111-203, 124 Stat. 1376 (2010) (codified as amended in scattered sections of the U.S. Code).

5. Reuven S. Avi-Yonah, *The Three Goals of Taxation*, 60 *TAX L. REV.* 1, 3-4 (2006); Reuven S. Avi-Yonah, *Taxation as Regulation: Carbon Tax, Health Care Tax, Bank Tax and Other Regulatory Taxes*, 1 *ACCT., ECON. & LAW* 1, 2-3 (2011) [hereinafter *Taxation as Regulation*].

6. See *Steward Machine Co. v. Davis*, 301 U.S. 548, 589 (1937) (quoting *Sonzinsky v. United States*, 300 U.S. 506, 513 (1937) (“Every tax is in some measure regulatory.”). See also *United States v. Sanchez*, 340 U.S. 42, 44 (1950) (“It is beyond serious question that a tax does not cease to be valid merely because it regulates, discourages, or even definitely deters the activities taxed.”). The U.S. Supreme Court has in several cases confirmed that Congress can legitimately use its taxing power to indirectly regulate non-tax behaviors and areas that it may not regulate directly under the “enumerated powers rule.” This position was recently reaffirmed by Chief Justice Roberts in his controlling opinion on the constitutionality of the Patient Protection and Affordable Health Care Act (so-called “Obamacare”), when Roberts wrote that “taxes that seek to influence conduct are nothing new” and cited Justice Story’s proposition that “the taxing power is often, very often, applied for other purposes, than revenue.” *National Federation of Independent Business v. Sebelius*, 132 S. Ct. 2566, 2596 (2012)

Article will discuss the use of such taxes as applied to the financial sector, referring to them as “*financial regulatory taxes*.”

The Article is organized as follows. Part I briefly describes the unfolding and the aftermath of the 2008 financial crisis. Part II articulates an argument for adopting regulatory taxes to address the problem of negative externalities created by the financial sector and currently borne by the economy and society as a whole. Part III defines the main features of the potential architecture of such financial regulatory taxes by looking at their principal policy goals and considering the issues arising from the need for multilateral cooperation at the international level. Part IV then describes the financial regulatory taxes levied on the economic outcomes of legal entities, including risky asset-based and liability-based taxes and excess-profits taxes. Part V, in turn, describes the financial transactions tax that is charged on actual operations in the financial markets in a broad sense. Part VI explains how these financial regulatory taxes may interact with and complement direct regulation in a holistic approach to the reform of the financial sector. The Article concludes with Part VII by highlighting how broad cooperation at the international level could rely on the policy mix that results from the complementary application of regulatory taxes and direct regulation.

It is important to note the regulatory taxes described in Parts III and IV are not exclusive of one another, but, if properly designed and carefully implemented, can be applied in combination. In such a flexible choice architecture, these taxes are potentially capable of addressing at domestic and international levels, the three policy goals of (1) discouraging excessive risk-taking, (2) building an insurance fund available for future crisis management, and (3) raising more revenue from the industry which creates the negative externalities, therefore achieving more redistribution and fairness within the tax system as a whole (for details, see *infra* Section III.A). Consequently, these different types of financial regulatory taxes can be combined as a cluster of diversified incentives (for details, see *infra* Section VI.).

We recognize that a proposal for the combined adoption of financial regulatory taxes may be vulnerable to criticism concerning its sustainability by the financial industry. We are aware of the delicate equilibrium that must be carefully calibrated to prevent the broad policy framework advanced here from suffocating the financial industry. At the same time, however, we believe that concerns about excessive regulatory burdens of the industry cannot preclude the development and design of broad policies that could more effectively prevent another global crisis from reoccurring.

Although it is not among the objectives of this work to go into the specific details of designing and implementing optimal financial regulatory

(citing JOSEPH STORY, COMMENTARIES ON THE CONSTITUTION OF THE UNITED STATES §962 (1833)). Roberts further cited *Sonzinsky* for the proposition that “[e]very tax is in some measure regulatory. To some extent it interposes an economic impediment to the activity taxed as compared with others not taxed.” *Id.* (quoting *Sonzinsky, supra*).

taxes, there are several precautions that can and should be taken to ensure that the implementation of regulatory taxes does not lead to undesirable, unintended consequences. In particular, besides the proper establishment and ongoing adjustment of minimal tax rates and tax bases, policy-makers and governments can also opt for a gradual adoption of such measures. Other refinements may be added as needed. In this way, the actual implementation process in the context of multilateral cooperation may, over time, enhance and refine those proposals and turn them into sustainable policies.

I. A BRIEF DIACHRONIC ACCOUNT OF THE FINANCIAL CRISIS

The events that unfolded in 2008 crystallized a tipping point: when the housing market collapsed, the credit markets were almost paralyzed. Shortly after, the U.S. Congress and the U.S. Federal Reserve took major macroeconomic measures and other specific actions.⁷ A number of U.S. investment banks were consolidated by the Federal Reserve as holding companies or went bankrupt.⁸ Additionally, the federal government bailed out important banks⁹ and protected them under a liquidity guarantee program.¹⁰

In the EU, an imbalanced pattern of growth spurred demand so that the region's periphery growth—especially in Spain—was fuelled by capital inflows from core countries—especially from Germany—and intermediated by the European financial system, which in turn was magnified by the use of bank leverage and securitization. The public sector stepped in to fill financing gaps with extraordinary measures, which included, in particular, emergency support facilities. The European Central Bank took several actions, including steps to ease the tension in interbank markets and to reduce bank refinancing risks, thereby averting a severe credit crunch and helping to ease borrowing costs for fiscally frail nations.¹¹

Most of these measures, aimed at fixing the damages created by segments of the financial industry, resulted in serious sacrifices for countries' public finances, as they were funded by revenue collected through general taxation. This raised not just fiscal but also fairness concerns, both of which still persist today. Such concerns were shared at the international level. At the end of the Pittsburgh Summit in 2009, the G20 leaders asked the International Monetary Fund (IMF) to prepare a report for their next

7. See American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, 123 Stat. 115 (codified as amended in scattered sections of the U.S. Code).

8. See Brunnermeier, *supra* note 2, at 77, 82-91; Barr, *supra* note 3, at 96.

9. See Emergency Economic Stabilization Act of 2008, Pub. L. No. 110-343, 122 Stat. 3765 (codified as amended in scattered sections of the U.S. Code).

10. See Temporary Liquidity Guarantee Program, 12 C.F.R. 370.2 (2008).

11. Dermot Hodson & Lucia Quaglia, *European Perspectives on the Global Financial Crisis: Introduction*, 47 J. COMMON MARKET STUD. 939 (2009); Summit of the Euro Area Countries, *Declaration on a Concerted European Action Plan of the Euro Area Countries*, (Oct. 12, 2008), available at http://ec.europa.eu/economy_finance/publications/publication_13260_en.pdf.

meeting on June 2010, “with regard to the range of options . . . as to how the financial sector could make a fair and substantial contribution toward paying for any burdens associated with government interventions to repair the banking system.”¹² In April of 2010, this request was subsequently expanded by the G20 finance ministers and central banks governors when they called for the IMF to engage in “further work on options to ensure domestic financial institutions bear the burden of any extraordinary government interventions where they occur, address their excessive risk taking and help promote a level playing field, taking into consideration individual country’s [sic] circumstances.”¹³

In a report issued on June 2010 (hereinafter, “IMF Report”), the IMF described the various measures already adopted at the domestic level by various countries and examined the application of ‘backward-looking’ charges—such as one based on the balance sheets of financial institutions at the beginning of the crisis—as the least distortionary way to recover the fiscal cost of the past bailouts.¹⁴ The IMF further proposed the adoption of two new taxes on financial institutions aimed at addressing future financial failures.¹⁵ The goal of these taxes was to reduce the systemic risk inherent in the financial sector and to raise a significant amount of revenue.¹⁶

Despite these efforts, the G20 Toronto Summit, which was held on June 26-27, 2010, clearly demonstrated the inability of the G20 leaders to reach an agreement on whether and how to create a globally coordinated tax on the financial sector. The contrast in viewpoint was insurmountable and, at the end of the Summit, the G20 leaders simply “recognized that there are a range of policy approaches to this end. Some countries are pursuing a financial levy. Other countries are pursuing different approaches.”¹⁷

The main reasons for the failure to agree had already been announced by the G20 ministers of finance and central bank governors after their preparatory meeting in Busan, South Korea, on June 5, 2010. At this meeting, the divide was clear. Europeans and Americans—both of which were strongly affected by the financial crisis and by the burdens of the

12. G20, *Leaders’ Statement: The Pittsburgh Summit*, at 10 (Sept. 24-25, 2009), https://g20.org/wp-content/uploads/2014/12/Pittsburgh_Declaration_0.pdf.

13. G20, *Communiqué: Meeting of Finance Ministers and Central Bank Governors*, ¶ 4 (Apr. 23, 2010), <http://www.g20.utoronto.ca/2010/g20finance100423.html>.

14. International Monetary Fund [IMF], *A Fair and Substantial Contribution by the Financial Sector: Final Report for the G-20*, at 8, (June 2010), <https://www.imf.org/external/np/g20/pdf/062710b.pdf>.

15. *Id.* at 25-26.

16. *Id.*; see also John D. Brondolo, *Taxing Financial Transactions: An Assessment of Administrative Feasibility 4* (IMF, Working Paper No. WP/11/185, 2011), <https://www.imf.org/external/pubs/ft/wp/2011/wp11185.pdf>. The main features of the two taxes proposed by the IMF—the ‘Financial Activities Tax’ and the ‘Financial Stability Contribution’—will be described in Sections IV.A and IV.B.

17. THE G20 TORONTO SUMMIT DECLARATION ¶ 21 (June 27, 2010), <http://www.g20.utoronto.ca/2010/to-communique.html#top>.

bailouts—pushed for the adoption of a globally coordinated tax. Countries that had not been particularly affected by the crisis were against the imposition of a new tax on their domestic banks, none of which had benefitted from any government aid, and instead supported the maintenance of traditional regulatory measures.¹⁸

To further regulate the financial sector in the United States, Congress enacted the Dodd-Frank Act in 2010.¹⁹ The Dodd-Frank Act adopted a sweeping regulatory approach consisting of three main actions: (i) improved management of systemic risk through a federal authority, including clear procedures for the winding down of Systemically Important Financial Institutions (“SIFIs”); (ii) regulation of the components of “shadow banking” markets,²⁰ such as derivatives, repurchase agreements (“repos”), and securitizations; and (iii) establishment of a consumer financial protection agency.²¹

Although the U.S. economy has arguably recovered from the 2008 crisis and some authoritative voices in the financial industry have begun lobbying for the relaxation of Dodd-Frank regulations which they consider to be too invasive, we strongly believe that there is still a need for sound regulation of the financial sector, because the threat of another financial

18. This explanation is strongly implied by reports of the conference. *See, e.g., World Finance Ministers Rule Out Global Bank Tax*, FRANCE 24 (June 5, 2010), <http://www.france24.com/en/20100605-G20-bank-bailouts-public-debt-budget-tax-south-korea-summit>. This scenario has been diplomatically summarized by the final joint statement of the Busan meeting, in which it is explained that the G20 ministers of finance and central bank governors agreed to develop common strategies “taking into account individual country’s circumstances and options.” G20 Meeting of Finance Ministers and Central Bank Governors, Busan, S. Kor., June 5, 2010, *Communiqué*, at 2, <http://www.oecd.org/env/45425658.pdf>. In addition, competition between countries in attracting capital and investments may also have played a decisive role in the failure of the international community to reach an agreement. Some countries may have been interested in becoming a ‘financial tax haven’ to attract financial institutions, at the expenses of other countries, relying on the belief that the latter, in the absence of an international agreement, would still implement a new domestic tax on the institutions established within their territories. In the United States, for example, the Obama Administration had already advanced, in January 2010, its unilateral proposal for the implementation of a national liability-based levy on large financial institutions (this proposal will be discussed in Section IV.A). This type of scenario already manifested in 1998, when the OECD failed to enforce a substantial tax harmonization plan due to the unwillingness of certain jurisdictions to renounce the opportunity to attract investors from high-tax countries by offering them a lower level of taxation. *See* Richard T. Page, *Foolish Revenge or Shrewd Regulation? Financial-Industry Tax Law Reforms Proposed in the Wake of the Financial Crisis*, 85 TUL. L. REV. 191, 207 (2010).

19. Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act), Pub. L. No. 111-203, 124 Stat. 1376 (2010).

20. This measure has already been discussed. *See, e.g.,* Tobias Adrian & Hyun Song Shin, *The Shadow Banking System: Implications for Financial Regulation*, Fed. Res. Bank of New York Staff Reports, No. 382 (2009).

21. Barr, *supra* note 3, at 92. Similar actions were taken in Europe. *See, e.g.,* Charles A. E. Goodhart, *The Regulatory Response to the Financial Crisis*, 4 J. FIN. STAB. 351 (2008); James Buckley & David Howarth, *Internal Market: Gesture Politics? Explaining the EU’s Response to the Financial Crisis*, 48 J. COMMON MKT. STUD. 119 (2010).

crisis may still exist.²² The severe and ongoing consequences of the 2008 crisis on the EU economy demonstrate that every effort must be made to prevent a potential future financial crisis of such a dimensions.

II. ADDRESSING THE FINANCIAL SECTOR'S NEGATIVE EXTERNALITIES: THE ROLE OF TAXATION

The preliminary question to address here is whether taxes should ever be used to regulate behavior. The standard answer to this question is that they should not because of “tax neutrality,” according to which tax measures are efficient (“neutral”) as long as they do not alter the relative prices/costs of goods, services, or any other economic activity.²³ Under this conception of neutrality, when tax measures alter relative prices and preferences of economic actors, they give rise to tax-affected decisions that are considered ‘distorted’ because they produce a lower welfare than that which would result in their absence.²⁴ This is true not only when tax measures take the form of actual taxes, but also when they take the form of so-called “tax-expenditures.”²⁵ Thus, in light of the tax neutrality principle, the standard view is that direct regulation and government subsidies should be the exclusive tools to regulate behaviors.

A robust argument in favor of taxes that indirectly regulate behaviors can, however, be made if one looks at the failures of the market that take the form of negative externalities as defined at the beginning of the Article. The English economist Arthur Cecil Pigou was the first to fully develop the argument that taxes may constitute efficient market-based

22. See Floyd Norris, *Financial Crisis, Over and Already Forgotten*, N.Y. TIMES, May 22, 2014, http://www.nytimes.com/2014/05/23/business/the-financial-crisis-already-forgotten.html?_r=1.

23. See, e.g., HARVEY S. ROSEN & TED GAYER, PUBLIC FINANCE 19 (9th ed. 2010); David Hasen, *Tax Neutrality and Tax Amenities* 12 FLA. TAX REV. 57, 77-78 (2012).

24. Such an argument is based on Adam Smith’s classic theory of the invisible hand of the market. To illustrate the significance of such an approach, it is worth mentioning that its “orthodox” supporters oppose, in principle, even the implementation of the basic, traditional individual or corporate income tax. This is because even if income taxes were applied at a flat rate on the income of every person (and without being subject to any statutory exclusions, credits, or special rates), they would still distort economic actors’ free preferences and decisions, since they would alter the relative prices of work and leisure. Thus, advocates of pure tax neutrality identify a lump-sum tax—that is, a head tax imposed without regard to the taxpayers’ conduct—as the “optimal theoretical tax.” Hasen, *supra* note 23, at 79-80. Nevertheless, the actual implementation of a lump-sum tax is, for obvious reasons, affected by serious questions of political feasibility.

25. By “tax expenditures,” the literature refers to those forms of indirect government spending implemented by means of statutory or regulatory rules, such as tax exclusions, deductions, credits, deferrals or special tax rates. Stanley Surrey, in his seminal works on tax expenditures, advanced the argument that they are basically aimed at encouraging, rewarding, and providing financial assistance to certain types of economic or social activities and are wide-spread among the tax systems of all developed countries, further complicating the tax system and tax code in a way that can inhibit the achievement of their natural objectives such as raising revenue and redistributing wealth. See STANLEY S. SURREY & PAUL R. MCDANIEL, TAX EXPENDITURES (1985); STANLEY S. SURREY, PATHWAYS TO TAX REFORM: THE CONCEPT OF TAX EXPENDITURE 6 (1973).

instruments to induce economic actors to internalize negative externalities that the actors generate.²⁶ These taxes are thus generally denominated “Pigouvian taxes” and impose a burden on the agents that is equal to the cost of the negative externalities that they generate. The result is that agents affected by Pigouvian taxes are induced to take into account the entire economic cost of their activities and are therefore incentivized to change their behavior to reduce the negative externalities.²⁷

Pigouvian taxes can be applied, for example, to carbon emissions. There is wide consensus that the command-and-control approach is limited.²⁸ Some countries have therefore adopted “carbon taxes” of a Pigouvian nature, but never has an international body been successful at promoting such an approach.²⁹ Another example of successful use of taxation for regulatory purposes can be found in “sin taxes” levied on items like alcohol and tobacco, whose consumption results in costs for the entire society—like additional health care costs—and neither the sellers nor the consumers account for such costs through their selling and purchasing activities.³⁰

26. ARTHUR C. PIGOU, *THE ECONOMICS OF WELFARE* 192-98 (4th ed., 1932). On externalities, see, e.g., RICHARD CORNES & TODD SANDLER, *THE THEORY OF EXTERNALITIES, PUBLIC GOODS, AND CLUB GOODS* 39 (1996); A. Lans Bovenberg & Lawrence H. Goulder, *Environmental Taxation and Regulation*, in 3 *HANDBOOK PUB. ECON.* 1471, 1477-90 (Alan J. Auerbach & Martin Feldstein eds., 2002); Gloria E. Helfand, Peter Berck & Tim Maull, *The Theory of Pollution Policy*, 1 *HANDBOOK ENVTL. ECON.* 249 (Karl-Göran Mäler & Jeffrey R. Vincent eds., 2003).

27. On the concept of Pigouvian taxes, see, e.g., Agnar Sandmo, *Pigouvian taxes*, in *THE NEW PALGRAVE DICTIONARY OF ECONOMICS* (Lawrence E. Blume & Steven N. Durlauf eds., 2nd ed., 2008); N. GREGORY MANKIW, *PRINCIPLES OF MICROECONOMICS* 210-14 (5th ed. 2009); ROBERT S. PINDYCK & DANIEL L. RUBINFELD, *MICROECONOMICS* 651-60 (7th Ed. 2009); ANDREU MAS-COLELL, MICHAEL D. WHINSTON & JERRY R. GREEN, *MICROECONOMIC THEORY* 354-56 (1995); JOEL SLEMROD & JON BAKIJA, *TAXING OURSELVES: A CITIZEN'S GUIDE TO THE DEBATE OVER TAXES* (4th ed. 2008); LEONARD E. BURMAN & JOEL SLEMROD, *TAXES IN AMERICA: WHAT EVERYONE NEEDS TO KNOW* 13 (2012); Andy H. Barnett, *The Pigouvian Tax Rule Under Monopoly*, 70 *AM. ECON. REV.* 1037 (1980).

28. See, e.g., Reuven S. Avi-Yonah & David M. Uhlmann, *Combating Global Climate Change: Why a Carbon Tax is a Better Response to Global Warming than Cap and Trade*, 28 *STAN. ENVTL. L.J.* 3 (2009); Reuven S. Avi-Yonah, *Taxation as Regulation*, *supra* note 5, at 4.

29. For a discussion of this institutional gap, see Igor Bashmakov, Catrinus Jepma, et al., *Policies, Measures, and Instruments*, in *CLIMATE CHANGE 2001: MITIGATION: CONTRIBUTION OF WORKING GROUP III TO THE THIRD ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE* 399 (2001), http://www.grida.no/climate/ipcc_tar/wg3/pdf/6.pdf; ERIC A. POSNER & DAVID WEISBACH, *CLIMATE CHANGE JUSTICE* 2-3 (2010). The failure to achieve a binding international agreement on the implementation of an internationally-coordinated environmental policy affected the ability of local measures to achieve their policy goals. See, e.g., Yoram Margalioth, *Tax Policy Analysis of Climate Change*, 64 *Tax L. Rev.* 63, 72-74 (2010); Gilbert E. Metcalf & David Weisbach, *Design of a Carbon Tax*, 33 *HARV. ENVTL. L. REV.* 499, 540 (2009).

30. For a good analysis of sin taxation, see Ted O'Donoghue & Matthew Rabin, *Optimal Sin Taxes*, 90 (10) *J. PUB. ECON.* 1825 (2006); see also BURMAN & SLEMROD, *supra* note 27, at 96-97.

The basic idea behind the use of market-based tools to correct negative externalities is that individual countries and the international community as a whole should take actions that have the greatest margin of social benefit over the social costs that are required to generate the benefits.³¹ Within this policy approach, the social *costs* are essentially those that can be imposed on the financial sector, while the social *benefits* consist of the elimination of negative externalities created by the financial sector.

The policy question that follows is how, beyond imposing regulations, policymakers can incentivize financial firms to prevent unacceptable risk and prevent the generation of negative externalities. A potential solution, if properly designed, could take the form of a market-based mechanism, implemented by governments and international institutions, which imposes costs on the financial actors whose behaviors create such negative externalities. Thus, financial regulatory taxes can constitute an efficient market-based solution insofar as they impose additional costs on certain financial actors' excessive risk-taking behavior equal to the negative externalities generated by such behavior.³²

Such financial regulatory taxes would result in risk-intense financial products and activities including in their price the entire cost of financial risk for the public at large, and this, in turn, would lower the price of non-risk-intense financial products, thereby reducing the overall amount of negative externalities and preventing, or significantly limiting, the rise of a new systemic crisis. The additional costs imposed through financial regulatory taxes would provide signals to firms to move to relatively low-risk products in order to increase their profits by reducing their costs. Moreover, those additional costs would give market incentives to firms that are financial innovators to develop and introduce low-risk financial products. Financial regulatory taxes would also provide signals to consumers about which financial products to purchase.

In addition, these financial regulatory taxes could give rise to a significant amount of revenue that, as illustrated in Part II, could be used to

31. It is quite difficult to determine the exact amount of costs related to negative externalities to be attributed to each financial product or activity in the market, so one must generally rely on causal indicators of a risky financial product by using baseline situations as a benchmark. For instance, as it will be illustrated in the next paragraphs, excessive risk-taking and excessive remuneration by firms, together with excessive price volatility in relation to the trades carried out by such firms, are indicators of potential negative externalities.

32. Some policy makers and scholars believe that traditional regulation failed to prevent the last crisis as such regulation was not capable, alone, of dealing with the financial sector's macro-prudential externalities and that new market-based tools such as regulatory taxation might help deal with such externalities. *See, e.g.*, IMF, *supra* note 14, at 47-50; Michael Keen, *The Taxation and Regulation of Banks* 6 (IMF Working Paper No. WP/11/206, Aug. 2011), <http://www.imf.org/external/pubs/ft/wp/2011/wp11206.pdf>; *see also* Avi-Yonah, *Taxation as Regulation*, *supra* note 5, at 9 (highlighting that the experience shows that "taxation as regulation makes sense when (1) it is applied to small numbers of taxpayers, (2) the taxpayers are sophisticated and able to deal with complex tax incentives, [and] (3) the regulatory goal is clear and related to the level of the tax," concluding that all of these criteria seem to be met upon looking at the financial industry and its externalities).

create insurance-like funds so that the burden of future crisis management measures would not be borne by the general taxpayer.

In sum, financial regulatory taxes come close to an optimal tax for the financial sector: they are economically efficient because they reduce the output of undesirable financial activities, and, at the same time, they are capable of preventing the use of general revenue to rescue financial institutions.

III. GOALS OF FINANCIAL REGULATORY TAXES AND THEIR INTERNATIONAL DIMENSION

Policy-makers can establish a “choice architecture” (in short, an “architecture”)³³ by structuring the framework in which economic actors make certain choices in the global financial markets. Such choices are dominated by manifold forms of rational decisions combined with “irrational exuberance,” to use Robert Shiller’s words.³⁴ Regulatory taxes constitute a dimension of the choice architecture insofar as they alter actors’ behavior by changing their incentives.

There are three layers of this choice architecture of financial regulatory taxes: first, different goals can be pursued by different types of taxes, alone or in combination; second, financial regulatory taxes are by nature global and therefore require the concerted effort of governments at the international level; third, financial regulatory taxes do not operate in isolation and complement the direct regulatory approach.

The first two layers of this choice architecture—their goals and their international dimension—are illustrated next in Sections II.A and II.B. The third layer—the interaction between financial regulatory taxes and traditional direct regulation—is examined through the use of concrete examples in Part VI after the description of the main types of financial regulatory taxes.

A. Goals

As mentioned in Part I, there are three potential goals of implementing financial regulatory taxes: (i) they can discourage excessive risk-taking conduct; (ii) they can create an insurance-like system in the event of defaults or a new systemic crisis; and (iii) they can raise revenue from the industry, which creates negative externalities, therefore achieving more redistribution and fairness within the tax system as a whole.

First, financial regulatory taxes can discourage excessive risk-taking conduct, which results from various factors that are compounded together.

33. Here, we borrow the approach of RICHARD H. THALER & CASS R. SUNSTEIN, *NUDGE: IMPROVING DECISIONS ABOUT HEALTH, WEALTH, AND HAPPINESS* 11-13, 83-87 (2008), acknowledging the difference that regulatory taxes, unlike “nudges,” do alter actors’ incentives.

34. See ROBERT J. SHILLER, *IRRATIONAL EXUBERANCE* 132-146 (2006) (discussing reactions by investors to market changes); see also GEORGE A. AKERLOF & ROBERT J. SHILLER, *ANIMAL SPIRITS: HOW HUMAN PSYCHOLOGY DRIVES THE ECONOMY, AND WHY IT MATTERS FOR GLOBAL CAPITALISM* 169 (2010).

Among others, these factors include high leveraging, the holding of risky assets, short-term financial speculation leading to excessive price volatility (especially in the derivative markets), lack of transparency in the shadow banking system, lax oversight, and a compensation structure for employees that incentivizes short-term strategies.³⁵

Regulatory taxes may reduce excessive risk by imposing a cost commensurate to the risk-creating activities, but, of course, different types of taxes can address the different facets of excessive financial risk. The different types of taxes, as this Article will demonstrate, may operate in combination with one another. For example, volatility may be addressed by financial transaction taxes, while high leveraging may be addressed by liability-based taxes, and, in general, excessively high risk-creating firms may be subject to an excess-profits tax.³⁶ In turn, these manifold dimensions of excessive financial risk can be subject to direct regulation, and there may be synergies with respect to each of them resulting from the combined operation of regulatory taxes and direct regulation, as will be illustrated in Part VI.

The second goal of financial regulatory taxes is to create an insurance-like system in the event of defaults or a new systemic crisis. If properly designed, certain regulatory taxes, just like insurance premiums, can be collected on the basis of the contribution of each firm to the creation of risks. Thus, a fund available to finance future crisis management would reflect the actual causal contributions of those firms to the negative externalities and provide available resources without exclusively relying on general tax revenues. This is another Pigouvian facet of regulatory taxes but one that is ancillary to the core goal of discouraging excessive risk.

The establishment of insurance funds raises concerns of moral hazard, as firms may decide to engage in riskier investments because of the insurance coverage provided by those funds. The massive government bailouts after 2008 already generated moral hazard, because such bailouts led actors to believe that they are implicitly insured by the public. There, however, the risk was covered by general taxpayer money, which did not take part in the creation of risk.³⁷ By contrast, with ad hoc insurance funds, those actors who causally contributed to the generation of risk would cover the risk.

Finally, financial regulatory taxes, like ordinary taxes, imply the collection by tax authorities of sums paid by taxpayers, so their inescapable

35. See John Vella, Clemens Fuest & Tim Schmidt-Eisenlohr, *The EU Commission's Proposal for a Financial Transaction Tax*, 6 BRITISH TAX REVIEW 607, 619 (2011); Michael Devereux, Clemens Fuest & Giorgia Maffini, *The G20 and New Bank Taxes. A Briefing Note*, 1-2, OXFORD UNIV. CTR. FOR BUS. TAXATION (Apr. 20, 2010), http://eureka.sbs.ox.ac.uk/3539/1/the_G20_and_new_bank_taxes.pdf.

36. The main features of the financial regulatory taxes are described, respectively, in Parts IV and V.

37. Devereux, Fuest & Maffini, *supra* note 35, at 2.

effect is to raise revenue.³⁸ However, financial regulatory tax revenues are different from ordinary tax revenues in that they are earmarked to fulfill specific goals, essentially to offset the cost of negative externalities that spillover on the taxpayers as a whole. This revenue-raising is therefore important because of its unique redistributive effects: as already highlighted, the crisis was attributable to segments of the financial industry, but the revenue used to bail out the largest financial institutions was collected through the taxes paid by all taxpayers, who clearly were not responsible for the crisis. Regulatory taxes would thus extract revenue from the financial sector to be redistributed to the public.

Extracting more revenue from the financial industry is also based on a broader fairness argument—the financial sector, in addition to potentially generating massive negative externalities, also benefits from generous tax privileges which lead to under-taxation of the financial sector in comparison to other industries.³⁹ Tax systems, for example, exempt most financial services from the value added taxes,⁴⁰ or allow the deductibility of financial costs such as the service debt as opposed to the cost of equity⁴¹ or bad loan reserves.⁴² In other cases, the groups of companies can consolidate losses.⁴³ These features are compounded by aggressive tax planning by financial institutions aimed at profit shifting.⁴⁴ So if the financial sector

38. Daniel Shavero, *The Financial Transactions Tax Versus (?) the Financial Activities Tax* 21-22 (N.Y.U. Law and Econ. Working Papers, Working Paper No. 292, Mar. 2012), http://lsr.nellco.org/nyu_lewp/292; Thornton Matheson, *Financial Sector Taxation and the Ongoing Financial Crisis*, in *TAXING THE FINANCIAL SECTOR: FINANCIAL TAXES, BANK LEVIES AND MORE* 203 (Otto Marres & Dennis Weber eds., 2012); see also Devereux, Fuest & Maffini, *supra* note 35, at 1.

39. Avi-Yonah, *Taxation as Regulation*, *supra* note 5, at 9.

40. Harry Huizinga, *A European VAT on Financial Services?*, 17 *ECON. POL'Y* 499, 499 (2002); Harry Grubert & James Mackie, *Must Financial Services Be Taxed Under a Consumption Tax?*, 53 *NAT'L TAX J.* 23, 23 (2000); Satya Poddar & Morley English, *Taxation of Financial Services Under a Value-Added Tax: Applying the Cash-Flow Approach*, 50 *NAT'L TAX J.* 89, 89 (1997).

41. While the regulation system aims to mitigate the use of debt finance, the corporate tax system favors debt finance over equity finance by granting a passive debt interest deduction but not allowing for a cost-of-equity deduction. Harry Huizinga, Luc Laeven & Gaetan Nicodeme, *Capital Structure and International Debt Shifting*, 88 *J. FIN. ECON.* 80, 81 (2008). There have been various proposals and attempts to eliminate this disparity of tax treatment between debt capital and equity capital, above all in the United States, by entirely repealing the deductibility of debt interest but none of them have succeeded due to questions of political practicability (basically, the resistance from the financial lobbies in eliminating such a privilege). See Tim Edgar, Jonathan Farras & Amin Mawant, *Foreign Direct Investment, Thin Capitalization, and the Interest Expense Deduction: A Policy Analysis*, 56 *CAN. TAX J.* 803, 810 (2008); Tim Edgar, *Policy Forum: Interest Deductibility Restrictions—Expecting Too Much from REOP?*, 52 *CAN. TAX J.* 1130 (2004).

42. Avi-Yonah, *Taxation as Regulation*, *supra* note 5, at 9.

43. See Dennis R. Post & Kelly P. Stals, *The Tax Treatment of Corporate Losses: A Comparative Study*, 40 *INTERTAX* 232 (2012).

44. On the global issue of profit shifting from high-tax to low-tax jurisdictions through aggressive tax planning, see, e.g., Org. for Econ. Co-operation and Dev. [OECD], *Addressing Base Erosion and Profit Shifting* (2013) (addressing the global issue of profit shifting from

contributes too little to public finances when compared to the contributions of other industries, fairness demands that the financial sector also pay its dues.⁴⁵

B. *The International Dimension*

The negative externalities addressed by financial regulatory taxes are truly global because of the complex network effect of the financial economy.⁴⁶ The elimination of these financial negative externalities would, in theory, make national communities everywhere better off and thus generate a *global public good* which would be non-excludable, because each country would not be prevented from enjoying it, and non-rival, because the enjoyment by each country would not infringe on the enjoyment by other countries.⁴⁷

There are different methods available to pursue global public goods, such as (1) the effort of just one or more self-interested agents (“single

high-tax to low-tax jurisdictions through aggressive tax planning); see also OECD, *Corporate Loss Utilisation Through Aggressive Tax Planning* (2011), <http://dx.doi.org/10.1787/9789264119222-en>; Kimberly A. Clausing, *The Revenue Effects of Multinational Firm Income Shifting*, 28 TAX NOTES 1580 (2011); Dhammika Dharmapala & Nadine Riedel, *Earnings Shocks and Tax-Motivated Income-Shifting: Evidence from European Multinationals*, 97 J. PUB. ECON. 95 (2013); Clemens Fuest & Nadine Riedel, *Tax Evasion and Tax Avoidance in Developing Countries: The Role of International Profit Shifting*, (Oxford Univ. Ctr. for Bus. Taxation, Working Paper No. 10/12, 2010), available at http://www.sbs.ox.ac.uk/sites/default/files/Business_Taxation/Docs/Publications/Working_Papers/Series_10/WP1012.pdf.

45. This sentiment is well expressed by the words of President Obama in announcing his Administration’s proposal for a levy on financial institutions (discussed *infra* in Section IV.A). He emphasized that his “commitment [was] to recover every single dime the American people are owed” and said, “My determination to achieve this goal is only heightened when I see reports of massive profits and obscene bonuses at the very firms who owe their continued existence to the American people.” See Press Release, The White House, President Obama Proposes Financial Crisis Responsibility Fee to Recoup Every Last Penny for American Taxpayers (Jan. 14, 2010), <https://www.whitehouse.gov/the-press-office/president-obama-proposes-financial-crisis-responsibility-fee-recoup-every-last-penn>. Similarly, Columbia University’s Jeffrey Sachs, in manifesting his support for a financial transactions tax (whose features are discussed *infra* at Part V), claimed that such a tax would properly burden a financial sector that was “under-taxed,” “out of control,” and was enjoying huge profits—even during the financial crisis—at the expense of the general public. “Bankers,” he concluded, “are brazenly smirking as they pocket large amounts of our money.” Larry Elliott, *Sachs calls Calls For Robin Hood tax on ‘Smirking’ Wall Street*, THE GUARDIAN, (Mar. 9, 2010) <http://www.theguardian.com/business/2010/mar/09/jeffrey-sachs-robin-hood-tax>.

46. See, e.g., MANUEL CASTELLS, *THE RISE OF THE NETWORK SOCIETY: THE INFORMATION AGE: ECONOMY, SOCIETY, AND CULTURE* 7 (Wiley-Blackwell 2d ed. 2011); Shiller, *IRRATIONAL EXUBERANCE*, *supra* note 34, at 132-134.

47. For a discussion on global public goods, see SCOTT BARRETT, *WHY COOPERATE? THE INCENTIVE TO SUPPLY GLOBAL PUBLIC GOODS* 1-22 (Oxford Univ. Press, 2007); DAVIS B. BOBROW & MARK A. BOYER, *DEFENSIVE INTERNATIONALISM: PROVIDING PUBLIC GOODS IN AN UNCERTAIN WORLD* 1-5 (Univ. of Mich. Press 2005); Marco Ferroni & Ashoka Mody, *Global Incentives for International Public Goods: Introduction and Overview*, in *INTERNATIONAL PUBLIC GOODS: INCENTIVES, MEASUREMENT AND FINANCING* 1, 1-28 (Marco Ferroni & Ashoka Mody eds., 2002).

best effort” methods),⁴⁸ (2) universal cooperation of all agents when the weakest agent’s failure could frustrate collective efforts (“weakest link” methods),⁴⁹ (3) mutual restraint⁵⁰ or mere technical coordination by agents,⁵¹ and (4) comprehensive and coordinated interaction of most of the agents (hereinafter, “aggregate effort,” or more generally, “multilateral cooperation”).⁵²

However, the global public good consisting of the elimination of financial negative externalities can only be obtained through the aggregate effort of the involved countries. The methods enumerated above either are not, on their own, sufficient or are not practically feasible. No single self-interested agent is capable of preventing externalities globally. There is no need to include even the weakest link (the country that can minimally contribute to the reform). Moreover, global financial reform clearly is not a question of mere technical coordination or of mutual restraint.

Where at a domestic level a public good such as the elimination of financial negative externalities can be achieved through the compulsory means of legal systems, at an international level no such exercise of legal force is attainable. Indeed, the institutions that domestic systems currently rely on to supply public good do not exist at the global level. The consequence is that, lacking supranational authority, elimination of global financial negative externalities must be attained voluntarily through multilateral cooperation.

Such cooperation is difficult to pursue for a variety of reasons. First, countries are affected in different ways by waves of financial negative externalities. Second, mitigating those externalities is expensive, both in terms of the costs necessary to reach an agreement and in terms of potential opportunity costs due to the diversion of financial resources from investments that might yield higher benefits than the reduction of externalities. Third, the implicit need of the aggregate effort of virtually all the involved countries creates the opportunity for free riding by a few countries that could benefit from such efforts without contributing their own resources.

Therefore, when regulatory taxes are considered at the multi-country level, one could envisage a two-stage model to ensure the final goal of reduction of financial negative externalities. In the first stage, countries

48. An example of “single best effort” is a world calamity in which a single agent has the capability of saving itself and the other agents, in light of the fact that there is no other agent that has such capability. *See generally* Barrett, *supra* note 47.

49. An example of “weakest link” is the eradication of an infectious disease, which requires action by even the weakest agent. *See id.* at 990-1466.

50. An example of mutual restraint is the limitation on the proliferation of nuclear weapons. *See id.* at 2462-2506.

51. An example of mere technical coordination is the establishment of common standards, such as those for aviation. *See id.* at 2759-85.

52. Aggregate efforts are generally used when other methods to pursue public goods cannot be adopted because of the complexity of the agenda to be pursued (for example, in the case of climate change). *See id.* at 1468-1520.

would resort to unilateral strategies to reduce those negative externalities through national regulatory taxes with extraterritorial reach. In the second stage, countries would abide by common binding rules that prevent opportunistic free riding by non-cooperating agents.

In the first stage, individual countries can exercise their extra-territorial jurisdiction and apply their financial regulatory taxes on a worldwide basis on resident firms. Of course, in an interdependent world, there are major obstacles for individual countries, regardless of their size or importance, to unilaterally enforcing their regulatory tax policies regarding the financial sector.⁵³ Global players tend to avoid the unilateral regulatory taxes enacted by individual countries by using aggressive strategies based on the natural mobility of financial transactions, taking advantage of information mismatches. Moreover, there are obvious incentives for jurisdictions to relax their own regulatory taxes in order to attract capital and investments.⁵⁴

The unilateral regulatory tax strategies that may be adopted by individual countries are especially vulnerable because they are exposed to (1) the substitution of taxable transactions with non-taxable transactions (“substitution effect”) and (2) the relocation of transactions or firms subject to the regulatory taxes of other jurisdictions that do not impose such taxes (“relocation effect”). The most effective tool to counteract such opportunistic behaviour is for governments to act multilaterally and fully exchange information on the enforcement of regulatory taxes. Secrecy and lack of access to information are key enablers of un-cooperative behavior by countries that are used by firms to pursue relocation effects and prevent multilaterality.⁵⁵ Governments thus assign strategic value to tax information that concerns situations occurring outside their territorial reach, which specifically result in relocation effects, and therefore need information about relevant transactions relocated to favorable jurisdictions. Countries that, by exerting political pressure on these favorable jurisdictions, actually manage to obtain such information would be capable of counter-

53. As highlighted by Zürn, “in a denationalized world ruled by a system of formally independent nation-states . . . there is a danger that political communities will be unable to reach a desired goal owing to conditions outside their jurisdiction.” Michael Zürn, *Democratic Governance Beyond the Nation State*, in *DEMOCRACY BEYOND THE STATE: THE EUROPEAN DILEMMA AND THE EMERGING GLOBAL ORDER* 91, 93 (Michale Th. Greven & Louis W. Pauly eds., 2000).

54. These jurisdictions are generally defined as “offshore financial centers.” See, e.g., MARK P. HAMPTON & JASON P. ABBOTT, *OFFSHORE FINANCE CENTERS AND TAX HAVENS: THE RISE OF GLOBAL CAPITAL* (Mark P. Hampton & Jason P. Abbott eds., 1999); Ahmed Zoromé, *Concept of Offshore Financial Centers: In Search of an Operational Definition* (IMF Working Paper No. WP/07/87, 2007); Julian S. Alworth & Donato Masciandaro, *Public policy: offshore centres and tax competition: the harmful problem*, in *GLOBAL FINANCIAL CRIME: TERRORISM, MONEY LAUNDERING, AND OFFSHORE CENTRES* 181 (Donato Masciandaro ed., 2004); JACK A. BLUM ET AL., *BANKING SECRECY AND FINANCIAL HAVENS* (1998); Marcel Cassard, *The Role of Offshore Centers in International Financial Intermediation*, (IMF Working Paper No. WP/94/107, 1994); Donato Masciandaro, *Offshore Financial Centres: The Political Economy of Regulation*, 26 *EUROP. J. LAW ECON.* 307, 312 (2008).

55. See generally BLUM ET AL., *supra* note 54.

acting the free-riding behavior of other countries that are willing to host relocated transactions which are taken out from the global reach of the financial transaction tax. However, given the growing interconnection of financial markets, countries' policies are increasingly influenced by external factors and, at the same time, individual countries cannot ignore the potential implications their conduct may have on the global market. This initial stage must therefore be followed by a second stage, in which comprehensive and coordinated interaction of most of the countries (multilateral cooperation) is pursued at the international level to prevent substitution and relocation effects and to achieve common goals.

Jurisdictions which host leading financial markets tend to be reluctant to adopt common measures, while other jurisdictions may be interested in becoming financial offshore centers.⁵⁶ There is, nevertheless, a sound reason why countries can be expected to cooperate in enforcing financial regulatory taxes. In a globalized financial market, each country, depending on its circumstances, can import negative externalities from other non-compliant countries or export negative externalities to other compliant countries. Countries thereby realize that this problem might be remedied by cooperation based on reciprocity achieved through communication and backed by commitment.

Reciprocity can be understood in this context by using a game theory approach.⁵⁷ In a multi-player situation, countries initially develop their own unilateral regulatory taxes, and then consider the reactions of other countries over time. In practice, initial bilateral interactions between pairs of countries and subsequent multilateral coordinated interactions among many countries are two progressive phases of a comprehensive process.

When some form of this multilateral cooperation is achieved among different countries, in the short term free-riding jurisdictions may continue to import or export negative externalities through not abiding by common rules. In the long term, however, cooperation among the other countries, complemented by other government measures such as those as described in Part VI (for example, denial of treaty benefits and sanctions), would exert pressure on free riders to end harmful behavior.

IV. ENTITY-BASED FINANCIAL REGULATORY TAXES

The conclusion that may be drawn from the discussion above is that the architecture of financial regulatory taxes would potentially alter actors' behavior by changing their incentives, therefore discouraging exces-

56. On this type of competitions among jurisdictions, see Page, *supra* note 18, at 207. Often the attraction of investment is fuelled by generous tax reductions. See, e.g., John Christensen & Mark P. Hampton, *The Economics of Offshore: Who Wins, Who Loses?*, 4 THE FINANCIAL REGULATOR 24 (2000); Dhammika Dharmapala & James R. Hines Jr., *Which Countries Become Tax Havens?*, 93 J. PUB. ECON. 1058 (2009); Mihir A. Desai, C. Fritz Foley & James R. Hines Jr., *Do Tax Havens Divert Economic Activity?*, 90 ECON. LETTERS 219 (2006).

57. See Andrew T. Guzman, *A Compliance-Based Theory of International Law*, 90 CAL. L. REV. 1823, 1831, 1858 (2002) (proposing game theory in international law).

sive risk-taking and raising funds to build an insurance-like fund generated by risk contributors available for any future crisis management. The collection of more revenue from the financial industry would also achieve more redistribution and fairness in the overall tax system. This architecture could be implemented at an international level to achieve a global public good and should be enforced by national tax systems in compliance with international agreements to engage in multilateral cooperation.

It is quite difficult to conceive of a single proposed tax capable of attaining all of the above policy goals, but different types of regulatory taxes may be combined to achieve them. In particular, in the past few years, policy makers and scholars have focused on three models: (1) taxes paid by financial companies on risky assets or liabilities; (2) taxes paid by financial companies on excess profits; and (3) taxes levied on specifically targeted transactions that involve the trading of financial instruments.

The first two types of taxes, illustrated in Sections III.A and III.B, are entity based, that is, they are imposed directly on financial institutions. Such taxes are backward looking—based on balance sheets and administered by firms on a year-to-year basis. The third type of financial regulatory taxes, illustrated in Part V, is not a levy on financial institutions per se; it is a charge on specific transactions that are previously designated as taxable by the legislator. In essence, it is a levy collected by the firms on behalf of the government on continuous transactions within the market. So the architecture of financial regulatory taxes is defined by attainment of the three policy goals described in Section II.A through any combination of the types of regulatory taxes that will be discussed in Parts III and IV.

A. *Risky Asset-based and Liability-based Taxes*

A regulatory tax can be imposed as a tax paid by financial firms on specific balance sheet positions on either risk-weighted assets or on liabilities. A tax on risk-weighted assets is levied on certain assets of the financial statement on the basis of their risk as measured by a weighted formula. The burden of a tax on risk-weighted assets becomes more substantial for institutions that hold more risky assets. For example, as suggested by the IMF, such a tax could be imposed on internationally defined level 2 and level 3 trading assets—“those assets not readily marked to market using observed prices, which could serve to discourage the buildup of assets that proved less liquid during the crisis.”⁵⁸

A risky asset-based tax is justified if one believes that one of the main reasons for the recent crisis was the engagement of banks and other finan-

58. IMF, *supra* note 14, at 17. See FINANCIAL ACCOUNTING STANDARDS BOARD, STATEMENT OF FINANCIAL ACCOUNTING STANDARDS NO. 157: FAIR VALUE MEASUREMENTS (2006), <http://www.fasb.org/cs/BlobServer?blobkey=id&blobwhere=1175823288587&blobheader=application/pdf&blobcol=urldata&blobtable=MungoBlobs>; BASEL COMM. ON BANKING SUPERVISION, BASEL III: A GLOBAL REGULATORY FRAMEWORK FOR MORE RESILIENT BANKS AND BANKING SYSTEMS (rev. June 2011), <http://www.bis.org/publ/bcbs189.pdf>.

cial institutions in high risk taking investments. Adopting such a tax would also facilitate multilateral cooperation on a global level and reduce the costs of compliance because the definitions of level 2 and level 3 trading assets are defined internationally. A tax on risk-weighted liabilities is levied on certain liabilities because they represent financial exposure, and therefore a firm's tax burden would increase as the proportion of such liabilities held by the firm increased. For example, the IMF suggests that such a tax should be imposed on uninsured liabilities, should exclude tier 1 capital and insured liabilities, and its rate should explicitly reflect systemic risk.⁵⁹ The liability-based levy would, therefore, provide incentives to reduce the financial firms' excessive leverage, which is regarded as one of the most significant threats to the stability of the financial sector. Tier 1 capital should be excluded from the tax base so that the accumulation of equity capital is not discouraged.

As to insured liabilities, there are three main reasons for their exclusion from the tax base. First, they represent stable sources of funding since they are covered by deposit insurance.⁶⁰ Second, they are assumed to be risk free, so that taxing them would be contrary to the concept of making the firms' tax liability proportionate to their contribution to systemic risk and potential cost in the event of default.⁶¹ Third, firms already pay insurance premiums on insured liabilities so that a tax levied on those liabilities results in a double imposition.

A tax on risk-weighted liabilities can also be designed with a narrower scope (a smaller tax base), which includes only short-term liabilities. The logic behind this scope is that that reliance on short-term uninsured funding was one of the main contributing causes of the recent financial crisis. The main goal of such a tax on short-term liabilities is to induce banks and other institutions to "internalize the negative systemic effects of fragile funding strategies"⁶² rather than to provoke de-leveraging across the board. Such a narrower base may, however, increase the risk of arbitrage and may introduce distortionary effects resulting from investment decisions affected by the tax on the liabilities.⁶³

For example, the IMF embraced the payment of tax on risk-weighted liabilities in its June 2010 Report, stating that "backward-looking" levies are the least distortionary way to recover the fiscal cost of the past bailouts.⁶⁴ The IMF therefore advanced a proposal of Financial Stability Contribution [FSC]—a liability-based levy whose main goal is to pay for the cost of future government support to the financial sector. Another goal pursued by the FSC is to prevent banks from highly leveraging and from

59. See IMF, *supra* note 14, at 14, 57.

60. See THE WHITE HOUSE, FINANCIAL CRISIS RESPONSIBILITY FEE (2010), https://www.whitehouse.gov/sites/default/files/financial_responsibility_fee_fact_sheet.pdf.

61. See IMF, *supra* note 14, at 17.

62. Enrico Perotti & Javier Suarez, *Liquidity Risk Charges as a Macroprudential Tool*, 40 CEPR POL'Y INSIGHT 3 (2009).

63. See IMF, *supra* note 14, at 17.

64. See *id.* at 4 and 8.

becoming too large.⁶⁵ In the IMF's view, the FSC is complementary to another regulatory tax denominated the "Financial Activities Tax" (see *infra* Section I.B.).

According to the IMF Report, the proceeds of the FSC are attributed to the general revenue accumulated in a specific fund. In the latter case, the FSC provides the financial sector with an insurance-like system, as the premium paid by each firm is proportional to the size and the level of its risk and available to governments to establish a resolution fund for a future crisis.⁶⁶

One example of this type of tax is the U.S. proposal for a levy based on risk-weighted liabilities. On January 2010, President Obama proposed as part of the 2011 fiscal budget the implementation of a 0.15% levy on the largest financial institutions' uninsured liabilities, referred to as the "Financial Crisis Responsibility Fee."⁶⁷ According to the Treasury's original estimations, such a levy was supposed to raise about 117 billion dollars over 12 years in order to pay back taxpayers for the extraordinary assistance provided by the Troubled Asset Relief Program [TARP].⁶⁸

However, this proposal was not enacted despite repeated presentations to Congress in the 2011, 2012, 2013, 2014, and 2015 fiscal budgets. The proposal for the implementation of a fee on large, highly-leveraged financial institutions also is included in the 2016 budget.

The proposal as of 2016 does not vary substantially from the original proposal included in the 2011 budget, except that the proposal does not tag the revenue from the tax as a means to pay back TARP. Rather, the declared goal of the tax is now the general prevention of future financial crises. In addition, the tax is no longer named "Financial Crisis Responsibility Fee."⁶⁹

65. *See id.* at 5, 25-26, 54.

66. *See id.* at 50.

67. *See* FINANCIAL CRISIS RESPONSIBILITY FEE, *supra* note 60; *see also* Page, *supra* note 18, at 197.

68. *See* Emergency Economic Stabilization Act of 2008, *supra* note 9 (establishing Troubled Asset Relief Program) [hereinafter "TARP"].

69. The estimated revenue resulting from such a tax over a ten-year period has fluctuated as follows: (1) in the 2012 budget, the estimated revenue was cut to 30 billion dollars; (2) in the 2013 budget, the estimated revenue was approximately 61 billion dollars; (3) in the 2014 budget, the estimated revenue was approximately 59 billion dollars and; (4) in the 2015 budget, the estimated revenue was approximately 56 billion dollars; (5) in the 2016 budget, the estimated revenue increased to 112 billion dollars. *See* THE WHITE HOUSE, FISCAL YEAR 2012 BUDGET OF THE U.S. GOVERNMENT, 23 (2011), <http://www.gpo.gov/fdsys/pkg/BUDGET-2012-BUD/pdf/BUDGET-2012-BUD.pdf>; THE WHITE HOUSE, FISCAL YEAR 2013 BUDGET OF THE U.S. GOVERNMENT, 26, 165 (2012), <http://www.gpo.gov/fdsys/pkg/BUDGET-2013-BUD/pdf/BUDGET-2013-BUD.pdf>; THE WHITE HOUSE, FISCAL YEAR 2014 BUDGET OF THE U.S. GOVERNMENT, 18-19 (2013), <http://www.gpo.gov/fdsys/pkg/BUDGET-2014-BUD/pdf/BUDGET-2014-BUD.pdf>; THE WHITE HOUSE, FISCAL YEAR 2015 BUDGET OF THE U.S. GOVERNMENT, 190 (Table S-9) (2014) (showing a line item in the budget for the Financial Crisis Responsibility Fee), <http://www.gpo.gov/fdsys/pkg/BUDGET-2015-BUD/pdf/BUDGET-2015-BUD.pdf>; THE WHITE HOUSE, FISCAL YEAR 2016 BUDGET OF THE U.S. GOVERNMENT, 55 (2015), <https://www.whitehouse.gov/sites/default/files/omb/>

The Obama proposal explicitly manifests the goal of discouraging excessive risk-taking conduct, therefore sharing the regulatory approach of the model of liability-based levy. In fact, the proposed tax imposed on the uninsured liabilities would provide firms with incentives to reduce their debt-to-equity ratio. Moreover, the tax would be applicable only to large institutions with more than 50 billion dollars in consolidated assets.⁷⁰ As a result, this would deter financial firms from increasing or maintaining their size. One negative side effect of this threshold is that it would not provide smaller institutions with incentives to lower their debt-to-equity ratio, which in most cases can be as high as the larger firms.

The Financial Crisis Responsibility Fee, as initially conceived, would have covered only those institutions that were recipients or indirect beneficiaries of financial aid programs established by the government for the purposes of limiting the impact of the financial crisis.⁷¹ This limitation had been subject to criticism, because the large firms that benefited from the TARP were returning their financing so that TARP was apparently paying for itself with no need to resort to a tax to redistribute its costs.⁷² These claims have also been fueled by, as mentioned above, the Obama Administration's significant cut (from 117 billion to 30 billion) of the revenue expected to arise from the implementation of the fee just one year after the formulation of the original proposal. The Administration increased it again (from 30 to 61 billion) in the 2013 fiscal budget, just before the re-

budget/fy2016/assets/budget.pdf. In the 2016 budget there was also a reference to the use of revenue arising from the tax to pay for President Obama's mortgage refinancing program, which had been included in the 2013 fiscal budget (FISCAL YEAR 2013 BUDGET OF THE U.S. GOVERNMENT at 26).

70. FINANCIAL CRISIS RESPONSIBILITY FEE, *supra* note 60, at 1; see also FISCAL YEAR 2016 BUDGET OF THE U.S., *supra* note 69, at 55.

71. *Id.* at 2 (stating that such institutions include "firms that were insured depository institutions, bank holding companies, thrift holding companies, insurance or other companies that owned insured depository institutions, or securities broker dealers as of January 14, 2010, or that become one of these types of firms after January 2010.").

72. American Bankers Association CEO Frank Keating released a statement saying, "[T]he banking industry strongly opposes the \$61 billion bank tax included in President Obama's budget proposal. Despite claims to the contrary, the facts on TARP are very clear. Taxpayers have profited \$13 billion from their investments in banks through the program and Treasury predicts they will see a lifetime positive return of more than \$20 billion" without the proposed tax. "Given that non-bank programs are responsible for all of TARP's losses, this would simply be an arbitrary tax with no regard to where losses actually occurred." Frank Keating, *ABA Statement on Proposed Bank Tax*, BANKERS AND THE ECONOMY (Feb. 13, 2012), <http://banksandtheeconomy.blogspot.com/2012/02/aba-statement-on-proposed-bank-tax.html>; see also Jia Lynn Yang & Zachary A. Goldfarb, *Obama Budget Would Double Bank Tax Size*, WASH. POST (Feb. 13, 2012), http://www.washingtonpost.com/blogs/ezra-klein/post/obama-budget-would-double-bank-tax-size/2012/02/13/gIQA0bnJBR_blog.html. For more recent data on TARP's profitability, see generally U.S. TREASURY, TROUBLED ASSET RELIEF PROGRAM: MONTHLY REPORT TO CONGRESS (June 2013), <http://www.treasury.gov/initiatives/financial-stability/reports/Documents/May%202013%20Monthly%20Report%20to%20Congress%20Final.pdf>; see also Edward D. Kleinbard, *WE ARE BETTER THAN THIS: HOW GOVERNMENT SHOULD SPEND OUR MONEY* 415-16 n.2 (2014).

election campaign, and doubled in the 2016 budget, another pre-election budget.⁷³

The levy on risk-weighted assets or on liabilities would be imposed on different elements of the balance sheet, but they are both essentially aimed at reaching the same result: providing incentives to financial institutions to avoid engaging in excessively risky activities (the acquisition of an excessive amount of high-risk assets and/or high leveraging). These levies aim to reduce potential negative externalities and systemic risk by imposing an additional cost on the acquisition of riskier assets or the generation of excessively high debt-to-equity ratios. In practice, these types of regulatory taxes rely on existing financial accounting systems and complement other regulatory tools, such as capital requirements.

Moreover, these taxes can raise a significant amount of revenue and introduce a typical insurance mechanism. This insurance effect is due to the fact that the higher the risk of default (commensurate with the amount of risky assets or the debt-to-equity ratio), the higher the insurance premium (in effect, the tax burden). These taxes may therefore function as an insurance policy, creating a fund in case of future crisis. Once the insurance fund grows, the taxes can also be maintained in the long term. They will preserve their beneficial corrective impact on the behavior of financial firms because of the correlation between tax liability of the institutions and their contribution to systemic risk.⁷⁴

The levy on risk-weighted assets or on liabilities should also be evaluated on the basis of their potential for multilateral cooperation. For example, adopting a tax on risk-weighted assets would reduce the costs of compliance from cross-border institutions because of the Basel capital requirements. These regulatory taxes can be applied unilaterally by individual countries but have global effects with the support of proper anti-avoidance rules. Any relocation effects would be less likely to occur in risky asset-based and liability-based taxes than in financial transaction taxes (see *infra* Part IV) because financial institutions, in particular banks, are tied to the financial centers where they have been located for many years.⁷⁵ Unilateral action by individual countries should then lead to multilateral cooperation at international levels through comprehensive and coordinated interaction of most of the countries, in order to prevent excessive and unintended burdens on financial firms.

B. *Excess-profits Financial Taxes*

The second type of entity-based financial regulatory tax is “excess-profits tax,” which is levied on profits realized by economic actors above a standard level, commonly referred to as “economic rent,” “unearned in-

73. See FISCAL YEAR 2013 BUDGET OF THE U.S. GOVERNMENT, *see supra* note 69, at 165; and FISCAL YEAR 2016 BUDGET OF THE U.S., *supra* note 69, at 55.

74. See IMF, *supra* note 14, at 15. Notably, the liability-based levy proposed in the United States does not establish an insurance/fund that may be used for a bailout in case of a future crisis. FINANCIAL CRISIS RESPONSIBILITY FEE, *supra* note 60.

75. See Page, *supra* note 18, at 207.

come,” or “supernormal profit.”⁷⁶ Excess-profits taxes have been imposed in addition to existing corporate income tax, in most cases during national emergencies like wars or economic turmoil. The U.S. Government relied on these taxes to increase revenue during periods of distress and to prevent corporations from unduly benefitting from atypical consumer purchasing or increased government spending during those periods.⁷⁷

An excess-profits tax on financial firms is, in some ways, a policy option that can be used also for purposes other than those indicated above. In the past, excess-profits taxes have been used by the U.S. government to target specific industries, such as oil companies,⁷⁸ but they and now can be applied to the financial industry as well.⁷⁹ Such a tax could be levied on the profits of financial companies that are above a normal rate of return for the industry, defined as the compounded amount of interest accrued on debt and a notional return of equity.⁸⁰

The main issue in designing an excess-profits tax for the financial sector is the definition of the notional rate of return of equity. This implies a quite complex comparability analysis similar to that deployed in transfer pricing and aimed at finding financial institutions with identical or nearly identical features in terms of size, fees charged, and the type, amount, and frequency of transactions. This in turn requires significant administrative effort and a high compliance burden, which may affect the feasibility of the tax.

The excess-profits tax, however, is not fully regulatory. In particular, it is not capable of discouraging excessive risk-taking conduct, because the causal linkage between excessive risk-taking and excess-profits is variable.

76. See T.S. Adams, *Federal Taxes Upon Income and Excess Profits*, 8 AM. ECON. REV. 18, 18 (1918); Carl C. Plehn, *War Profits and Excess Profits Taxes*, 10 AM. ECON. REV. 283, 284 (1920); Julian S. Alworth & Giampaolo Arachi, INTRODUCTION TO TAXATION AND THE FINANCIAL CRISIS 15 (Julian S. Alworth & Giampaolo Arachi eds., 2012).

77. The first implementation of an excess-profits tax in the United States was between 1917 and 1921 during the First World War. It was revived by federal legislation during World War II and during the Korean War. The tax was levied on the excess of a corporation's peacetime earnings at a rate set by the government. See F.W. Taussig, *The War Act of 1917*, 32 Q. J. ECON., 1, 27-37; Adams, *supra* note 76, at 18; Plehn, *supra* note 76, at 288; William B. Paul, *Excess Profits Tax*, 27 ACCT. REV. 44, 44-49 (1952).

78. For instance, during the 1980s the price of a barrel of crude oil went above a certain specified threshold due to the exercise of oligopolistic pricing power by the members of the Organization of Petroleum Exporting Countries, and gave rise to a sharp increase in domestic oil production income. The US was convinced that oil producers were obtaining excess profits as a result of the situation and therefore enacted, for a period of time, an excess-profits tax, which is commonly referred to as 'windfall profits tax.' See, e.g., Crude Oil Windfall Profit Tax Act of 1980, Pub. L. No. 96-223, 94 Stat. 229 (codified as amended in scattered sections of Internal Revenue Code of 1954.); see also Dennis B. Drapkin & Philip K. Verleger, Jr., *The Windfall Profit Tax: Origins, Development Implications*, 22 B.C.L. REV. 631, 659-67 (1981).

79. In the United Kingdom, for example, the government imposed an excess-profits tax on banks in the 1981 Budget to counteract the sharp increase in interest rates caused by new monetary policies.

80. Michael Devereux, *New Bank Taxes, New World Order?*, TAX ADVISER, June 2010, at 12, 13.

Indeed, such a tax would be relatively neutral because companies generally aim to maximize profits regardless of tax rates, assuming that they are not in a position to arbitrage tax rates.⁸¹ A financial excess-profits tax is a regulatory tax to the extent that it can create an insurance-like fund available for future crisis management and can extract substantial revenue from the financial sector.⁸² These are two goals that, as illustrated in Part II, are both essential to the architecture of financial regulatory taxes. In practice, the excess-profits tax on financial institutions is a traditional income tax that, rather than incentivizing or discouraging specific risk-taking conduct within the financial industry, can serve as a revenue-raising tool to fund targeted regulatory programs⁸³ and achieve redistributive goals.

Such a tax, like the risky asset-based or liability-based regulatory tax, can initially be applied unilaterally by individual countries on a worldwide basis along the lines of extraterritorial application of corporate taxes. This would mean that relocation effects would be those currently regulated under the residence rules of tax treaties and would certainly be lower than those engendered by a financial transaction tax (see Part IV).

The IMF Report also proposed a levy based on excess profits. Indeed, the IMF Report contains a proposal for the adoption of a Financial Activities Tax (FAT).⁸⁴ The FAT, in its basic version, is a tax levied on the profits of financial firms. The IMF proposed three different variants of the FAT—hereinafter FAT1, FAT2 and FAT3—each of which is based on different definition of the tax base.

FAT1 is characterized by a base that includes all wages and profits and is designed in such a way that it would substantially function as a standard consumption-type value added tax (VAT), which is a tax on sales of goods and services less purchases of non-labor inputs. So FAT1, like a VAT, would operate as a tax on the sum of wages and profits of financial firms⁸⁵ and therefore would obviate the problem created by the exemption of most financial services from VAT.

The main reason for the exemption from the VAT of most financial services is that calculating the value added by a financial firm to a financial product is extremely complicated due to the fact that, in most cases, the charges for financial services are not explicitly stated as fees or commissions. Rather they are implicitly included in interest rate spreads and other margins.⁸⁶ The problem is that “the overall effect of the VAT exemp-

81. Devereux, Fuest & Maffini, *supra* note 35, at 3.

82. It has been estimated that an excess-profit tax on financial firms levied would be capable of generating a significant amount of revenue. *See id.* at 5.

83. *See, e.g.*, Edmund Conway, IMF Targets Banks with ‘Excess Profits Tax’, The Telegraph (Apr. 5 2010, 10:24 PM) <http://www.telegraph.co.uk/finance/newsbysector/banksandfinance/7557409/IMF-targets-banks-with-excess-profits-tax.html>.

84. IMF, *supra* note 14, at 66-71.

85. *Id.* at 66.

86. *See* Alan J. Auerbach & Roger H. Gordon, *Taxation of Financial Services Under a VAT*, 92 AM. ECON. REV. 411, 412 (2002); Huizinga, *supra* note 40, at 500; Grubert & Mackie, *supra* note 40, at 25; Poddar & English, *supra* note 40, at 92.

tion . . . is ambiguous [as] the exemption reduces the tax burden on services to consumers but it also increases the tax burden on transactions with businesses.”⁸⁷ The VAT exemption on financial services was one of the factors that, when compounded with the other tax privileges, resulted in the financial institutions becoming unduly large, distorting competition in several ways. In the view of the IMF, the implementation of FAT1 could “partially offset the risk of the financial sector becoming unduly large because of its favorable treatment under existing VATs.”⁸⁸ As for the VAT, however, and also for FAT1, the risk is that the burden of the tax falls on customers and increases the cost of employment.⁸⁹

As opposed to FAT1, the tax base of FAT2 proposed by the IMF includes “supernormal” wages and profits, and the tax base of FAT3 includes only “very high” wages and profits.⁹⁰ Therefore, FAT2 and FAT3 are a combination of an excess-profits tax and a tax on wages. The FAT is capable, in all three of its variants, of generating a large amount of revenue. Yet each may “differ across countries, depending on the relative size, profitability and wage structures of their financial sectors, and may be constrained by the need to apply low rates where the impact on competitiveness or the risk of avoidance are of concern.”⁹¹

As demonstrated by FAT2 and FAT3, which include wages in their taxable base, the model of the excess-profits tax for financial institutions may also encompass taxation on excess compensation for employees and managers of financial companies. Before the crisis, the structure of compensation of most financial institutions strongly incentivized employees to engage in excessively high-risk investments and activities. The compensation for employees was often structured to incentivize positive short-term performance (essentially investments with a high-margin of volatile profitability),⁹² without providing disincentives with respect to conduct likely to generate negative medium-to-long term effects.⁹³

87. Vella et al., *supra* note 35, at 613; see also Peter R. Merrill, *VAT Treatment of the Financial Sector*, TAX ANALYST 163, 167-168 (2011).

88. IMF, *supra* note 14, at 22.

89. Michael Devereux, Clement Fuest, & Giorgia Maffini, *Taxing Banks: The IMF Proposals. A Briefing Note*, 1 OXFORD UNIV. CTR. FOR BUS. TAXATION (Apr. 21, 2010), eureka.sbs.ox.ac.uk/3538/1/taxing_banks_the_imf_proposals.pdf. Apr. For a detailed comparison between VAT and FAT1, see Shaviro, *supra* note 38, at 13-17.

90. IMF, *supra* note 14, at 67-68.

91. *Id.* at 68.

92. See, e.g., Ben Chu, *Bank Bonuses: No Rhyme, Reason or Justification*, THE INDEPENDENT (Jan. 25, 2011, 2:04 PM), <http://blogs.independent.co.uk/2011/01/25/bank-bonuses-no-rhyme-reason-or-justification/>.

93. Bonuses have usually been provided in the form of stock options and other stock-based compensation, which are usually deferred and subject to more favorable tax treatment than cash compensation. See Alworth & Arachi, *supra* note 76, at 9. For a detailed analysis of tax treatment of the financial sector's remuneration plans in OECD countries, see Vieri Ceriani, Stefano Manestra, Giacomo Ricotti &, and Alessandra Sanelli, *The Role of Taxes in Compensation Schemes and Structured Finance*, in TAXATION AND THE FINANCIAL CRISIS 88 (Julian S. Alworth & Giampaolo Arachi eds., 2012).

In fact, during the crisis, public opinion strongly supported the imposition of a high tax rate on those individuals who gained an enormous amount of money in the form of bonuses for making decisions that largely contributed to the creation of the financial crisis. Temporary taxes on bonuses were thus introduced. For example, the UK Bank Payroll Tax, which took effect on December 9, 2009 and expired on April 5, 2010, was imposed on all bonuses exceeding 25,000 pounds sterling at a fifty percent rate.⁹⁴ The French bonus tax was also levied at a fifty percent rate.⁹⁵ It had a similar threshold to the UK Bank Payroll Tax and was levied on bonuses paid during the 2009 accounting year.⁹⁶

These taxes were designed as retrospective and temporary because they were considered penalties for the past conduct of bank employees. However, it seems that such a penalty goal was not reached. There is, in fact, evidence that these taxes were actually paid by the employers via a grossing up of pre-tax compensation,⁹⁷ with the consequence that the cost of the taxes was borne by the financial institutions' shareholders rather than by the employees who received the bonuses.⁹⁸ The likely reason for this tax shifting is found in the decision by shareholders to bear the burden of the tax in order to prevent top managers from moving to other companies with headquarters located in countries where such a tax was not adopted. The decision to pay the tax out of the institutions' profits may have also been influenced by the shareholders' awareness of the temporary nature of the tax. Such tax shifting raises two main issues. First, there are indirect consequences of such a tax on bank capitalization. The fact that financial institutions are induced—at least in the short term—to pay the tax on employees' bonuses out of their profits (via a grossing-up of the managers' compensation) may make it more difficult to comply with the regulatory capital requirements. The second issue is whether the penalty goal pursued through a tax on bonuses may be more efficiently reached by means of a direct tax on bank profits, like an excess-profits tax. A tax on bonuses, if expected to reoccur, practically amounts to an “invitation to avoidance, given the difficulty of ascertaining and monitoring what part of compensation is in fact a ‘bonus.’”⁹⁹ In light of these considerations and the fact that the revenue raised is not significant in macroeconomic terms, this type of tax has been substantially abandoned.¹⁰⁰

94. IMF, *supra* note 14, at 8.

95. *Id.*

96. *Id.*

97. Alworth & Arachi, *supra* note 76, at 12-14.

98. Douglas A. Shackelford, Daniel Shaviro & Joel Slemrod, *Taxation and the Financial Sector*, 18, New York University School of Law: Public Law & Legal Theory Research Paper Series, Working Paper No. 10-30, (2010), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1601330.

99. *Id.*

100. As has been pointed out, “[i]f the bonus tax has the objective to raise revenue from bank employees in leading positions, a levy on all types of remuneration (including the

V. THE FINANCIAL TRANSACTION TAX

A. *General Features*

The third type of financial regulatory tax is generally identified as a “financial transaction tax” or “tax on financial transactions” (FTT). As the name suggests, an FTT is a levy on specifically-targeted transactions that involve the trading of financial instruments. More precisely, an FTT applies “to purchases and sales of financial instruments as well as other types of financial transactions that may not technically constitute a purchase or sale (e.g., various types of derivatives) but have a similar effect. As such, FTTs can be levied on one, a few, or a broad range of instruments, including stocks, fixed income securities, derivatives, and foreign exchange.”¹⁰¹

The first authoritative proponent of the implementation of an FTT was John Maynard Keynes. In his view, short-term speculation over enterprises by means of financial instruments trading, like speculation carried out in Wall Street during the 1930s, could affect the price of the underlying assets and push them away from their fundamental equilibrium values, with negative impacts on the real economy and employment. To deal with this, Keynes proposed “[t]he introduction of a substantial Government transfer tax on all transactions [which] might prove [to be] the most serviceable reform available, with a view to mitigating the predominance of speculation over enterprise.”¹⁰² According to that proposal, the tax should have been imposed on transactions in the stock market, instead of every financial transaction in every market.

More than forty years later, James Tobin revived the idea of an FTT after the breakdown of the Bretton Woods system for stabilizing currencies in the early 1970s. In that context, Tobin advanced a proposal for a global uniform tax at a very low rate on all currency exchanges. According to Tobin, this tax would have been particularly effective at deterring what he called “short-term financial round-trip excursions into another currency” and therefore would reduce currency market volatility.¹⁰³

Beginning in the 1980s, the liberalization of financial markets compounded with financial innovation—in particular derivatives instruments—provoked a boom in trading activity (that is, ‘liquidity’) characterized by the predominance of short-term speculation. This speculation in turn gave rise to volatility, with wide fluctuations of asset not just in the short-term but also in the long-term.¹⁰⁴ However, there was no immediate national policy response.

fixed wage) beyond a certain wage level would seem more appropriate in the financial sector.” Devereux, Fuest & Maffini, *supra* note 35, at 5.

101. Brondolo, *supra* note 16, at 3.

102. JOHN MAYNARD KEYNES, *THE GENERAL THEORY OF EMPLOYMENT, INTEREST AND MONEY*, 160 (1st ed., 1936).

103. James Tobin, *Proposal for International Monetary Reform*, 4 E. ECON. J. 153, 155 (1978).

104. On the concept of “volatility” in general, see ROBERT J. SHILLER, *MARKET VOLATILITY* (1989).

Several countries already had taxes in place regarding transactions of securities devoid of specific regulatory intent, but these taxes were mostly repealed,¹⁰⁵ with the notable exception of the UK, which has maintained an FTT over the last 25 years (see *infra*).¹⁰⁶ National governments were hesitant to implement FTTs, because the liberalization and globalization of markets that occurred in the last two decades of the last century was based on the high mobility of capital and financial transactions among different markets, and an FTT was generally perceived to be an obstacle to a successful market. A renewed interest by policy-makers in the debate over FTTs was spurred by the last crisis. The European Commission proposed the adoption of a tax that would apply to all transactions in which a European-based institution is involved. A specific analysis of this proposal will be provided *infra* in Section IV.C; here, the general rationale of the FTT model will be discussed.

The goal of an FTT is to reduce short-term liquidity and market volatility by imposing an additional transaction cost on targeted trades without impacting medium and long-term liquidity, thereby stabilizing asset prices. This works in practice because the more frequently transactions occur, the higher the cumulated effect of such a tax. Ultimately, the tax should reduce the volatility of both short-term and long-term asset prices and positively affect overall macroeconomic performance.¹⁰⁷ As a result, the FTT exhibits a complex regulatory structure and differs from the traditional taxes on transactions of securities.

The model of the FTT as a volatility reducer is indeed premised on the assumption that modern financial markets—more or less like the 1930s markets Keynes referred to in his original proposal—are characterized by excessive trading activity (excessive liquidity) due to the high volume of short-term speculation, which gives rise to “long swings in asset prices and, hence, persistent deviation from their fundamental equilibrium” (excessive long-term volatility).¹⁰⁸

The causal correlations between the internalization of the additional cost imposed by the FTT and its purported effects are obviously difficult to estimate.¹⁰⁹ But the principal criticism raised by opponents of such a tax

105. In particular, financial transaction taxes were eliminated in the United States (turnover tax at federal level, 1966), Spain (1988), the Netherlands (transfer tax 1990, capital duty 2006), Germany (security tax, 1965), Sweden (transfer tax 1991), Denmark (capital duty 1993, transfer tax 1999), Japan (1999), Austria (securities tax 1995, stock exchange turnover tax 2000), Italy (capital duty 2000), Ireland (2005) and Belgium (2006). Stephan Schulmeister, Margit Schratzenstaller & Oliver Picek, *A General Financial Transaction Tax Motives, Revenues, Feasibility and Effects*, 14-15 AUSTRIAN INST. OF ECON. RESEARCH (Mar. 2008), <http://ssrn.com/abstract=1714395>.

106. *Id.* at 24-26.

107. *Id.* at 7.

108. *Id.* at 1-2, 7.

109. This was highlighted by Alworth & Arachi, *supra* note 76, at 20 (“The various empirical studies fail to detect a strong relationship between an increase in transaction costs (via either taxes or other means) and the functioning of markets. Most studies find that trade volume is reduced, but the effects on volatility and prices are less clear, even though results

is that reducing short-term liquidity is not, by itself, a good aim. According to this view, based on the efficient capital market hypothesis,¹¹⁰ high trading volumes are crucial for price discovery and for driving asset prices toward their fundamental equilibrium.¹¹¹ In addition, much of short-term trading is related to hedging thus, constituting a form of risk management.¹¹²

There is also a more moderate critical view regarding the adoption of an FTT, which provides that such a tax “may also suppress activity by informed traders and arbitrageurs, whose trading tends to push prices towards their fundamental values.”¹¹³ The fundamental problem highlighted by this middle-of-the-road view is that it is often difficult to discriminate between good and bad trading.¹¹⁴ Defining the scope and the rate at which to apply an FTT in a way that reduces volatility without discouraging good trading activity is thus an extremely complicated and sophisticated task.

Proponents of the FTT argue that such a tax has already proven to be effective when properly designed. They cite the U.K. experience (see *infra* Section IV.B) as an example of successful implementation.¹¹⁵ They also emphasize that “there is a remarkable discrepancy between the levels of financial transactions and the levels of the ‘underlying’ transactions in the ‘real world’ . . . [which] suggest[s] that financial markets are [currently] characterized by excessive liquidity and by excessive long-run volatility of prices.”¹¹⁶ In particular, they point out that “the volume of financial transactions in the global economy is 73.5 times higher than nominal world GDP.”¹¹⁷ If that is the case, it is not conceivable that the spectacular rise in trading is caused only by hedging or genuine price discovery.

Thus, the FTT is a regulatory tax that addresses market volatility and that does not target a financial firm’s ability to pay in terms of its income

based on panel data and estimation approaches that better identify transaction cost effects seem to find unexpectedly a positive relationship between transaction costs and volatility.”); see also Thornton Matheson, *Taxing Financial Transactions: Issues and Evidence* 20 (IMF Working Paper No. 11/54, 2011), <http://www.imf.org/external/pubs/ft/wp/2011/wp1154.pdf> (discussing ambiguity in relation to short-term price volatility); see also Devereux, Fuest & Maffini, *supra* note 35, at 5.

110. See Eugene F. Fama, *Efficient Capital Markets: A Review of Theory and Empirical Work*, 25 J. OF FIN. 383 (1970).

111. Schulmeister, Schratzenstaller & Picek, *supra* note 105, at 7.

112. *Opinion of the European Central Bank of 4 November 2004 at the request of the Belgian Ministry of Finance on a draft law introducing a tax on exchange operations involving foreign exchange, banknotes and currency*, CON/2004/34, 3 (2004).; see also Karl Habermeier & Andrei A. Kirilenko, *Securities Transaction Taxes and Financial Markets*, 50 IMF STAFF PAPERS 165, 178 (2003).

113. Matheson, *supra* note 109, at 20.

114. See Shaviro, *supra* note 38, at 26.

115. Schulmeister, Schratzenstaller & Picek, *supra* note 105, at 24-26.

116. *Id.* at 43-44.

117. Stephan Schulmeister, *A General Financial Transaction Tax: A Short Cut of the Pros, the Cons and a Proposal*, 5 (WIFO, Working Paper No. 344, 2009), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1714336.

or wealth. In fact, FTT rates are determined according to market factors rather than by the need to collect revenues, and policy-makers should constantly ensure that rates are adjusted (relatively low) to prevent unintended distortions, essentially the risk of substitution/relocation (see *infra* Section IV.B).¹¹⁸

In addition, the FTT rate should be low, because a high FTT rate may provoke an increase in the cost of capital. This is due to the fact that, since a company's cost of capital is determined by the minimum rate of return demanded by investors, the imposition of an additional transaction cost arising from the transaction tax could be accompanied by demand from investors for a higher minimum rate of return on their investment. This would increase companies' cost of capital, which would have detrimental effects on the real economy and on economic growth.¹¹⁹

B. *The 'Relocation' and 'Substitution' Risks*

As noted in Part II.B, the need for an aggregate effort by countries to implement regulatory taxes at a global level creates the opportunity for free riding by non-cooperating countries. This risk is particularly acute with the FTT because the existence of only a few non-taxing countries can give rise to a relocation risk, referring to the risk that entities shift their residence or the transaction to countries where the FTT is not in place, frustrating the FTT's goal of reducing volatility.

Therefore, the risk of relocation is caused by the existence of competing jurisdictions that do not impose an FTT, thereby attracting relevant trades out of the tax jurisdiction of countries that do enforce an FTT. With respect to this free-riding problem, one should distinguish the situation of an FTT that is unilaterally imposed by one country and the situation of an FTT that is multilaterally imposed by various countries.

Two approaches are available when a country imposes the FTT unilaterally: the territorial approach and the worldwide approach. In the territorial approach, the relevant country taxes only transactions that are carried

118. See Matheson, *supra* note 109, at 36-37; *Commission Staff Working Paper, Executive Summary of the Impact Assessment, Accompanying the Proposal for a Council Directive on a Common System of Financial Transaction Tax and Amending Directive 2008/7/EC*, at 9, SEC (2011) 1103 final (Sept. 28, 2011), http://ec.europa.eu/taxation_customs/resources/documents/taxation/other_taxes/financial_sector/summ_impact_assesmt_en.pdf ("A low flat statutory tax rate is assumed to be essential to avoid strong negative impacts on markets and to ensure some revenue collection, since the incentives for avoidance increase with the tax rate. The IA also suggests differentiated rate by category of products as a good way to mitigate the relocation risks while ensuring appropriate revenues. [In conclusion, f]or an efficient application of any version of an FTT in the EU, a common definition of the scope of the tax, tax rates as well as on the precise tax bases and other essential features of the tax is highly advisable.").

119. See Benjamin Cortez & Thorsten Vogel, *A Financial Transaction Tax for Europe*, 20 EC TAX REV. 16, 21 (2011) (explaining that, nevertheless, "the increase [in the cost of capital] could be mitigated by the reduced volume of government bonds due to the tax revenue generated by the FTT, which, in turn, would increase the demand for non-government securities.").

out through traders and intermediaries established in that country.¹²⁰ For example, an FTT was introduced in Sweden in 1984 with rates ranging between 0.5% and 2%.¹²¹ It was levied on all transactions of securities registered in Sweden *and* all transactions in which a Swedish intermediary was involved.¹²² Under the territorial approach, the FTT is significantly prone to relocation effects. The case of Sweden is a good example: the parties to a transaction of shares of Swedish companies were not subject to tax if the transaction was not carried out through a Swedish intermediary. As a result, a large part of securities trading for Swedish companies was relocated abroad outside the reach of the tax, with detrimental effects not just in terms of revenue collected but also in terms of macroeconomic performance. In light of this relocation, the Swedish government repealed the FTT in 1991.¹²³

Under the worldwide approach, a country unilaterally imposes an FTT on all of the transactions for securities issued in the country, regardless of the location of the transaction or place of establishment of the parties and the intermediaries. For example, in 1964, the U.K. enacted a type of FTT (the British Stamp Duty Reserve Tax) on the transfer of ownership of shares of companies established in the U.K., regardless of the location of the transaction and the establishment of the trader.¹²⁴

The worldwide FTT tends not to cause relocation effects, because transactions remain subject to the tax even if they are shifted abroad. In addition, in the U.K., prevention of the risk of relocation is effected by a special “exit charge” of 1.5% applied when shares are transferred to clearance services or converted into financial products that are excluded from the scope of the tax.¹²⁵ A drawback to the unilateral application of a worldwide FTT is potential enforcement and collection problems with regard to taxable transactions carried out abroad.

In contrast to FTTs that may be applied unilaterally by individual countries, different countries can apply FTTs through multilateral cooper-

120. When transactions are carried out through resident intermediaries, there are two variants of FTT based on the territorial approach: in one, the FTT taxes transactions on securities issued by both resident and non-resident companies; in the other, the FTT only taxes transactions on securities issued by resident companies.

121. John Y. Campbell & Kenneth A. Froot, *International Experiences with Securities Transaction Taxes*, in *THE INTERNATIONALIZATION OF EQUITY MARKETS* 277, 280 (1994).

122. *Id.*

123. *Id.* at 281.

124. Application of the tax to transactions outside of the UK's territory began in 1996. Shares of foreign companies issued or listed on the London Stock Exchange are not subject to the tax. PATRICK CANNON, *TOLLEY'S STAMP DUTIES AND STAMP RESERVE TAX* 61.7 (9th ed., 2001). The Act is still in force in the U.K., although it has been largely modified. Currently, there is a 0.5% tax on the registration of ownership of shares, consisting of a stamp (now an electronic stamp) that is required to make the purchase of shares legally effective.

125. In the worldwide approach to FTT, however, the risks of relocation can be a problem insofar as companies established in the residence-country effectively migrate to non-taxing countries.

ation. There are essentially two scenarios: global and regional multilateralism.

Global multilateralism would be achieved if all (or virtually all) countries agreed on a global FTT and established apportionment rules, exchange of information rules, and dispute settlement procedures. Under global multilateralism, the risk of relocation would be entirely prevented. Global multilateralism, however, is a goal that cannot be achieved in the short term because it implies a virtually complete unanimous consent by numerous countries.

In the short and medium term, a more reasonable strategy is to pursue regional multilateralism. That is, complete multilateralism at regional levels—for example, in the EU (see *infra* Section IV.C). In such a case, however, enforcement of the tax would still be prone to a particular form of relocation risk, as opportunistic taxpayers would be able to transfer their transactions or establishments to countries that are not parties to the regional agreement.

In addition, the FTT is exposed to the *risk of substitution*. In other words, taxable transactions can be replaced by non-taxable transactions. Indeed, such a tax can apply to transactions of all kinds or only to certain specific transactions (such as transactions involving shares, corporate bonds, derivatives, or currencies). Most experts suggest the broadest possible scope, since a tax that is imposed only on specific markets may indeed create unintended distortionary effects. It may, for one thing, induce a shift of investments from one type of instruments to another solely for tax reasons thus, producing economically inefficient outcomes. For example, if assets that are not subject to the FTT are characterized by the same level of profitability as the transactions subject to the tax, investors and institutions are likely to switch their investment to the former if the net cost of switching is lower than the tax imposed on the latter, especially when all types of financial instruments can serve as substitutes for one another.¹²⁶

C. *The EU Commission's Proposal for an FTT*

On September 28, 2011, the European Commission released a proposal for an FTT based on the model of regional multilateralism (hereinafter, the “EU Proposal” or “EU FTT”).¹²⁷ Originally, all of the Member States of the European Union planned on unanimously approving the EU Proposal. However, due to the lack of unanimous consensus (with the United Kingdom leading the group of Member States opposing the enactment of

126. Vella et al., *supra* note 35, at 609; Schulmeister, Schratzenstaller & Picek, *supra* note 105, at 20.

127. See Commission Proposal for a Council Directive on a Common System of Financial Transaction Tax and Amending Directive 2008/7/EC, COM (2011) 594 final (Sept. 28, 2011), http://ec.europa.eu/taxation_customs/resources/documents/taxation/other_taxes/financial_sector/com%282011%29594_en.pdf.

the measure),¹²⁸ the EU Proposal, in a slightly updated version,¹²⁹ is currently the subject of an “enhanced cooperation” procedure¹³⁰ promoted by ten Member States.¹³¹

128. See Press Release, Council of the European Union, Econ. and Fin. Affairs (June 22, 2012), http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ecofin/131141.pdf. For United Kingdom opposition to the Proposal, see *Transcript of David Cameron interview*, THE ANDREW MARR SHOW, BBC NEWS (Jan. 8, 2012), http://news.bbc.co.uk/2/hi/programmes/andrew_marr_show/9673749.stm (stating that, in response to the interviewer’s question “You will block it [the EU Proposal for a common FTT]?”), Prime Minister Cameron stated: “Unless the rest of the world all agreed at the same time that we’re all going to have some sort of tax, then we’re not going to go ahead with that.”).

129. *Commission Proposal for a Council Directive Implementing Enhanced Cooperation in the Area of Financial Transaction Tax*, COM (2013) 71 final (Feb. 14, 2013), http://ec.europa.eu/taxation_customs/resources/documents/taxation/com_2013_71_en.pdf.

130. Enhanced cooperation was initially introduced by the Treaty of Amsterdam (1999) and the Treaty of Nice (2003), which made the Europe legislative procedures less restrictive. Under these treaties, the right to veto that had been previously enjoyed by Member States was eliminated (except in the field of foreign policy), the number of Member States required for launching the procedure changed from the majority to nine Member States, and the procedure’s scope was extended to common foreign and security policies. The general provisions applicable to enhanced cooperation have been grouped together in Title VII of the Treaty on European Union. For more information regarding enhanced cooperation, see Csaba Törö, *The Latest Example of Enhanced Cooperation in the Constitutional Treaty: The Benefits of Flexibility and Differentiation in European Security and Defence Policy Decisions and Their Implementation*, 11 EUROPEAN L.J. 641 (2005); Norberto Nuno Gomes de Andrade, *Enhanced Cooperation: The Ultimate Challenge of Managing Diversity in Europe: New Perspectives on the European Integration Process*, 40 INTERECONOMICS : REV. OF EUROPEAN ECON. POL’Y 201 (2005); Frédéric Allemand, *The Impact of the EU Enlargement on Economic and Monetary Union: What Lessons Can Be Learnt From the Differentiated Integration Mechanisms in an Enlarged Europe?*, 11 EUROPEAN L. J. 586 (2005); Vlad Costantinesco, *Les clauses de “coopération renforcée” - Le protocole sur l’application des principes de subsidiarité et de proportionnalité [“Enhanced Cooperation” Clauses – The Protocol on Application of the Principles of Subsidiarity and Proportionality]*, 33 REVUE TRIMESTRIELLE DU DROIT EUROPÉEN 751 (1997).

131. The Council authorized the requesting Member States to engage in the enhanced cooperation procedure on January 22, 2013. See Press Release, Council of the European Union, Financial Transaction Tax: Council Agrees to Enhance Cooperation (Jan. 22, 2013), http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ecofin/234949.pdf. Initially, eleven Member States requested to engage in the enhanced cooperation procedure: Austria, Belgium, France, Estonia, Germany, Greece, Italy, Ireland, Portugal, Slovenia, and Spain. On May 6, 2014, Slovenia expressed reluctance on signing a declaration through which the requesting Member States committed themselves to finalize the procedure. See *Slovenia Wants Broader Tax Base for Financial Transaction Tax*, GOV’T COMM’N OFFICE FOR REPUBLIC OF SLOVENIA, May 19, 2014, <http://www.sloveniatimes.com/slovenia-wants-broader-tax-base-for-financial-transactions-tax>. Therefore, there are currently only ten Member States proactively engaged in the enhanced cooperation procedure. The UK challenged the legality of the Council’s decision of January 22, 2013 authorizing enhanced cooperation for the adoption of an FTT. On April 30, 2014, the European Court of Justice rejected the UK’s arguments and dismissed the case. See Case C-209/13, U.K. v. Council (Apr. 30, 2014), <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:62013CJ0209&from=EN>. However, the UK Chancellor of the Exchequer, George Osborne, stated that the UK would advance a new challenge if the final design of the proposed FTT had implications for the UK. See Angela Monaghan, *George Osborne bristles as EU moves closer to financial transaction*

In the EU Proposal, the EU Commission expressly identifies “addressing particularly risky behavior” as one of the main targets of a coordinated EU FTT.¹³² The proposed tax is based on the finding that the exponential rise over the last two decades of trading constitutes strong evidence that EU financial markets are characterized by excessive liquidity.¹³³ The EU FTT would therefore be an evolution of the current model of existing national taxes on securities transactions. It would purportedly regulate the volume of trade by imposing an additional cost on transactions. Other objectives of the EU Proposal include raising revenue to provide adequate contributions from the financial sector to public finances and coordinating national laws concerning indirect taxation of financial transactions.¹³⁴

The financial industry has advanced an argument loosely based on the efficient market hypothesis that increased trading, and in particular derivatives trading, is caused by normal hedging, and that it should not be regulated because it allows genuine price discovery.¹³⁵ However, others argue that, even accounting for the effect of an EU FTT, the volume of trading would remain thirty-five times higher than the GDP, thereby enabling an efficient price discovery process and providing “enough liquidity for hedging purposes.”¹³⁶

The proposed EU FTT would cover a broad range of financial transactions. In particular, the scope of the tax would include transactions involving financial instruments that are negotiable on the capital markets

tax, THE GUARDIAN (May 6, 2014, 2:14 PM), <http://www.theguardian.com/politics/2014/may/06/george-osborne-eu-financial-transaction-tax-legal-challenge>.

132. Commission Proposal for a Council Directive on a Common System of Financial Transaction Tax and Amending Directive 2008/7/EC, *supra* note 127, at 2; Commission Proposal for a Council Directive Implementing Enhanced Cooperation in the Area of Financial Transaction Tax, *supra* note 129, at 4.

133. Schulmeister, *supra* note 117, at 5, 7 (“The volume of financial transactions in the global economy is 73.5 times higher than the nominal world GDP. In 1990 this ratio amounted to ‘only’ 15.3.”). See also Schulmeister, Schratzenstaller & Picek, *supra* note 105, at 43-44 (“[T]he volume of foreign exchange transactions is almost 70 times higher than world trade of goods and services. In Germany, the UK and the US, the volume of stock trading is almost 100 times bigger than business investment, and the trading volume of interest rate securities is even several 100 times greater than overall investment.”).

134. The Commission stated that the goal of the EU Proposal is “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” during the crisis. Commission Proposal for a Council Directive on a Common System of Financial Transaction Tax and Amending Directive 2008/7/EC, *supra* note 127, at 2. The same goal has been confirmed in the February 2013 Proposal. See Commission Proposal for a Council Directive Implementing Enhanced Cooperation in the Area of Financial Transaction Tax, *supra* note 129, at 2, 32.

135. Noam Noked, *EU Proposed Financial Transaction Tax – Fortune or Folly?*, THE HARV. L. SCH. F. ON CORP. GOVERNANCE & FIN. REG. (Nov. 17, 2011), <http://corpgov.law.harvard.edu/2011/11/17/eu-proposed/transaction-tax-fortune-or-folly/>.

136. STEPHAN SCHULMEISTER, AUST. INST. OF ECON. RESEARCH, *Bank Levy Versus Transactions Tax: A Critical Analysis of the IMF and EC Reports on Financial Sector Taxation* 4 (2010), http://stephan.schulmeister.wifo.ac.at/fileadmin/homepage_schulmeister/files/FTT_StS_on_IMF_EC_04_10_.

(including transferable securities and money market instruments except the instruments of payment), units or shares in collective investment undertakings, and derivative agreements, as well as transactions outside the organized markets, including over-the-counter (OTC) transactions.¹³⁷

However, there are exemptions motivated by public interest concerns. Transactions with the European Central Bank or national central banks of EU Member States would not be subject to the tax so as not to affect monetary policies or refinancing opportunities for financial institutions. Transactions with international organizations would also be excluded from the scope of the tax in consideration of the sovereign debt crisis.¹³⁸ Transactions connected with business activities or carried out by investors in their capacity as citizens are excluded as well. Examples of these transactions are insurance contracts, mortgage lending and consumer credit and payment services. Currency transactions on spot markets are also exempted.¹³⁹ In addition, the EU Proposal sets forth an exception for primary market transactions and for transactions arising from restructuring operations.¹⁴⁰

According to the EU Proposal, a tax would be levied at the rate of 0.1% on transactions involving shares of stock and bonds, and 0.01% on all transactions involving derivatives transactions. In the Commission's forecast, it is expected to raise thirty to thirty-five billion euros per year.¹⁴¹ According to the EU Proposal, revenue arising from the tax will be apportioned among the various countries, depending "on the place of establishment of the financial institutions involved in financial transactions and not on the place of trade."¹⁴² This solution meets the demands of Member

137. *Commission Proposal for a Council Directive Implementing Enhanced Cooperation in the Area of Financial Transaction Tax*, *supra* note 129, at 8. Actually, for the meaning of "financial instruments," the Commission's Proposal refers to the MiFID Directive, which, in turn, provides an enumeration of financial instruments that can be subject to transactions that qualify as "financial transactions." For the MiFID Directive's definition, see Council Directive 2004/39/EC, Annex 1 Sec. C, 2004 O.J. (L. 145/41), <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32004L0039&from=EN>.

138. Laurent de La Mettrie, Patricia Songnaba & Donald Murre, *The European Financial Transaction Tax: The New Reality*, 15 *DERIVATIVES & FINANCIAL INSTRUMENTS* 71, 72-73 (2013).

139. *Commission Proposal for a Council Directive Implementing Enhanced Cooperation in the Area of Financial Transaction Tax*, *supra* note 129, at 23-24. However, if these instruments and services "are securitized and traded as structured products, these transactions are within the scope" of the tax. De La Mettrie, Songnaba & Murre, *supra* note 138, at 72.

140. Art. 3(4)(a) and (g) of *Commission Proposal for a Council Directive Implementing Enhanced Cooperation in the Area of Financial Transaction Tax*, *supra* note 129, at 17.

141. *Id.* at 14, 26. Although the envisaged tax rates are the same as those indicated in the original Proposal, in its new Proposal the Commission lowered the expected revenue per year, which originally was fifty-seven million euros – this is clearly consequent to the narrower group of Member States which are engaged in the enhanced cooperation procedure. See *Commission Proposal for a Council Directive Implementing Enhanced Cooperation in the Area of Financial Transaction Tax*, *supra* note 129, at 14.

142. *Commission Proposal for a Council Directive on a Common System of Financial Transaction Tax and amending Directive 2008/7/EC*, *supra* note 127, at 5 (see "Impact assess-

States like France or Germany, which are the headquarters of large financial institutions, but is not likely to satisfy other countries, which host a number of institutions disproportionate to the amount of transactions.¹⁴³

Under the EU Proposal, an unspecified portion of the revenue could be used for the EU budget, thereby reducing the required contributions of Member States.¹⁴⁴ This raises serious questions in terms of feasibility. In particular, the unpredictability of revenue raised by the FTT—due to the inherent relocation risk if the tax is not implemented by all of the Member States—makes such a type of tax an unreliable source of funding.¹⁴⁵

The EU Proposal adopts a territorial approach, under which a transaction is subject to taxation as long as at least one of the parties is a financial institution established in a Member State participating in the enhanced cooperation procedure (hereinafter, “Participating Member State”).¹⁴⁶ Such a structure deals effectively with the risks of relocation among the Participating Member States, but leaves the tax vulnerable to relocation to other jurisdictions.¹⁴⁷ For this reason, in the updated version of the EU Proposal, the EU Commission clarified that the term “establishment” for the purpose of the EU FTT is not defined by the place of incorporation, but is identified by several substantial criteria set forth by the EU Proposal.¹⁴⁸ Moreover, the European Commission added to the 2013 updated

ment”, to which the 2013 Proposal refers). See *Commission Proposal for a Council Directive Implementing Enhanced Cooperation in the Area of Financial Transaction Tax*, *supra* note 129, at 6.

143. This would have been the case for the UK, which rejected the Commission’s Proposal and is not one of the countries pursuing the enhanced cooperation procedure for the enactment of the EU FTT. According to estimates, up to eighty percent of income that could have been raised by the tax would have arisen from transactions based in London. See Noked, *supra* note 135.

144. *Commission Proposal for a Council Directive Implementing Enhanced Cooperation in the Area of Financial Transaction Tax*, *supra* note 129, at 4.

145. Vella et al., *supra* note 35, at 612-13, 616.

146. According to Article 4 of the current Proposal, a financial institution is considered ‘established’ in the European Union when it is authorized, has its registered seat, its permanent address, its usual residence or a branch in one of the Member States. *Commission Proposal for a Council Directive Implementing Enhanced Cooperation in the Area of Financial Transaction Tax*, *supra* note 129, at 24.

147. If the parties of the transaction are both established in territories of countries that do not adopt the FTT, the transaction is not subject to the common tax. This type of avoidance can be pursued by large institutions, which can carry out transactions through subsidiaries established in jurisdictions not involved in the implementation of the FTT. See Vella et al., *supra* note 35, at 611; Carlo Garbarino & Giulio Allevato, *Financial Transaction Tax europea: obiettivi dichiarati e potenziali effetti distorsivi*, 12 FISCALITÀ E COMMERCIO INTERNAZIONALE 14, 17-19 (2012).

148. Such criteria are, in particular, i) the authorization of the financial institution by the regulator of a participating Member State; ii) the authorization provided by a participating Member State different from that where the transaction takes place; iii) the holding of a registered seat in a participating Member State; iv) the holding of a permanent address in a participating Member State; v) the disposal of a branch within a participating Member State; vi) a residual criterion according to which if a financial institution takes part in a transaction with another financial institution, or even with a non-financial institution, established in a

version of its Proposal the “issuance principle,” an element borrowed from the worldwide approach (see *supra* Section IV.B.) according to which financial instruments issued in the Participating Member States will be taxed when traded, even if the firms trading such instruments are not established within the FTT zone.¹⁴⁹ Finally, explicit anti-abuse provisions are now included.¹⁵⁰

Nevertheless, the lack of a global implementation of an FTT may still give rise to relocation concerns and may result in competitive disadvantages for the markets of Participating Member States. Due to this concern, the U.K., at the time of the first EU Commission’s proposal, stated that it would oppose the adoption of the proposed tax if not implemented within a globally coordinated framework, including all of the other main financial regions outside of Europe.¹⁵¹ Indeed, the U.K. was one of the countries that opposed the adoption of the EU Proposal in June 2012.¹⁵² As a result of the decision by only eleven Member States to engage in enhanced cooperation procedure, the FTT-zone will be even smaller and, correspondingly, the relocation risk to the non FTT-zone will be increased.

Businesses, financial organizations, governments (mainly the U.K.) and international institutions, such as the IMF, have raised criticism to the EU Proposal. This criticism coalesces around four themes. First, some critics have argued that the tax may have a detrimental effect on the financial sector and on overall GDP growth in terms of increase in the cost of capital.¹⁵³ Second, others have claimed that the adoption of an EU FTT, without similar provisions in the other main financial centers around the world, would represent a significant competitive disadvantage for the European centers.¹⁵⁴ Third, it is contended that the EU proposal is not sufficiently consistent with the Commission’s goal of ensuring harmonized function of the European Internal Market because the Commission should have tried

participating Member State according to one of the previous five criteria, such financial institution is deemed to be established in that Member State as well. *Commission Proposal for a Council Directive Implementing Enhanced Cooperation in the Area of Financial Transaction Tax*, *supra* note 129, at 24; see also de La Mettrie, Songnaba & Murre, *supra* note 138, at 75.

149. *Commission Proposal for a Council Directive Implementing Enhanced Cooperation in the Area of Financial Transaction Tax*, *supra* note 129, at 18.

150. In particular, the new Proposal includes a provision which deals directly with depository receipts and similar securities, and a general anti-abuse rule aimed at tackling almost any form of avoidance. See *Commission Proposal for a Council Directive Implementing Enhanced Cooperation in the Area of Financial Transaction Tax*, *supra* note 129, at 28-29.

151. European Union Comm., Rep. on Its Twenty-Ninth Session, Towards a Financial Transaction Tax, at 55-56 (2010-12).

152. See *supra* note 128.

153. The European Commission originally estimated the impact of the FTT, in terms of GDP losses, between 0.5 and 1.76%. See *Executive Summary of the Impact Assessment*, *supra* note 118, at 10.

154. Noked, *supra* note 135.

to coordinate these national levies introduced by some Member States,¹⁵⁵ rather than imposing a top-down solution.¹⁵⁶

Lastly, critics have also cast doubt on the administrative feasibility of such a tax. With regard to the Participating Member States' tax authorities, there is a concern about implementation and collection of the tax. This is mainly due to the fact that the EU Proposal does not provide much guidance on this topic and only provides that the tax should be paid at the moment of the electronic transaction or within three working days of the conclusion of a non-electronic transaction. Moreover, the burden of the tax collection falls on the participating Member States on the basis of internal regulations to be enacted.¹⁵⁷

It is also likely that taxpayers would encounter difficulty administering the tax. Since the EU FTT would potentially apply to a large range of transactions, including transactions outside the organized markets, this tax would be difficult to administer, as it would require firms to track individual transactions rather than to report a final position at the end of the financial year as occurs with backward-looking levies such as risky asset-based and liability-based taxes. However, these administrative problems can be mitigated by several factors, including clearinghouses taking a more prominent role in settling financial transactions, the growth of automated trading platforms, the movement from paper securities to electronic book entries, and the recent progression toward more stringent regulation of OTC derivatives in a number of countries.¹⁵⁸

VI. HOW FINANCIAL REGULATORY TAXES COMPLEMENT DIRECT REGULATION

Parts IV and V described the main types of financial regulatory taxes and some of the concrete proposals recently advanced by governments and international organizations. It is important to note that such regulatory taxes (risky-asset and liability-based taxes, excess-profits tax, and FTT) are not exclusive of one another, but if properly designed and carefully implemented can be applied in combination.

155. See Vella et al., *supra* note 35, at 620; Devereux, *New Bank Taxes, New World Order?*, *supra* note 80, at 13. Only after the issuance of the Commission's proposal, a few Member States enacted domestic financial transaction taxes. These taxes have been enacted by Italy, France, and Hungary but have been strongly criticized. The critiques focused on the potential counter-productive effects of unilateral enforcement and on the fact that such taxes differ from each other and even from the Commission's proposal. See, e.g., Garbarino & Allevato, *supra* note 147, at 17.

156. As a matter of fact, the explicit efforts of the Commission have been to harmonize top-down rather than to coordinate national legislation: "Several EU Member States have already taken divergent action in the area of financial sector taxation. The purpose of this proposal is to provide a common European approach to this issue that is consistent with the internal market." *Commission Proposal for a Council Directive on a Common System of Financial Transaction Tax and Amending Directive 2008/7/EC*, *supra* note 127, at 2.

157. *Commission Proposal for a Council Directive Implementing Enhanced Cooperation in the Area of Financial Transaction Tax*, *supra* note 129, at 26-28.

158. Brondolo, *supra* note 16, at 5.

In such a flexible choice architecture, these taxes are potentially capable to reach, at domestic and international levels, varying degrees of the three policy goals of (1) discouraging excessive risk-taking, (2) building an insurance fund available for future crisis management, and (3) raising more revenue from the industry which creates the negative externalities, thereby achieving greater redistribution and fairness effects within the tax system as a whole (see *supra* Section II.A). Consequently, these different types of financial regulatory taxes can be combined as a cluster of diversified incentives.

There is an additional important feature of regulatory financial taxes—the potential impact of such taxes on and their interconnection with direct regulation. This interconnection constitutes, as mentioned in Part III, the third layer of the choice architecture of financial regulatory taxes.

In a broad sense, there are two aspects of this interconnection: first, both approaches are aligned as to their goals; and second, both approaches are functionally interdependent.

The goals of these two policy approaches are aligned, because they both operate as preventive measures against negative externalities. Regulatory taxes, by attributing a certain cost *ex ante*, leave to the market mechanism the reduction of potential negative externalities. Direct regulation, on the other hand, compels *ex ante* certain kinds of behavior that are expected to reduce risks because they have a tendency to create negative externalities.

In particular, regulatory taxes can address one or more of the central externalities (for example, volatility through FTT or excessive risk through a liabilities-based levy), while improved traditional regulation can cover other externalities and behaviors or reinforce the impact of regulatory taxes.

Furthermore, financial regulatory taxes and direct regulation are functionally interdependent for two reasons. First, there is a feedback loop between these two policy approaches. Regulatory taxes should be able to reduce negative externalities, and this, in turn, should facilitate the similar task of direct regulation. At the same time, however, direct regulation should be able to reduce negative externalities, and this, in turn, should facilitate the similar task of regulatory taxes. Because of this expected feedback loop, the more that negative externalities are reduced by regulatory taxes, the more direct regulation will more easily achieve its goals, and vice versa.

Second, there is a symbiotic operation¹⁵⁹ of these two approaches. On the one hand, regulatory taxes extract earmarked revenues used to finance

159. The existence of mutual benefits between regulation and financial regulatory taxes created a kind of “symbiosis” between two different policy approaches. The term “symbiosis” is used in biological sciences to denote close physical association between organisms of different species interact to their mutual benefit, as distinguished from parasitic situations in which an organism species interacts with another organism to its own exclusive benefit damaging the other party. By extension, in the social sciences “symbiosis” is used to denote situations

the administrative costs of direct regulation. On the other hand, heightened direct regulation reduces the need for further funds for its financing. In practice, the more funds raised by regulatory taxes, the more resources that are available for direct regulation. Through the gradual reduction of negative externalities by heightened regulation, lower amounts of financial resources extracted by regulatory taxes are needed.

It could therefore be reasonably expected that the feedback loop between these two policy approaches and their symbiotic operation would lead to recurring cycles of further reductions of negative externalities. Moreover, financial regulatory taxes present two important comparative advantages in terms of practical feasibility over direct regulation, which significantly contribute to making the former critical to the achievement of the regulatory goals.

First, they simplify the complex decisions that are taken by firms and consumers in respect to financial risk by reducing the amount of information that is necessary to market and purchase financial products. Therefore, instead of computing complex information at each stage of the process, economic actors merely need to factor into their decisions the cost of financial products and activities impacted by the regulatory taxes and develop their own strategies on that basis.

Second, new direct regulation requires the establishment of agencies, the development of new expertise within already existing agencies, and significant costs for the firms reporting information and authorities collecting it. By contrast, the adoption of regulatory taxes simply places an upstream cost of risk on diverse financial products that is collected through the already-existing channels of the tax system. This is effective because firms and consumers will presumably behave according to a price mechanism.

In the remaining paragraphs of Part VI, we will illustrate how this interdependence between policy approaches may operate by way of several examples, evidencing how both entity-based regulatory taxes and FTTs, if properly designed and implemented, can effectively complement the effects of direct regulation. If one reviews, for example, the most extensive attempt to regulate the financial markets after the 2008 crisis—the Dodd-Frank Act,—one can identify the three main goals of direct regulation: (1) the management of systemic risk, (2) the regulation of components of “shadow banking” markets, including derivatives and repos, and (3) the establishment of a consumer financial protection agency. Such direct regulation can be complemented to some extent by the tools of regulatory taxation.

First, regulatory taxes can complement regulation with respect to the management of systemic risk. One of the chief aims of the Dodd-Frank Act was to directly contain this type of systemic risk because of the ineffi-

in which agents interact with one another to their mutual benefit, as distinguished from parasitic situations in which agents interact with other agents to their own exclusive benefit damaging the other agent. *See, e.g.,* GEERAT J. VERMEIJ, *THE EVOLUTIONARY WORLD: HOW ADAPTATION EXPLAINS EVERYTHING FROM SEASHELLS TO CIVILIZATION* 106-31 (2010).

ciencies of the pre-crisis regulatory system.¹⁶⁰ The Dodd-Frank Act first introduced a regulatory framework for SIFIs, establishing a more efficient monitoring of systemic risk. The regulatory framework for SIFIs was accomplished by conferring on the Federal Reserve the power to supervise and regulate financial firms, which, in case of collapse, may endanger financial stability. The Federal Reserve now oversees banking holding companies and nonbank financial institutions,¹⁶¹ replacing functions previously carried out by the Securities and Exchange Commission¹⁶² and Office of Thrift Supervision (“OTS”), the latter of which has been abolished.¹⁶³

In particular, the Federal Reserve’s supervisory purview includes supervision over risks to the institution itself together with the risks that such an institution poses to the financial system as a whole.¹⁶⁴ In addition, the Dodd-Frank Act requires major banks and nonbank firms to meet specific capital and liquidity requirements.¹⁶⁵ This goal is also pursued at the international level through the Basel Agreements in order to strengthen capital requirements.¹⁶⁶

These regulatory functions exercised by the Federal Reserve in the United States, or by similar agencies in other countries, could be complemented by the application of a risky asset-based or liability-based regulatory tax (such as the Financial Crisis Responsibility Fee proposed in the United States). Indeed, such taxes—the burden of which is, by definition, proportionate to each firm’s contribution to systemic risk and potential cost in the event of default (see Section III.A)—can give rise to an insurance mechanism which attributes *ex ante* an insurance cost to financial firms and leaves to market mechanisms the reduction of risks that create potential negative externalities, therefore buttressing the purpose behind

160. Major financial firms were regulated according to their formal labels—as banks, investment banks, insurance companies, and the like—rather than according to their actual conduct. See U.S. GOV’T ACCOUNTABILITY OFFICE, FINANCIAL REGULATION: A FRAMEWORK FOR CRAFTING AND ASSESSING PROPOSALS TO MODERNIZE THE OUTDATED U.S. FINANCIAL REGULATORY SYSTEM, GAO-09-216, 5-15 (2009), <http://www.gao.gov/assets/290/284691.pdf>. Diversified financial institutions and non-bank financial companies competed with banks in the mortgage, consumer credit, and business lending markets, yet escaped the capital and other requirements imposed on their bank-chartered competitors. *Id.* at 20, 23-24. Large financial institutions could choose to be overseen by the regulator that would offer the least restrictive supervision. *Id.* at 55.

161. Dodd-Frank Act, Pub. L. No. 111-203, § 312(b)(1), 124 Stat. 1376, 1523 (2010) (codified at 12 U.S.C. § 5412).

162. *Id.* § 618.

163. *Id.* § 313.

164. See *id.* § 113(a)-(b).

165. *Id.* § 115(a)-(c), § 171(b)(2).

166. For more on regulatory capital, see Bank for Int’l Settlements, Basel Comm. on Banking Supervision, *The Basel Committee’s Response to the Financial Crisis: Report to the G20* (Oct. 2010), <http://www.bis.org/publ/bcbs179.pdf>. On the loss absorbency of regulatory capital, see Bank for Int’l Settlements, Basel Comm. on Banking Supervision, *Proposal to Ensure the Loss Absorbency of Regulatory Capital at the Point of Non-Viability* (Aug. 2010), <http://www.bis.org/publ/bcbs179.pdf>.

capital requirements set forth in direct regulation. In addition, revenue arising from risky asset-based or liability-based regulatory taxes can contribute to the creation of insurance-like funds available for future crisis management and prevention of systemic collapse. Such funds could also be used to finance the costs of ongoing regulatory activities.

Notably, the EU Commission, reversing an initial position,¹⁶⁷ signaled that for the purposes of reducing high leveraging, high-risk assets, or limiting the size of financial institutions, it will continue to rely exclusively on more traditional regulatory tools—such as capital requirements or the definition of risk-weighted assets—rather than use tax measures like those proposed in the United States (see *supra* section IV.A).¹⁶⁸

An additional example of the complementary use of regulatory taxes with direct regulation is found in relation to shadow banking markets, particularly OTC derivatives, repo agreements, and securitization programs. Before 2008, the OTC derivatives market grew disproportionately with respect to the value of the underlying transactions,¹⁶⁹ thereby increasing risk in the financial market as a whole, particularly in light of the fact that OTC derivatives concentrated risk among big players.¹⁷⁰ These derivatives also increased firms' counterparty credit exposure and aggravated the impact of the firms' failure on the financial system and on the securitization market when synthetic securitization (with embedded derivatives) was implicated.¹⁷¹

Just before the 2008 crisis, major players used the repo markets for short-term funding, making them an essential feature of shadow banking. However, the financial crisis blocked the repo markets, thus triggering a contraction in credit.¹⁷² The Dodd-Frank Act, as a countermeasure, introduced central clearing and exchange trading and strengthened supervision of market participants. Central clearing is achieved through a mix of limitations and incentives. Limitation comes in the form of compulsory regimes, such as central clearing and trading of standardized derivatives,¹⁷³ reporting requirements, and higher capital and margin requirements.¹⁷⁴

167. The European Commission was, indeed, initially in favor of the implementation of a liability-based levy rather than an FTT. See *Innovative Financing at the Global Level*, EUROPEAN COMMISSION, SEC 409 final (Apr. 2010) 16-17, http://ec.europa.eu/economy_finance/articles/international/documents/innovative_financing_global_level_sec2010_409en.pdf.

168. *Executive Summary of the Impact Assessment*, *supra* note 11, at 5-6. In regard to the potential impact of a harmonized EU FTT, which accompanied the Proposal, the European Commission clearly stated that “regulatory measures are more appropriate” for the purpose of “address[ing] the distortions of financing decisions and the incentives to excessive leverage created by the different treatment of debt and equity under the current corporate tax systems.”

169. See FIN. CRISIS INQUIRY COMM'N, *supra* note 3, at 299.

170. See *id.* at 50.

171. See *id.* at 57.

172. Barr, *supra* note 3, at 105.

173. See Dodd-Frank Act, Pub. L. No. 111-203, § 723(a)(3), 124 Stat. 1376, 1675-81 (2010) (amending 7 U.S.C. § 2).

174. *Id.* § 729, 731.

Supervision is increased through prudential regulation and capital requirements on dealers and other major players in the OTC derivatives markets.¹⁷⁵

Also in regard to the regulation of OTC derivatives and repos, the previously described measures set forth in the Dodd-Frank Act could, in theory, be supplemented by regulatory taxation. Specifically, the U.S. government could place a levy based on the FTT model. For example, as illustrated in Section IV.C, the FTT proposed by the EU covers derivative agreements as well as transactions outside the organized markets, including OTC transactions. Such a tax imposes significant reporting and collection arrangements on financial firms and trading intermediaries, so that one of the expected results of both direct monitoring and regulatory taxation on shadow banking markets would be the reduction of price volatility combined with increased transparency. Furthermore, with regard to the purpose of reducing volatility, a measure such as the proposed EU FTT, in spite of its intrinsic limitations relating to the relocation risk, may have a more significant and effective impact than mere direct regulation. While the FTT, by attributing *ex ante* an additional cost on targeted trades, provides concrete market incentives to reduce the amount of merely speculative trading, direct regulation can, at most, oversee the transactions that may create volatility. This monitoring is only expected to reduce transactions that create volatility.

Finally, financial regulatory taxes can complement direct regulation with respect to consumer protection—another important concern of the Dodd-Frank Act. While the impact of direct regulation with respect to this issue in the United States in the short run led to the replacement of the fragmented financial consumer protection regulation with a single Consumer Financial Protection Bureau through the Dodd-Frank Act,¹⁷⁶ the impact of regulatory taxes—in particular FTTs—could be felt in the medium-run through the alignment of prices of financial products by market mechanisms. Indeed, Pigouvian taxes, as illustrated in Part II, essentially signal to the consumer the actual financial risk of products, as the price of those products would include their negative externalities for the public at large. This would incentivize consumers to change their behavior in a way that lowers potential negative externalities.

VII. POLICY MIX AND MULTILATERAL COOPERATION

The financial sector's problem with negative externalities cannot be solved entirely by replacing direct regulation with regulatory taxes, because the problem arises from a complex bundle of causes.¹⁷⁷ In light of

175. *Id.* § 731(d)-(e).

176. *See* Barr, *supra* note 3, at 107-08.

177. As Shackelford, Shaviro, and Slemrod correctly pointed out, the financial sector's negative externalities' "expected social harm, other than the purely pecuniary to the government as insurer, is multi-dimensional and difficult to measure" and "even that pecuniary harm cannot be measured entirely accurately through a risk-adjusted fee." They thus conclude that "the classic tax-or-regulation debate is surely beside the point with respect to fi-

this causal complexity and of the potential interconnections between direct regulation and regulatory taxes, as illustrated in Part VI, a policy mix of regulatory taxes and direct regulation seems to be an appropriate response to the call for a structured reform of the regulatory framework of the financial sector; these changes should be applied gradually, as advocated in the Introduction.

Such a policy mix can address different problems. For example, systemic risk can be managed through a levy on risk-weighted assets or on liabilities based on an insurance mechanism, combined with direct regulation in the form of systemic risk monitoring (including capital requirements) and winding down SIFIs. Likewise, market volatility could be constrained through another regulatory tax—a multilateral FTT—which would attempt to internalize the cost of excessive-risk trading by financial operators, while direct regulation could complement the FTT through traditional oversight of under-regulated financial markets, in particular OTC derivatives and securitization programs. Finally, both entity-based financial regulatory taxes and an FTT, complemented by proper agency oversight, could successfully attribute the costs of the externalities to the actors who gave rise to them.

In addition, the collection of earmarked revenue constitutes a collateral, yet not negligible effect of financial regulatory taxes, which can fund other regulatory programs and potential future bailouts. This is particularly true of entity-based regulatory taxes, which are less prone to avoidance and generate a more stable source of revenue. Specifically, among the entity-based regulatory taxes, the financial excess-profits tax (addressed in Part IV.B.) is most suitable for this purpose because such a tax is imposed on activities, such as profit creation, that entities will continue to maximize.

As illustrated in Section III.B, unilateral application of domestic tax-regulatory measures may constitute only the first stage of a larger process toward the implementation of an effective regulatory tax strategy, and international cooperation should at least take place at the macro-regional level to prevent major free-riding problems. Therefore, multilateral cooperation should be pursued at least among all of the jurisdictions belonging to a given financial macro-region (for example, all the jurisdictions belonging to the North American region, the European region or the Asian Pacific region).

Moreover, the jurisdictions willing to cooperate with one another should pursue an aligned reduction of the core negative externalities. It is obviously impossible to quantify the exact amount of those externalities in respect to each contributing national system, but negotiating a minimum threshold—a sort of *de minimis* rule—appears to be an attainable goal. Every country would agree to meet a minimum international standard

nancial institutions, because regulation of the financial sector both is not going away, and should not.” Shackelford, Shaviro & Slemrod, *supra* note 98, at 14.

through mechanisms that are not entirely dictated at international levels but which are part of a portfolio of agreed-upon financial regulatory taxes.

A possible solution could be the inclusion of global or macro-regional financial regulatory taxes within the framework of agreements involving broader economic and political interests, such as, in international trade agreements. The involved jurisdictions should require that the signatories to such an agreement adopt a mix of financial regulatory taxes as a condition to signing the agreement. As an alternative to (or in combination with) such a condition to signing the agreement, a condition of the effectiveness of such an agreement regarding a particular country could serve the purpose. Conversely, the refusal of adopting the regulatory taxes could also lead to the exclusion of such country from treaty benefits, including withdrawal from the treaty. The combination of these measures may prevent free riding by non-cooperating countries. Of course those limitations should not apply to those signatories of the framework treaties that have not yet developed mature financial systems capable of creating negative externalities such as those of the 2008 financial crisis. Applying financial regulatory taxes on a global level, would be an arduous undertaking akin to international programs in other contexts in which a cluster of “core countries” already committed to a standard attempts to recruit other (potentially unwilling) “peripheral countries” to adhere to that standard. Like in those situations, peripheral countries are incentivized to sign the framework treaty to extract general benefit, even if they plan on defaulting later to escape from the obligation to implement the financial regulatory taxes. Therefore, effective implementation may be difficult.

In practice, the only real sanction would be that countries not contributing to the implementation of the global architecture of financial regulatory taxes would be excluded from the benefits provided by those framework international agreements. The international organizations dealing with such trade agreements would provide the natural framework for implementation of this type of multilateral agreement on financial regulatory taxes. For global trade agreements, the WTO would serve as such international organization; for regional agreements, the European Union, or the NAFTA Secretariat would serve as such international organization.¹⁷⁸ These international organizations could also play a prominent role

178. The same approach, for example, has been taken through the inclusion of environmental cooperation within the NAFTA framework. Indeed, in 1993, the United States, Canada, and Mexico agreed to sign a side-treaty of NAFTA, the North American Agreement on Environmental Cooperation (NAAEC), which aimed at setting out principles and concrete measures regarding conservation and protection of the environment. North American Agreement on Environmental Cooperation, preamble, art. 1, Can.-Mex.-U.S., Sept. 8, 1993, 32 I.L.M. 1480, <http://www.cec.org/Page.asp?PageID=1226&SiteNodeID=567>. The agreement went into effect on January 1, 1994. Furthermore, by means of such agreements the United States, Canada, and Mexico also established the Commission for Environmental Cooperation (CEC), which is in charge of bolstering and monitoring the cooperation among the three countries on the achievement and implementation, respectively, of the goals and measures announced in the NAAEC. PIERRE MARC JOHNSON & ANDRE BEAULIEU, *THE ENVIRONMENT AND NAFTA: UNDERSTANDING AND IMPLEMENTING THE NEW CONTINENTAL LAW* 131-32 (1996).

in the choice and the design for a harmonized application of regulatory financial taxes whose adoption should be discussed in the negotiations, as well as in the implementation process.
