

A step too far?
The European Financial Transactions Tax and Shadow Banking

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ABSTRACT. This paper explores two related puzzles around the Financial Transactions Tax: how did the FTT proposals become increasingly radical when scholarly insights would predict the opposite and why did resistance to the FTT concentrate around the repo market, a shadow market at once systemic and yet without regulatory oversight? It argues that taxing repos is the key transformational element of the FTT because it goes to the heart of cross-border, cross-market systemic interconnectedness in Europe. The widespread resistance to the repo-FTT invites a broader reflection on the governance of financial interconnectedness when the regulator can no longer define clearly its interests because it is part and parcel of interconnected financial architectures. The FTT debates illuminate a symbiotic relationship between governments and shadow banking, yet one ridden with fragilities. Governments have little influence over repo practices that can generate both liquidity and volatility for government bond markets and private asset markets. Crises bring this trade-off into sharp focus - as they did for Greece, Ireland or France - and prompt governments to contemplate mechanisms for gaining control. Yet regulators may easily backtrack under the threat that outside the repo market lays a world of higher funding costs.

...the bulk of the FTT impact stems from the European banks' REPO books (€118 bn) followed by derivatives (€32 bn), equities (€11 bn) and government bond books (€4 bn)
Goldman Sachs (2013) Report on the European Financial Transactions Tax.

According to information provided by representatives of the Dutch pension fund industry, it appears that around 50% of a tax bill of EUR 3 bn. annually would stem from the tax on REPOS, 37% from taxing its investment in equities and bonds and about 13% from the tax on derivatives.
European Commission FTT Technical Paper, 2013

To include such [repo] transactions will simply pose a major risk to the functioning of the credit market..... Pierre Moscovici, French Minister of Finance, June 2013

The financial markets of the future will revolve around collateral.
Andrew Hauser, Chair of the Securities Lending and Repo Committee, Bank of England, June 2013

In February 2013, the European Commission (EC) published the draft directive for a Financial Transactions Tax (FTT). Throughout the process of negotiating the Directive (EC, 2013a), the FTT became more radical in scope and narrower in the number of Member States ready to implement it¹. The proposals caused uproar. Financial lobbies declared it the nail in the coffin of European finance, an ill-thought initiative that would affect the competitiveness of European banking, increase financial instability by making risk management more expensive, and reduce investment in fast growing companies (Financial Times, 2013a). In particular, opposition rallied around the taxation of repo activities, a systemic market previously invisible in regulatory debates. The European Repo Council², the repo lobby, warned that taxing repos would eradicate collateralized funding markets on which banks relied for funding (Comotto, 2013)³, a position shared by the European Central Bank. The ECB feared that a tax on repos would effectively force it to remain the largest intermediary of liquidity even after exit from unconventional monetary policies. Pension funds complained that the tax would reduce the profitability of their repo activities (Financial Times, 2013b⁴). Indeed, private estimates of the FTT impact attributed half of costs for European banks and pension funds to their repo portfolios (ISLA, 2013⁵; Goldman Sachs 2013). Several governments, including the erstwhile supportive French government, raised concerns that the liquidity of their bond markets would suffer at a time of high and rising public debt and financing needs (Tax

¹ Henceforth referred to as EU11: Belgium, Germany, Estonia, Greece, Spain, France, Italy, Austria, Portugal, Slovenia and Slovakia.

² The European Repo Council (ERC), operating under the umbrella of International Capital Markets Association (ICMA).

³ <http://www.ft.com/cms/s/0/411cb28c-b1aa-11e2-b324-00144feabdc0.html#axzz2dpH7UKZB>

⁴ <http://www.ft.com/cms/s/0/5cb60a60-b7d2-11e2-bd62-00144feabdc0.html#axzz2fhdncdq2>

⁵ The International Securities Lending Association claimed that 'the proposed levy will eradicate 65% of lending activity in Europe, slashing the €3bn (£2.6bn) annual windfall revenues earned by long-term asset owners including pension funds and [mutual funds](#) by more than €2b'.

News, 2013⁶). With the exception of civil society organizations, everyone else treated the Commission's proposals as a step too far.

Two questions guide this paper: how did the FTT proposals become increasingly radical when scholarly insights would predict the opposite and why did resistance to the FTT concentrate around the repo market, a shadow market at once systemic and yet without regulatory oversight?

First, contrary to the predictions of the political economy literature, the FTT became more radical both compared to initial proposals and to country-level FTT initiatives. While the literature on financial regulation typically documents how initial ambitions get watered down by the interventions of various interest groups (Woll, 2013), the EC's proposals went in the opposite direction: from an individual tax on financial activities to a AAA - all instruments, all markets, all actors - approach that applies the tax to *institutions* resided in the participating Member States and, at the proposal of the European Parliament, to *instruments* issued in those Member States even when traded outside the FTT area. Such a trajectory flies in the face of various streams of European scholarship that typically see the Commission as a conservative institution (Lutz and Cranke, 2013; Howarth and Quaglia, 2013) that often engages in turf wars with other European institutions (Hooghe, 2012) and pays no attention to the suggestions of the European Parliament on issues of policy substance (Kardasheva, 2009). Furthermore, the FTT proposal reaches far beyond what participating Member States have implemented individually (in Germany, France or Italy). This suggests that Member States are prepared to allow that politically salient demands be met at European level, a puzzle for arguments connecting the supranationalization of financial regulation to regulatory networks that sidestep democratic debate (Mugge, 2013).

The second related puzzle is the unlikely coalition of actors that expressed, in no uncertain terms, their opposition to taxing repos. What stakes do such a diverse range of private financial institutions with different investment strategies (including pension funds, treasuries of multinational companies, banks), governments and central banks have in a systemic, yet shadow, market with virtually no regulatory oversight (see FSB 2011, Gabor 2013a)? This coalition of the unwilling calls into question arguments - made for example by the Legal Council to European Ministers of Finance - that the FTT punishes 'investors that had nothing to do with the crisis' (Financial Times, 2013c⁷). From a repo angle, the distinction between 'socially useful' and impatient finance becomes elusive.

Taxing repos is the radical core of the FTT and its possible downfall. Whereas the Commission used the tax revenue narrative to shore up the political legitimacy of its proposals, the paper argues that the European FTT is a deliberate attempt to re-organize the European financial sector in a manner far more radical than the numerous regulatory initiatives at either European, global or indeed national level. It is *supranational* because the pace of European financial integration makes individual initiatives politically unfeasible as well as ineffective. It is *radical* in that its focus on repo markets goes to the

⁶ http://www.tax-news.com/news/France_Seeks_Improvements_To_FTT_Proposal___61436.html

⁷ <http://blogs.ft.com/brusselsblog/2013/09/eu-legal-opinion-against-the-fft-full-text/>

heart of cross-border, cross-market interconnectedness underpinning shadow banking activities that the Financial Stability Board (FSB) and various central banks have linked to systemic risk (FSB 2011, 2013). By targeting the creation of risk, the FTT seeks to bring European finance, including European banking, out of the shadows and make more expensive the market-based banking model to which the Liikanen Report (2012) attributed the European banking crisis.

How did the FTT come to include repo activities, a domain of ‘quiet politics’ before the crisis (Culpepper, 2010)? The Commission appears to have stumbled onto it. The initial proposals paid no attention to repo markets. The 2011 consultation document had one repo question, buried at number 52 out of the 57 questions asked. Respondents, with the exception of the repo lobby, several banking associations and the French government, ignored it altogether. Such low interest was pervasive among citizens, regulators and scholars alike, who treated collateral issues (including repos) as a low-profile back-office legal activity (see Riles, 2011).

Three factors made the ‘radicalization’ of the FTT possible: the willingness of the Franco/German alliance to support a more ambitious project at European level, a willingness closely influenced by the Eurozone crisis; the contribution of the European Parliament and the radical agenda of its (socialist) FTT rapporteur and finally, the institutional politics permeating the Commission’s expansion of its remit that allowed the DG Tax to revisit established ideas about liquidity and financial instability. In turn, the widespread resistance to FTT sheds light onto the extensive involvement in shadow banking activity of private financial actors, including pension funds, large multinational corporations, governments and central banks. The paper proposes three dimensions: *narrative ambiguity*, *systemic interconnectedness* and *political salience* to explore the struggle around taxing repos.

The paper argues that the literatures on European institutions, financial governance and shadow banking need to be read alongside one another. It first details the AAA approach and its provisions for shadow banking, to then provide a timeline of the FTT negotiations, exploring the conditions under which the proposals became increasingly radicalized. It zooms in on the repo provisions, arguing that the Commission embraced a Minskian reasoning that puts more emphasis on the destabilizing nature of interconnected financial activity, for government and privately issued debt. At stake for the Commission is a measure that would mitigate systemic risk in two ways: it would reduce leverage-related repo activity and simultaneously provide a ‘visibility fix’ to the opaque shadow banking universe by shedding light on repo connections. For Member States, the stakes are different. Repos can generate both liquidity and volatility for government bond markets. The interests of the state are no longer clearly defined, as they were under the paradigm of the efficient market hypothesis.

In a nutshell: the 2013 AAA approach to the Financial Transactions Tax

The FTT initiative in Europe is unprecedented in its scope. Published in detail in February 2013, the DG Tax of the European Commission proposed a ‘AAA’ approach that applies the FTT to all institutions, all markets, all instruments. In targeting both organized markets and over-the-counter transactions across all traded instruments, the FTT goes well beyond the 2012 French and 2013 Italian FTT on equity (and equity derivatives in Italy), the 1990s Swedish FTT on equity and fixed-income instruments, and the Tobin tax on currency transactions that serves as theoretical foundation for FTT initiatives. It combines a ‘residence principle’, if a party in a transaction is resident of an implementing Member State, with an ‘issuance principle’ that applies the FTT to transactions with instruments issued in the Member States, regardless of where that transaction takes place (see EC, 2013a).

While the ‘AAA’ tag encompasses well its ambition, the FTT does in fact leave outside its scope traditional lending and deposit taking (relationship banking) as well as currency trading. It taxes gross transactions on secondary markets and over-the-counter. The guiding principle for the level of the tax was to set the rate low enough to prevent disruptions of financial markets but high enough to generate revenue from business models associated with impatient finance or trading of risk. Indeed, Manfred Bergmann, the German EC official credited with the intellectual parenthood of the FTT, rejected arguments that the FTT would affect negatively credit conditions for real economic activity. He instead stressed the impact on trades between financial institutions ‘according to available estimates, about 80-90% of all transactions for which an FTT would be due would be due are transactions where financial institutions trade in their own name and own account’⁸.

The FTT proposals include the activities that the Financial Stability Board (2011) and the IMF (Claessens et al, 2012) describe as shadow banking activities: securitization and repo intermediation. The Commission’s definition of a financial instrument covers trading in structured products created through securitization. It also proposes to tax repo (repurchases agreements) and securities lending. These are similar transactions through which two institutions exchange collateral for cash (or for other securities in case of securities lending), with a promise to reverse that transaction at a later date⁹. Repos are treated as one transaction, and taxed with 10 basis points on the market value of the repo collateral.

The FTT is more than a tax measure. Indeed, the DG Tax used the FTT as an opportunity to ask fundamental questions about the nature of finance, the desirability of distinctive business models in finance¹⁰ and with these, to distance itself from the ‘pre-crisis

⁸ <http://www.internationaltaxreview.com/Article/2974990/EXCLUSIVE-ECs-Manfred-Bergmann-reveals-why-the-FTTs-critics-are-wrong.html>

⁹ For the purposes of this paper, securities lending will be treated as a repo.

¹⁰ “Taxing such activities could roll back business models that “internalise” spreads and, thus, only redistribute rents to the financial sector at the expense of the non-financial economy.” (EC, 2013b).

paradigm of ‘the more the better’ as regards liquidity and financial intermediation’ (EC 2013b), a paradigm that had informed the Commission’s sustained efforts to accelerate European financial integration through a liberal or light-touch approach (see Mugge 2013). The importance of this paradigmatic shift should not be underestimated. It entails efforts to re-politicize finance at a discursive level, and to transform it on a material level, with all the complex challenges involved in such an exercise. Indeed, the light-touch mode of financial regulation contains no analytical criteria for distinguishing between ‘real’ and ‘virtual’ liquidity (see EC, 2013b:9), or between ‘socially useful’ and ‘problematic’ business models. With the FTT, the Commission seeks to establish such distinctions, not as a knee-jerk politicized reaction (see Comotto, 2013), but through firm theoretical anchoring in academic contributions from both mainstream finance and Minsky scholars (Nesvetailova, 2008).

The Commission’s ‘virtual liquidity’ is conceptually equivalent to the ‘excess liquidity’ term used by the Committee on the Global Financial System (2011) and echoes Adrian and Shin’s (2010) definition of liquidity as the rate of growth in the balance sheets of financial institutions, growth driven by business models reliant on repos and pro-cyclical leverage (see also Haldane, 2009). Such academic notions about liquidity have also travelled to other fields of financial regulation, as for example the Basel III liquidity requirements. However, while the FTT shares with Basel III concerns about unstable liquidity, it differs in its targeting of *markets* and *instruments* rather than individual financial institutions. The Commission’s approach is consistent with a systemic understanding of risk and crisis, whereas the focus on individual institutions remains wedded to a micro-prudential approach demonstrably weak since the crisis.

A literature review: the economics of the FTT and the politics of financial regulation

The 2008- financial crisis called into question established ideas about efficient markets. Regulators lost confidence in the ability of efficient markets to self-regulate, and instead turned to Minskian concepts of instability endogenous to financial markets, and systemic risk to be mitigated through macro-prudential policies. The crisis further made it clear that governments had to propose measures that would protect taxpayers from the costs of future bailouts. A tax on the financial sector quickly became central to these plans.

Before the crisis, scholarly research on taxing finance was divided. Research in favour shared several premises (see Schulmeister, 2009). It posited that speculative activity moves prices away from fundamentals, rather than returning them faster to equilibrium, as proposed by Milton Friedman. In doing so, ‘excessive’ trading creates cyclical liquidity. Markets are highly liquid during periods of confident expectations and collective trust in the tradability of assets, but loose liquidity in a crisis, driving asset prices through boom/bust cycles (Nesvetailova, 2008). Policy advice would typically focus on imposing a tax on the market most affected by speculative activity, be it the stock market, as advocated by Keynes, or foreign exchange market. Ultimately, such arguments rest on the adverse consequences that destabilizing finance has on economic activity, growth and employment.

More engaging critiques of the FTT pointed to un-intended effects, relying on two distinctive arguments: the failure to distinguish the various drivers of financial transactions and pragmatic concerns with the feasibility of enforcing FTTs. The first view typically invokes the hedger/speculator dichotomy. Hedgers seek protection from an undesired exposure to risk; in contrast to speculators who bet on future price movements (see Engel 2013). The ECB, for example, used this dichotomy to argue that most short-term transactions arise from hedging, rather than speculative activity (see Schulmeister 2009). The FTT thus punishes hedgers, and in doing so, harms economic growth. The second type of arguments draws more on political economy concerns with relocation and tax arbitrage. The well-documented ability of financial actors to innovate around rules makes it difficult to design an effective FTT regime, while a poorly designed tax generates significant economic costs (Grahl and Lysandrou, 2003). Relocation/innovation may harm market liquidity, and in doing so, increase price volatility, achieving the exact opposite of the FTT intention to stabilize asset prices.

In the post-crisis environment of less benign neglect towards financial markets, research suggested that such unintended effects can be largely avoided through careful design. Indeed, Schulmeister (2011), closely anticipating the Commission proposals, argued that a general FTT levied on all transactions in either organized exchanges or over the counter, on both parties and at very low levels would target impatient investors that rely on technical analysis while protecting long-term investors that follow buy-to-hold strategies. Similarly, Griffith-Jones and Persaud (2011) highlight various avenues for mitigating avoidance that include conditioning the transfer of ownership to the payment of the tax, including derivatives and contracts for difference (as Italy did to avoid the loophole in the French FTT on equities introduced in 2012) and ensuring that non-taxed instruments are not eligible for central clearing, thus bearing a higher capital adequacy requirement. Arestis and Sawyer (2013) call for a broader base to ensure that the FTT would reduce excessive trading activity and volatility.

What these studies share is the recognition that any FTT initiative would lead to smaller markets, by design or as an unintended consequence. Herein lies an important political question that the economics scholarship leaves un-answered: under what conditions are governments ready to accept smaller, potentially less liquid markets? The assumption in this literature, shared with the constructivist political economy, is that a powerful idea is enough to generate change. Once governments recognize the ‘death’ of the efficient market hypothesis, they should readily accept that some types of investors (impatient) are less desirable over the long-run, and thus provide political support to FTT initiatives.

In turn, the scholarship on financial regulation teases out the conditions under which governments and/or supranational institutions may design and implement FTTs. Optimistic readings of the post-Lehman environment point to a paradigmatic shift, at European and global level, towards a shared understanding that stronger regulatory interventions are necessary to replace the Anglo-Saxon model of light regulation (Quaglia, 2010; Moschella 2011). Yet even if at an ideational level it is easy to identify paradigm change - as in the move away from the efficient market hypothesis signalled by

the rapid mainstreaming of macroprudential policies - that does not imply that these ideas would be translated into radically different regulatory regimes (Buckley and Howarth, 2010). Indeed, accounts of European (or global) financial regulation detail the processes through which ambitious proposals get watered down, be it due to the power of private financial lobbies or regulatory arbitrage. Thus, Howarth and Quaglia (2013) explain the limited European support for Basel III reforms through a ‘varieties of financial systems’ approach according to which European governments endorse regulation that does not affect the competitiveness of their banking systems. In turn, Woll (2013) argues that it is important to juxtapose an ideational analysis with a careful consideration of the (private) economic interests that might inform governments’ position in regulatory debates. In her analysis, the impact of financial lobbies on the regulatory framework depends on the importance that the public attributes to that regulatory initiative. Under a ‘quiet politics’ regime (see Culpepper 2010), private financial institutions get to set the rules of the game without much contestation. In contrast, once financial regulation becomes politically salient, it disrupts the narrative established under the ‘quiet politics’ regime and requires lobbies to re-affirm the legitimacy of their preferences (see Gabor 2011 for this argument applied to central banks).

In the case of the European FTT, it is also important to take into account the institutional logics governing European institutions. Thus, Commission staff may hold different views of the right balance between supranationalism and Member State sovereignty (Hooghe, 2012). Those more inclined to supranationalism actively seek to include new activities, such as taxation of finance, under the Commission’s remit (Posner, 2009). Hooghe (2012) in turn conceives of a third category - institutional pragmatists - located in DGs that require technical expertise. Institutional pragmatists view less/more Europe debates as a distraction from complex, technical policy questions that require European answers mindful of national sensitivities.

Yet such ostensibly technocratic dialogues are deeply political, and the outcomes contingent on the context in which these take place. On the one hand, the Commission is more likely to engage with technical arguments on financial regulation (Woll, 2013). Since the Commission and financial lobbies often share epistemic communities, their common understanding of the world may yield regulatory initiatives closer to the preferences of private finance rather than, say, civil society organizations suspicious of the benefits of financial activity. Indeed, the Commission’s record since the crisis suggests an institution conservative on austerity (Lutz and Kranke 2013) and on global initiatives to tighten banking regulation (Howarth and Quaglia, 2013). On the other hand, the Commission may experience less lobbying pressure when it includes a new regulatory domain in its remit if private finance does not have established informal channels through which to influence deliberations (Mugge, 2010).

How come, in this context, that the European FTT proposals became increasingly more radical throughout the various stages of consultation and re-drafting of the institutionally pragmatic DG Tax? And how did the repo market - that is, a shadow banking activity *par excellence* - turn to be central to contestations of the FTT?

Timeline

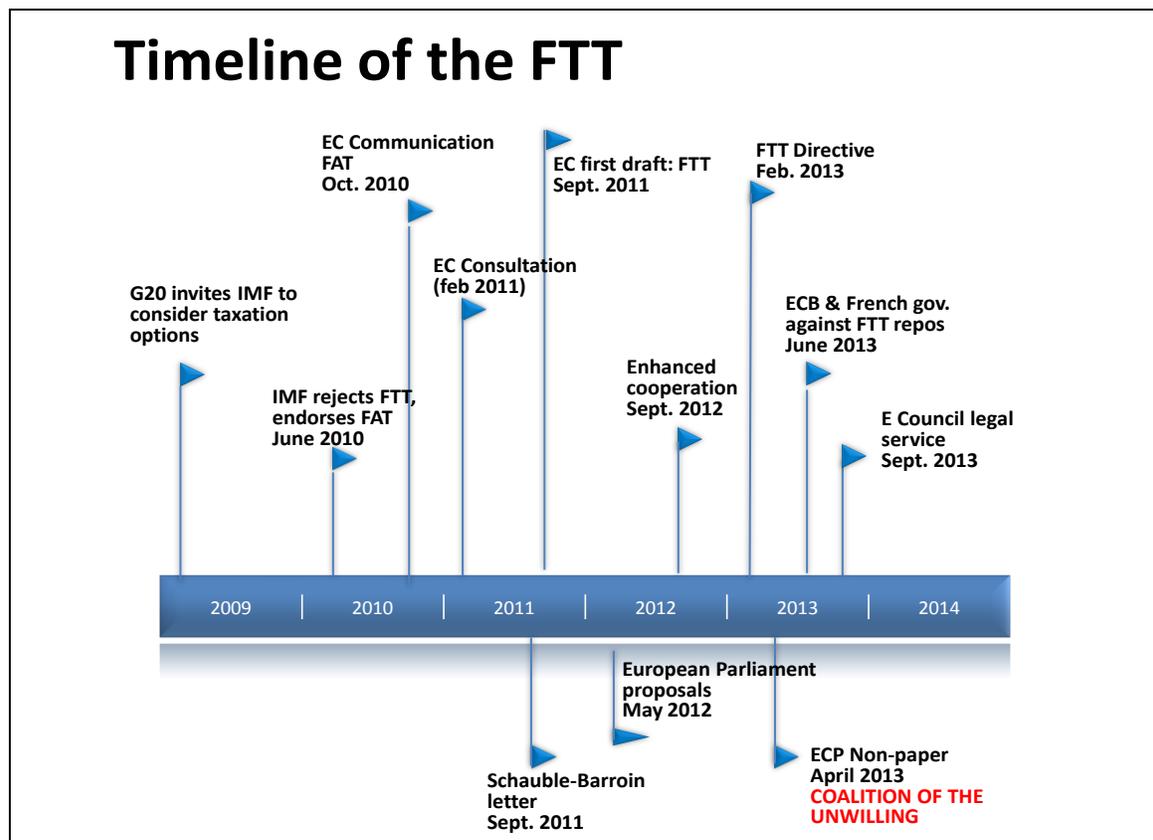
Throughout a three-year consultation and negotiation process, the EC made its proposals increasingly radical despite political and technocratic opposition from financial actors, international financial organizations, the European Central Bank and governments of the opposing Member States. Three material and ideational factors made this possible: the willingness of the Franco/German alliance to support a more ambitious project at European level in the context of the European crisis; the agenda of the (socialist) rapporteur on the FTT in the European Parliament and finally, institutional politics that enabled a DG without previous involvement in financial regulation – DG Tax – to ask fundamental questions about the nature of finance in Europe.

Stage 1 (2010-2011): FAT vs FTT in the EC's Communication and Public Consultation

The European FTT started as a global project. Indeed, in September 2009, the G20 invited the IMF to map the various channels through which financial sectors could make a contribution to the costs of the crisis. The IMF (2010) proposed two types of taxes that would target *individual institutions*, rather than *markets* or *instruments*. The Financial Stability Contribution would be levied according to some balance sheet variable, while the Financial Activities Tax (FAT) envisaged a tax on the profits and/or remunerations (Vella et al 2011). The IMF (2010:5) dismissed a general tax on transactions (FTT) as it 'would not target any of the key attributes - institution size, interconnectedness and substitutability – that give rise to systemic risk'. Yet, the paper argues, this is exactly what the FTT, in its 2013 form, does.

Following the IMF proposals, in October 2010 the European Commission issued a 'Communication' paper that considered the relative merits of the FAT and the FTT (see Figure 1). Yet the political context had shifted since the IMF proposals. With the sovereign debt crisis threatening to spread from Greece, public opinion demanded a more substantial contribution from the financial sector than the bank levy suggested by the IMF and implemented by various Member States to finance bank rescue funds (Germany, UK) or as a 'crisis tax' (Hungary). In that paper, the Commission concluded that the risks of re-location made FTT an effective option only at the global level. In contrast, a (FAT) tax on wages or profits would achieve the desired target of raising revenues, particularly relevant since it compensated for the financial sector's VAT exemption, while simultaneously acting as a deterrent to high bonuses/profitability from high-risk activities (EC 2010). Crucially, the Commission did not share the IMF's view that the FTT was ill-suited to address systemic risk. It rather made its choice on pragmatic grounds linked to the possibility of tax arbitrage. Indeed, the Commission, along with the French government during its G20 presidency, continued to pursue a global FTT agreement while supporting a FAT at European level.

Figure 1 Main events in the FTT negotiations



Then, in February 2011, the EC started the consultation process. It warned that measures were necessary to curb excessive risk taking, and if such measures were taken in a un-coordinated fashion by individual Member States, they would create incentives for tax relocation or double taxation (EC,2011a). The Consultation document contained 57 questions, from general (such as the desirability of the tax, the role of financial actors in crisis etc) to very detailed questions about the design of tax. Despite the Commission’s stated preference for the FAT, the Consultation document invited comments on all possible measures to tax financial activity, including the FTT and other levies (on liabilities, assets, or systemic activities).

The Consultation document distinguished between the broad FTT ‘to tax stock, bond, currency and derivative transactions on exchanges as well as over-the-counter (OTC) traded instruments’ and the narrow FTT ‘limited to stocks and bonds’. It is important to note that even the broad-based definition left repos out; indeed, there is only one question directly pertaining to repo in the ‘Other Measures’ section. Question 52 portrays repos as follows: ‘Some authors argue that overnight secured credit (through repos mainly) necessitates special treatment of those types of funding because of the cheap, but unstable funding leading to systemic risk. Do you agree to such an argument and if so, what treatment do you suggest?’ In this, the EC ascribes repos a status fundamentally different

from other funding instruments (retail deposits or unsecured markets), linking it to systemic risk.

Respondents, with few exceptions, ignored the repo question. Those who did address it, private and public institutions alike, rejected the idea of including repos in the tax perimeter. Private financial actors questioned the repo tax as a mistake of interpretation from the Commission since repos constitute ‘low risk’ instruments, as for example made clear by the UK bank levy that exempted repos collateralized with high-quality assets from the tax base (EBF, 2011; ERC, 2011). Although the French government¹¹ alone associated repos with bank vulnerability, it stopped short of endorsing its taxation. To mitigate systemic risks, the French government suggested restricting the pool of collateral eligible for repo transactions to high-quality assets. In other words, regulatory restrictions on repo practices, rather than taxation would be best suited to mitigate the potential vulnerabilities generated by repo markets.

Stage 2: the first proposal (Sept. 2011) and the Franco-German engine

The Commission published the first proposals for taxing finance on September 28, 2011. It now put forward an FTT, rather than the milder FAT, and proposed to apply to financial transactions involving at least one EU-resident party and at least one financial institution. This would include to financial instruments as defined in the MIFID legislation, structured products under the CRD or transactions involving transfer of risk other than credit risk, including repos (Clifford Chance 2011).

The German and French governments were instrumental in bringing about a broad interpretation of the FTT. In part, this reflected the political will to have an FTT at European level once it became clear, after the G20 discussions in Toronto that a global FTT would be impossible to achieve. Arguably, a more important role was played by how European politicians understood and narrated the ongoing sovereign debt crisis. Indeed, in early September 2011, Wolfgang Schauble and Francois Baroin, Ministers of Finance for Germany and France, sent a joint letter to the Commission outlining the Franco-German vision for a broad FTT¹². The letter constructed a clear distinction between speculative and non-speculative financial transactions. It envisaged taxing all trading ‘related to financial instruments such as equities, bonds, currency transactions and derivatives’ including currency trading and a blanket cause to catch all future ‘innovations’ to circumvent the FTT; to apply the tax to organized exchanges and over-the-counter transactions, including those within financial groups (between subsidiaries of large transnational banks). The letter specifically called for repos/securities lending to be taxed, particularly if these supported short-selling.

The shift in the French position on repos highlights the importance of the European crisis for the FTT trajectory. Sarkozy ran its campaign for the May 2012 French elections on a platform of tighter financial regulation, describing the tax as ‘technically possible,

¹¹http://www.sgae.gouv.fr/webdav/site/sgae/shared/04_Consultations_publicques/201104/201104_19_ReponseFR_Taxation_secteur_financier.pdf

¹² <https://www.tuc.org.uk/tucfiles/79/lettre-franco-allemande.pdf>

financially necessary and morally unavoidable¹³. Yet domestic politics alone cannot explain why France supported a broad FTT, including on repos. Instead, the crisis juncture made the difference. Throughout the summer of 2011, both European sovereigns and European banks had come under increased market pressure. France, alongside Italy, Belgium and Spain, banned short-selling of financial shares, in France for eleven of its largest financial institutions. The movement that ‘smacked of desperation’, as Kenneth Rogoff put it¹⁴, suggested that European governments attributed (some of) the woes of their banking sectors to short-selling and speculators. The repo market, it will be discussed later, is central to short-selling practices and thus became part of the FTT project to make speculation more expensive.

The Commission followed closely the Franco-German suggestions. It proposed to apply the FTT through the residence principle, to secondary markets and OTC transactions, and to both parties even if one party is located outside the FTT area. It left spot currency transactions (Tobin tax) out of the FTT scope to preserve the free movement of capital¹⁵ and consumer products (insurance contracts, mortgage lending and consumer credit) in order to minimize the impact on the real economy. It envisaged differentiated rates, higher for trading in securities/equity (0.1%) than in derivatives (0.01%). It set January 2014 as deadline for implementation.

Interesting, the repo provisions drew little attention, even from the repo/securities lending lobbies. The growing scepticism that the FTT would ever materialize did not encourage engagement. Indeed, a month after the Commission’s proposals, several Member States – mostly from outside the Eurozone (UK, Sweden) - stated their strong opposition to the FTT project. Most notably in Eurozone, Italy, whose banks had suffered a series of ratings downgrades throughout September 2011 and had been forced to turn to the ECB’s long-term refinancing operations, voiced concerns that its banks could not withstand additional taxation measures (WSJ, 2011¹⁶).

Stage 3: the proposals of the European Parliament and the draft Directive (February 2013)

Between September 2011 and the February 2013 publication of the draft Directive, two developments shaped the FTT trajectory: the European Parliament’s intervention in May 2012 and the narrowing of the FTT implementing group to 11 member states through the method of enhanced coordination.

Even before the Parliament’s proposals, it became clear that the FTT would not be adopted by all the EU member states. The UK had made public its opposition in December 2011, and formalized it, alongside several other states, at the June 2012

¹³ <http://www.emergingmarkets.org/Article/2929587/Gates-Dont-use-FTT-to-bail-out-Greece.html>

¹⁴ http://www.nytimes.com/2011/08/12/business/global/europe-considers-ban-on-short-selling.html?_r=0

¹⁵ EC 2011, 13: leave out transactions relevant for citizens and businesses such as conclusion of insurance contracts, mortgage lending, consumer credits or payment services .

¹⁶ <http://online.wsj.com/article/SB10001424052970204554204577025750960668474.html>.

ECOFIN meeting. Confronted with the prospect of successive opposing presidencies (Cyprus, Ireland and an undecided Lithuania), the Franco-German ‘engine’ recruited nine allies to push for a faster process through enhanced cooperation. This allows a group of European states to create new legislation on European issues that require unanimity, such as taxation (Wahl, 2012). The Commission approved the enhanced cooperation request in October 2012, the European Parliament in December 2012, and the European Council in January 2013. A month later, the Commission made its draft Directive public.

The move to enhanced cooperation was important for the shape of the FTT proposals. Having a smaller group of committed countries created room for manoeuvre and enabled the Commission to contemplate radical proposals that would involve less of a delicate balancing act between competing national pressures. Indeed, the French socialist government, winner of the May 2012 elections, appeared willing to support a more comprehensive European FTT than the French FTT designed by the Sarkozy government. The French FTT, in effect since August 2012, only targeted equity trading and uncovered CDS positions in EU sovereign debt, but left out repos and securities lending involving equities. By September 2012, Pierre Moscovici and Wolfgang Schauble, the French and German ministers of finance, urged the other interested countries to declare their support for a broad FTT so that the enhanced cooperation procedure would be approved by December 2012 (Financial Times, 2012¹⁷).

The European Parliament’s involvement in the FTT process signals a shift in cross-institutional dynamics. Similar to other European policy initiatives, the Parliament had a consultative role on the FTT proposals. Such role, scholars argue, restricts its influence to fundamental rights issues, whereas the Commission is least likely to make concessions on substantive policy proposals (Kardasheva, 2009). At first sight, this argument describes well the FTT process. While the socialist group had long been pushing for the FTT, only one of the suggestions made by the rapporteur Anni Podimata made it into the final draft (see Table 1), and even that in a diluted form. The Commission did include the issuance principle but exempted OTC derivatives. It left out the ‘ownership principle’, which conditioned recognition of legal ownership to the FTT payment; the higher tax on OTC transaction; the Tobin tax on currency trading; and the exemption for pension funds.

¹⁷ <http://blogs.ft.com/brusselsblog/2012/09/france-germany-push-for-scaled-down-tobin-tax/>

Table 1 Proposals of the European Parliament, May 2012.

Strengthening the proposal	Adopted by the EC in the final FTT text
The issuance principle	Yes, except for OTC derivatives
The ownership principle	No (no administrative structure in place to enforce)
Higher FTT on OTC trades	NO
Include spot currency transactions	NO
Include NGOs and other stakeholders alongside experts in consultation	NO
Diluting the proposal	
Exemption for pension funds	NO

Yet in this case, simple arithmetic is misleading. The issuance principle is important because it expands the FTT perimeter to globalized finance. The Commission is prepared to draw boundaries between desirable and destabilizing financial activities with FTT instruments, wherever these may be taking place. The issuance principle is particularly important for repo activities, it will be argued later, since repo institutions can easily substitute between different types of collateral, and thus use FTT assets outside the FTT area.

Finally, the institutional context of the FTT design should also be taken into account. The past twenty years have witnessed a move of regulatory competencies to Brussels (Quaglia, 2010; Posner, 2009). Regulatory debates often took place in expert committees delinked from democratic national processes as governments preferred to ‘outsource’ deregulation and thus avoid political battles in the national arenas (Mugge, 2013). By contributing to these expert committees, the financial industry was able to institutionalize direct and informal access to the DG Internal Market (Mugge, 2010), or to national regulators that could be enlisted to defend their demands at European level (Woll, 2013). However, for the FTT, such dense ties between the financial industry and the Commission were absent because DG Tax had no previous involvement in issues related to financial regulation. In contrast, for example on repos, DG Internal Market had pushed, through the Financial Collateral Directive 2002/47/EC¹⁸, for a rapid cross-border integration of European repo markets as a key contribution to the efficiency and stability of the financial system. That the financial industry had to rely mostly on public consultations to express its views on the FTT implied that DG Tax officials had less ideational overlaps with the financial industry. The Commission could thus move away from the ‘market efficiency’ concepts previously governing financial regulation in Europe and propose a tax regime that would, it believed, transform European finance.

¹⁸ http://ec.europa.eu/internal_market/financial-markets/docs/collateral/directive-presentation_en.pdf

A step too far: opposition to the FTT on repos

“Anyone with a securities portfolio can build their own shadow bank by borrowing at call against the securities and then employing the cash in credit assets”

Paul Tucker, Bank of England, 2012.

Since 2008, repos have been core to public debates on the reform of shadow banking (FSB, 2011; Tucker, 2012; Claessens et al 2012). Yet once the Commission published the draft FTT directive, a coalition of the ‘unwilling’, including governments, central banks, private banks, pension funds and European businesses, emerged to oppose taxing repo transactions¹⁹. First, the private European repo lobby group estimated that the FTT would cause a 66% in short-term repo markets, with dramatic consequences for lending in Europe. Then, the fiscal attaches of the implementing Member States in the FTT Working party showed uneasiness that the repo FTT would worsen funding conditions for governments and increase financial instability (Working Party on FTT, 2013). By the summer of 2013, even the Franco-German engine appeared to withdraw its support. Jens Weidmann, the president of the German central bank, warned that ‘hampering this market would make banks reliant on central banks providing liquidity, which we want to get rid of’ (Financial Times, 2013²⁰), while Pierre Moscovici warned that taxing repos would damage the ‘credit market’. By September 2013, the ‘FTT has gone too far’ emerged as a consensus, with expectations that once the German elections had passed, implementing states would agree on a diluted version certain to leave repos out of its scope.

Such a widespread resistance signals the transformative character of the repo FTT. To explore this, and the improbable coalition of the ‘unwilling’, three key dimensions of the political economy of repo should be considered: narrative ambiguity, systemic (European) interconnectedness and political salience.

Narrative ambiguity: repos and risk

The successful introduction of reforms relies on crafting persuasive analytical stories about the activities to be regulated. For repos, this is a difficult exercise because there is no straightforward answer to the question: is repo an instrument that reduces or increases systemic risk?

For those opposing the FTT, the answer is that repos reduce risk. The repo lobby often cites the crisis-induced shift from un-collateralized to repo markets in Europe as evidence that repos offer protection during periods of market tension (ERC, 2011; Comotto, 2013). A similar view informs the ‘non-paper’ of the fiscal attaches in the Working Group of the

¹⁹ According to the Financial Times: ‘Some industry bodies have warned the wide-ranging nature of the proposals could curtail the market for repurchase agreements, a key source of short-term funding for banks and governments’, <http://www.ft.com/cms/s/0/411cb28c-b1aa-11e2-b324-00144feabdc0.html#axzz2g0XIN0hU>.

²⁰ <http://www.ft.com/cms/s/0/61f2f41e-df39-11e2-a9f4-00144feab7de.html#axzz2g0XIN0hU>

implementing Member States²¹. Furthermore, central banks implement monetary policy during ‘normal times’ through repos, thus conferring these operations an air of (re)s(pec)tability. Indeed, even the long-term refinancing operations (LTROs) of the European Central Bank are repos with long (one or three year) maturity (Gabor, 2012).

The starting point is to consider the mechanics of the repo. For example, Deutsche Bank (DB) raises cash by pledging Greek government bonds as collateral to cash-rich Commerzbank. When the repo expires (overnight, one week, one month), Commerzbank returns the collateral (Greek government bonds) and receives from Deutsche Bank the cash and repo interest. What makes repos safer than unsecured lending, the traditional form of interbank lending, is the risk management framework. Commerzbank is protected against counterparty risk because it becomes the legal owner of the collateral posted, and can sell it off if DB defaults. To ensure that in such a case it does not make losses, Commerzbank has to ensure that its portfolio of collateral can be quickly liquidated at a value equal to the original cash loan. This involves two risk management techniques.

Commerzbank can impose an initial *haircut* dependent on how risky it perceived that asset to be (for example, in early 2009, DB would have had to provide EUR130 of Greek bonds at market value in exchange for EUR 100 of liquidity). Commerzbank also relies on *margin calls* for repos with maturities beyond overnight: it calculates daily the market value of the collateral portfolio, and asks DB to send additional collateral if Greek government bonds have fallen in price (increase in interest rates). Furthermore, Commerzbank does not assume the risks of the underlying collateral - Greek government bonds - because in a repo transaction the seller of collateral (DB in this case) retains the risk and return on that collateral (see Gabor, 2013). Even if Commerzbank is the legal owner of the Greek government bonds, it sends any accrued payments on that collateral back to Deutsche Bank. This distinction between the legal and economic interpretation implies that the two repo parties can clearly define and control credit and collateral risk.

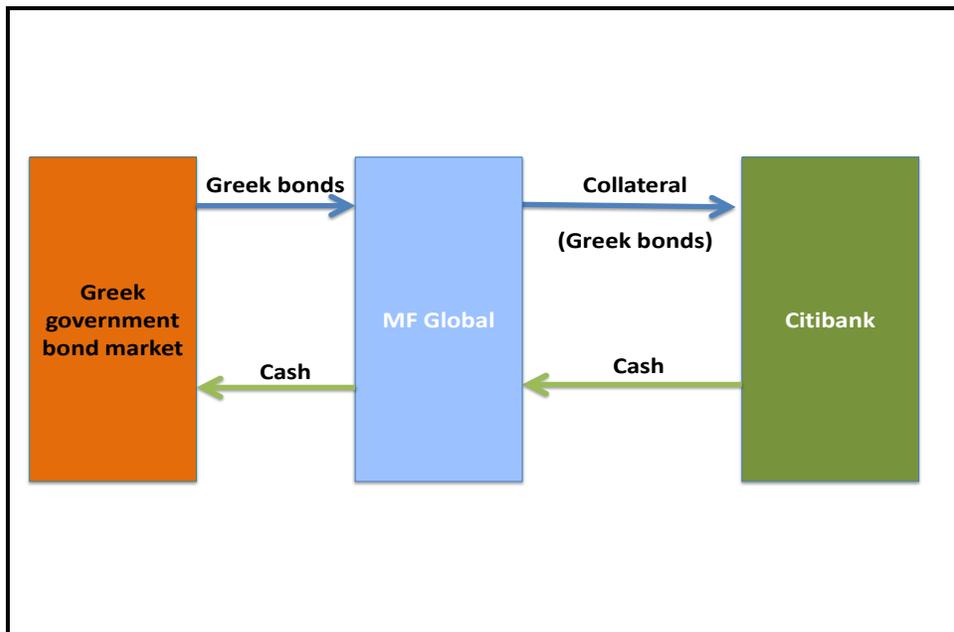
From this perspective, the FTT makes little sense. It targets the largest, safest funding market in Europe (see ERC, 2011). If DB and Commerzbank choose, as most repo parties do in Europe, to roll-over short-term repos, both parties would have to pay the FTT repeatedly (daily for an overnight repo). This, for the repo lobby, would lead to the disappearance of the short-term repo market (Comotto, 2013), an outcome of great concern for the ECB. Indeed, the ECB sees the repo market as the market that would take over its crisis liquidity provision as well as intermediate collateral that banks require to meet new regulatory requirements (from Basel III or new European rules). Without it, the ECB would be forced to remain the main intermediary of liquidity and collateral in Eurozone, making exit from unconventional monetary policies difficult.

Yet the French government, in its 2011 response to the FTT consultations, alluded to the opposite interpretation: repos are essential for the creation of risk through leverage.

²¹ The paper states that ‘Repo operations are very useful for managing the treasury liquidity and the disappearance of this market combined by the lack of viable alternatives will induce serious problems about risk management.’ (FTT Working Group, 2013).

Indeed, early research from the Bank of International Settlements recognized that repos offer the cheapest source of leverage for financial institutions (BIS, 1999), a view most central banks now share (Courre, 2012²², Hauser, 2013). The key again is to distinguish between the legal and economic interpretation of a repo (see Gabor 2013a). Consider the previous example, albeit with different, US-based actors. MF Global, a financial institution that famously collapsed due to its repo activities, wants to gain exposure to high-risk, high-return Greek government bonds. It buys two-year bonds in 2011, knowing that the EFSF²³ in Europe reduces considerably the chances of a Greek default until 2013. A repo-to-maturity allows MF Global to finance these securities by borrowing cash through a two-year repo from Citibank, cash it uses to pay for the bonds acquired. At maturity, MF Global receives the principal payments from the Greek government, and sends that cash back to Citibank. MF Global can repeat this transaction to increase leverage, bound only by the repo rate and the haircut: the lower the two, the less MF Global has to provide of its own capital. To paraphrase Paul Tucker, anyone with a securities portfolio could have built it through (leverage in) repo markets.

Figure 2 Repos as cheapest source of leverage (first leg)



For Hauser (2013), it is essential to distinguish between the micro and macroprudential aspects of repos. Practices of risk management (including haircuts, mark to market, margin calls and short maturities) that reduce counterparty and liquidity risk for individual institutions may pose systemic risks. While enabling rapid growth in leverage during boom periods and feeding higher asset prices, repos are sensitive to fluctuations in the market price of collateral. Indeed, repos rely on market-to-market valuation, and mark-to-market leverage is strongly pro-cyclical (Adrian and Shin, 2010; Plantin et al.

²² Benoit Courre, member of the ECB Board, argued that that repos ‘can contribute to pro-cyclicality and the so-called leverage cycles’ (Courre, 2012).

²³ European Financial Stability Facility.

2005). During crisis, repo actors become impatient (Gabor and Ban, 2013), continuously scrutinizing the markets for collateral to work out whether that collateral remains ‘insensitive’ to crisis (Gorton and Ordunez, 2012), since ‘sensitive’ collateral may not be accepted by repo counterparties.

This is at the root of financial fragility through the shadow banking sector. Continuing with the MF Global example of a two-year repo, a funding problem for MF Global may introduce volatility in the Greek government bond markets through what Brunnermeier and Pedersen (2009) termed a liquidity spiral. MF Global has to post additional collateral or pay back some of the cash borrowed. During periods of market turbulence, it may not find additional collateral or cash, so it must sell some assets - say Greek bonds. The fall in the price of Greek bonds triggers further margin calls for those institutions that collateralized repos with Greek bonds, and further asset sales. Fire-sales spread through Greek 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. Substitute MF Global for Lehman Brothers, and this, Gorton and Metrick (2012) argue, is a close account of the 2008 near meltdown of the financial system, or, in their words, a ‘run on repo’. Substitute Lehman Brothers for a Greek bank, and this, Gabor and Ban (2013) have argued, is a close account of the Greek sovereign debt crisis; the Irish, the Portuguese, and the ‘almost’ Italian and Spanish crisis throughout 2011 and 2012, until the ECB promised to do whatever it takes (see Courre, 2013).

Indeed, the 2012 FSB proposal for regulating repos stressed the importance of setting minimum haircuts, including for government bond collateral, to make repo-supported leverage more expensive (FSB, 2012). However, confronted with vocal opposition, by September 2013 the FSB had dropped the minimum haircuts requirement on repos with government bonds (see FSB, 2013). The repo-FTT complements these proposals and takes them further. The tax is applied on the market value of the collateral portfolio, so it includes the haircut. The intended extra-territorial effect renders leverage more expensive for institutions that *are not* based in the FTT countries even if the transaction takes place *outside* those countries because the instrument is issued in the implementing Member States. Under the FTT, both MF Global and Citibank would be established in Greece, and would have to pay repo tax to the Greek government. If they chose to roll overnight repos rather than a repo to maturity, they would pay the repo tax daily. With the issuance principle, the FTT re-draws the boundaries of global finance, previously dismantled by deregulation while simultaneously seeking to prompt a shift away from impatient finance.

Systemic (European) connectedness: cross-border and cross-markets

Since the publication of the FTT proposals, the financial industry writ large published estimates of its impact on profitability (Goldman Sachs, 2013; ISLA, 2013; also

European Commission, 2013b²⁴). Remarkably, these estimates attribute the largest tax-related losses to repo activities for European banks as well as pension funds, far larger in comparison to derivative or securities portfolios. This brings into sharp focus the systemic role of repo markets (Comotto, 2013²⁵) and highlights, this section argues, why the repo-FTT goes at the heart of interconnectedness generated through market-based finance. Through collateral flows, repos connect financial institutions across a variety of asset markets, including government bond markets. Systemic interconnectedness is crucial to understand why the proposals to tax repos have ignited such a wide opposition.

Since the introduction of the Euro, repo markets grew rapidly, tripling in size to around EUR 6 trillion by 2008. Such rapid growth reflects ‘the era of the great glut in financial transactions’ (Fisher, 2013:93) as much as the shift to large scale, market-based banking in Europe (Liikanen Report, 2012). Indeed, in contrast to the US, large European banks dominate the European repo market (ICMA, 2012), with data for 2008 suggesting that the 20 largest banks generated between themselves around 80% of repo transactions (Hordhal and King, 2008). The Goldman Sachs figures, questionable as they may be (see Schulmeister, 2013), indicate that the biggest loss to European banks - read large French and German banks - stem from repo portfolios. The larger the trading activity of a global bank, the more it may be involved in repo markets simply because it can fund securities portfolios there or lends securities and gain additional returns.

Banks aside, how does repo involve long-term investors usually subject to strict regulation (pension funds), investors with shorter trading horizons (hedge funds), large multinational companies, the ECB and implementing Member States?

To answer this question, it is useful to think of 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. Indeed, repos can be used to obtain cash and build leverage in any asset market (see Gabor, 2013a). In theory, any asset can be repo-ed out if the counterparty agrees on the adequate haircut. Yet in practice, most trading is funded through repos with high-quality collateral because high-quality equals lowest funding costs in terms of both haircuts and price volatility.

Typically, these are government bonds that trade in liquid markets. Data from the repo lobby shows that around 80% of repo market transactions in Europe were supported by government bonds before 2008 (ICMA, 2008). Demand for government bonds as collateral is, from a repo perspective, demand for leverage (see BIS, 1999). This is how repo markets introduce what the European Commission calls ‘virtual liquidity’

²⁴ “According to information provided by representatives of the Dutch pension fund industry, it appears that around 50% of a tax bill of EUR 3 bn. annually would stem from the tax on repurchase agreements, 37% from taxing its investment in equities and bonds and about 13% from the tax on derivatives.” EC, 2013b.

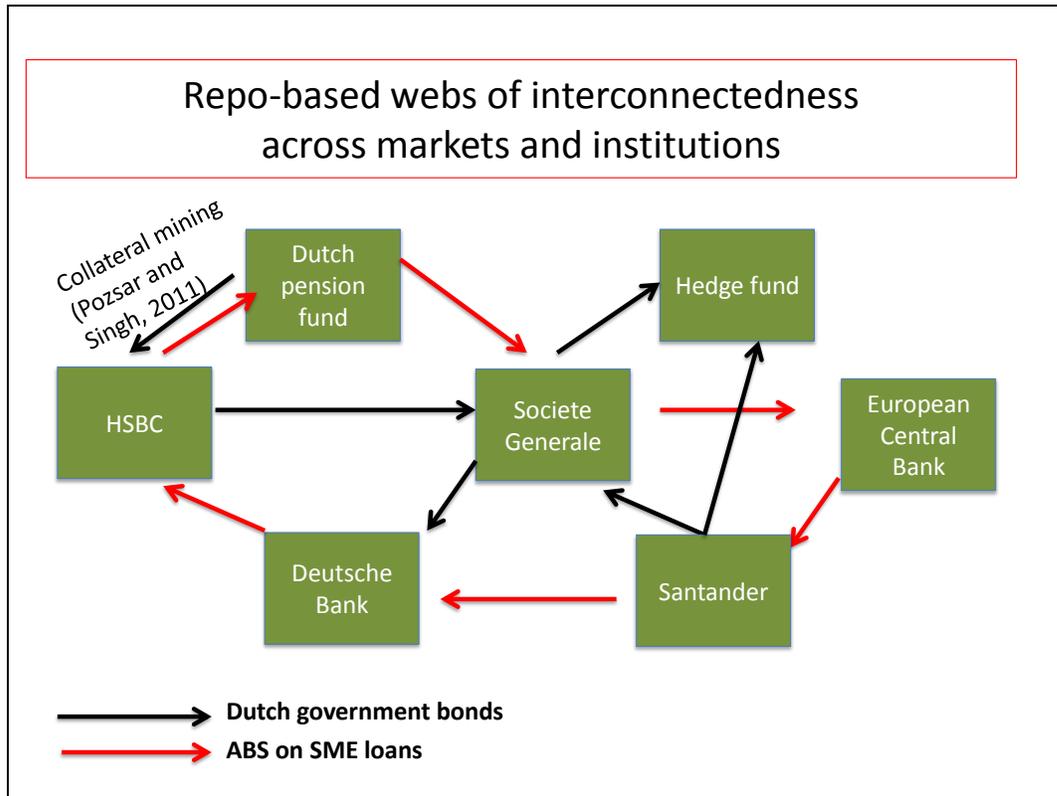
²⁵ “Given the systemic role of collateral, it should be a matter of the greatest concern for regulators that movements of collateral through the repo market would be taxed.” Comotto, 2013.

simultaneously in government bond markets and in higher-risk securities markets financed through repo transactions.

But repos also bring distinctive types of financial institutions in the shadow banking world, weaving networks of interconnectedness through collateral flows. Indeed, a known theme in the shadow banking literature is the pre-crisis shortage of high-quality collateral issued by governments (Pozsar and Singh, 2011; Pozsar, 2011; Singh and Stella, 2012). In other words, fiscal policy in high-income countries was not expansionary enough to keep pace with the demand for leverage. To mitigate shortages, financial institutions have three options: increase the velocity with which collateral circulates in the system; ‘unearth’ or ‘mine’ high-quality collateral parked in ‘buy-to-hold’ portfolios (such as pension funds, the largest class of asset holders) or manufacture private collateral functionally similar to government bonds. The first two strategies are linked, and rely on the right to re-use/re-hypothecate collateral in repo transactions.

In Figure 2, HSBC can borrow high quality Dutch government bonds from a Dutch pension fund, assume against Asset Backed Securities issued on SME loans (lower-quality assets). The Dutch pension fund enters the securities lending agreement with HSBC because it increases returns on a low-risk asset without assuming the credit risks of the lower-quality assets it accepts in return. HSBC, now legal owner of the Dutch bonds, may repo them to Societe Generale to fund some of its own securities. Societe Generale in turn lends the Dutch bonds to a US hedge fund that posts them as collateral for an OTC transaction. But Societe Generale simultaneously borrows the ABS from the Dutch pension fund to cover a short position, and then uses those ABS instruments to substitute other assets held as collateral in an LTRO operation with the ECB. Indeed, the right to substitution - that is, the possibility for repo lenders to constantly shift the composition of collateral pledged - means that collateral may move on a daily basis between repo parties. Such a scenario is not far-fetched, on the contrary. Singh (2012) estimated that a single piece of collateral sustained, on average, more than three different repo transactions before Lehman’s collapse. Since then, that ratio has fallen to two.

Figure 3 Repo-based webs of interconnectedness



This example highlights the distinctive regime of systemic risks in market-based financial systems. Systemic vulnerability arises from tight interconnectedness through the repeated use of the same collateral that exposes the entire chain to liquidity spirals discussed earlier. As a Financial Times²⁶ (2013) editorial put it: ‘the more times a piece of collateral is recycled, the less it serves as security for anything at all’. Furthermore, this is systemic vulnerability of the ‘shadow’ invisible kind: the regulatory regimes in place so far make it virtually impossible to track either the movement of an asset through collateral networks or the collective exposures. Neither central banks nor regulators have any reliable statistics on daily flows of collateral through repo markets. For Europe, the repo lobby produces publishes data of existing repo transactions (rather than flows) every six month for a systemic market that is short-term! The EBC’s money market survey collects less detailed data once a year.

Furthermore, the example illustrates well that repos connect financial institutions with different investment strategies and degrees of ‘social usefulness’. From a repo angle, pension funds that engage in securities lending are as much part of the shadow universe as hedge funds. Governments are also part of the shadow banking world - as manufacturers of preferred collateral - but without (yet) playing an active role as regulators. This calls into question arguments about taxing financial institutions ‘that had nothing to do with the crisis’ and have ‘no influence on systemic risk’.

²⁶ <http://www.ft.com/cms/s/0/0ff52c3e-116d-11e3-a14c-00144feabdc0.html#axzz2g0XIN0hU>

The repo-FTT has two likely consequences for systemic interconnectedness. It may shorten collateral chains by making one of the driving forces, leveraged activities, more expensive. This is the Commission's (2013b) stated intention given that 'the financial crisis has demonstrated that the reliance on short-term financing (e.g. through commercial papers or through repos) is not viable.' While the level of the tax will determine the extent to which such chains contract, the effect will be sizable because assets issued in the FTT Member States account for around 50% of European repo collateral (see Table 2). Figures for June 2013 show that EU11 sovereigns provide around 43% of EU repo collateral; a share that has increased after the ECB introduced Outright Monetary Transactions and thus committed to preserve the collateral acceptability of *any* European government bond (see Gabor, 2013b). German pfandbriefe and other assets issued in the EU11 account for a stable share of 10% of overall repo collateral.

Table 2 Share of EU11 collateral in EU repo markets

	2008	2012	2013
Share_EU11_Sovereign bonds	52%	38%	43%
Share_All_EU11_Assets	62%	48%	52%
Repo_volumes (EUR bn)	6504	5647	6076

Source: computed from ICMA reports

The share of the EU11 collateral in repo markets also highlights the importance of the issuance principle. Most cash-driven repo transactions²⁷ entail the right of substitution: the collateral provider can change the composition of the collateral portfolio it has pledged to the cash lender. For example, HSBC can replace the Dutch government bonds it has pledged to Societe Generale for, say, British government bonds if both are treated as GC collateral. However, under the issuance principle, non EU11 financial institutions would have to pay FTT to substitute EU 11 collateral. Furthermore, the Commission is yet to decide whether daily substitution of EU11 collateral in longer-term repos should be subject to FTT (EC, 2013c).

Perhaps more importantly, the FTT provides a *visibility fix* to repo markets that regulators have advocated for some time (see FSB 2013; Hauser 2013). Having to pay the tax implies that financial institutions will have to share with regulators information on mutual exposures and instruments used in repo transactions. Regulators would know in detail which financial institutions depend on repo, the extent to which pension funds engage in the repo/securities lending universe, how much collateral is re-used/re-hypothecated (see FSB, 2013 for the importance of these data). This will enable regulators to closely

²⁷ In so-called General Collateral GC repos defined by ICMA as 'a range of assets that are accepted, at any particular moment, as collateral in the repo market by the majority of market intermediaries and at a very similar repo rate --- the *GC repo rate*. In other words, the repo market as a whole is indifferent between securities that are to be in the 'general collateral basket'. GC assets are high quality and liquid, but none is subject to exceptional specific demand.' see <http://www.icmagroup.org/Regulatory-Policy-and-Market-Practice/short-term-markets/Repo-Markets/frequently-asked-questions-on-repo/11-what-is-general-collateral-gc-repo/>

monitor systemic interconnectedness, and researchers to explore the politics of collateral, reflecting for example on the symbiotic relationship between governments and repo markets.

(Not so) quiet politics

Before the crisis, the repo market constituted the perfect example of a market constructed through what Culppepper (2010) termed a ‘quiet politics’ regime. The European Commission and Member States shared the view that repo markets could ‘intermediate’ a market-driven process of financial integration. To enable this process, the Commission allowed repo actors – through the Giovannini expert group - to design rules that would align national legal frameworks and permit the cross-border use of collateral. Indeed, the Giovannini Report on Repo Markets (1999) argued that a rapidly growing repo market would dissolve borders between European government bond markets. Reading between the lines, repos would create a *de facto* fiscal union where government bonds issued by any Member State would be treated on equal terms as *collateral*.

In that report, and the Collateral Directive 2002/47/EC it informed, repos were treated as the repo industry has portrayed them in the FTT debates: risk-reducing, liquidity-enhancing financial instruments crucial to financial stability. This narrative worked to align closely the interests of the repo industry, of Member States and the Commission: the rapid growth in repo transactions would dismantle borders between financial markets and push further financial integration. Member States had little reason to dismiss such promises since increased liquidity is typically associated with stable - and low - interest rates. The promise quickly became true: by 2008, repo markets made no distinction between Greek and German government bonds. Governments, the European Commission and the ECB could afford a hands-off regulatory regime that imposed no restrictions on private repo parties.

Lehman’s collapse undermined this ‘quiet politics’ regime. The repo industry lost control over the terms of the debate once academic research in the US described the post-Lehman contagion as a run on repos (see Gorton and Metrick, 2012). In doing so, academics introduced the competing narrative of repos as source of systemic risk and conduit for liquidity spirals. The FSB and the Bank of England were among the first to set that narrative in a regulatory context through the shadow banking agenda. Yet given the US-based nature of academic research, Eurozone debates on financial reform initially ignored this as an issue pertaining to Anglo-Saxon, market-based financial systems. Most critical commentary on the European aspects of repo activities came from the Financial Times Alphaville blog and a few academic voices (see Avoyui-Dovi and Idier, 2012; Gabor 2012, Gabor and Ban 2013). For Avoyui-Dovi and Idier (2012) and Gabor (2012), the ECB’s unconventional monetary policies could increase volatility in collateral markets, including government bond markets.

Yet it took the ECB five years into the crisis to *propose* a reporting framework for repos at European level (early 2013), let alone consider the link between its crisis policies and collateral markets. Similarly, the European Commission started paying attention to

shadow banking in 2012, much later than the FSB. This is why the repo-FTT generated so much controversy: the European Commission highlighted how pervasive shadow activities were in Europe, while simultaneously bringing into the European regulatory debates the narrative that ‘repos are risky’, that the liquidity they provide to government markets is ‘virtual’ and thus potentially destabilizing.

The repo lobby rejected such arguments as a misrepresentation of how repo markets behave in crisis. Deleveraging may have repercussions on some, but not all, assets used as collateral. If anything, government bond markets benefit from being used as collateral in repo markets, since repo tensions push financial institutions to only accept the safest collateral. Indeed, Comotto (2013) contested the Gorton and Metrick (2012) account of the run on the US repo by arguing that haircuts may have gone up for private securities circulating in collateral networks, but not for US government bonds. Copeland et al (2012) also described the ‘puzzle’ of stable haircuts in the tri-party US repo market²⁸.

While this may be the case in the US, the unfolding European crisis suggests that the Commission’s concerns about repo-triggered volatility are well founded, and should be central to genuine deliberations about the repo-FTT. Indeed, the Commission is not the only European institution to note that repos may be destabilizing for government bond markets (see Gabor, 2013b; also Avoyui-Dovi and Idier, 2012; FSB, 2012). Outside the FTT debates, the ECB has linked repos to the sovereign debt crisis. For example, Benoit Courre, member of its Executive Board, described the last months of 2011 (that led to the introduction of the 3 year LTROs) as a crisis of collateral for Italian government bonds:

Collateral of course is intended to hedge default risk, while haircuts are usually seen as being intended to hedge the risk on that collateral. In times of market stress however, large and sudden margin increases can create self-reinforcing, pro-cyclical spirals of increasing weakness, exacerbate market swings and oblige market dealers to provide collateral to support secured transactions just when it is most costly to do so. Two examples come to mind.

First, when the sovereign debt crisis intensified, haircuts on government bonds under stress also went up because the rise in yields reduced their collateral value. For example, when the spread on Italian ten-year government bonds relative to core issuers rose to over 450 basis points in November 2011, the haircut for Italian government bonds was increased by 500 basis points, leading to a posting of intraday margins about 12 times greater than in any other preceding month in 2011. On the day of the increased haircut alone, the spread between Italian and German government bonds rose by 60 basis points.

Courre, 2013²⁹.

In this analysis, Courre recognizes that decisions about haircuts, combined with mark-to-market practices, may destabilize government bond markets. Repo-reliant financial

²⁸ In a tri-party repo, a clearing bank intermediates between the cash investor and the collateral provider. This market is far larger in the US than in Europe (around 10% of overall transaction volumes).

²⁹ <http://www.ecb.europa.eu/press/key/date/2013/html/sp130116.en.html>

institutions have little incentive to be loyal to governments during period of market stress because mark-to-market practices render collateral with high haircuts and price volatility more expensive (see Gabor and Ban 2013). That not all sovereigns are ‘safe’ becomes immediately clear, but this is not merely a matter of *weak* fundamentals. Take the Irish example: its pre-crisis government finances were in better shape than most ‘core’ European countries. Yet, once the woes of the Irish banking sector - and its impact on government finances - became apparent, repo markets reacted promptly. Similar to Courre, the *Alphaville* blog of the Financial Times narrated the 2010 Irish crisis as a crisis of collateral triggered by the haircut policies of a private (systemic) repo actor, LCH Clearnet:

At the heart of volatility in the Eurozone bond market, according to investors, was a decision by one of Europe’s biggest clearing houses, LCH Clearnet, to require banks or institutions wanting to use Irish bonds as collateral in the repo market to raise cash to pay an extra margin of 15 percent. *FT Alphaville*, Nov. 1, 2010.

The Irish episode highlights that governments have little influence over the haircut decisions of private repo actors even if these sharpen volatility in their government bond markets. In other words, the US is not a representative example of how a crisis of deleveraging may affect sovereign bond markets, except perhaps for Germany. Even Germany is ‘exceptional’ in that it has benefited from a flight to safety once repo markets began questioning the safe asset status of Italian and Spanish government bonds, two of the largest providers of collateral for European repo networks (see ICMA 2008). Indeed, repo transactions with German government bonds registered *negative* repo rates at the height of the European crisis precisely because financial institutions were reluctant to part with German debt. The volume of German sovereign bonds circulating through the repo market fell by about 40% between 2008 and 2012 (compared to a 15% fall in overall repo volumes), and then recovered once the ECB changed the game with OMTs (see Table 3). A similar trend is observable across all other Eurozone sovereigns, as the bonds of the three countries bailed out by the IMF (Portugal, Ireland and Greece) virtually disappeared from repo markets.

Table 3 Volumes of sovereign bonds in repo transactions (EUR bn), EU repo markets

	2008	2012	2013
Greece, Ireland, Portugal	241	17	36
Spain and Italy	924	683	717
Germany	1.294	802	1.009
<i>Eurozone sovereign collateral (share in total)</i>	57%	41%	46%

Source: ICMA Surveys, 2001, 2008;2012 and 2013 (July)

Thus, the key factors that determine whether a government bond continues to be acceptable as collateral remain outside the direct influence of that government: its velocity in collateral networks; the extent to which home banks have internationalized

portfolios of sovereign bonds³⁰, the central bank's crisis management framework³¹ or haircut frameworks. To preserve their position as manufacturers of good collateral, European governments have to somehow insulate fiscal positions from (banking) crises, difficult to achieve in a European Union where responsibility for bailing out banks still falls on individual governments, and where welfare contributions generate higher spending in a crisis (from automatic stabilizers).

The FTT poses a trade-off for governments: long-term benefits of embedding repo markets in terms of financial stability, systemic interconnectedness and sustainable public debt against the potential losses in liquidity. For the Commission, the answer is straightforward: liquidity is no longer an end in itself, particularly if it arises from leveraged financial activity. From the shadow banking literature, the answer is a new paradigm of central banking, where central banks ensure that government bonds remain acceptable collateral (see Mehrling 2012; Gabor 2012, 2013b). With such a central bank approach, the repo FTT would not inflict much damage on government bond markets, particularly since post-crisis financial regulations demand financial institutions to hold high-quality collateral. Yet for European governments confronted with the pressures of the sovereign debt crisis and a political deadlock around changing the mandate of the ECB, the answer is not straightforward.

This is the avenue that the European Repo Council has chosen to influence FTT debates. It has stressed the most threatening scenario for governments: the rise in bond yields once repo investors abandon sovereign bond markets. In its March 2013 meeting, the European Repo Council intimated that the best strategy to resist the repo FTT was to stress the 'need for internal discussions at Ministries of Finance departments as FTT will increase cost of funding of government debt'³². The strategy appeared immediately successful. The April 2013 non-paper of the FTT Working Group (2013), and then the French Minister of Finance, framed repos in the narrative preferred by the financial industry, as low risk, liquidity enhancing instruments. This may well explain why the final compromise on the FTT will exclude repos.

Conclusion

This paper explored an on-going episode in the European efforts to re-embed finance: the Financial Transactions Tax proposal by the European Commission in 2010 and its

³⁰ Kaminska (2011) for example argues that Greek banks, with sovereign debt holdings concentrated in Greek government bonds, used these as collateral in the ECB's LTRO operations in 2009. This reduced the liquidity of the Greek government bond market, increased volatility and made these bonds less attractive as collateral in the repo markets. The effect on the Greek government bond market would have been less important if Greek banks had at their disposal non-Greek collateral to pledge to the ECB.

³¹ Mehrling (2012) and Gabor (2012) argue that central banks can only effectively stabilize repo-reliant financial systems by intervening directly in collateral markets, including government bond markets. For political reasons, the ECB has been very reluctant to do so (see Gabor 2012, 2013b).

³² <http://www.icmagroup.org/About-ICMA/icma-councils-and-committees/European-Repo-Council/minutes/#ICMA>

trajectory since. The regulatory dimension of the FTT shows, perhaps surprisingly, the Commission as one of the most radical advocates of measures to transform European finance in general, and repo-based finance in particular. This is important because repos are intimately linked to the creation of risk through leverage and because repo practices sharpen systemic interconnectedness in Europe.

The FTT episode offers interesting insights to students of the politics of European financial governance. Thus, including new domains in the remit of the Commission and relying on the enhanced cooperation procedure may open up space for radical re-thinking of established paradigms in the absence of close (epistemic) connections between Commission staff and the financial industry. Supranational policy making can thus respond to democratic demand more effectively than individual Member States. For students of the interaction between the Commission and the European Parliament, the FTT episode suggests that in such new domains, the Commission may be more prepared to listen to the policy suggestions of the Parliament. Further qualitative research is required to explore in detail the process of FTT negotiation between the two European institutions that resulted in the inclusion of the issuance principle in the final FTT Directive.

The widespread resistance to the repo-FTT invites a broader reflection on the governance of financial interconnectedness when the regulator can no longer define clearly what its interests are because it is part and parcel of interconnected financial architectures through the government bond market. The FTT debates illuminated a symbiotic relationship between governments and repo markets, yet one ridden with fragilities. Governments have little influence over repo practices - velocity in collateral networks; the home banks' collateral choices; the central bank's liquidity management framework or haircut frameworks - that may improve liquidity during stable times and sharpen volatility in their government bond markets. Crises bring these factors into sharp focus - as they did for Greece or Ireland - and prompt governments to contemplate mechanisms for gaining some control. Yet governments may easily backtrack if threatened with loss of market liquidity.

References

- Adrian, T. and Shin, Hyun Song, 2010. Liquidity and leverage, *Journal of Financial Intermediation*, Elsevier, vol. 19(3), pages 418-437, July.
- Arestis, P. and M. Sawyer. 2013. The Potential of Financial Transaction Taxes. Mimeo. University of Cambridge.
- Avouyi-Dovi, S. and Idier, J. 2012. The impact of unconventional monetary policy on the market for collateral: The case of the French bond market, *Journal of Banking & Finance*, vol. 36(2), pages 428-438.
- Bank for International Settlements. 1999. *Implications of repo markets for central banks*. Committee on the Global Financial System Paper No 10.
- Brunnermeier, M. and L. Pedersen. 2009. Market Liquidity and Funding Liquidity, *Review of Financial Studies* 2201-2238.

- Buckley, J. and Howarth, D. 2010. Internal Market: Gesture Politics? Explaining the EU's Response to the Financial Crisis. *Journal of Common Market Studies*, Vol. 48, No. 1, pp. 119–141.
- Claessens, S., Z. Pozsar, L. Ratnovski, and M. Singh. 2012. Shadow Banking: Economics and Policy, IMF Staff Discussion Note, 12/12.
- Committee on the Global Financial System. 2011. Global liquidity - concept, measurement and policy implications. CGFS Papers no. 45, available at <http://www.bis.org/publ/cgfs45.pdf>
- Comotto, R. 2012. Shadow banking and repo. European Repo Council paper. available at <http://www.icmacentre.ac.uk/images/2011/08/shadow-banking-and-repo.pdf>
- Comotto, R. 2013. The Impact of the Financial Transactions Tax on the European Repo Market. Available 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/>
- Courre, B. 2012. The importance of money markets. Speech at the Morgan Stanley 16th Annual Global Investment Seminar. June 16, 2012. Available at <http://www.ecb.europa.eu/press/key/date/2012/html/sp120616.en.html>
- Courre, B. 2013. Ensuring the smooth functioning of money markets. Speech at the 17th Global Securities Financing Summit, Luxembourg, 16 January 2013. Available at <http://www.ecb.europa.eu/press/key/date/2013/html/sp130116.en.html>
- Culpepper, P.D. 2011. *Quiet Politics and Business Power: Corporate Control in Europe and Japan*. New York: Cambridge University Press.
- Commission of the European Communities
EBF (European Banking Federation). 2011. Response to the FTT Consultation.
- European Commission. 2011a, *The Commission Proposal for a Council Directive on a Common System of FTT*, COM 594, 28 September. DG Taxation and Customs Union.
- European Commission, 2011b. Consultation Paper, DG Taxation and Customs Union.
- European Commission. 2012a, Technical Fiche: Revenue Estimations. Available at: http://ec.europa.eu/taxation_customs/resources/documents/taxation/other_taxes/financial_sector/fact_sheet/revenue-estimates.pdf
- European Commission, 2012b, Technical Fiche: Macroeconomic Impacts. Available at: http://ec.europa.eu/taxation_customs/resources/documents/taxation/other_taxes/financial_sector/fact_sheet/macroeconomic-effects.pdf (Downloaded May 2012).
- European Commission 2012c. Green Paper Shadow Banking. 19 March 2012, Brussels. [Last accessed 14 Aug 2012.] Available from URL: http://ec.europa.eu/internal_market/bank/docs/shadow/green-paper_en.pdf.
- European Commission, 2013a Proposal for a Council Directive implementing enhanced cooperation in the area of Financial Transaction Tax. Available at http://ec.europa.eu/taxation_customs/resources/documents/taxation/com_2013_71_en.pdf
- European Commission, 2013b. Impact Assessment. Proposal for a Council Directive implementing enhanced cooperation in the area of Financial Transaction Tax. Available at http://ec.europa.eu/taxation_customs/resources/documents/taxation/swd_2013_28_en.pdf
- European Parliament. 2012. Parliament Adopts Ambitious Approach on Financial Transaction Tax, Press Release Reference No:20120523IPR45627.
- European Commission. 2013c. How the FTT works in specific cases and other questions and answers. Available at http://ec.europa.eu/taxation_customs/resources/documents/taxation/swd_2013_29_en.pdf

- ERC (European Repo Council). 2011. Response submission from the ICMA European Repo Council to Consultation on Financial Sector Taxation. available at https://circabc.europa.eu/faces/jsp/extension/wai/navigation/container.jsp?FormPrincipal:_idcl=FormPrincipal:libraryContentList:pager&page=0&FormPrincipal_SUBMIT=1&org.apache.myfaces.trinidad.faces.STATE=DUMMY
- Fisher, P. 2013. Reflection on the meaning of risk free. BIS paper 72, pp. 65-73.
- FSB (Financial Stability Board). 2013. Policy Framework for Addressing Shadow Banking Risks in Securities Lending and Repos. Available at http://www.financialstabilityboard.org/publications/r_130829b.pdf
- FSB (Financial Stability Board), 2012. Global Shadow Banking Monitoring Report. 18 November 2012. [Last accessed 22 Feb 2013.] Available from URL: http://www.financialstabilityboard.org/publications/r_121118c.pdf.
- FSB (Financial Stability Board) 2011. Shadow Banking: Scoping the Issues. A Background Note of the Financial Stability Board. 12 April 2011. [Last accessed 20 Jul 2011.] Available from URL: http://www.financialstabilityboard.org/publications/r_110412a.pdf.
- FTT Working Party on Tax Questions-Indirect Taxation (Financial Transactions Tax). 2013. Implementing enhanced cooperation in the area of Financial Transaction Tax Questions to the Commission from the working level. Available at <http://www.openeurope.org.uk/Content/Documents/Pdfs/2013FTTnonpaper.pdf>
- Gabor, D. 2012. The Power of Collateral: The ECB and Bank Funding Strategies in Crisis. *SSRN eLibrary* (May 18).
- Gabor, D. 2013a. Shadow interconnectedness: the political economy of European shadow banking. Available at SSRN: <http://ssrn.com/abstract=2326645> or <http://dx.doi.org/10.2139/ssrn.2326645>
- Gabor, D. 2013b. Learning from Japan: the ECB and the sovereign debt crisis. *Review of Political Economy* (forthcoming).
- Goldman Sachs. 2013. Financial Transactions Tax: how severe? available at http://www.steuer-gegen-armut.org/fileadmin/Dateien/Kampagnen-Seite/Unterstuetzung_Ausland/EU/2013/2013.05_GS_on_Fin_l_Transaction_tax_FT_T_-_Bottom_Up_Analysis_Europe.pdf
- Giovannini Expert Group. 1999. *EU Repo Markets: Opportunities for Change*. Brussels, October 1999.
- 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*, vol. 27, pp. 597-621.
- Gorton, Gary and Metrick, Andrew, 2012. Securitized banking and the run on repo, *Journal of Financial Economics*, Elsevier, vol. 104(3), pp. 23-36.
- Gorton, G. and Ordonez, G. 2012. *Collateral crises*. NBER Working Paper No. 17771. Issued in January 2012.
- Griffith-Jones, S. and Persaud, A. 2011. Financial Transaction Taxes, *Mimeo*, Columbia University.
- Hauser, A. 2013. The future of repo: 'too much' or 'too little'? Speech at the ICMA Conference on the Future of the Repo Market, London, June 13.
- Haldane, A.G. 2012. On counterparty risk. *Journal of Risk Management in Financial Institutions*, 5(3):224-226.
- Hördahl, P., and M. King. 2008. —Developments in Repo Markets During the Financial Turmoil. *BIS Quarterly, December*.

- Howarth, D. and L. Quaglia. 2013. The Comparative Political Economy of Basel III in Europe. Available at <http://speri.dept.shef.ac.uk/wp-content/uploads/2013/06/Howarth-and-Quaglia-Basel-III-in-Europe-SPERI.pdf>
- ICMA (International Capital Markets Association). 2008-2012. European repo market survey.
- International Monetary Fund. 2010. A fair and substantial contribution by the financial sector. Final Report for the G20. Available at <http://www.imf.org/external/np/g20/pdf/062710b.pdf>
- Kaminska, I. 2011. One Eurobond to rule them all. FT Alphaville, November 21.
- Kardasheva, R. 2009. The Power to Delay: the European Parliament's influence in the consultation procedure. *Journal of Common Market Studies*, 47(2):385-409.
- International Securities Lending Association (ISLA). 2013. Impact of the Financial Transactions Tax on Europe's Securities Lending Market.
- Lutz, S. and M. Kranke. 2013. The European rescue of the Washington Consensus? EU and IMF lending to Central and Eastern European countries. *Review of International Political Economy*.
- Moschella, M. 2010. Back to the Drawing Board: The International Financial Architecture Exercise. *Review of International Political Economy*, Vol. 17, No. 1, pp. 155–171.
- McCulloch, N. and Pacillo, G. 2010. The Tobin Tax: A Review of the Evidence Economics Department Working Paper Series No. 16-2010, Department of Economics: University of Sussex.
- Mehrling, P. 2012. Three Principles for Market-Based Credit Regulation. *The American Economic Review* 102 (3): 107–112.
- Mügge, D. 2010. *Widen the Market, Narrow the Competition: Banker Interests and the Making of a European Capital Market* (Colchester: ECPR Press).
- Mügge, D. 2013. The Political Economy of Europeanized Financial Regulation. *Journal of European Public Policy*, 20(3), 458-470.
- Nesvetailova, A. 2008. Three facets of liquidity illusion: financial innovation and the credit crunch, *German Policy Studies*, 4(3).
- Plantin, G., H. Saprà, and H. S. Shin. 2005. Marking-to-Market: Panacea or Pandora's Box? *Journal of Accounting Research* 46:435–60.
- Posner, E. 2009. *The Origins of Europe's New Stock Markets* (Cambridge, MA: Harvard University Press).
- Pozsar, Z., and M. Singh. 2011. The nonbank-bank nexus and the shadow banking system. IMF Working Paper WP/11/289. Washington, DC: IMF, December.
- Pozsar, Z., et al. 2010. Shadow banking. Staff Report no. 458, *Federal Reserve Bank of New York*, July.
- Riles, A. 2011. *Collateral Knowledge: Legal Reasoning in the Global Financial Markets*. Chicago and London: University of Chicago Press, 2011.
- Schulmeister, S. 2009. A General Financial Transaction Tax: A Short Cut of the Pros, the Cons and a Proposal, *WIFO Working Paper 344/2009*, Vienna: Osterreichisches Institut Fur Wirtschaftsforschung.
- Schulmeister, S. 2011. A General Financial Transactions Tax: Motives, Effects and Implementation. Available at http://stephan.schulmeister.wifo.ac.at/fileadmin/homepage_schulmeister/files/FTT_tax_forum_29_03_11.pdf
- Schulmeister, S. 2013. Impact of the FTT on the profitability of financial market activities – the assessment of Goldman Sachs Research. Available at

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

- Singh, M. 2011. Velocity of Pledged Collateral: Analysis and Implications, IMF Working Paper 11/256.
- Singh, M., and P. Stella. 2012. Money and Collateral. *SSRN eLibrary* (April). http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2050268.
- Tucker, P. 2012. Shadow banking: thoughts for a possible policy agenda, speech at the European Commission's Shadow Banking Conference, Brussels, 27 April 2012
- Vella, J., Fuest, C. and T. Schmidt-Eisenlohr. 2011. The EU Commission's Proposal for a Financial Transaction Tax (March 19, 2012). *British Tax Review*, No. 6, 2011;
- Quaglia, L. 2010. *Governing Financial Services in the European Union: Banking, Securities and Post-Trading* (London: Routledge).
- Woll, C. 2012. Lobbying under Pressure: The Effect of Salience on European Union Hedge Fund Regulation. *Journal of Common Market Studies*. 51(3):555-572.