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Avoided "act of vandalism" or "missed opportunity"? Two alternative accounts of the European Financial Transactions Tax proposal

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Avoided "act of vandalism" or "missed opportunity"? Two alternative accounts of the European Financial Transactions Tax proposal

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Abstract: After the seeming exhaustion of the Tobin tax debates in the early 2000s, the idea of levying a tax on financial transactions has recently resurfaced at the centre stage of European politics. This has been prompted by a concatenation of events which includes the persistence of the current economic crisis and the paucity of the responses to it, the initial European Commission proposal to tax all types of financial instruments, all financial markets and all financial institutions and, ultimately, the subsequent progressive dilution of the application of such prospects in practice. Given such backdrop, this paper reviews closely two distinct accounts of financial transaction taxes in general and of the European Commission proposal in particular: Grahl and Lysandrou's argument against them (together with their preference for financial activities taxes instead), and Gabor's alternative account of their rationale. Such a review aims to constitute a preliminary assessment of these two distinct accounts of the material socio-economic relations, processes and structures underpinning the prospects for global financial reform, which is then offered as a base to relate such perspectives to broader issues and debates about financialisation.

Keywords: financial transactions tax, financial activities tax, regulatory response to the crisis, financialisation

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1. Introduction

As it is well known, financial transactions taxes are the offspring of the Tobin tax. This originates in James Tobin's landmark proposal to levy a tax on currency transactions, and was first offered in Tobin's 1972 Janeway lecture at Princeton (Tobin, 1978, 1996). Such proposal drew inspiration from Keynes' suggestion – elaborated in his *Treatise on Money* (1930) and *General Theory* (1936) – to tax 'foreign lending to contain speculative capital movements' (Arestis and Sawyer, 2013, p.89). Significantly, for Keynes the role of such a tax should have been that of influencing 'the balance between short term and long term holdings of shares, with possible impact on the volatility of share prices ("speculation"), on investment ("enterprise") and corporate governance' (Arestis and Sawyer, 2013, p.89). However, since Tobin's original proposal, his eponymous tax has witnessed several phases with respect to its popularity within and across distinct constituencies. Thus, for example, Caldari and Masini (2010) subdivide the history of the Tobin tax into three broad periods: from 1978 to 1994, where Tobin's proposal remained unheeded and neglected by the vast majority of economic scholarship (indeed, Tobin himself was already lamenting in 1978 that his 'idea' had fallen 'like a stone in a deep well' – see Tobin, 1978, p.155); from 1995 to approximately 1998, where, in light of recurrent financial crises originating or manifesting in wide volatility on currency markets, and in light of the processes of consolidation of the European Monetary Union, Tobin's proposal enjoyed a "golden age" within scholarly discussions (even though the positions expressed were, more often than not, critical rather than appreciative); and from 1998 onwards, where the Tobin tax became prominent amongst those opposing the financial and monetary features and structures of the world economic order, especially with the constitution of the French *Association pour la Taxation des Transactions financières et l'Aide aux Citoyens* (ATTAC) (first announced in Ramonet, 1997, but see also Waters, 2004, 2006) and its rapid evolution into a truly international organisation, phenomenon and movement.

In the process of these intellectual vicissitudes and in response to changes in the underlying economic reality, the common understanding of the scope of application

of the Tobin tax has broadened well beyond Tobin's original proposal of taxing currency transactions, both in the scholarship focusing on it as well as in the proposals of activists demanding its implementation (Schulmeister, 2014). In this respect, it cannot be emphasised enough that Tobin's own order of priorities differed substantially from that often expressed by the advocates of the tax named after him, for he considered the revenue-raising potential of the tax subordinated to the objectives of restoring the autonomy of macroeconomic policy and of reducing financial volatility (Bellofiore and Brancaccio, 2002; Grahl and Lysandrou, 2003). Indeed, Tobin was well aware that the 'growing constituency of advocates of the tax' was mostly interested in it 'for its revenue-raising potential' as opposed to its (dis)'incentive effects'. However, he cautioned that there would 'always' be 'a tradeoff between these two goals', and that the 'more the tax succeeds in the economic objectives that primarily motivated' its original proposal, 'the less revenues it collects for worldwide good works' (Tobin, 1996, p.497). Obviously, this should not have precluded – neither in principle nor in practice – the proponents of the tax to have a different order of priorities and set of stated objectives, as it has indeed been the case historically (Grahl and Lysandrou, 2003; Jetin, 2002). However, it must be equally emphasised that the expansion of the common understanding of the scope of application of the Tobin tax to encompass a wide variety of financial transactions (as opposed to focusing on currency transactions exclusively) should not be understood as a break with Tobin's (and Keynes') own logic and abstract reasoning. For Tobin believed that 'the basic problem' with which policy-makers were confronted in the wake of the shift from a fixed to a floating exchange rates regime in the 1970s was 'not the exchange rate regime [*per se*], whether fixed or floating' but, rather, 'the excessive international … mobility of private financial capital' (Tobin, 1978, p.153), of which currency transactions are but one specific form. Abstracting from this, the idea of a tax on currency transactions has rapidly developed and morphed to encompass financial transactions in general, giving way to a broader debate on the potential, desirability, feasibility and design of financial

transaction taxes (henceforth FTTs) (see, for example: Plihon, 2003; Arestis and Sawyer, 2013; Stiglitz, 2014a).[1]

Given the above, it could be argued that a new phase in the vicissitudes concerning the Tobin tax opened recently, with new material, socio-economic and political factors gaining centrality and needing to be taken into account, together with the concurrent recasting of the (debate on the) Tobin tax into (that on) FTTs. First among such factors is, without doubts, the persistence of the current crisis. This has rapidly ramified from the (strictly conceived) economic and financial realms into that of institutions, governance and their democratic legitimacy (Jessop, 2013), as well as from its origin in the United States to the European Union (albeit unevenly). In the process, the crisis has become North-Atlantic in scope and character, coming to involve simultaneously banking, public finances and the real economy (Streeck, 2014). Thus, the crisis has been a major factor in opening a new space in public debates for those advocating the implementation of FTTs (Schulmeister, 2014). In particular, the paucity of the remedies to the crisis, and the risks these entail to democratic life 'by transferring the legitimate control over governments from citizens and democratic parliaments to unelected, nonrepresentative international financial markets' (Garcia-Arias et al., 2013, p.826; similarly Streeck, 2014), have revived the urgency of the arguments of those advocating FTTs on primarily political and ethical grounds (see, for example, Patomäki, 2012 and Wollner, 2013). Second, the prominence of finance within contemporary capitalism has reached such proportions that it simply cannot be dismissed out of hand anymore. Indeed, concerns with it are being expressed by a plethora of sources, including by those who do not refer (nor would necessarily otherwise subscribe) to the (heterodox) concept of financialisation (for example, see European Systemic Risk Board, 2014 for

[1] See Schulmeister, 2014 (p.12) for a claim of paternity, in Schulmeister et al., 2008, of the FTT as a comprehensive concept and as prominent in current discussions. Although Schulmeister recognises that others had already proposed a general FTT (pointing to Pollin et al., 2003 for the proposal of securities transaction taxes, and Summers and Summers, 1989 for a previous "cautious case" in favour of such taxes), for him, the version proposed in Schulmeister et al., 2008 was 'the most detailed ... as regards the reasoning of the usefulness of a general FTT, the revenue potential as well as the implementation issues' (Schulmeister, 2014, p.12, footnote 1).

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an assessment of the EU banking sector as "over-weight"). Third, it must be remembered that Keynes' (1936, p.143) own tax proposal moved from his opinion that the 'spectacle of modern investment markets' prompted 'towards the conclusion that to make the purchase of an investment permanent and indissoluble, like marriage, except by reason of death or other grave cause, might be a useful remedy for' the 'evils' of excessive liquidity. Yet – with financial speculation being constituted by a set of markets, trading strategies and institutions which are constantly being reinvented (Epstein and Habbard, 2013) – contemporary material developments could not be more distant from the situation Keynes hoped for. This is particularly evident with the rise of High-Frequency Trading (henceforth HFT), a subset of automated trading (Gomber et al., 2011) consisting in the execution of 'frequent but small trades in milliseconds', aiming 'to make profits from incremental price movements in a given security (market making) or exploiting differences in pricing between two separate trading venues (arbitrage)' (Epstein and Habbard, 2013, pp.338-9). Although HFT has been praised and defended as a form of financial innovation that adds liquidity, increases price transparency, helps price discovery and, ultimately, promotes market efficiency (Brogaard et al., 2013; Gomber et al., 2011; Kirilenko and Lo, 2013), its role in the US stock market "flash crash" of the sixth of May 2010, together with the risk of similar events happening again, remains a controversial and contested issue (Epstein and Habbard, 2013; Haldane, 2011; Lewis, 2014; Stiglitz, 2014b).

Fourth, and partly in response to the factors above, in the wake of the crisis some EU member states have unilaterally started levying their own FTTs, or announced their intention of doing so. For example, France instituted a FTT in 2012 under the Sarkozy presidency. Similarly, Italy adopted a FTT in February 2013, and Spain and Portugal also announced the future introduction of similar national taxes (European Commission, 2013a). In particular, the Italian FTT stands out for being the first FTT in the world specifically designed to target HFT (see Ministero delle Finanze, 2013).[2]

[2] This has attracted praise from ATTAC (2014), which has presented the Italian FTT (as opposed to the French) as a positive model for the European FTT. However, the Italian FTT campaign group

In parallel to these developments, and given the difference in scope, rates and technical design of newly established and prospected national FTTs, the European Commission tabled a proposal for a Council Directive on a common FTT in September 2011. However, after it became evident 'that essential differences in opinion' persisted among EU member states with respect to 'the need to establish a common system of FTT at EU level', and 'that the principle of harmonised tax on financial transactions' would 'not receive unanimous support … in the foreseeable future' (European Commission, 2003, p.3), the proposal came to concern only a group of eleven countries willing to take the project forward under the aegis of EU enhanced cooperation.[3] Thus, in February 2013 the European Commission published a draft directive for the levying of a European FTT, with the aim of harmonising the 'legislation concerning the taxation of financial transactions necessary for the proper functioning of the internal market and to avoid distortions of competition' (p.7).[4] Lastly, a fifth important factor worthy of consideration is that, despite its previous scepticism on such matters (see International Monetary Fund, 2010, pp.17-20), the International Monetary Fund has started endorsing some of these measures (the European and the French) and, more generally, the prospect of using financial sector taxes as instruments for bringing the financial sector to shoulder the social costs of the riskiness of its activities (Gottlieb et al., 2012), adopting arguments

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ZeroZeroCinque has emphasised the limits of the Italian measure (see http://www.zerozerocinque.it/area-stampa/282-la-tassa-sulle-transazioni-finanziarie-allitaliana-e-solo-un-punto-di-partenza). Indeed, the Italian FTT: 1) does not apply to pension funds; 2) *de facto* exempts derivatives, since it applies only to equity derivatives (these, according to the Italian central bank, amounted only to 2.7 % of all over-the-counter derivatives in Italy in 2012, see http://www.bancaditalia.it/media/comsta/2012/Comunicato-OTC-30-giu-12.pdf); and, significantly, 3) it 'is determined on the basis of the *net balance* of the transactions regulated daily, calculated for each liable person with reference to the number of securities traded on the same day and relating to the same financial instrument' (Ministero delle Finanze, 2013, emphasis added) as opposed to being calculated on *each single transaction*. This last point in particular – in conjunction with the trade-off identified by Tobin between the revenue-raising potential of the tax and its desirable disincentive effects – betrays a greater concern of the Italian government with raising revenue in the short term as opposed to addressing reform of the financial sector purposefully.

[3] These are: Belgium, Germany, Estonia, Greece, Spain, France, Italy, Austria, Portugal, Slovenia and Slovakia. See http://europa.eu/rapid/press-release_IP-13-115_en.htm

[4] See Leaman, 2013 for an overview of the consequences of tax competition in the European Union in the context of the current crisis and, in particular, for an account of how the European single market encourages tax competition between member states through the dilution of tax rates progressivity.

which are closely reminiscent of those of long-standing supporters of the Tobin tax and global taxes in general (see, for example, Plihon, 2003). This happens on the backdrop of wide agreement within the economics profession on the urgency of implementing FTTs.[5] On the face of it, demands that were not long ago a prerogative of the left – i.e. the levying of a Tobin tax with the twofold aim of reducing the amount of speculative financial activity and raising revenue to be devoted to one or another socio-economic cause – would seem to have seeped into the direct concerns of governments and once recalcitrant international institutions (i.e. in particular the IMF as opposed to the UNDP, which has traditionally been a supporter of the Tobin tax – see Haq et al., 1996).

It is in this renewed and (at least apparently) more favourable context that, after months of heated public debate,[6] the EU Economic and Finance Ministers Council (ECOFIN) met on the sixth of May 2014 to discuss the prospects for the concrete implementation of the European Commission's FTT proposal.[7] Yet, while ECOFIN agreed to introduce a harmonised FTT by the first of January 2016, it also stated that such implementation will be 'progressive', 'focusing initially on the taxation of shares and' only 'certain derivatives'.[8] This gives a wide berth to the original EU proposal, which prospected a wide scope of application for the tax, encompassing 'both organized markets and over-the counter-transactions across equity, fixed income, securitised instruments and derivatives' (Gabor, 2014a, p.3). Such wide scope of application emanated from a "triple A" approach – i.e. to tax *all types of financial instruments*, *all markets*, and *all institutions* (Gabor, 2014a; Grahl and Lysandrou, 2014b) – based on a mix of the residence and issuance principles aiming to contrast the relocation of both activities and institutions outside of the areas of

[5] See http://robinhoodtax.org.uk/latest/1000-economists-tell-g20-support-robin-hood-tax and http://robinhoodtax.org.uk/sites/default/files/Economist%20sign-ons.pdf

[6] For a sample of the debate, see the doubts expressed on the Financial Times by a former economist at the Swedish ministry of finance and central bank, based on the Swedish experience of taxing financial transactions (Wiberg, 2013), and the response of the General Secretary of the European Trade Union Confederation (Ségol, 2013).

[7] See http://europa.eu/rapid/press-release_MEMO-14-326_en.htm

[8] See http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ecofin/142513.pdf

jurisdiction of the FTT (see European Commission, 2013a, pp.8-11).[9] Although presented as a major achievement by Commissioner Šemeta (the European Commissioner for taxation and customs union, audit and anti-fraud),[10] ECOFIN's decision has been criticised by ATTAC,[11] which charged it of hollowing out the radical content of the original proposal and of debasing the latter's application at the level of the French FTT (which does not apply to transactions on obligations and currencies, and applies only marginally to derivatives, see ATTAC, 2014).[12] Similarly, the Italian FTT campaign ZeroZeroCinque charged ECOFIN's decision of being a vague compromise lacking audacity.[13]

This paper will refrain from providing a blow-by-blow account of the political processes and vicissitudes through which the European Commission's FTT proposal came into being, together with the controversies and battle over the modalities of its concrete implementation and, ultimately, its short-circuiting and dilution (see Schulmeister, 2014 for such a detailed account, and the characterisation of the unfolding of events as a "politico-economic farce" in three acts). Instead, the paper will focus on reviewing two alternative accounts of the salient structural features of the contemporary financial landscape relevant to the evaluation of the appropriateness and possible implications of levying a European FTT. Indeed, following the Tobin tax debates of the 1990s and their slowing down in the early

[9] By virtue of the issuance principle, the FTT would apply even in cases 'where none of the parties to the transaction' are '"established" in a participating Member State', as long as 'such parties are trading in financial instruments issued in that Member State'. Indeed, 'the issuance principle' links transactions 'to the participating Member State in which the issuer is located'. Thus, under the issuance principle, transacting parties are considered as if 'established in that Member State because of this link, and the financial institution(s) concerned' is (are) required 'to pay' the 'FTT in that State' (European Commission, 2013a, p.11).

[10] See http://europa.eu/rapid/press-release_SPEECH-14-360_en.htm

[11] See http://france.attac.org/actus-et-medias/salle-de-presse/article/couronnant-2-ans-de-renoncements

[12] See also ATTAC's broader assessment of the Hollande presidency with respect to its response to the crisis at http://france.attac.org/actus-et-medias/le-flux/article/deux-ans-apres-les-reniements-du, as well as ATTAC's reaction to the recent appointment of Emmanuel Macron – a former investment banker – as Minister of the Economy at https://france.attac.org/actus-et-medias/salle-de-presse/article/un-banquier-ministre-de-l-economie?pk_campaign=Infolettre-114&pk_kwd=un-banquier-ministre-de-lconomie-et-de-lindustrie-limpudence-de-mm-hollande-et-valls

[13] See http://www.zerozerocinque.it/area-stampa/396-tassa-europea-sulle-transazioni-finanziarie-l-annuncio-di-un-compromesso-poco-audace

2000s, the prevailing opinion seems to be that all of what could possibly be said about the Tobin tax and – by extension – FTTs has been already said and discussed *ad nauseam* (see, respectively, Arestis and Sawyer, 1997 and 2013 for two of the most comprehensive literature surveys), and that whether FTTs are implemented or not is merely a matter of political will and regulatory capture. Yet, the parable of the European Commission's FTT proposal shows that, to understand the prospects for global financial reform and the role of the European Union within it, it is necessary to develop an appreciation of the *material socio-economic relations, processes* and *structures* within which reform proposals are formulated and meant to operate (Bieling, 2014). For the moral of the parable is that such an understanding is needed precisely because these material socio-economic relations, processes and structures have significant bearing on the *formation* and (the different modalities of) *actualisation* of the interests and political will behind the thrust for financial reform itself.

In particular, following the inclusion of repurchase agreements (henceforth repo) in the scope of application of the revised European Commission's FTT proposal (European Commission, 2013a), ensuing controversies brought to the fore the complex character and role of repo markets, together with that of their interactions with both the conduct of monetary policy – through government bonds usage as the privileged form of collateral in repo contracts – and welfare provision – through the involvement of pension funds as providers of increasingly scarce high-quality government bonds to be used as collateral (Gabor, 2014a; Grahl and Lysandrou, 2014a, 2014b; Schumeister, 2014). Thus, this paper will revisit the European Commission's FTT proposal and its attendant controversies by reviewing the most prominent recent scholarship which has dealt with their underlying dynamics. In this spirit, section 2 offers a detailed and close review of Grahl and Lysandrou's argument against FTTs, following its genealogy from its inception as an argument against the Tobin tax to its current recasting as an indictment of the European Commission's FTT proposal. Section 3, will offer empirical and conceptual objections to Grahl and Lysandrou's account, not least through the prism of reviewing Gabor's

alternative account of the rationale for a European FTT. Section 4 will conclude by offering a brief reflection and outlook on how the debate reviewed in the paper relates to broader issues and debates about financialisation.

2. The levying of FTTs as an "act of vandalism": Grahl and Lysandrou on the Tobin tax and the European Commission's FTT proposal

Grahl and Lysandrou hold a distinctive position on the European Commission's FTT proposal, based on their disfavour for FTTs in general and their preference instead for financial activities taxes (henceforth FATs). While FTTs are intended to apply to all financial transactions (at least in principle), FATs are applied *ex post facto* to the total sum of profits and remunerations of financial institutions. Thus, if the former target trading activity itself, the latter are levied on the value added by the financial sector as a whole (European Commission, 2010a; Grahl and Lysandrou, 2014a). Grahl and Lysandrou's position is the product of reflections spanning over a decade, which can be traced, at the very least, from their critique of the ideas of the supporters of the Tobin tax at the peak of the Tobin tax debates at the turn of the century (Grahl and Lysandrou, 2003) to their recent critique of the European Commission's FTT proposal (Grahl and Lysandrou, 2014a, 2014b). Therefore, before presenting the latter, it is necessary to outline the former, for the two are intimately connected. Section 2.1 expounds Grahl and Lysandrou's reassessment of the Tobin tax debates, with emphasis on their account of the structural function performed by foreign exchange swaps in a globally integrated financial market. Section 2.2 expounds Grahl and Lysandrou's critique of the European Commission's FTT proposal, with emphasis on their account of short-term trading as an economically functional activity, HFT and the repo market. As will be clear, the two arguments are closely related, not least in drawing a picture of finance as performing an indispensable function in the global economy. This leads Grahl and Lysandrou to equate the possible impairments to such a function – i.e. the Tobin tax and the European FTT – to acts of vandalism.

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2.1 From the re-interpretation of the Tobin tax debates …

The origin of Grahl and Lysandrou's analysis lies in an article of theirs from 2003 which critically revisited the Tobin tax debates of the previous decades. This was being written at a point in time when the first two phases of the intellectual life of the Tobin tax had long elapsed, and the third itself could be considered to be coming to an end. In this conjuncture, Grahl and Lysandrou's point of departure is easily found in what they see as the "conventional" criticisms of the Tobin tax. These, according to them (henceforth G&L), have traditionally focused around two arguments: 1) the claim that the identification of foreign exchange trading with speculation is 'simplistic', sometimes paired with the alternative explanation that a large part of speculative activity 'is accounted for by currency arbitrage' (see, as per G&L's example, Davidson, 1997); and 2) the claim that a large part of 'what appears to be excessive trading volumes are simply risk spreading and position balancing trades undertaken by dealers' (see, as per G&L's example, Frankel, 1996) (Grahl and Lysandrou, 2003, p.598). However, notwithstanding the vivacity and animosity of the debate between the supporters and "conventional" critics of the Tobin tax, for G&L such debate had previously taken place on the basis of 'an assumption that is accorded axiomatic status', that is the belief 'that all non-goods/securities related' foreign exchange 'transactions are driven by exchange rate considerations' (p.599). By contrast, G&L depart from both the arguments put forward by the supporters of the Tobin tax and their "conventional" criticisms detailed above, mounting their challenge to the rationale of the tax on a reassessment and a rejection of the premise of the whole debate. In this vein, G&L deny that 'all non-goods/securities related' foreign exchange 'trades are exchange rate motivated', submitting instead that 'a large part of' foreign exchange 'turnover is determined by liquidity and interest rate considerations' – i.e. the 'same concerns and priorities' lying 'at the heart of domestic money-market transactions' (p.599). To demonstrate this, G&L emphasise the increasing importance of foreign exchange swaps in the composition of daily foreign exchange transactions over the 1990s, a phenomenon to which they ascribe the status of structural change. This also leads them to reassess the issues

of desirability and effectiveness of the tax along different lines from those having traditionally characterised the debate: indeed, for G&L, foreign exchange turnover 'plays an essential role in the day to day operation of the global financial system' (p.599) and, for this reason, it cannot be reduced to a mere epiphenomenon of speculative activity. As a result, the levying of the Tobin tax, rather than introducing a mere disincentive, would have utterly disruptive consequences.

Indeed, for G&L, 'much of the … confusion over the size and character' of foreign exchange markets would arise from what they see as a systematic 'failure to pay close attention to the different types' of transactions taking place on such markets, together with their dynamics and the functions they perform (p.600). Distinguishing between the three main types of foreign exchange transactions – spot transactions, outright forward transactions, and foreign exchange swaps – G&L ground their reasoning in the following two premises. First, 'although classified as' foreign exchange 'instruments', foreign exchange swaps 'are more like money market instruments'. Indeed, foreign exchange swaps are transaction between two parties whereby two currencies are exchanged in the spot market and, simultaneously, in the forward market in the opposite direction (Acocella, 2005, p.236; Bank of International Settlements, 2001, p.2, footnote 4; Gandolfo, 2004, pp.27-9; Grahl and Lysandrou, 2003, p.600). However, 'since neither party' to the transaction 'assumes any currency risk', for G&L it must follow 'that interest rate and liquidity considerations, not possible exchange rate movements, are always the *immediate* motives behind the swap'. Second, when 'viewed from a functional perspective', foreign exchange swaps should be divided in 'two distinct categories: those *related* to hedging and speculation strategies', and 'those used *purely* to manage liquidity and interest rate risk' (Grahl and Lysandrou, 2003, p.601). The first of these categories – 'exchange rate-related swaps' – is distinguished by its being 'matched with spots and with outright forwards (as is the case in hedging strategies) or simply with spots (as in the case of speculation)' (p.601). The second category – 'pure money market swaps' – is distinguished by its being 'completely unrelated to exchange rate positions, whether hedging or speculative', and its being solely motivated instead by

'liquidity and interest rate management'. These 'can be identified by the fact that they arise on a *stand-alone* basis and not in connection with either spot or outright forward transactions' (p.602). It is on the basis of these distinctions and reasoning that G&L categorically assert what they see as the "correct" logic according to which activity on foreign exchange markets should be interpreted: if 'the volume of swap transactions were seen to lag behind or broadly correlate with the volumes of spots and outrights forwards, one could safely interpret' foreign exchange 'activity from an exchange rate perspective. If, on the other hand, swap transaction volumes are seen to dominate those for spots and outright forwards, an alternative perspective on' foreign exchange activity 'which foregrounds money market concerns' would become 'more convincing' (pp.602-3).

Equipped with such reasoning, G&L set about: 1) questioning the conventional account of foreign exchange trading as primarily driven by speculation; 2) suggesting that other accounts of foreign exchange transactions focusing on exchange rate movements, such as those accounts emphasising hedging and arbitrage, 'are also flawed' or insufficient; and 3) arguing instead 'that an increasing share' of foreign exchange 'transactions arise from money market operations' and are therefore unrelated to 'exchange rate fluctuations' (p.600). Drawing from Bank of International Settlements (2001) triennial data for average daily foreign exchange turnover since 1992,[14] G&L highlighted how, from their standpoint in 2003, 'approximately one half of total trading volume' was 'accounted for by' foreign exchange swaps (Grahl and Lysandrou, 2003, p.603) (see Table 1).[15] Since, as recalled above, neither party to the latter transaction assumes foreign exchange risk, for G&L foreign exchange swaps 'cannot in themselves be speculative in nature': '[o]ne can only speculate on foreign

[14] This is the year in which foreign exchange swaps began being classified and measured as a separate category from outright forward transactions (Grahl and Lysandrou, 2003, p.603).

[15] This table reproduces and elaborates on data drawn from Table 1 of Bank of International Settlements, 2013, p.9. The latter is consistent with Table 2 of Bank of International Settlements, 2001, p.5 – i.e. the document from which G&L draw the data they present in their own Table 4 in Grahl and Lysandrou, 2003, p.604. Table 1 and Figure 1 are here reproduced for the reader's convenience and to help in following G&L's argument. Yet, as will be discussed in section 3, G&L's argument reviewed in this section can be questioned on the grounds of more recent Bank of International Settlements data (see Bank of International Settlements, 2013).

exchange (or any other asset) by taking an open position in it', and 'neither counter-party to' a foreign exchange swap 'takes such a position' (p.603). Further, although '[t]echnically speaking … exchange rate speculation can be conducted in the traditional market for outright forwards' (p.604), for G&L the 'speculation thesis' is also 'most unlikely to apply to' the latter because of the costs that would be involved (p.605). Instead, 'professional traders' will be likely to 'take positions in the spot market, where the ability to cover an open position quickly is far greater and where the bid-ask spreads are substantially narrower than in forward markets' (p.604). This, then, leads G&L to conclude that 'if speculative activities can dominate a market for any one type of instrument, it must be that for spot trades'. But this, according to G&L, would lead the speculation thesis in an *impasse*, for the Bank of International Settlements data on which G&L were drawing in 2003 showed 'spot trades' as a 'rapidly declining part of total' foreign exchange volumes (p.605) (see Table 1 and Figure 1).

[INSERT TABLE 1]

[INSERT FIGURE 1]

Moving on to other accounts of foreign exchange transactions, although G&L concede greater validity to those explanations emphasising 'exchange rate fluctuations as the basis of' foreign exchange activity (i.e. hedging and arbitrage) than that they accord to the 'speculation notion', they also identify them as deficient and problematic in their own right (p.605). In the case of *hedging*, while G&L stress how this explanation must have a degree of validity given its consistency with the continuity of the market, they also highlight how such an 'account cannot apply directly to swap transactions'. Indeed, these 'cannot be used to hedge exchange rate risk any more than to speculate on exchange rate movements' for 'they are closed positions': '[t]o hedge an open position in a currency, one would necessarily have to take out a second open position with the opposite exposure', and 'it is impossible to use' foreign exchange swaps 'for this purpose'. Indeed, G&L stress that swaps 'form part of a hedging strategy when used in conjunction with spots and outright forwards; but given the wide disparity between the amounts of outright forward

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transactions and swaps' in the Bank of International Settings data from which G&L were drawing, they feel confident 'that only a small fraction of swaps are embedded in forward hedging operations' (p.605). With respect to the claims that large part of foreign exchange transactions can be explained by *arbitrage*, G&L advance two objections. First, 'the speed with which prices are communicated' on foreign exchange markets renders 'implausible', in their view, the suggestion that 'the bulk of transactions are driven by inter-dealer price differences, as would have to be the case for the arbitrage thesis to be valid'. Second, for G&L the latter thesis 'would seem to apply only to spot trades': since, for them, 'the cost of a swap transaction depends only on the interest rate differential which is applied to the forward price relative to a single spot price', swaps 'cannot be used to exploit differences between different spot prices'. Further, for G&L '[t]echnological factors may reinforce this view of arbitrage', for 'deals between brokers are' increasingly 'mediated by electronic brokerage systems rather than separate market operators, and this' would suggest, in G&L's opinion, 'that price discovery is becoming easier and more rapid' (p.606).

Thus, on the basis of the above analysis and reasoning, G&L submit that 'if the speculation interpretation' of foreign exchange 'volumes held by proponents of the Tobin tax had some credibility in the days when transactions were dominated by spot trades', it would be 'completely implausible today, when swaps represent the dominant instrument'. Indeed, and by contrast, for G&L this would imply 'that no account' of foreign exchange volumes 'centred on exchange rate movements can be satisfactory' (p.606), and that the elaboration of an explanation of foreign exchange activity based on the money market becomes essential. Therefore, drawing an analogy with currency swaps, G&L submit that foreign exchange swaps can be explained by the same logic arising 'as advantageous opportunities to borrow (or surplus liquidities) in one currency are matched against lending opportunities (or acute liquidity needs) in another' and, therefore, that they should be understood 'in the context of increasing money market transactions across currency zones'. From this, G&L derive three sets of observations. First, they explain 'the recent rapid

growth of money market activity ... in terms of widespread changes in the financial system' rooted, in particular, in the phenomenon of disintermediation (p.607). Indeed, the latter, on par with 'the move to ... restrictive monetary policies associated with the general reassignment of macro instruments taking place in the 1980s, have led to' a true paradox whereby, although money is increasingly less 'held as an asset' in its own right, 'the huge increase in securities transactions makes for an increased demand for money as an exchange medium'. Therefore, for G&L, this has resulted in 'a very rapid growth of the money markets, because it is here that monetary resources are recycled from surplus to deficit units on an immense scale, at great speed and at low cost' (p.609). Second, G&L notice the existence of 'several strong parallels between the money markets' and foreign exchange markets, which they summarise as:

- '[*c*]*orrespondence in scale*' (for, in 'both cases, trading volumes appear excessive when set against GDP data');
- '*correspondence in rhythm*' (for, 'in both cases, trading activity is heavily skewed towards the very short end of the maturity spectrum');
- '*correspondence of actors*' (for, 'in both cases inter-bank transactions easily outweigh dealer-customer relations').

Therefore, for G&L, all of these parallels conspire to 'provide strong, if indirect, motives to relate' foreign exchange 'turnover to money markets' (p.611). Third, G&L propose a specific interpretation of the parallels above, suggesting 'that cross-border monetary flows have become a key factor of flexibility in domestic money market' (p.607). In such a characterisation of foreign exchange markets, the latter perform a *necessary function* spontaneously emerging from the 'immense tensions' created by 'both the process of disintermediation and the assignment of monetary policy to the target of price stability'. Indeed, while the former 'increases the demand for financial transactions balances at the same time as it reduces the relative supply of the deposits to which those balances correspond', 'restrictive monetary policy raises the rate of interest at which these liquidity needs can be met'. Therefore, for G&L, '[i]nternational bank lending', together with the foreign exchange swaps which

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they see as now dominating foreign exchange markets, 'helps to reduce the frictions and imbalances arising within currency zone financial systems'. Therefore, G&L retrace in this the emergence of 'a globalised money market accompanied by a globalised payments system', from which it 'follows that accounts of' foreign exchange 'transactions in terms of exchange rate speculation, or indeed in terms of exchange rate hedging, are increasingly obsolete and therefore form a poor basis for thinking about policy' (p.614).

According to G&L, the salience of these developments with respect to policy and the potential effects following the levying of the Tobin tax cannot be understated. Here, once again, G&L's position differs significantly from that of the "conventional" critics, who have traditionally focused on emphasising the technical difficulties that the implementation of such a tax would have to surmount (and which have been purposefully addressed and dispelled, for example, in: de Brunhoff and Jetin, 2002; Jetin, 2002; McCulloch and Pacillo, 2011; and Griffith Jones and Persaud, 2012). Instead, building on their reasoning outlined above, G&L's assessment of the potential policy effects of the Tobin tax gathers around two axes. First, for G&L the latter's 'main impact ... would be on the liquidity of money markets rather than on the stability of exchange rates'. Second, given that US financial markets are the biggest in the world in terms of breadth, depth and liquidity (see below), such 'impact on money markets would be asymmetric, with the US economy likely to be the least affected' (Grahl and Lysandrou, 2003, p.614). It is through these axes that G&L revisit the issues of the desirability and effectiveness of the Tobin tax, with the aim of showing how the concrete effects of the tax would *de facto* undermine the objectives and rationale motivating its adoption. Beginning with the first axe, although G&L concede that the Tobin tax 'might reduce destabilising speculation', they stress how it could also 'amplify the price disturbances arising from a smaller volume of trading' by reducing liquidity in the foreign exchange market (p.614). This would run counter to the first main motive for the introduction of the Tobin tax, i.e. the reduction of volatility. Further, G&L see the 'original logic' of Tobin's proposal as still appearing 'to hold in that a Tobin tax would make it more costly to sell a currency

short, and this might create a little more scope for variations in domestic interest rates'. However, they also propose important qualifications to this: in their opinion, the tax would be inconsequential in discouraging 'attacks on a currency where a significant devaluation or depreciation was seen as very likely, because the costs of the tax would then be dwarfed by the potential gains from a short position'; further, the ordinary 'operation of monetary policy might be made more difficult or more uncertain if the tax led', as they suggest, 'to narrower or less liquid money markets, since it is through these markets that monetary policy is implemented'; finally, 'under circumstances where the tax was effective in limiting exchange rate speculation, there might be a certain destabilisation of bond yields', for 'bonds and other fixed interest securities, which could be traded to give open positions in a currency without the need to hold bank deposits', could serve as channels through which to avoid or evade the tax itself (p.615). These qualifying factors would run counter to the second main motive for the introduction of the Tobin tax, i.e. the enhancement of the national autonomy of economic policy.

Moving to the second leg of G&L's argument on the potential effects of the implementation of the Tobin tax, this has important consequences in terms of both the revenue raising potential of the tax and the issue of enhancing national policy autonomy. Indeed, while G&L are sympathetic with the objective of 'raising … large amounts of tax on an international base and directing the receipts to the needs of … less developed countries' in particular, they remain sceptical about the appropriateness of the Tobin tax as preferred instrument of choice to fulfil such goals (p.615). Indeed, for G&L, when judging 'the impact of the tax on the financial markets taken as a whole', it is necessary to consider not only its 'direct effect on the liquidity and the costs of money market operations themselves', but also its 'indirect effect on the liquidity and costs of the markets they serve – above all the security markets which give rise to most money market activity'. While the 'desirability of such an effect in the abstract' remains 'an open question', G&L emphasise how 'it is not usually seen as part of the Tobin tax agenda to bring about such an effect on either the money markets, which are extremely stable, or the

securities markets where problems of stability are surely better addressed directly'. More importantly, though, G&L's greatest concern is not with 'the general nature of these liquidity effects', but with their asymmetric impact 'across countries' (p.616). Here G&L emphasise the position of 'financial dominance' held by the United States internationally. Indeed, '[h]istorically … US capital markets have been bigger and more efficiently organised than their counterparts in other countries because of the greater reliance on them by the corporate sector and for social provision' (pp.616-7). Because of, and in addition to, this reason, such 'markets have benefited from the opportunities thrown up by the world-wide trend towards financial liberalisation and deregulation', attracting the heavy involvement of foreign institutions 'by virtue of their depth … range, and … low dealing costs'. As a result of such financial dominance and 'scale advantages', the United States can benefit from relative insulation from 'external developments' and can, therefore, 'adopt an attitude of "benign neglect"' towards them. But then, given this international context, the levying of a Tobin tax would, in G&L's opinion, 'restrict the' foreign exchange 'swap turnover and the short-term international bank lending that together constitute an important source of external liquidity to domestic monetary systems'. Further, such 'squeeze on external liquidity' would 'typically have an economic impact in inverse proportion to the size of the financial system concerned', with the consequence that small systems 'making more extensive use of the' foreign exchange 'market for internal liquidity needs' would end up being 'the most affected'. On the other hand, impact on United States markets would be 'minimal', because their 'domestic money markets are so sophisticated and … immense that less use is made of external liquidity in the day-to-day working of the internal credit market' and, '[e]ven where external credit is used', it would 'be much cheaper and easier to mobilise alternative sources' (p.617).

Ultimately, G&L are categorical about what they see as the undesired consequences that the levying of a Tobin tax would bring about. For them, the levying of such a tax would leave 'the US economy … relatively unscathed', if not 'probably even … strengthened, because' they prospect that 'one unavoidable consequence of the tax'

would be the diversion of borrowing and lending activity 'around the globe to US capital markets', where 'the costs of issuing and re-trading securities' would 'fall relative to costs in other markets'. Further, the Eurozone financial system would come under enormous strain. Indeed, even if the latter is 'relatively large in size compared with most other systems', its scale still lags behind that of the Unites States and it 'remains relatively fragmented'. As a result, the dollar continues to be a 'major' contributor to 'the liquidity of ... money markets' in the Eurozone and, by hindering such a role, the levying of a Tobin tax would 'significantly disrupt money market functions' and slow down 'the process of internal financial integration'. This, in turn, would 'inevitably impact on the scale of both short-run and long-run capital markets', reducing 'Europe's ability to compete with US finance' (p.617). Therefore, G&L's analysis has obvious detrimental implications for the issue of policy autonomy. Indeed, for them, whether, what kind of, and 'how much autonomy remains' for national policy is determined by 'the size of local financial markets relative to those of the US' (pp.617-8). Given that, in G&L's view, the levying of a Tobin tax 'would inevitably strengthen the dollar-based financial system relative to its competitors', they see 'any increase in policy autonomy' following from the levying of a Tobin tax as inevitably matched by 'strong adverse' effects 'on the distribution of this autonomy', with the 'smallest systems' as the 'worst affected' and 'other large systems, including the eurozone', still severely affected. Therefore, the outcomes which G&L see as following the levying of a Tobin tax are 'surely the exact reverse' of those originally intended by its proponents. Indeed, although the latter's 'general intention' is 'to establish some kind of multilateral [social] control over' foreign exchange 'flows', 'to restore the balance of priorities in favour of industry and trade', and to restore at least part of the power that 'national governments ... lost to the financial markets', according to G&L 'a more inappropriate instrument for these purposes' could not have been chosen. For, in their view, globalisation has eroded the foundations for the applicability of the Tobin tax, *de facto* decreeing its obsolescence. Therefore, to levy it in the current era and context would not be helpful in bringing the processes of globalisation under 'social control' and in

imparting to them a 'new direction' but, rather, it would result in a mere 'act of vandalism' (p.618).

2.2 … to the contestation of the European Commission's FTT proposal

While G&L's reassessment of the Tobin tax and its attendant controversies is now more than a decade old, the recent debate around the European Commission's FTT proposal has allowed them to revive and recast their polemic, now broadened to target FTTs in general and the European FTT proposal in particular. Such recasting takes as point of departure the European Commission's preference for FTTs over FATs as potential instruments to raise additional tax revenues from the financial sector. Indeed, the relative advantages and disadvantages of FATs and FTTs were simultaneously under evaluation in the early phases of the European Commission's discussions on the taxation of the financial sector in the wake of the crisis (European Commission, 2010a). Ultimately, though, the European Commission ended up favouring FTTs because it perceived them as instrumental in both *raising revenue* and *improving market efficiency and stability*, two policy objectives whose joint attainment was perceived as constituting a "double dividend" (European Commission, 2010b). However, in this preference and episode, G&L retrace the implicit 'acceptance of a key premise underpinning' the position that FTTs have stabilising effects on financial markets: 'namely, that as all short-term trading is purely speculative it can only be central to the functions of institutions that are peripheral to the financial system', and 'only peripheral to the functions of those institutions that are central to the system' (Grahl and Lysandrou, 2014a, p.234). By contrast, although they recognise that 'a significant amount of short-term trading in the money and capital markets is speculative and thus potentially destabilizing', G&L also stress how 'an equally significant amount' of it is, in their opinion, 'integral' to the ordinary 'activities of commercial banks and asset management firms'. Indeed, according to them, if '[s]hort-term trading may have been exogenous to the financial intermediation functions of these institutions in previous historical periods', 'recent structural changes to capitalist economies' have coalesced to make it 'become …

integral' to 'those functions' (p.234). Thus, given 'the importance of the commercial banks and institutional asset managers to the European financial system', levying 'a European FTT that indiscriminately restrains all short-term trading' (p.234) would run contrary to, and therefore 'severely undermine', its own stated objective of enhancing 'the ability of the European financial system to service the real economy in a stable and cost-efficient manner'. For G&L, then, it would be preferable 'to allow important financial institutions to perform their functions unhindered and then tax any excessive profits made out of the performance of those functions' (p.235) through a FAT.

As the 2011 European Commission's FTT proposal states, the Commission originally authorised the analysis of 'the impacts of additional taxes on the financial sector with regard to the objectives of (1) ensuring a contribution of the financial sector to public finances, (2) limiting the undesirable market behaviour and thereby stabilising markets and (3) avoiding distortions on the internal market' (European Commission, 2011a, p.4). The result of such impact assessment – which contrasted merits and flaws of FTTs and FATs together with their various possible design options – was that FTTs were to be preferred to FATs, not least because the latter 'would only be an indirect measure to tackle risk-taking' (European Commission, 2011b, p.5), unable to exert 'direct impact on the trading behaviour in financial markets' (p.6). However, for G&L, 'the identification of "undesirable behaviour" with "trading behaviour"' as a whole is '[c]entral to this conclusion' since, 'while the FTT would have a directly negative impact on trading volumes by raising the cost of financial transactions, the FAT would have no equivalent impact' (Grahl and Lysandrou, 2014a, p.235). Others have accused the European Commission and its FTT proposal of failing to discriminate appropriately 'between "good" and "bad" transactions' (Vella et al., 2011, p.619). By contrast, G&L stress how this assessment is not entirely correct. Indeed, for them, the European Commission's stance can be understood as distinguishing trades, albeit implicitly, 'according to whether or not they have some link to underlying economic fundamentals' (Grahl and Lysandrou, 2014a, p.235). For example, it is in this light that G&L interpret the Commission's decision to exclude

primary market transactions for currencies and securities from the scope of application of the FTT 'so as not to undermine the raising of capital by governments and companies' (European Commission, 2011a, p.4). Similarly, G&L read the Commission's recommendation of setting low rates for the tax (European Commission, 2011a) as indicative of the intention to safeguard 'low-speed transactions connected to real sector activities' while simultaneously hindering 'high-speed transactions' lacking 'such connection' (Grahl and Lysandrou, 2014a, pp.235-6). Nonetheless, for G&L the 'criticism that no distinction is made between "good" and "bad" trades' is entirely valid when it comes to 'short-term trades in the secondary markets', as signalled – in their opinion – by the Commission's identification of all automated trading as speculative and its singling out of HFT in particular (p.236).

Indeed, while G&L concede that HFT 'is purely speculative in nature' and that levying 'the FTT will certainly help' curbing it, they also raise two interrelated sets of issues which they see as both important and neglected by the Commission (p.239). First, what is the relation between HFT and automated trading as a whole as well as with its other constituent parts? Second, who are the agents engaging with each of these and in their attendant activities, and what is the character of their relation to one another? Drawing on Gomber et al., 2011, G&L point out how automated trading is constituted by algorithmic and high frequency trading. For them, then, the Commission's emphasis on HFT 'may give the' erroneous 'impression that … algorithmic trading', the 'other important subset' of automated trading, is not significantly different from HFT 'either in terms of the trading players involved or in terms of the central trading purpose'. Yet, although both forms of trading share 'several common characteristics by virtue of' their 'being subsets of automated trading', for G&L their differences 'are more important because they relate to two contrasting types of financial function performed by two contrasting types of financial institution'. Indeed, HFT 'is speculative trading conducted primarily by hedge funds and other proprietary trading vehicles', while 'algorithmic trading is portfolio trading conducted by institutional asset managers and … mutual funds' in

particular (Grahl and Lysandrou, 2014a, p.241).[16] Yet, the two forms of trading share a complex relationship of co-dependence. On the one hand, HFT is 'fundamentally antithetical to algorithmic trading', for the latter 'is "portfolio-serving" – trading to keep a portfolio to its benchmark' – while HFT is '"self-serving" – trading purely aimed at making a profit'. On the other hand, though, HFT 'is also parasitic on' algorithmic trading, since:

> 'Where institutional asset managers typically engage in algorithmic trading to avoid price volatility and thus avoid giving profitable opportunities to poachers, the hedge funds and other speculative vehicles on the contrary are the poachers and engage in high-frequency trading precisely in order to feed off any price volatility caused by institutional trading. This is why high-frequency trading concentrates on large cap liquid securities – those that dominate the indexes used by the mutual and pension funds as their benchmarks – and this is why hedge funds place their computers in close proximity to those used by the mutual funds in the major trading venues'.

From this, G&L conclude that to impose a FTT 'in the secondary equity markets would be self-defeating': while the tax would successfully contain and curtail HFT, it would also simultaneously damage the algorithmic trading on which HFT parasitically thrives (p.242).

G&L admit that this should not necessarily be seen as problematic if 'current trends in portfolio management that give rise to algorithmic trading as an indispensable activity were themselves not an irreversible aspect of the contemporary European

[16] G&L subscribe to a specific explanation of security trading volumes (Grahl and Lysandrou, 2014a, pp.237-9). Indeed, if 'the indirect functionality of secondary markets is generally accepted', the common sense remains that 'much of the observed large volumes of secondary market trading' are excessive with respect to such 'functionality' (p.238). For G&L this is mostly due to the intellectual influence of general equilibrium theories – as in Milgrom and Stokey's (1982) "no trading theorem" – and the fact that the interest of financial economists has shifted from prices and evaluations to trading volumes themselves only recently (p.238). Amongst the various theories departing from general equilibrium which they briefly review – noise or liquidity trading, price discovery, and churning – G&L take the view that '[a]lthough much trading on many financial markets is purely speculative, one cannot immediately dismiss all *speculative trades* as dysfunctional'. Thus, they subscribe to an explanation stressing portfolio balancing (Grahl and Lysandrou, 2014a, p.239; see also Grahl and Lysandrou, 2006).

financial landscape'. However, for them, '[t]he reality is that they are', and will increasingly be so in the near future: as the crisis has put government finances under (even greater) strain (then prior to it), governments themselves have come under greater pressure 'to force increasing numbers of middle- and higher-income households to make their own arrangements for supplementary pension and … welfare provision'. In turn, this has exerted greater pressure on 'the asset management industry' to make increasing recourse to the standardisation and efficient portfolio balancing and management techniques allowed by algorithmic trading. For G&L, then, the result of such a state of affairs 'is that algorithmic trading is set to continue to expand in importance given the ongoing shift towards standardization and the benchmarking of portfolios and given the necessity of trading to index benchmarking'. As a result, if the objective is to curb HFT while preserving algorithmic trading (for the welfare provision functions that the latter performs), then it would be preferable to subject 'directly … this form of trading and the principal institutions engaging in it to stricter regulatory controls' (p.242).[17] Significantly, in emphasising such 'irreversibility of algorithmic trading and of the structural changes in the fund management sector with which it is associated', G&L's intention is not that of idealising the sector, nor that of suggesting the perfect coincidence of the interests of institutional investors and retail customers (pp.242-3). Rather, their aim is to stress how 'the move towards leaner financial intermediation, more closely aligned with customer interests, is one that will inevitably increase rather than reduce security trading because intensive trading is a key component of this more efficient model'. It is for this reason that they hold the view that 'the Commission's decision' to levy a FTT 'as its preferred method for taxing the financial sector is in the end profoundly contradictory, for having done

[17] For example, G&L recently suggested an alternative and, in their opinion, more 'effective measure against' HFT. This 'could be based on the fact that' HFT traders take on 'the role of market-makers who quote both bid and offer prices for the securities they are interested in. These quotes are very rapidly taken down when they threaten to disadvantage the traders who post them. To suppress the whole business it might well suffice to require the quoted prices to be maintained for a somewhat longer period of time – a few seconds would probably be more than enough' (Grahl and Lysandrou, 2014b).

everything to promote financial market reform it then proposes to introduce precisely the one type of tax that would be an obstacle to that reform' (p.243).

After this analysis of capital markets and their dynamics, G&L shift their attention to the money markets. With respect to these, they resume the analysis of the dynamics and trends central to their earlier argument against the Tobin tax (expounded in section 2.1), which they now complement by bringing into focus the rise of securitised transactions and the repo market since the beginning of the new century. Indeed, by G&L's own admission, the growth rates of trading volumes in money markets have, in recent decades, exceeded by far 'what can be meaningfully explained in terms of real sector activities' (p.243), and this prompted the European Commission's initial proposal to encompass money markets within the scope of application of the European FTT (European Commission, 2013a). However, for G&L, such encompassing would have been a wrong turn since, for them, 'the growth of money market trading, while having relatively little to do with the pressures on the banking function emanating from the product markets, has, on the contrary, everything to do with the pressures on that function emanating from the securities markets' (Grahl and Lysandrou, 2014a, p.243). In particular – as discussed at length in section 2.1 – G&L see the 'rapid development and international integration of the money markets' as emerging out of 'the increased role of institutional investors and the accompanying shift away from classical bank intermediation towards greater use of the security markets', especially because of the latter's role in providing a solution to the "paradox of disintermediation" (p.243). It is in this context that G&L note that, as most of inter-bank transactions take the form of securitised borrowing, and as this phenomenon has been exacerbated by the erosion of the relations of trust between banks in the wake of the crisis, 'the proportion of unsecured borrowing and lending activity has fallen' dramatically 'in favour of securitized forms of activity'.[18] The principal of these is 'the repo: the sale of collateral such as

[18] Here, G&L rely on a table drawn from European Central Bank, 2011 (chart 67, p.29) highlighting average daily turnover in various money market segments, including secured and unsecured transactions. The trends G&L refer to are confirmed in more recent documents such as European

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government bonds for cash, and the repurchase of these same bonds with cash' (p.244). The rationale according to which the repo market could have been included by the European Commission within the scope of application of the European FTT rests, according to G&L, on the following two premises: first, repo market trades are considered as '"transactions" inasmuch as they involve the sale and purchase of securities'; and, second, such 'transactions are typically short term and hence presumably speculative in nature'. But, for G&L, '[t]his is illogical' (p.244): although they are based on the sale and repurchase of bonds, and although this involves concurrent changes in legal ownership of the bonds themselves, once understood in economic terms repo deals cannot be reduced to 'security trading' as such. Rather, they must be categorised as 'a credit market mostly used by banks lending to and borrowing from each other', where securities 'are not being traded' *per se* but merely serve 'as collateral for these loans' (Grahl and Lysandrou, 2014b). Thus, for G&L, as 'the inter-bank money market' broke 'down during the crisis', and as it incurred into 'an even deeper and more comprehensive breakdown in Europe' in the wake of 'the sovereign debt crisis', its 'impairment' could only have been 'aggravated' by the extension of the scope of the FTT to encompass 'repo transactions' (Grahl and Lysandrou, 2014a, p.244).

Since G&L understand 'much of the trading in securities markets' as 'economically functional', and since they believe that 'increased constraints on the banks will make economies more dependent on these markets', for them it automatically follows that to extend 'the application of the FTT to secured inter-bank loans is likely to be economically damaging'. Further, what G&L see as illogical in the 'Commission's position', they also see as 'compounded by the fact that' the latter did not originally intend to include 'foreign exchange swaps' in the scope of application of its proposed FTT. This, for G&L, is important because not only do foreign exchange swaps

Central Bank, 2013 (see chart 3, p. 7, which shows cumulative quarterly turnover in various money market segments, including secured and unsecured).

'account for over 50 per cent of all daily foreign exchange trading' (p.244),[19] but they also 'serve as an alternative type of repo' (p.245). Indeed:

> 'a eurozone bank wanting to borrow euros can either engage in a straightforward repo transaction – using government bonds as collateral – or in a foreign exchange swap – selling dollars for euros and then repurchasing the dollars with euros, with the point here being that dollars not government securities act as the collateral. Now', for G&L, 'there is already a perceived tendency to supplement ordinary repo transactions with foreign exchange swaps on the part of eurozone banks because of the increasing shortage of good quality government bonds to serve as collateral. Following the introduction of the euro, the world's investors for a time treated all eurozone government bonds as a more or less homogeneous class because of the elimination of currency risk – a development that became manifest in the narrowing of government yield spreads. With the advent of the sovereign debt crisis and the consequent rise in credit risk considerations in the minds of bond investors these yield spreads have again widened as the eurozone government bond market again fragmented into heterogeneous groups. Among the best quality government bonds are those of the German government, but these are in short supply due to the heavy pressure of demand from investors seeking a safe haven. As a result, the eurozone banks have had to find alternative assets to use as collateral, including the US dollar' (p245).

For G&L, then, the Commission's original intention to include the repo market within the scope of application of the FTT while simultaneously excluding foreign exchange swaps from it would have inevitably conferred to the latter 'a tax advantage' over the former. This, in turn, would have had the effect of encouraging the recourse to foreign exchange swaps 'as alternative credit transactions to the repo', concurrently 'boosting the already large foreign exchange swap daily volume'.

[19] There are reasons to believe that, although taken for granted by G&L, this central element of their argument against the Tobin tax (and, by extension, the European FTT) has not stood the test of time, see below for discussion.

In G&L's opinion, such inadvertent effects of the original European FTT proposal would not have been devoid of irony, for 'the original Tobin tax that gave inspiration to all subsequent financial transaction tax proposals was specifically directed at foreign exchange transactions' (p.245). Thus, it is as the possible and partial recognition by the European Commission of 'this anomaly' (p.245) that G&L interpret the Commission's own impact assessment recommendation to include currency spot transactions within the scope of application of the FTT (although subject to legal feasibility) (European Commission, 2011b). Yet, the concurrent exclusion from the latter of 'foreign exchange swaps' and 'outright forward currency transactions' clearly indicates, in G&L's opinion, the persisting 'inconsistency in the Commission's proposal to tax one form of collateral (repos) but not another (US dollars)' (Grahl and Lysandrou, 2014a, p.245). This worries G&L not only for its role in 'undermin[ing] the liquidity of euro-denominated bond markets' (pp.245-6), but also because it would 'make the liquidity of the European banking system' entirely 'dependent on credit conditions in the United States', with detrimental effects on the independence of the European financial sector 'from credit conditions' elsewhere in 'the global economy' as well as on 'European financial integration' as a whole (p.246). Further, G&L also prospect 'serious implications for the implementation of monetary policy' as a result of the 'weakening' and attendant fragmentation 'of the inter-bank money market' (p.246). Thus, for G&L, had the repo market been included within the scope of application of the FTT, this would have resulted in 'three very undesirable' consequences. First, it would have exacerbated 'the contractionary effects of the FTT on security market trading by impeding inter-bank transactions'. Second, it would have encouraged 'the use of dollars' as opposed to 'euro-denominated securities in the functioning of EU money markets, thereby undermining EU autonomy'. Lastly, 'by fragmenting short-run credit markets', it would have hindered 'the effective implementation of monetary policy that requires all financial agents to be integrated into a unified system'. While each of these effects is 'damaging' in and by itself, for G&L the introduction of 'a measure' impairing 'the EU money markets in all three ways comes close to vandalism' (p.246).

From these analysis and conclusions G&L derive strategic considerations. For them, the preoccupation with the 'impact' of the FTT 'on financial prices' has hitherto monopolised the economics profession's attention, and this has proved instrumental in distracting the latter away from assessing the 'impact' of the FTT 'on financial institutions' – not least along the analytical lines G&L themselves propose – as well as in maintaining the profession 'deeply divided over' the appropriateness of levying and implementing the FTT (p.246). Yet, for G&L such lack of consensus amongst the ranks of the profession also reveals how 'political considerations must figure' with equal prominence 'as economic ones' in the reasoning leading the Commission to persist with its FTT proposal (p.247) – even in the latter's more modest present form. Indeed, for them, the 'key political problem' faced by the Commission lies in its being caught 'between strong popular demands for a tax on banks' following the widespread indignation in the wake of the crisis, 'and the equally strong opposition to any form of bank taxation mounted by the banks themselves'. Thus, for G&L, the European Commission's attachment to its FTT proposal would mark the contradictory attempt to strike a compromise between the two pressures above, with the implicit positing of the FTT as 'the most judicious way of resolving' their 'conflict'. Indeed, on the one hand, the FTT proposal can be seen to assuage popular concerns with finance and the crisis due to its 'redistributive and hence moral appeal'. On the other hand, for G&L, when compared with a FAT, the FTT is less threatening for the 'banks' interests'. For the FAT, in addition to being 'a direct tax on bank profits' as a whole (as opposed to the FTT, which 'taxes trading activities that only form part of the source of profits'), has the advantage of allowing for selective application – i.e. it 'can be focused on specific institutions' (as opposed to the FTT, which 'indiscriminately affects all types of institution engaging in the transactions' falling within its scope of application). Thus, and ultimately, for G&L 'the logic behind the Commission's choice of the FTT as the preferred means of taxing the European financial sector can' and must 'be stood on its head':

> 'If the intention behind a European financial tax is not only to force financial institutions to bear some of the costs of the last financial crisis but also to force

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> changes in their behaviour so as to prevent a future financial crisis, then it is not the FTT but the FAT that is superior. The explanation is clear. If it is the prospect of distributing huge financial profits in the form of generous salaries and bonuses that is the chief motivation for excessive leverage and other types of excessive risk taking in the financial sector, then it must follow that the most effective way of dealing with this problem is to tax financial profits before they can be privately distributed' (p.247).

Thus, for G&L, the best way to impute to 'the banking sector … its part of the post-crisis financial burden' a FAT would be preferable to a FTT, 'because the better strategy for raising public revenues is to tax the immense private fortunes that have been accumulated by the very same abuse of financial and corporate power that has rendered democratic governments insolvent' (p.247).

3. The backtracking from the "triple A" approach as a "missed opportunity"?

Before moving on to review Gabor's account of the reasons why the backtracking of the European Commission from the prescriptions of its original FTT proposal may represent a "missed opportunity", and as a preliminary to undertaking such a review, it is worthwhile highlighting two grey areas of G&L's argument outlined above. These range across the empirical and the conceptual, with significant implications for G&L's indictment of the Tobin tax and the European FTT. To begin with, it must be recalled that G&L were rather resolute, in their 2003 paper, about the logic according to which activity on foreign exchange markets should be interpreted: '[i]f the volume of swap transactions were seen to lag behind or broadly correlate with the volumes of spots and outrights forwards', then for G&L 'one could safely interpret' foreign exchange 'activity from an exchange rate perspective'. Yet, if 'swap transaction volumes are seen to dominate those for spots and outright forwards, an alternative perspective on' foreign exchange activity 'which foregrounds money market concerns' would become 'more convincing' (Grahl and Lysandrou, 2003, pp.602-3), and its elaboration essential. As discussed above, it is by drawing on Bank of International Settlements (2001) triennial data for average daily foreign

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exchange turnover from 1992 to 2001 that G&L could stress, in 2003, how 'approximately one half of total trading volume' was 'accounted for by' foreign exchange swaps (Grahl and Lysandrou, 2003, p.603). Further, this observation has been carried forward to G&L's assessment of trading volumes as an endogenous feature of capital markets (Grahl and Lysandrou, 2006, p.956), and their current argument against the European FTT (Grahl and Lysandrou, 2014a). It is on the basis of such observation that G&L develop their understanding of foreign exchange swaps as a money market instrument, of their function within globalised financial markets, and the concurrent understanding of the Tobin tax and European FTT as undermined by such developments. Table 1 and Figure 1 in this paper reproduce, for the reader's convenience, the Bank of International Settlements data on which G&L were drawing in 2003. Yet, if G&L's assessment may have seemed unequivocal then, when swap transaction volumes *were* dominant with respect to those for spots and outright forwards (see Table 1 and Figures 1 and 2 in the Appendix), it is not clear that it can be considered valid for the period intervening between 2001 and 2014. Indeed, in the decade spanning G&L's reassessment of the Tobin tax debates and their rejection of the European FTT, the decline of spot trading which G&L identified in 2003 (see Table 1 and Figure 1) has reversed, with spot transactions catching up with foreign exchange swaps in both absolute and relative terms – that is, both in volumes and as a percentage of total foreign exchange trading. Further, it could be argued that, for the period under consideration, swap transactions volumes seem to broadly correlate with those of spots and outrights forwards (see Table 2 and Figures 2 and 3). Although this does not necessarily prove that G&L's reading of foreign exchange swaps is wrong, it nonetheless raises the issue that, *according to the interpretative parameters set by G&L themselves*, those accounts interpreting foreign exchange activity from an exchange rate perspective cannot be entirely ruled out (if not declared obsolete, as G&L do).

[INSERT TABLE 2]

[INSERT FIGURE 2]

[INSERT FIGURE 3]

The second grey area of G&L's argument concerns their preference for FATs over FTTs, together with its being predicated on the basis of their particular functionalist reading of finance. Such grey area is easily illustrated by comparison with the ambiguities identified by Mann (2012) in the European Commission's stance towards its own FTT proposal. In this respect, Mann (2012, p.13, emphasis added) begins by distinguishing between two specific conceptions of regulation: 'a "substantive"' one – whereby 'regulatory measures' are devised 'to ensure that the financial system fulfils its role in the service of the real economy', not least 'by identifying … specific types of market behavior' to 'be encouraged, impeded, or even prohibited' – and the '"thin" conception' which 'became dominant in the 1980s' – whereby 'financial markets' are presumed 'efficient until proven otherwise', and 'the role of regulation' is limited 'to facilitating market transactions and' rectifying 'diagnosed instances of market failure by *relatively unobtrusive means*'. As Mann retraces the origin of the idea of raising FTTs in Keynes' own "substantive" conception of regulation – which can be gleaned from the famous "casino passage" of his *General Theory* (Keynes, 1936; see also section 1) – she recalls how the European Commission's original FTT proposal explicitly stated the aim of 'limiting … undesirable market behaviour' (European Commission, 2011a, p.4) and the intent of creating 'appropriate disincentives for transactions that do not enhance the efficiency of financial markets' (p.2). Yet, for Mann, rather than signalling 'a sober departure from' the commitment to 'financial deregulation' and the revival of a more "substantive" conception of regulation (Mann, 2012, pp.13-4), the European Commission's stance was plagued from the onset by the 'unacknowledged oscillation between' the two conceptions of regulation she identifies (p.13). For, despite its explicitly stated aims and intent, for Mann the European Commission's own forecast of a negative effect on GDP of its proposed FTT – in European Commission, 2011a, but also reiterated in European Commission, 2013b – gave away the implicit acceptance of the main tenets of deregulation as well as the resilience of 'the "thin" conception, wedded to a presumption of market efficiency' (Mann, 2012, p.16). Indeed, had the European Commission truly stood 'behind its statement that the targeted transactions "do not

enhance the efficiency of financial markets"', then its prediction should have emphasised reduction of 'waste, better allocation of resources, improved corporate strategy' and, ultimately 'increased productivity' (p.15). Yet, for Mann, the 'prediction of a negative impact on GDP' could seem 'to be based, at least in part, on the assumption that the tax would result in increased cost of capital', with the implicit premise that 'the FTT would be a distortion of pre-tax behaviour and transactions … assumed to provide the efficient baseline' (p.15). Further, this failed to acknowledge 'that some forms of market transactions are themselves the cause of inefficiencies', and that 'their reduction via taxation' should be seen as 'a contribution to increased efficiency, rather than a "cost" of pursuing various other aims through the tax' (pp.15-6).

As Mann perceptively stresses, '[t]he very use of the GDP measure' as a yardstick 'for assessing the FTT is not at all obvious', if not (one might add) outright contradictory. Indeed, while 'financial transactions themselves do not register in GDP, brokers' fees do'. Thus, if 'the post-FTT decrease in the volume of financial services would show as a decrease of GDP, any analysis that saw some of these services as socially useless should have expressed some reservation about the merits of GDP in this context' (Mann, 2012, p.16). This, in itself, exemplifies Christophers' (2011, 2013) account of how national accounting practices and conventions contribute to conferring to finance an aura of "productivity" and "social usefulness", ultimately reflecting (and in turn contributing to reproduce) the contemporary hegemony of finance in society. For, in a nutshell, it is 'being seen as *economically* vital' that 'makes financial institutions *politically* untouchable' (Christophers, 2011, p.113). Of course, it may seem unfair to charge G&L with *exactly* the same ambiguity retraced by Mann in the European Commission's position towards its own FTT proposal. Indeed, G&L are extremely clear about their understanding of finance as a powerful and 'dangerous grouping of interests' (Grahl and Lysandrou, 2014b), about their dislike of the latter, and about their own aim of showing that the problems with the Tobin tax and FTT proposal lie in the neglect in their technical design of the economic functionality of secondary market trading and

attendant implications (Grahl and Lysandrou, 2003, 2014a, 2014b). However, a *similar tension* to that which Mann identifies in the European Commission's position may, after all, also lurk in the background of G&L's argument. Indeed, while they depart from mainstream accounts of self-equilibrating and efficient (although occasionally riddled with market failure) financial markets, G&L also recognise finance as an indispensable function in the global economy. Ultimately, it is on such grounds that they advocate the levying of a FAT as opposed to that of a FTT, for their 'central conclusion is that it would be far better to allow important financial institutions to *perform their functions unhindered* and then tax any excessive profits made out of the performance of those functions' (Grahl and Lysandrou, 2014a, p.235, emphasis added). Without denying that the FAT possesses specific features which may contribute to its appeal – its targeting of bank profits as a whole (as opposed to targeting only a set of activities contributing to these), together with its ability to allow for selective application – it is hard for the reader not to see in G&L's central conclusion an inadvertent endorsement of the "thin" approach to regulation, although this time predicated on functionalism as opposed to the presumed efficiency of financial markets. To be extremely clear on this point, the intention of this criticism of G&L's argument is not that of denying that finance performs a strategic function in the economy but, rather, to emphasise that recognising such function without addressing the issue of whether the development of *functional substitutes* (*à la* Gerschenkron, 1962) is at least conceivable, if not necessary or advisable, may have two negative implications. First, it may be symptomatic of the conflation of the (abstract) function with the (concrete) mechanisms which allow the latter to be performed and, as such, detrimental to conceptual and analytical clarity. Second, and as consequence, it may have conservative political implications, for preserving the function without distinguishing it from the mechanisms which allow its performance may easily translate into preserving the specific way in which such function is performed and, in the current context, an implicit endorsement of the *hypertrophy*/rise of finance itself.

However, there are further deep-seated reasons to question G&L's rejection of the European FTT. These can be found in Gabor's (2014a) account of the dynamics of the repo market. Gabor takes as point of departure the latter's centrality in rallying opposition to the European FTT proposal from a wide and unlikely coalition of actors, ranging from the repo lobby (Comotto, 2013), through pension funds (ISLA, 2013 and Goldman Sachs, 2013; see also Schulmeister, 2013 and 2014 for a fine-grained critique of the latter document), to concerned national governments and the European Central Bank (Financial Times, 2013; Schulmeister, 2014). In addition, Gabor notes how, despite the above, repo market activity has received virtually 'no attention' within current scholarship on FTTs. Thus, she identifies G&L's contribution as a 'notable exception', for their strong criticism of the European FTT proposal rests exactly on their view that '(a) [repos] are economically necessary for Europe's new, market-based system of financial intermediation and (b) [repos] can be easily replaced by foreign exchange swaps, a similar instrument' excluded from the scope of application of the proposed FTT. Yet, for Gabor, G&L's 'criticism sidelines the systemic risk underpinning repos', not least by 'suggesting that swaps enable leverage in the same way that repos do' (Gabor, 2014a, p.6). Indeed, while the opponents of the FTT – perhaps not very differently from G&L themselves – stress the key role of repos in allowing for risk management and hedging (see, for example, Comotto, 2013), for Gabor the issue of 'whether repos reduce or increase risk' is both a matter of perspective (as in micro versus macro) and not devoid of 'macroprudential overtones' (Gabor, 2014a, p.7). For, on the one hand, repos are preferred to unsecured interbank lending because of the 'complex risk management regime' underpinning them, which 'implies that the two repo parties can clearly define and manage credit and collateral risk' through the setting of appropriate initial *haircuts* and – if and when necessary – subsequent mark-to-market *margin calls* (p.7). That the lenders acquire legal ownership of the underlying collateral for the duration of the repo loan allows them, if borrowers default, to recover their loan by selling the collateral (Gabor and Ban, 2013), and this protects lenders from counterparty/credit risk (Gabor, 2014a) – at least to the extent that appropriate

haircuts and margin calls have been negotiated to tame the credit risk arising from the volatility in the value of the pledged collateral (Bank of International Settlements, 1999). Further, the above happens without the concurrent exposure of lenders to the risk associated to the bonds themselves, since borrowers retain the risk and return on the collateral they pledge (Gabor, 2014a). Thus, Gabor concedes that, when repos are observed '[f]rom this micro perspective, the FTT makes little sense'. Indeed, as G&L also noted (see above), once the matter is seen from this angle, the tax would target 'the largest, safest funding market in Europe'. Further, when the parties of targeted repo operations chose 'to roll-over short-term repos' – as it is the case with 'most repo parties … in Europe' – both of them 'would have to pay the FTT repeatedly' (p.7). It is for these reasons that the repo lobby has argued that the short-term repo market would be 'taxed out of existence by the FTT' (Comotto, 2013, p.22, p.27).

On the other hand, though, Gabor stresses how repos also 'offer the cheapest mechanism for leverage' (Gabor, 2014a, p.7; see also: Bank of International Settlements, 1999; Financial Stability Board, 2013, pp.32-5; and Schulmeister, 2014), with the possibilities they allow to increase the latter limited 'only by the repo interest rate and the haircut' (Gabor, 2014a, p.8). Indeed, through repos, assets can be purchased '(almost) without cash by borrowing money to buy the asset and simultaneously posting' said 'asset as collateral' (Schulmeister, 2014, p.21). Such transactions can be repeated indefinitely with the explicit aim of increasing leverage, with the repo interest rate and the haircut as their only obstacle: the 'lower' these are, 'the less' borrowers have 'to provide of' their 'own capital/cash' (Gabor, 2014a, p.8). Thus, for Gabor, the very same 'practices of risk management' which allow the taming/reduction of 'counterparty and liquidity risk for individual institutions' – including 'haircuts, mark to market, margin calls and short maturities' – may be central to the eruption of boom-and-bust cycles of asset prices and the rapid diffusion of 'systemic risks' at the macroeconomic level. Indeed, in periods of boom, 'repos enable rapid leverage and feed higher prices', as per the European 'Commission's notion of "virtual liquidity"' (p.8) – for which see European

Commission, 2013b, p.9. Yet, whenever volatility is introduced or increases in a specific market for government bonds serving as collateral for repos, '[c]ollateral fragility' can quickly emerge as 'the root of shadow banking/repo fragility' (Gabor, 2014a, p.9). Indeed, as an hypothetical borrower involved in a repo transaction is required, because of a margin call, 'to post additional collateral or pay back some of the cash borrowed' (pp.8-9), in 'periods of market turbulence' it may find itself constrained in its ability to do so and, therefore, pushed to 'sell some assets', which may include part of the government bonds in question. In turn, the ensuing 'fall in the price of' the latter 'triggers further margin calls for those institutions that collateralized repos with' such government bonds, 'and further asset sales'. Thus, '[f]ire-sales spread through' the market of the government bonds in question 'and other asset markets, and suddenly those institutions reliant on repo funding are confronted with daily margin calls, forcing further asset sales, falling asset prices and increasing funding difficulties. In overnight repos, cash-rich counterparties only accept high-quality collateral and/or increase haircuts on repos with lower-quality assets' (p.9). For Gabor this is, in a nutshell, a faithful account of the dynamics leading to and characterising a true "run on repo" (as per Gorton and Metrick, 2012), which highlights how '[r]epo crises are crises of collateral – be [it] private AAA structured products in the US or "periphery" government bonds in the Eurozone' (Gabor, 2014a, p.9; see also Gabor and Ban, 2013; and Schulmeister, 2014, p.22).

Having thus recast the issue of the relation of repos to risk (management) in macroprudential terms, shifting attention from the micro to the systemic, Gabor stresses how '[s]ystemic interconnectedness' is essential to explaining 'why the proposals to tax repos' encountered 'such … wide opposition' (Gabor, 2014a, p.9) within and across different constituencies with distinct (and sometimes contrasting) interests, practices and constraints. To do so, she delineates a precise profile of the systemic role performed by repo markets. Indeed, '[t]hrough collateral flows, repos connect financial institutions across various asset markets, including government bond markets', embroiling a wide array of 'financial institutions in leverage cycles' (pp.9-10). Thus, the proposal to include repo markets in the scope of application of

the European FTT inevitably addressed the core of the 'interconnectedness generated through market-based finance' (p.10). For banks, involvement in repo markets is easily explained: the 'larger the[ir] trading activity ... the more [they] may be involved in repo markets', 'simply because' of the possibilities allowed by repos to 'fund securities portfolios ... or gain additional returns from lending securities'. However, the mechanisms through which repo markets entangle 'long-term investors usually subject to strict regulation (pension funds), investors with shorter trading horizons (hedge funds), large multinational companies, and implementing Member States' are less evident, and require deeper probing. To address this issue, Gabor aptly and sharply characterises 'repos as the nervous central system of market-based finance, a system that dissolves borders between securities markets, and in the context of the European integration process, national borders between government bond markets' (p.10). Indeed, although in principle any asset can act as collateral for a repo loan once 'the counterparty agrees on the adequate haircut', in practice 'most trading is funded through repos with high-quality collateral', as this entails 'lowest funding costs in terms of both haircuts and price volatility'. Such high-quality collateral is '[t]ipically' found in 'government bonds that trade in liquid markets'.[20] It is through this channel that 'repo markets introduce what the European Commission call[ed] "virtual liquidity" simultaneously in government bond markets and in higher-risk securities markets financed through repo transactions'. For Gabor, ultimately, it is '[t]hrough repos' that 'government bonds become more liquid *because* banks can use them as collateral to support rapidly growing balance sheets' (p.10).

However, for Gabor, repos also play a unique role in attracting 'distinctive types of financial institutions' into the universe of shadow banking by building and enabling

[20] See http://www.icmagroup.org/Regulatory-Policy-and-Market-Practice/short-term-markets/Repo-Markets/repo/latest/ for a series of reports from the repo lobby (the International Capital Market Association) on the European repo market. According to such reports, in the period spanning 2008 and 2013, the share of government bonds within the pool of EU-originated collateral oscillated between just above 70% and just above 80%. The exact level reported in September (but relative to a survey conducted in June) 2014 is set at 79.3% (see International Capital Market Association, 2014, p.5).

'networks of interconnectedness through collateral flows'. To clarify such dynamics, Gabor highlights the continuing concern in the scholarship concerning shadow banking with 'the pre-crisis' (and persisting?) 'shortage of high-quality collateral issued by governments' (Gabor, 2014a, p.10; see: also Gabor and Ban, 2013; Pozsar and Singh, 2011). Note that G&L's account of repo markets also reflects such concern, inasmuch as it posits 'the increasing shortage of good quality government bonds to serve as collateral' as the cause of 'a perceived tendency to supplement ordinary repo transactions with foreign exchange swaps on the part of eurozone banks' (Grahl and Lysandrou, 2014a, p.245). Yet, for Gabor, the '[d]emand for government bonds as collateral is, from a repo perspective', equivalent to 'demand for leverage'. Thus, she identifies the root of the above shortage in '[f]iscal policy in high-income countries' which, by not being 'expansionary enough', has proved unable to maintain the manufacturing of 'high-quality collateral' attuned to the 'demand for leverage' (Gabor, 2014a, p.10). Hence, by drawing on Pozsar, 2011, Gabor points out how, to address this situation, financial institutions are confronted with three strategies: 1) 'increas[ing] the velocity with which collateral circulates in the system'; 2) '"unearth[ing]" or "min[ing]" high-quality collateral parked in "buy-to-hold" portfolios (such as pension funds)';[21] or 3) 'manufactur[ing] private collateral functionally similar to government bonds'. The increase of circulation of collateral in the system and collateral mining are connected strategies, and they both rest 'on the right to *re-use/re-hypothecate* collateral in repo transactions' (Gabor, 2014a, p.10). This, together with the right to substitution – i.e. the provisions according to which repo lenders can alter the composition of pledged collateral over the entire duration of the repo contract (see Bank of International Settlements, 1999, pp.32-3) – implies that 'collateral may move on a daily basis between repo parties', which in turn translates into the collective exposure of financial institutions 'to the market value' of specific single assets (Gabor, 2014a, p.11). Indeed, as the 'richest

[21] Following Pozsar and Singh (2011, p.5), '[o]btaining collateral' can be considered 'similar to mining', for it 'involves both exploration' – i.e. the 'looking for deposits of collateral' – and 'extraction' - i.e. 'the "unearthing" of passive securities so they can be re-used as collateral for various purposes in the shadow banking system'.

deposits of collateral reside with asset managers' – including 'hedge funds, exchange traded funds, sovereign wealth funds, central banks, pension funds, insurance companies and mutual funds' – collateral is routinely '"mined" from these deposits' (thus becoming "source" collateral) in a number of ways – including 'the borrowing of securities from asset managers, reverse repos, customer margin loans, and margins stemming from in-the-money OTC derivatives contracts'. So, as the 'repeated use of source collateral facilitates system-lubrication', it also concurrently contributes to 'the build-up of leverage-like collateral chains between banks and asset managers' (Pozsar and Singh, 2011, p.5).

While the two paragraphs above illustrate the practices and mechanisms which allow the building of networks of systemic interconnectedness, for Gabor such a state of affairs directly 'calls into question' G&L's argument 'that taxing repos is "illogical" when' their 'close substitute' – foreign exchange swaps – is left untaxed (Gabor, 2014a, p.11). Although, as opposed to repos, foreign exchange swaps 'constitute an exchange of cash flows' (p.11), Gabor highlights how both types of transaction rest 'on similar risk management practices' (p.12). Indeed, similarly to repo counterparties, counterparties in foreign exchange swaps 'also make margin calls when exchange rates move significantly'. Such margin calls, to be met, require the posting of 'additional cash or securities' and, therefore, this entails that foreign exchange swaps 'may trigger ... liquidity spirals' akin to those that can be triggered by repos (p.12) (see also Barkbu and Ong 2010, p12). However, a significant difference between repos and foreign exchange swaps is that the latter – as opposed to the former – 'do not enable leverage (securities financing)' and they do not 'sharpen interconnectedness'. Indeed, banks willing to partake in foreign exchange swaps to benefit from 'cheaper funding conditions' in other currencies may mobilise the necessary 'domestic currency' to be swapped also through repos. 'Conversely', though, foreign exchange 'swaps do not connect institutions across asset markets through cyclical leverage, since swaps do not generate a direct relationship between funding levels and fluctuating asset values' (Gabor, 2014a, p.12). Thus, Gabor's account of the systemic role performed by repos in the contemporary European

financial landscape defuses G&L's warning against the illogicality of taxing repos while leaving foreign exchange swaps untaxed.

Further, and by contrast with G&L's rejection of the European FTT on the grounds of the illogicality they perceive, Gabor stresses how the taxing of repos through a European FTT 'would have two likely' and welcome 'consequences for systemic interconnectedness'. First, it would inevitably make 'collateral chains' shorter 'by making leverage more expensive'. Indeed, while the scope and reach of collateral chains would be in an inverse relationship with the level at which the tax is set, 'effects would' nonetheless 'be sizable': for example, based on International Capital Market Association data and reports from 2008 to 2012, Gabor estimates that assets issued in the eleven countries which agreed to take the European Commission's FTT proposal further under the aegis of enhanced cooperation (see section 1 and footnote 2) 'account for around 50% of European repo collateral'. Second, and '[i]mmediately important, the FTT', by *acting as a tracer* for each repo transaction, would provide 'a *transparency fix* to repo markets', something which 'regulators have' invoked in the recent past (p.12). As the Financial Stability Board has stressed recently, since 'direct lending markets are by nature private, information' on them is characteristically 'scarce and patchy'. Thus, to gather such information, regulators cannot but resort to 'a mix of market intelligence, research reports by banks, and ... financial news reports'. This in itself highlights the need for '[s]ystematic market-wide information on these activities ... to monitor their size, growth and characteristics and detect any build-up of risk' (Financial Stability Board, 2013, p.44). Thus, as Gabor stresses, the taxing of repos through a FTT would exactly address such needs and concerns since, through it, '[r]egulators would' be able to 'know *which* financial institutions depend on repo, the *extent* to which pension funds engage in the repo/securities lending universe', and the *amounts* of 'collateral' which 'is re-used/re-hypothecated' (Gabor, 2014a, pp.12-13, emphasis added). These are strong reasons to support a European FTT. However, these reasons notwithstanding, the European Commission has backtracked from its original FTT proposal (see section 1), with national governments now adopting the view that

'manufacturing collateral for repo markets – and for leveraged business models – preserves liquidity', while the 'deleterious consequences' of the dynamics of repo markets are better addressed through regulation. As Gabor herself concludes, '[w]hether this will be a missed opportunity for reforming European (shadow) banking remains to be seen' (p.16).

4. Conclusion

As recalled in the introduction of this paper, both the "golden age" of the scholarship on the Tobin tax – the forebear of FTTs – and the tax's own rise to popularity beyond the precinct of the economics profession coincided with the unquestionable and unparalleled prominence in the 1990s of globalisation, both as a set of processes as well as a concept within and beyond social science at large. This was particularly manifest in the UNDP's proposal of the Tobin tax as a mechanism to finance the provision of underfunded Global Public Goods (see: Haq et al. 1996; Kaul and Langmore, 1996; Caldari and Masini, 2010) if not the United Nations themselves (Bellofiore and Brancaccio, 2002, p.17), as well as in ATTAC's proposal of the Tobin tax as a terrain of strategic recomposition for the demands and objectives of the anti-globalisation movement (Caldari and Masini, 2010; Waters, 2004 and 2006). Indeed, if the two proposals often ended up converging and significantly overlapping in content despite their different origins, they also exemplified distinct attempts to articulate a response to the processes of globalisation and their detrimental effects that aimed to be equally "global" in character – a response from above in the UNDP's case, and one from below in ATTAC's case. In this juncture, it was easy to identify clearly those opposing the Tobin tax by their positive reading of globalisation and the attendant liberalisation of capital movements, as well as their more or less explicit adherence to Friedman's (1953b) view of speculation as a stabilising force leading financial markets to self-equilibrate. By contrast, and whatever their theoretical starting point, those proposing the levying of a Tobin tax could be as easily and clearly identified by their negative reading of globalisation and the liberalisation of capital movements, together with their explicit rejection of

speculation as a destabilising force operative in endogenously crisis-prone financial markets (Arestis and Sawyer, 1997; Bellofiore and Brancaccio, 2002).

Mirroring such distinction between opponents and proponents of the Tobin tax, Schulmeister (2014) – a veteran of the Tobin tax debates – recently offered a similar distinction with respect to FTTs. Thus, he distinguished between two approaches to analysing economic relations, broadly evocative of the heterodox vs mainstream divide in the discipline of economics: one inspired by the classical and (original) Keynesian traditions, which he terms "realistic economics", and neoclassical economics, which he terms "idealistic economics". For Schulmeister, the crucial difference between such approaches lies in their 'way of thinking': "realistic economics" 'addresses concrete economic problems, collects empirical observations and tries to arrive at general conclusions about the relevant relationships in a predominantly – yet not exclusively – inductive manner'. Therefore, it 'acknowledges the importance of contradictions in the economy, which should therefore be incorporated in economic theory', and puts forward '[p]olicy recommendations' which 'are problem-oriented, pragmatic and … embedded in the context of historical time' (Schulmeister, 2014, p.2). By contrast, "idealistic economics" 'aims at modelling the universe of economic relationships in an ideal world – free of contradictions'. Therefore, it rests on 'assumptions which "abstract away" essential properties of human beings and of their interaction in society like the role of emotions or of uncertainty. From the general equilibrium models based on these assumptions, one deducts a "navigation map" for economic policy – again valid beyond time and space' (Schulmeister, 2014, pp.2-3). Armed with such distinction, Schulmeister identifies the 'struggle over the usefulness of a FTT on the academic level, in the media and in politics, between EU member states as well as within each country', as reflective of 'the fundamental differences between the "realistic" and "idealistic" approach to economics'. Further, he prospects that with the foreseeable deepening of the crisis, such 'struggle will extend to other problem fields like unemployment or … public debt', hopefully as 'part of the process of

destructing the old paradigm' ("idealistic economics"?) and 'developing a new one' (attuned to "realistic economics"?) (Schulmeister, 2014, pp.3-4).

However, the scholarship assessed in this paper brings to the fore the inadequacy of Schulmeister's classification. Indeed, both G&L's approach – on the one hand – and Gabor's approach – on the other – rightfully qualify to be encompassed under Schulmeister's heading of "realistic economics". If anything, G&L's and Gabor's distinct readings of the European commission's FTT proposal and of FTTs in general signal disagreements which are completely internal to heterodox economics (i.e. "realistic economics", in Schulmeister's terminology). Indeed, the Tobin tax debates ran out of steam at the turn of the century, and G&L's (2003) indictment of the Tobin tax itself and its attendant debates neatly closed the latter's last cycle. Yet the rise of financialisation in the twenty-first century and its replacement of globalisation – both as a set of identified processes and a concept and object of study in its own right – gave new impetus to the study of "everything finance" (Epstein, 2005b), also allowing for the recent recasting of the debates on the Tobin tax into the debate on FTTs. Thus, in the past, adherence to the proposal of a Tobin tax could be used as an organising principle to discern between heterodox and mainstream approaches to economics (although sometimes at the price of rough approximation), as well as between unfavourable and favourable attitudes towards globalisation and the liberalisation of capital movements. By contrast, in the scholarship reviewed in this paper, attitudes towards FTTs can be understood as an organising principle to discern between distinct attitudes towards the nature of financialisation within heterodox economics. This should not surprise, for despite its prominence, there is little agreement amongst social scientists and heterodox scholars as to the definition of the term and its significance, with the consequent persistence of a plurality of meanings for the term (Fine, 2014; van der Zwan, 2014). At a general level, both the work of G&L and of Gabor brings to the fore the crucial relation between repo markets, the conduct of monetary policy and the provision of welfare. Yet, G&L locate such relation within a broader understanding of finance as a functional activity within contemporary capitalism, and the concurrent rejection of

interpretations of financialisation portraying financial activity as "dysfunctional" or "excessive". While this is a theme running more or less explicitly through G&L's recent work (see: Grahl, 2001, 2011; Grahl and Lysandrou, 2006; Lysandrou, 2005) and clearly evident in their negative assessment of FTTs and their attendant preference for FATs (Grahl and Lysandrou, 2003, 2014a, 2014b), its full elaboration as an alternative view of financialisation is still *in fieri* (Lysandrou, 2014a, 2014b). On the other hand, Gabor locates such relation in a broader political economy of central banking, fiscal policy, shadow banking and repo markets (see Gabor, 2012, 2013, 2014b; Gabor and Ban, 2013) – a reflection which is equally *in fieri*. Following and engaging with such theoretical developments and their contribution to the financialisation debate will undoubtedly enrich and deepen the understanding of contemporary capitalism, together with its core socio-economic relations, processes and structures, *beyond* the support they lend to the adoption or the rejection of FTTs themselves.

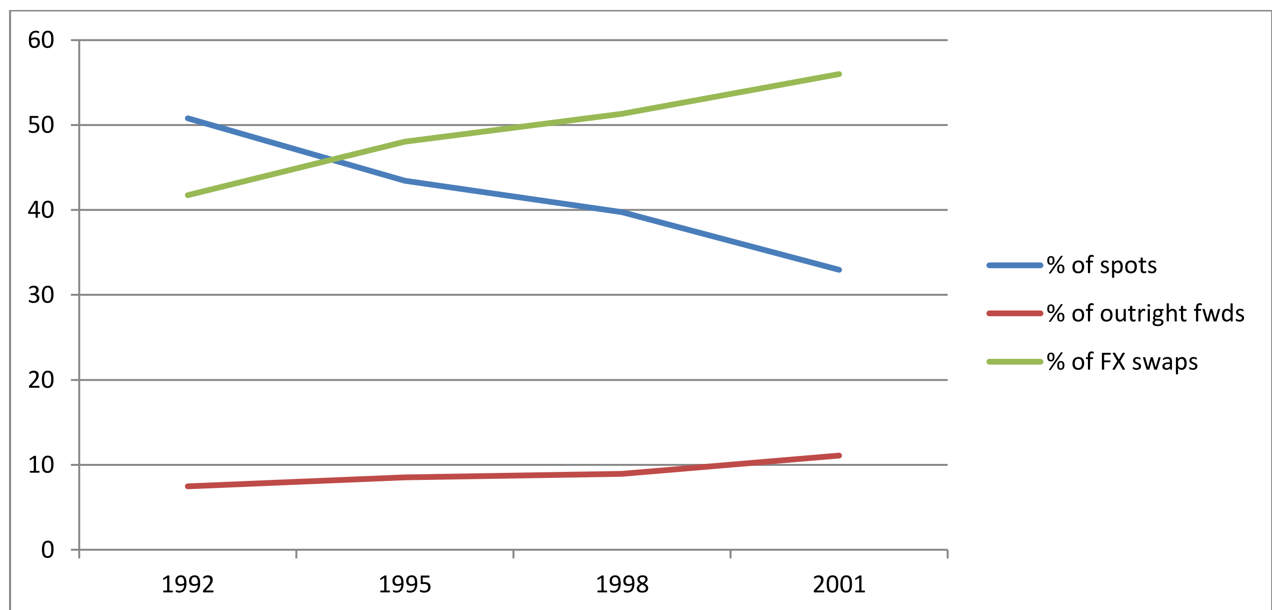
5. Appendix: Figures and Tables

Table 1: volumes and shares of foreign exchange instruments as of 2001

Instrument	1992	1995	1998	2001
Spot Transactions	394	494	568	386
Outright Forwards	58	97	128	130
FX Swaps	324	546	734	656
Total	776	1137	1430	1172
% of Spots	50.7732	43.44767	39.72028	32.93515
% of Outright Forwards	7.474227	8.531223	8.951049	11.09215
% of FX Swaps	41.75258	48.02111	51.32867	55.9727

Source: Bank of International Settlements, 2001.

Figure 1: shares of foreign exchange instruments as of 2001



Source: Bank of International Settlements, 2001.

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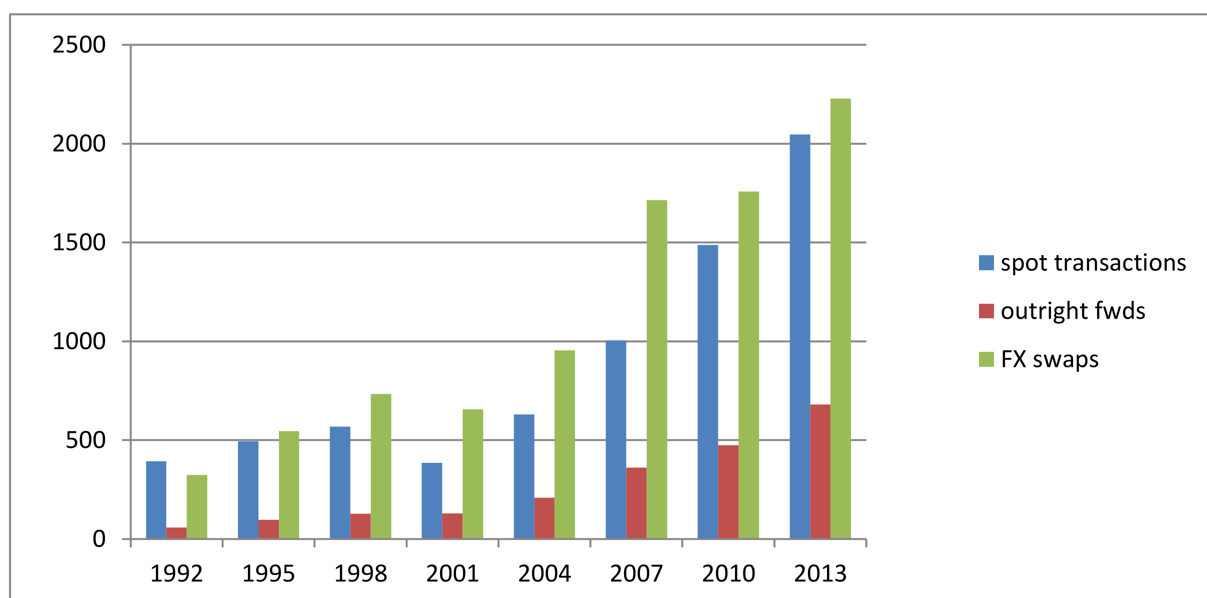
Table 2: volumes and shares of foreign exchange instruments as of 2013

Instrument	1992	1995	1998	2001	2004	2007	2010	2013
Spot Transactions	394	494	568	386	631	1005	1488	2046
Outright Forwards	58	97	128	130	209	362	475	680
FX Swaps	324	546	734	656	954	1714	1759	2228
Total	776	1137	1430	1172	1794	3081	3722	4954
% of Spots	50.7732	43.44767	39.72028	32.93515	35.1728	32.61928	39.97851	41.2999
% of Outright Forwards	7.474227	8.531223	8.951049	11.09215	11.64994	11.74943	12.76196	13.7262
% of FX Swaps	41.75258	48.02111	51.32867	55.9727	53.17726	55.63129	47.25954	44.9737

Source: Bank of International Settlements, 2001 and Bank of International Settlements, 2013 (Table 1, p.9).

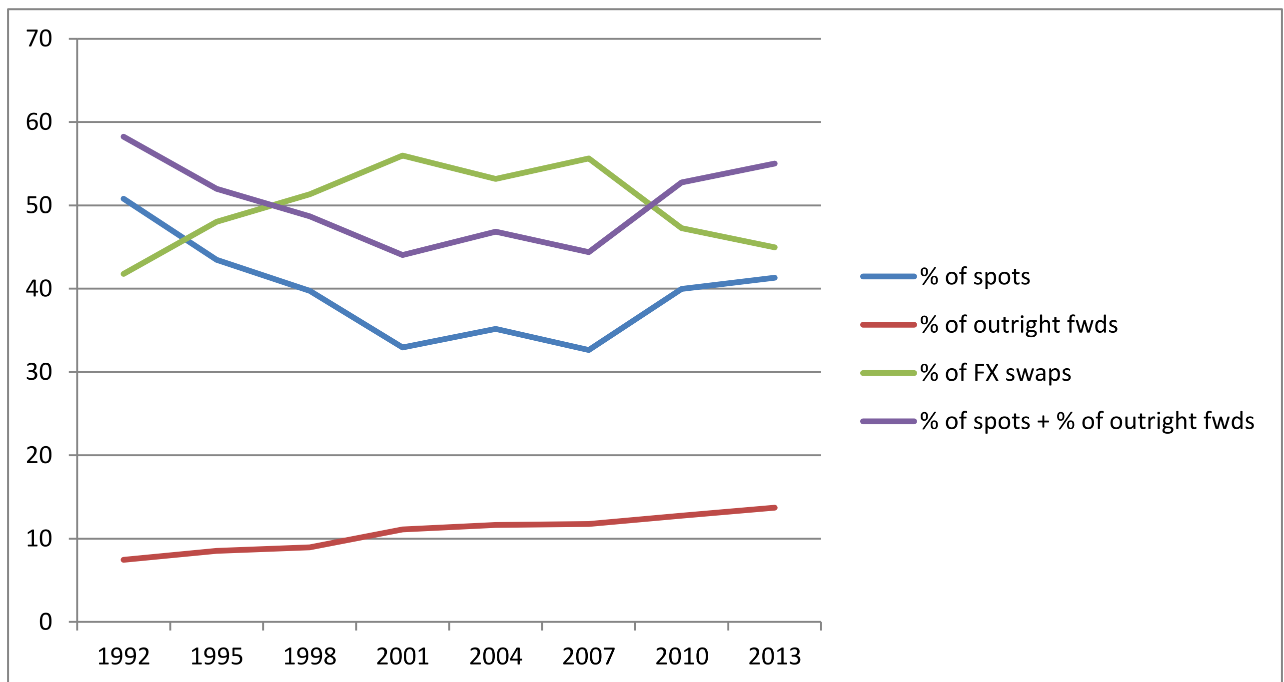
Figure 2: volumes of foreign exchange instruments as of 2013



This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 266800

Source: Bank of International Settlements, 2001 and Bank of International Settlements, 2013 (Table 1, p.9).

Figure 3: shares of foreign exchange instruments as of 2013



Source: Bank of International Settlements, 2001 and Bank of International Settlements, 2013 (Table 1, p.9).

References

Acocella, N. (2005), *Economic Policy in the Age of Globalisation*, Cambridge: Cambridge University Press;

Arestis, P. and Sawyer, M. (1997), 'How Many Cheers for the Tobin Transactions Tax?', *Cambridge Journal of Economics*, **21**(6): 753-768;

________________________ (2013), 'The Potential of Financial Transactions Taxes' in Arestis, P. and Sawyer, M. (2013), *Economic Policies, Governance and the New Economics*, Basingstoke: Palgrave Macmillan;

ATTAC (2014), 'Taxe Tobin européenne: pourquoi veulent-ils la saboter?', available online at http://france.attac.org/nos-publications/notes-et-rapports-37/article/taxe-tobin-europeenne-pourquoi

Bank of International Settlements (1999), 'Bank for International Settlements Implications of repo markets for central banks', available online at http://www.bis.org/publ/cgfs10.pdf;

____________________________ (2001), *Central Bank Survey of Foreign Exchange and Derivatives Market Activity in April 2001: Preliminary Global Data*, Press Release, 9 October, http://www.bis.org/press/p011009.pdf;

____________________________ (2013), *Triennial Central Bank Survey, Foreign Exchange Turnover in April 2013: Preliminary Global Results*, Monetary and Economic Department, September 2013, http://www.bis.org/publ/rpfx13fx.pdf;

Barkbu, B. and Ong. L. (2010), "FX Swaps: implications for financial and economic stability", IMF Working Paper WP/10/55, Washington, DC: International Monetary Fund, available online at http://www.imf.org/external/pubs/ft/wp/2010/wp1055.pdf

Bellofiore, R. and Brancaccio, E. (2002), *Il granello di sabbia. I pro e i contro della Tobin tax*, Milan : Feltrinelli;

Bieling, H. J. (2014), 'Shattered expectations: the defeat of European ambitions of global financial reform', *Journal of European Public Policy*, **21**(3): 346-366;

Brogaard, J., Hendershott, T. and Riordan, R. (2013), 'High Frequency Trading and Price Discovery', Working Paper Series NO 1602/November 2013, European Central Bank, available online at http://www.ecb.europa.eu/pub/pdf/scpwps/ecbwp1602.pdf

Caldari, K. and Masini, F. (2010), 'National Autonomy, Regional Integration and Global Public Goods: The Debate on the Tobin Tax (1978-2009)', CREI Working Paper no. 1/2010, available online at http://host.uniroma3.it/centri/crei/pubblicazioni/workingpapers2010/CREI_01_2010.pdf

Christophers, B. (2011), 'Making Finance Productive', *Economy and Society*, **40**(1): 112-140;

______________ (2013), *Banking Across Boundaries. Placing Finance in Capitalism*, Oxford: Wiley Blackwell;

Comotto, R. (2013), 'Collateral damage: the impact of the Financial Transaction Tax on the European repo market and its consequences for the financial markets and the real economy', International Capital Market Association, available online at http://www.icmagroup.org/Regulatory-Policy-and-Market-Practice/short-term-markets/Repo-Markets/icma-european-repo-market-reports-and-white-papers/the-impact-of-the-financial-transaction-tax-on-the-european-repo-market

Davidson, P. (1997), 'Are Grains of Sand in the Wheels of International Finance Sufficient to Do the Job When Boulders Are Often Required?', *Economic Journal*, 107(442): 671-686;

de Brunhoff, S. and Jetin, B. (2002), 'La Tobin tax: una misura forte contro l'instabilità finanziaria', in Bellofiore, R. and Brancaccio, E. (2002);

Epstein, G. (Ed.) (2005a), *Financialization and the World Economy*, Cheltenham: Edward Elgar;

Epstein, G. (2005b), 'Introduction: Financialization and the World Economy', in Epstein, G. (Ed.) (2005a), *Financialization and the World Economy*, Cheltenham: Edward Elgar;

Epstein, G. A. and Habbard, P. (2013), 'Speculation and Sovereign Debt. An Insidious Interaction', in Wolfson, M. H. and Epstein, G. A. (2013), *The Handbook of the Political Economy of Financial Crises*, Oxford: Oxford University Press;

European Central Bank (2011), 'Euro Money Market Survey', September 2011, Frankfurt: European Central Bank, available online at http://www.ecb.europa.eu/pub/pdf/other/euromoneymarketsurvey201109en.pdf

________________________ (2013), 'Euro Money Market Survey', November 2013, Frankfurt: European Central Bank, available online at http://www.ecb.europa.eu/pub/pdf/other/euromoneymarketsurvey201311en.pdf

European Commission (2010a), 'Financial Sector Taxation', Commission Staff Working Document. SEC(2010) 1166, available online at http://ec.europa.eu/taxation_customs/resources/documents/taxation/sec_2010_1166_en.pdf

______________________ (2010b), 'Innovative financing at a global level', SEC(2010) 409 final, available online at http://ec.europa.eu/economy_finance/articles/international/documents/innovative_financing_global_level_sec2010_409en.pdf

______________________ (2011a), 'Proposal for a COUNCIL DIRECTIVE on a common system of financial transaction tax and amending Directive 2008/7/EC', COM(2011) 594 final, available online at http://ec.europa.eu/taxation_customs/resources/documents/taxation/other_taxes/financial_sector/com%282011%29594_en.pdf

______________________ (2011b), 'Executive Summary of the Impact Assessment Accompanying the document Proposal for a Council Directive on a common system of financial transaction tax and amending Directive 2008/7/EC', SEC(2011) 1103 final, available online at http://ec.europa.eu/taxation_customs/resources/documents/taxation/other_taxes/financial_sector/summ_impact_assesmt_en.pdf

______________________ (2013a), 'Proposal for a COUNCIL DIRECTIVE implementing enhanced cooperation in the area of financial transaction tax', COM/2013/71, available online at http://ec.europa.eu/taxation_customs/resources/documents/taxation/com_2013_71_en.pdf

_______________________ (2013b), 'IMPACT ASSESSMENT Accompanying the document Proposal for a COUNCIL DIRECTIVE implementing enhanced cooperation in the area of financial transaction tax. Analysis of policy options and impacts', SWD(2013) 28 final, available online at http://ec.europa.eu/taxation_customs/resources/documents/taxation/swd_2013_28_en.pdf

European Systemic Risk Board (2014), 'Is Europe Overbanked?', Reports of the Advisory Scientific Committee No. 4/June 2014, available online at https://www.esrb.europa.eu/pub/pdf/asc/Reports_ASC_4_1406.pdf

Financial Stability Board (2013), 'Global Shadow Banking Monitoring Report 2013', available online at http://www.financialstabilityboard.org/publications/r_131114.pdf

Financial Times (2013), 'France central bank chief says Robin Hood tax is "enormous risk"', 27 October 2013;

Fine, B. (2014), 'Towards a Material Culture of Financialisation', FESSUD Working Paper Series No 15;

Frankel, J. (1996), 'How well do foreign exchange markets work: might a Tobin tax help?' in Haq, M. ul, Kaul, I. and Grunberg, I. (Eds.) (1996), *The Tobin Tax: Coping with Financial Volatility*, Oxford: Oxford University Press;

Friedman, M. (1953a), *Essays in Positive Economics*, Chicago: University of Chicago Press;

Friedman, M. (1953b), 'The Case for Flexible Exchange Rates', in Friedman, M. (1953a), *Essays in Positive Economics*, Chicago: University of Chicago Press;

Gabor, D. (2012), 'The Power of Collateral: The ECB and Geographies of Bank Funding', Social Science Research Network;

________ (2013), 'Shadow Interconnectedness: the political economy of (European) shadow banking', Social Science Research Network;

________ (2014a), 'A step too far? The European Financial Transactions Tax on shadow banking', unpublished draft;

________ (2014b), 'The Political Economy of Repo Markets', unpublished draft;

Gabor, D. and Ban, C. (2013), 'Fiscal Policy in (European) Hard Times: Financialization and Varieties of Capitalism', available online at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2201518

Gandolfo, G. (2004), *Elements of International Economics*, Berlin: Springer-Verlag;

Garcia-Arias, J., Fernandez-Huerga, E. and Salvador, A. (2013), 'European Periphery Crises, International Financial Markets, and Democracy', *American Journal of Economics and Sociology*, **72**(4): 826-850;

Gerschenkron, A. (1962), *Economic Backwardness in Historical Perspective. A Book of Essays*, Cambridge (Mass): Harvard University Press;

Goldman Sachs (2013), 'Financial Transactions Tax: how severe?', available online at http://www.steuer-gegen-armut.org/fileadmin/Dateien/Kampagnen-Seite/Unterstuetzung_Ausland/EU/2013/2013.05._GS_on_Fin_l_Transaction_tax__FTT__-_Bottom_Up_Analysis_Europe.pdf

Gomber, P., Arndt, B., Lutat, M. and Uhle, T. (2011), 'High Frequency Trading', Goethe University, Deutsche Borse Discussion Paper, March, available online at https://xetra.com/xetra/dispatch/en/binary/gdb_content_pool/imported_files/public_files/10_downloads/31_trading_member/10_Products_and_Functionalities/hft/High_Frequency_Trading_Study.pdf

Gordon, G. and Metrick, A. (2012), 'Securitized banking and the run on repo', *Journal of Financial Economics*, **104**(3): 425-451;

Gottlieb, G., Impavido, G. and Ivanova, A. (2012), 'Taxing Finance', *Finance & Development*, **49**(3): 44-47;

Grahl, J. (2001), 'The Sway of Finance?', *New Left Review* **9**, May-June 2001: 148-53;

_______ (2011), 'A Capitalist Contrarian', *New Left Review* **69**, May-June 2011: 35-59;

Grahl, J. and Lysandrou, P. (2003), 'Sand in the wheels or spanner in the works? The Tobin tax and global finance', *Cambridge Journal of Economics*, **27**(4): 597-621;

_________________________ (2006), 'Capital market trading volume: an overview and some preliminary conclusions', *Cambridge Journal of Economics*, **30**(6): 955-979;

________________________ (2014a), 'The European Commission's Proposal for a Financial Transactions Tax: A Critical Assessment', *Journal of Common Market Studies*, **52**(2): 234-249;

________________________ (2014b), 'The proposed EU Financial Transactions Tax is both illogical and likely to be economically damaging', LSE EUROPP (European Politics and Policy) blog, http://blogs.lse.ac.uk/europpblog/2014/04/09/the-proposed-eu-financial-transactions-tax-is-both-illogical-and-likely-to-be-economically-damaging/#Author

Griffith-Jones, S. and Persaud, A. (2012), 'Financial Trasactions Taxes', Paper prepared for - and presented to - the Committee on Economic and Monetary Affairs of the European Parliament on the 6th of February 2012, available online at http://www.stephanygj.net/papers/FTT.pdf

Haldane, A. (2011), 'The Race to Zero', Speech given at the International Economic Association, Sixteenth World Congress, Beijing, China, 8 July 2011, available online at http://www.bankofengland.co.uk/publications/Documents/speeches/2011/speech509.pdf

Haq, M. ul, Kaul, I. and Grunberg, I. (Eds.) (1996), *The Tobin Tax: Coping with Financial Volatility*, Oxford: Oxford University Press;

International Capital Market Association (2014), 'European repo market survey' Number 27 - September 2014, available online at http://www.icmagroup.org/Regulatory-Policy-and-Market-Practice/short-term-markets/Repo-Markets/repo/latest/

International Monetary Fund (2010), *A Fair and Substantial Contribution by the Financial Sector. Final Report for the G-20*, Washington DC: IMF available online at http://www.imf.org/external/np/g20/pdf/062710b.pdf

International Securities Lending Association (ISLA) (2013), 'Impact of the Financial Transactions Tax on Europe's Securities Lending Market', available online at http://www.eseclending.com/pdfs/ISLA_FTT_Europe_06_2013.pdf

Jessop, B. (2013), 'Finance-dominated accumulation and post-democratic capitalism', in Fadda, S. and Tridico, P. (Eds.) (2013), *Institutions and Economic Development after the Financial Crisis*, London: Routledge.

Jetin B. (2002), *La taxe Tobin et la solidarité entre les nations*, Paris: Editions Descartes et Compagnie;

Kaul I. and Langmore J. (1996), 'Potential Uses of the Revenue from a Tobin Tax', in Haq, M. ul, Kaul, I. and Grunberg, I. (Eds.) (1996), *The Tobin Tax: Coping with Financial Volatility*, Oxford: Oxford University Press;

Keynes, J. M. (1930), *A Treatise on Money. The Pure Theory of Money*, London: Macmillan;

___________ (1936), *The General Theory of Employment, Interest and Money*, London: Macmillan;

Kirilenko, A. A. and Lo, A. W. (2013), 'Moore's Law versus Murphy's Law: Algorithmic Trading and Its Discontents', *Journal of Economic Perspectives*, **27**(2): 51-72;

Leaman, J. (2013), 'The Fiscal Lessons of the Global Crisis for the European Union. The Destructive Consequences of Tax Competition', in Leaman, J. And Waris, A. (Eds.) (2013), *Tax Justice and the Political Economy of Global Capitalism, 1945 to the Present*, New York: Berghahn;

Lewis, M. (2014), *Flash Boys. A Wall Street Revolt*, New York: W. W. Norton & Company;

Lysandrou, P. (2005), 'Globalisation as commodification', *Cambridge Journal of Economics*, **29**(5): 769-797;

____________ (2014a), 'Financialisation and the Limits of Circuit Theory', unpublished manuscript;

____________ (2014b), 'The Colonisation of the Future: An Alternative View of the Content and Cause of Financialisation', unpublished manuscript;

Mann, R. (2012), 'The Regulatory Road not Taken. The Proposed Financial Transaction Tax in a Historical Context', WZB-Mitteilungen, No. 137, available online at http://bibliothek.wzb.eu/artikel/2012/f-17353.pdf

McCulloch, N. and Pacillo, G. (2011), 'The Tobin Tax: A Review of the Evidence', IDS Research Report **68**, Brighton: University of Sussex;

Milgrom, P. and Stokey, N. (1982), 'Information, Trade and Common Knowledge', *Journal of Economic Theory*, **26**(1): 17-27;

Ministero dell'Economia e delle Finanze (2013), *Decreto del Ministero dell'Economia e delle Finanze 21 Febbraio 2013*, available online at http://www.mef.gov.it/primo-piano/documenti/DECRETO_FTT.pdf and in English at http://www.mef.gov.it/primo-piano/documenti/DecretoFTT_11_3_2013_EN.pdf

Patomäki, H. (2012), 'The EU Commission Proposal for a Financial Transaction Tax: Problems and Prospects', available online at http://www.unrisd.org/unrisd/website/newsview.nsf/(httpNews)/EB314706E0A240D6C12579AD006117FC?OpenDocument

Plihon, D. (2003), 'Les taxes globales: une utopie?', *L'Économie politique*, **2003/1** (17): 7-19;

Pollin, R., Baker, D. and Schaberg, M. (2003), 'Securities transaction taxes for U.S. financial markets', *Eastern Economic Journal*, **29**(4): 527-558;

Pozsar, Z. (2011), 'Institutional Cash Pools and the Triffin Dilemma of the U.S. Banking System', IMF Working Paper WP/11/190, Washington, DC: International Monetary Fund, available online at https://www.imf.org/external/pubs/ft/wp/2011/wp11190.pdf

Pozsar, Z. and Singh. M. (2011), 'The Nonbank-Bank Nexus and the Shadow Banking System', IMF Working Paper WP/11/289, Washington, DC: International Monetary Fund, available online at https://www.imf.org/external/pubs/ft/wp/2011/wp11289.pdf

Ramonet, I. (1997), 'Désarmer les marchés', *Le Monde Diplomatique*, décembre 1997, available online at http://www.monde-diplomatique.fr/1997/12/RAMONET/9665 and in English at http://mondediplo.com/1997/12/leader

Schulmeister, S. (2013), 'Impact of the FTT on the profitability of financial market activities – the assessment of Goldman Sachs Research', available online at

http://stephan.schulmeister.wifo.ac.at/fileadmin/homepage_schulmeister/files/GS_FTT_05_13.pdf

_______________ (2014), 'The Struggle Over the Financial Transactions Tax – A Politico-economic Farce', WIFO Working Papers, No. **474** June 2014, available online at http://www.wifo.ac.at/jart/prj3/wifo/resources/person_dokument/person_dokument.jart?publikationsid=47272&mime_type=application/pdf

Schulmeister, S., Schratzenstaller, M. and Picek, O. (2008), 'A General Financial Transaction Tax – Motives, Revenues, Feasibility and Effects', Study of the Austrian Institute of Economic Research (WIFO), Vienna, April 2008;

Ségol, B. (2013), 'Europe's Tobin tax is designed to work', *Financial Times*, 17 April 2013;

Stiglitz, J. E. (2014a), 'Reforming Taxation to Promote Growth and Equity', Roosevelt Institute White Paper available online at http://rooseveltinstitute.org/sites/all/files/Stiglitz_Reforming_Taxation_White_Paper_Roosevelt_Institute.pdf

____________ (2014b), 'Tapping the Brakes: Are Less Active Markets Safer and Better for the Economy?', paper presented at the Federal Reserve Bank of Atlanta 2014 Financial Markets Conference "Tuning Financial Regulation for Stability and Efficiency", Atlanta, Georgia, 15 April 2014, available online at https://www.frbatlanta.org/

Streeck, W. (2014), *Buying Time. The Delayed Crisis of Democratic Capitalism*, London: Verso;

Summers, L. H. and Summers, V. P. (1989), 'When financial markets work too well: A cautious case for a securities transactions tax', *Journal of Financial Services Research*, 3(2-3): 261-286;

Tobin, J. (1978), 'A proposal for international monetary reform', *Eastern Economic Journal*, 4(3-4): 153-159. Reprinted in Tobin, J. (1996), *Essays in Economics: Theory and Policy*, Cambridge (Mass.): The MIT Press;

________ (1996), 'A Currency Transactions Tax: Why and How', *Open Economies Review*, **7**: 493-499;

Van der Zwan, N. (2014), 'Making Sense of Financialization', *Socio-Economic Review*, **12**(1): 99-129;

Vella, J., Fuest, C. and Schmidt-Eisenlohr, T. (2011), 'The EU Commission's Proposal for a Financial Transaction Tax', *British Tax Review* No. 6 (also published as Oxford Legal Studies Research Paper No. 14/2012);

Waters, S. (2004), 'Mobilising against Globalisation: Attac and the French Intellectuals', *West European Politics*, **27**(5): 854-874;

_________ (2006), 'A l'attac. Globalisation and Ideological Renewal on the French Left', *Modern & Contemporary France*, **14**(2): 141-56;

Wiberg, M. (2013), 'We tried a Tobin tax and it didn't work', *Financial Times*, 15 April 2013;

Wollner, G. (2013), 'Justice in Finance: The Normative Case for an International Financial Transaction Tax', *The Journal of Political Philosophy*, online first: DOI: 10.1111/jopp.12016;

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THE ABSTRACT OF THE PROJECT IS:

The research programme will integrate diverse levels, methods and disciplinary traditions with the aim of developing a comprehensive policy agenda for changing the role of the financial system to help achieve a future which is sustainable in environmental, social and economic terms. The programme involves an integrated and balanced consortium involving partners from 14 countries that has unsurpassed experience of deploying diverse perspectives both within economics and across disciplines inclusive of economics. The programme is distinctively pluralistic, and aims to forge alliances across the social sciences, so as to understand how finance can better serve economic, social and environmental needs. The central issues addressed are the ways in which the growth and performance of economies in the last 30 years have been dependent on the characteristics of the processes of financialisation; how has financialisation impacted on the achievement of specific economic, social, and environmental objectives?; the nature of the relationship between financialisation and the sustainability of the financial system, economic development and the environment?; the lessons to be drawn from the crisis about the nature and impacts of financialisation? ; what are the requisites of a financial system able to support a process of sustainable development, broadly conceived?'

FESSUD

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THE PARTNERS IN THE CONSORTIUM ARE:

Participant Number	Participant organisation name	Country
1 (Coordinator)	University of Leeds	UK
2	University of Siena	Italy
3	School of Oriental and African Studies	UK
4	Fondation Nationale des Sciences Politiques	France
5	Pour la Solidarite, Brussels	Belgium
6	Poznan University of Economics	Poland
7	Tallin University of Technology	Estonia
8	Berlin School of Economics and Law	Germany
9	Centre for Social Studies, University of Coimbra	Portugal
10	University of Pannonia, Veszprem	Hungary
11	National and Kapodistrian University of Athens	Greece
12	Middle East Technical University, Ankara	Turkey
13	Lund University	Sweden
14	University of Witwatersrand	South Africa
15	University of the Basque Country, Bilbao	Spain

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