Balancing the Regulation and Taxation of Banking

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Abstract

This study gives an overview of bank taxation as an alternative to prudential regulations or non-revenue taxation. We review existing bank taxation with a view to eliminating distortions in the tax system, which have incentivized banks to engage in risky activities in the past. We furthermore analyze taxation of financial instruments trading and taxation of banking products and services and their ability to finance resolution mechanisms for banks and to ensure their stability. In this respect, we put forward the following arguments: (1) that a financial transaction tax is economically inefficient and potentially costly for the economy and may not protect taxpayers; (2) that a bank levy used to finance deposit guarantee and bank resolution mechanisms is potentially useful for financial stability, but that it poses the threat of double taxation, together with the proposed Basel III liquidity ratios; and (3) that we support the elimination of exemption from value added tax (VAT) for financial services in order to provide banks with a level playing field, whilst retaining exemption for basic payments services. This is expected to improve efficiency by reducing the wasteful use of financial services.

Keywords: banks, taxation, regulation, too big to fail banks

JEL codes: G28, G21, H20

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1. Introduction

Since the 'Global, or Great, Financial Crisis' (GFC) of 2007-9, policy makers, academics, and regulators have been seeking the best approach to 'taxing' financial institutions and their activities in the financial markets. There are two predominant ways of taxing banks, with the goal of improving their stability, and dissuading them from carrying out overly risky activities. One way is through regulations and the other is through imposing direct 'fiscal' taxes that raise revenues. Regulations have been the dominant way of ensuring the stability of banks. The post crisis Basel III framework strengthens the minimum capital requirements required by Basel I and Basel II and introduces new regulatory requirements in the form of bank liquidity and leverage ratios. Nevertheless, big banks remain implicitly insured by taxpayers and can consequently raise funds more cheaply than strategically less important banks that are not too big or too complex to be allowed to fail. This gives them a competitive advantage and re-enforces their dominance. In response to this, systemically important financial institutions (SIFIs) are required to hold supplementary capital as recommended by the Financial Stability Board (FSB, 2011) and attention is now turning to GLAC, the general loss absorbing capacity of banks and the banking system (Mullineux, 2014).

Whilst we see regulatory reforms are moving in the right direction[1] and keeping in mind the usefulness of regulations to ensure financial stability, we argue that the regulatory and structural measures should be augmented by (fiscal) taxation and also that a balance between regulation and taxation should be aimed for. We support Adam Smith's (Smith, 1776) widely accepted 'principles' of fairness and efficiency in taxation and propose that they should be used to balance the regulatory and fiscal taxation of banks (and other financial institutions), noting that regulatory and fiscal taxes may potentially be interchangeable.

The IMF (2010) proposes the use of taxes and regulations to counteract micro- and macro-prudential risk in the financial system. While micro-prudential supervision focuses on individual institutions, macro-prudential supervision aims to mitigate risks to the financial system as a whole ('systemic risks'). The Bank of England (2009) highlighted that macro-prudential policy was missing in the prevailing policy framework and the gap between macro-prudential policy and micro-prudential supervision had widened over the previous decade. The focus of regulations has primarily been on micro-prudential regulation and supervision. The GFC has emphasized the need for a macro prudential framework that can address systemic risks and hence focus on the stability of the financial

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[1] In the form of a structural proposal of solving the problem of 'too big to be allowed to fail' by separating the investment and commercial bank activities of 'universal banks', 'ring-fencing' of retail banking by UK's Independent Commission on Banking (ICB, 2011 and PCBS, 2013a) and new capital, leverage and liquidity proposed by Basel III (BIS, 2011).

system by providing self-insurance and external-insurance (Haldane, 2014). Recently, some measures to 'tax' banks have been devised to measure the macro-economic impact of the financial institutions. These include: Conditional Value-at-Risk (CoVaR), by Adrian and Brunnermeier (2011); Systemic Expected Shortfall (SES), by Acharya et al. (2010), proposing a tax on the default risk of a bank; and the Market-based tax by Hart and Zingales (2009), proposing a bank tax on the value of credit default swap contracts. We portray the taxation of banks as a macro-prudential regulation and argue that there is a need to put fiscal taxation to compensate for the systemic risk posed by banks to the financial system and to reflect that the costs of bailing them out are not borne by the public finances.

In this paper, we study how banks are regulated and taxed in a number of countries and analyze how they could be taxed to achieve a fair and efficient balance between regulatory and fiscal taxes. Additionally, we provide an overview of the taxation of financial activities (the Financial Activities Tax, or FAT), the taxation of financial instruments trading (the Financial Transaction Tax, or FTT) and the taxation of banking products and services using a Value Added Tax, or VAT. We note that revenue from such taxes could be hypothecated in order to build both 'bank resolution' and deposit guarantee funds, and also to finance bank supervisory authorities; which are normally funded out of general taxation or through levies on banks and other supervised financial institutions. We furthermore note that regulation is a tax, which is needed to avoid double taxation and achieve overall efficiency and fairness. VAT (and FTT) can have potentially desirable behavioral effects-extending VAT to financial services reduces distortions and raises revenue, at least potentially, and discourages wasteful use of financial services. The overall aim is to use taxes to level the playing field and remove distortions. This is difficult to achieve whilst there remain Systemically Important Financial Institutions (SIFIs) that require taxpayers to be protected through the use of bail-in bonds, such as co-cos, and forced bail-ins of other bondholders by governments/regulators (FSB, 2014). It is too soon to tell whether these proposals provide a 'solution' for the moral hazard problem raised by the SIFIs, but the alternative solution of far reaching structural reform involving the breaking up of big banks and/or forcing 'ring fencing' or separately capitalized subsidiaries for various commercial and investment banking, trading and asset management activities, or stricter separation as in the US Glass-Steagall Act of the 1930s seems unlikely to be widely and comprehensively adopted.

We propose elimination of the tax deductibility of the 'expensing' of interest on debt because current business tax rules encourage excessive debt issuance and favours debt over equity, which is in direct opposition to what bank regulations require, namely raising extra equity to make banks safer. Second, we support the prevailing view that a Financial Transactions Tax (FTT) is economically inefficient because it reduces market trading volume and liquidity and increases volatility and the cost of capital for firms. Third, we prefer UK-style stamp duty on equities as a revenue raiser whose major benefit might be to serve as a 'Tobin Tax' (Tobin, 1978) discouraging wasteful over-trading of shares and

'short-termism'. Fourth, we propose the removal of the exemption of financial services from VAT in order to achieve greater efficiency in taxation, as recommended in the Mirrlees Report (Mirrlees, 2010), and to discourage over use of financial services and the elimination of the distortionary 'free banking' system (Mullineux, 2013). Sixth, we note the overlap between the UK Bank Levy (HM Treasury, 2010), which was initially designed to discourage reliance on wholesale money market funding in favour of retail deposits taking, but has increasingly been used to hit revenue raising targets, and the proposed Basel III Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR). This should be rectified to eliminate double taxation.. Finally, the proposed EU FTT is likely to reduce market liquidity and the proposed Basel III liquidity ratios (LCR and NSFR) may also reduce it because they require banks to hold more liquidity on their balance sheets. This may reduce the number of buyers in the market and could cause difficulties when many banks are seeking to sell liquid assets following a major adverse event. We thus propose a cautious approach to the implementation of FTT on top of the Basel III liquidity ratios, especially as it undermines the 'repo' market, which underpins the interbank markets and the central banks' liquidity management channel.

The remainder of the paper is organised as follows: Section 2 makes a comparison between regulations and taxation and section 3 provides an overview of existing taxation and related issues. Section 4 discusses the financial taxes; section 5 provides the policy recommendations and section 6 concludes the paper.

2. Regulations and Taxation

The IMF's (2010) idea of using regulatory and other policy measures, including the implementation of taxes and surcharge, is not new and has been supported by policy makers for some time. Over a decade ago, the Bank for International Settlements (BIS) proposed marrying the micro- and macro-prudential dimensions of financial stability in a speech by its general manager (Andrew Crockett) that proved prescient (Crockett, 2000). The focus of micro-prudential supervision is on individual institutions whereas the focus of macro-prudential supervision is to mitigate risks to the financial system. Haldane (2014) argues that the safety of individual banks is neither a necessary nor sufficient condition for systemic stability. It is not necessary because individual banks should be allowed to fail and not sufficient because the chain is only as strong as its weakest link in an integrated link. Macro-prudential supervision focuses on reducing asset price inflation, and thus the need to insure against bank failure; it hence protects taxpayers from the need for bail-outs. The proposed tools include 'mortgage or home loan (house price) to value' and 'loan to income' ratios; which can be raised in response to increasing asset price inflation. They essentially credit controls that can be regarded as a targeted 'tax' on mortgage lending.

Additional macro-prudential tools have been proposed to counter the pro-cyclicality of the banking system caused by risk-related capital adequacy, 'mark-to-market' accounting, and backward looking provisioning against bad and doubtful debts. Examples of these are countercyclical capital and liquidity requirements, and non-risk related capital ('leverage') ratios; a levy on the outstanding debt multiplied with a factor of average time-to-maturity of a bank; and a levy on non-core liabilities (Perotti and Suarez, 2009; Shin, 2011; Hansen et al. 2011); and forward looking provisioning, for which allowance has been made via changes in the international accounting standards to permit forward looking 'general' provisioning (Gaston & Song, 2014).

The capital requirements under Basel framework were not able to prevent banks from taking excessive risks, forcing governments to either let them fail or bail them out in the GFC. The proposed Basel III (BIS, 2011) requires banks to increase their capital ratios in order to make them more resilient. This helps to address the moral hazard problem created by implicit taxpayer insurance of banks and also helps to reassure depositors. However, the Parliamentary Commission on Banking Standards (PCBS, 2013a) report argues that the proposed Basel III capital leverage ratio[2] of 3% is too low, and that it should be substantially higher than this level.[3] Admati & Hellwig (2013) favour an equity ratio of 30% or more and argue that it will not reduce the lending capacity of banks; rather, it will increase it because banks will become less risky and able to raise equity more cheaply from the capital market. Because the leverage ratio is implemented on a gross and non-weighted basis, it might encourage banks to increase their exposure to high-risk, high-return lending and could potentially increase their risk exposures and lending to SMEs, *inter alia,* helping to overcome the credit to crunch perhaps. The parallel Basel risk-weighted capital adequacy requirements would limit this tendency, however and the balance between the leverage and risk weighted capital ratios needs to be carefully thought through to avoid double taxation and distortions. Furthermore, as highlighted by Mullineux (2012), the increased emphasis on core equity will put the small saving banks at a disadvantage because they cannot issue equity, potentially reducing diversity in banking; which is widely seen as beneficial (Mullineux, 2014).

Alongside this re-regulation, broader interest in financial sector taxation has been increasing. The European Commission's (EC, 2010) report on financial sector taxation puts forward three arguments in favour of the use of taxation. They consider taxation, in addition to regulations, to be a corrective measure to reduce the risk taking activities by the financial sector. Secondly, it is a source of revenue

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[2] Note that there is a difference between leverage ratio and RWA (Risk Weighted Assets) capital ratios. Leverage ratio is the ratio of tier 1 capital to average total assets, whereas RWA tier 1 capital ratio is the tier 1 capital divided by the risk weighted assets. RWA are the assets weighted according their risk.

[3] In October 2014 it was anticipated that the Prudential Regulation Authority (PRA) at the Bank of England would set the rate at 5% and thus above the Basel requirements.

through which banks, underpinned by taxpayers, can make a fair contribution to public finances, and thirdly, it is also a source of funding for the resolution of failed banks. However, studies such as those of Shaviro (2011) and Ceriani et al. (2011) have argued that taxes have the potential to exacerbate behaviors that may have contributed to the crisis. For instance, tax rules encouraging excessive debt, as we have noted, complex financial transactions, poorly designed incentive compensation for corporate managers and highly leveraged home-ownership may have all contributed to the crisis.

The last observation has been strongly supported by a recent book by Mian and Sufi (2014), who present a strong case that the US subprime crisis was caused by over-indebtedness and the subsequent household deleveraging was the major cause of the 'Great American Recession' that followed. The prevention of future cycle of housing debt requires replacing debt-based contracts with equity based home purchase contracts that allow risk sharing and provide for more debt forgiveness. Because firms can deduct interest expenses from their payable taxes, this gives a tax advantage to debt finance. Tax deductibility of interest on home loans is still permitted in the US, where there are also implicit subsidies through mortgage loan guarantees by government sponsored agencies, Switzerland, and a number of other countries, also allow tax deductibility of interest on mortgages, but they were removed in the UK over a decade ago. 'Debt bias' is recognised in the wider public finance literature (Auerbach & Gordon, 2002).

The IMF (2010) argues that debt financing could in principle be offset by taxes at a personal level - relatively light taxation of capital gains favours equity, for instance. However, in reality, the importance of tax-exempt and non-resident investors, the prevalence of avoidance schemes focused on creating interest deductions, and the common discourse of market participants suggest that debt is often strongly tax-favoured. In fact, Weichenrieder & Klautke (2008) show that debt biasness leads to noticeably higher leverage for non-financial companies. Moreover, the proliferation prior to the crisis of hybrid instruments (such as Trust Preferred Securities; Engel et al., 1999) attracting interest in deduction yet allowable (subject to limits) as regulatory capital, strongly suggests tax incentives are conflicting with regulatory objectives.

Ceriani et al. (2011) consider the taxation of residential buildings and the deductibility of mortgage interest, the taxation of stock options and other performance-based remuneration, and the interaction between securitization and the tax system. They argue that three kinds of taxation contributed to the global financial crisis and the repeal of capital gains taxation on home selling through the 1997 US Tax Relief Act was particularly important. In the US there is evidence of preferential tax treatment on the employer's side, which may have contributed to the success of stock-based remuneration plans. Stock options, nevertheless, force managers to go for short-term profits instead of having a long-term

focus. Furthermore, Ceriani et al. (2011) argue that securitization creates opportunities for tax arbitrage and reduces the total tax paid by the originator, the special purpose vehicle (SPV) and the final investor. Because of tax differences in different countries, the SPV may be a tax-free vehicle under foreign law. The SPV offsets incomes that are otherwise taxed at a different rate by pooling interest incomes, capital gains and losses. It also defers the tax until the SPV distributes incomes on the securities it has issued or profits are realized.

Keen (2011) presents an interesting debate over the choice of taxation or regulation as a measure to attain the stability of a financial system. He highlights that taxation strengthens public buffers to address bank failure and crisis, whereas regulation focuses on private buffers. For strongly correlated negative shocks, public buffers provide a useful risk-pooling role and reduce the incidence of bank failures. However, for strongly positively correlated shocks across institutions, the benefit of risk pooling and economy of scale disappears. Taxation is more beneficial in dealing with macro-prudential risks, whereas regulation, while leaving institutions to respond appropriately to systemic crises, may enable a more robust response to macro- prudential concerns.

De Nicolo et al. (2012) study the impact of bank regulation and taxation in a dynamic setting, in which banks are exposed to capital and liquidity risk. They find that capital requirements can mitigate banks' incentives to take on the excessive risk induced by deposit insurance and limited liability, and can increase efficiency and welfare. By contrast, liquidity requirements significantly reduce lending, efficiency and welfare. If these requirements are too strict, then the benefits of regulation disappear, and the associated efficiency and social costs may be significant. On taxation, corporate income taxes generate higher government revenues and entail lower efficiency and welfare costs than taxes on non-deposit liabilities. Coulter et al. (2013) argue that taxation and regulation are fundamentally the same; however, if taxes are paid ex ante, unless they are pure capital, the double-edged aspect of taxation arises.

This leads us to evaluate the existing taxes and related issues that are related to the financial sector. They are briefly discussed in the following section.

First is the corporate income tax (CIT). There are two main differences between financial and non-financial corporations. These concern the treatment of bad and doubtful loans and the non-application of thin capitalization rules to the financial sector. As far as bad and doubtful loans are concerned, the differential treatment may provide a cash-flow (liquidity) advantage, but not a tax advantage. To limit excessive debt financing and so to minimize the adverse tax consequences of excessive interest deductions, several countries have set up 'thin capitalization rules' or rules 'limiting interest deductions'. These rules determine how much of the interest paid on corporate debt is deductible for

tax purposes, thus limiting the amount of interest deduction when a certain debt-equity ratio is exceeded. In certain countries, for example in the Netherlands, rules also provide for a limitation of interest expenses, for instance when they exceed interest income.[4] The Table 1 in the Appendix provides an overview of Thin Capitalization Rules around the world.

To discourage the excessive debt financing, the economic theory offers two potential solutions: a Comprehensive Business Income Tax (CBIT), which disallows the interest deductibility of debt (IMF, 2010) and an Allowance for Corporate Equity (ACE), which allows companies to retain interest deductibility but also allow a deduction for a notional return on equity.[5] The Table 2 in the Appendix provides an overview of ACE around the world.

There are generally no differences in the treatment of the personal income of workers employed in the financial sector, except for the introduction of a special bonus tax (albeit temporary for some EU member states) on financial sector employees. A special enhanced tax on bonuses would lead to higher tax rates than personal income taxation alone. In a limited number of countries, stock options and bonuses benefit from a favourable tax treatment, but this treatment is available across all sectors. Also, some studies (Egger et al., 2012 and Philippon and Reshef, 2009) find earnings premium in the financial sector.

3. Financial Taxes

The IMF (2010) argues that there may be reasons to consider additional tax measures beyond a levy. This is because the large fiscal, economic, and social costs of financial crises may suggest a contribution of the financial sector to general revenues beyond covering the fiscal costs of direct support (Keen, 2011). Moreover, taxes might have a role in correcting adverse externalities arising from the financial sector, such as the creation of systemic risks and excessive risk taking. Specifically, proposals include taxes on short-term and/or foreign exchange borrowing; on high rates of return (to offset any tendency for decision takers to attach too little weight to downside outcomes); and for corrective taxes related to the notions of systemic risks and interconnectedness. The underlying belief or assumption is that receipts from these taxes would go to general revenue, although they need not equal the damage – however defined – that they seek to limit or avert[6]. Explicitly corrective taxes, on

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[4] See Staderini (2001), Klemm (2006), Pricen (2010) and EC (2011) for detail.

[5] An overview of the design issues of ACE can be found in OECD (2007) and IMF (2009).

[6] The reason is that corrective taxes need to address the marginal social damage from some activity, which may differ from the average damage.

systemic risk for instance, would need to be considered in close coordination with regulatory changes to assure capital and liquidity adequacy. The remainder of this section focuses on two possible instruments directed primarily to revenue raising,[7] although in each case their behavioral, and hence potentially corrective, impact cannot be ignored.

3.1 Financial Transactions Tax (FTT)

A Financial Transaction Tax (FTT) is a tax placed on financial transactions that has to be borne by the consumers. From the beginning of the financial crisis, the design and implementation of an FTT has received much attention. According to the EC (2010) report, the financial sector might be too large and take excessive risks because of actual or expected state support. As a result this moral hazard problem, the financial market is very volatile and this creates negative external effects for the rest of the economy. The EC argues that an FTT might be used as a corrective tool for the existence of this moral hazard, thereby enhancing the potential efficiency and stability of financial markets.

Tobin's tax (Tobin, 1978) on foreign exchange tax is a particular form of an FTT, which is an internationally uniform tax on all spot conversion of one currency into another. The underlying presumption is that the tax would deter short-term financial 'round trip' currency transactions, or wasteful 'over-trading'. Tobin's proposal on exchange rates and the efficiency of monetary policies remains very informative for today's debate on a general FTT, and indeed Tobin (Tobin, 1984) extended the argument for applying FTT to the trading of financial instruments, and not just currencies. As the IMF (2010) states, the common feature focused on here is the applicability of the tax to a very wide range of transactions. Advocates of FTT argue that its implementation could raise substantial amounts: it has been estimated that a tax of one basis point would raise over $200 billion annually if levied globally on stocks, bonds and derivative transactions, and a 0.5 basis point Tobin tax on spot and derivative transactions in the four major trading currencies would raise $20-$40 billion (IMF, 2010). Moreover, Schulmeister et al. (2008) estimate that the revenue of a global FTT would amount to 1.52% of world GDP at a tax rate of 0.1%. On the other hand, it is estimated that in Europe tax revenues would be 2.1% of GDP if a similar tax were imposed.[8]

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[7] The EC (2010) reports other possibilities, including for instance a surcharge on the rate of corporate income tax applied to financial institutions.

[8] It should be noted that the revenue potential of financial transaction taxes will inter-alia depend on their impact on trading volumes. For the estimates discussed, a 'medium transaction-reduction-scenario' is assumed. In that situation, Schulmeister (2011) assumes that the volume of spot transactions in the stock and bond market would decline by 10% and 5% respectively. Moreover, the reduction in trading volume of exchange-traded derivatives as well as of over-the-counter (OTC) transactions would lie between 60 and 70% (Schulmeister et al. 2008)

Furthermore, FTT cannot be dismissed on the grounds of administrative impracticality. In fact, as the IMF (2010) notes, most G20 countries, including the UK, already tax some financial transactions. For instance, Argentina, which has the broadest coverage, taxes payments into and from current accounts, and in Turkey, all the receipts of banks and insurance companies are taxed. Other countries charge particular financial transactions, such as the 0.5% stamp duty on locally registered share purchases in the United Kingdom and there is also a stamp duty charge on house purchases. As experience with UK stamp duty on share purchases shows, collecting taxes on a wide range of exchange-traded securities, and, possibly also financial derivatives, could be straightforward and cheap if levied through central clearing mechanisms. The Table 3 in the Appendix gives an overview of Securities Transaction Tax around the world.

Nevertheless, some important practical issues have not yet been fully resolved. For instance, it might be expected that an FTT might drive transactions into less secure channels; but there is a post crisis countervailing regulatory requirement to require more financial instrument transactions to be undertaken through exchanges with central counterparties and clearing. However, implementation difficulties are not unique to the FTT, and a sufficient basis exists for practical implementation of at least some form of FTT to focus on the central question of whether there would be any substantial costs from implementing an FTT.

Schamp (2011) notes that if the implementation of the FTT were limited to a few jurisdictions, it would be unlikely to raise the revenue sought, because avoidance of the trading market subject to the transaction tax would result in a substantial decrease in the tax base. Nevertheless, the implementation of an FTT in all major financial centres would be sufficient to prevent avoidance, as liquidity and legal requirements are still decisive factors and in many tax havens transaction costs are much higher compared to industrialized countries (UN, 2010 and Cortez & Vogel, 2011). Besides, a global basis is needed to ensure a worldwide playing field for global financial players. Regarding tax avoidance or evasion, experience shows that financial transactions seem to be particularly vulnerable to avoidance or evasion. For instance, in the United Kingdom, 'contracts in differences' are used to avoid the tax. A 'contract for difference' is a financial product which reallocates the income associated with share of ownership, without changing the ownership itself. However, to mitigate the incentive for such engineering, the tax rate could be set lower than the avoidance costs and tax authorities could react precisely by incorporating new financial instruments in the tax base (Schamp, 2011).

Schamp (2011) argues that FTT is likely to increase the cost of capital because investors would demand a higher minimum rate of return on their investment, given the rise in transaction costs and hence the expectation of a decrease in future profits. For this scenario, Bond et al. (2004) find that after stamp duty in the UK was halved in 1986, share price increases depended on market turnover. As a consequence of the increased cost of capital, fewer investment projects will be profitable, and hence investment and economic growth in the economy will be hampered (Schamp, 2011). However, Cortez & Vogel (2011) argue that the increase in the cost of capital could be restricted if the government issued fewer bonds as a result of the additional revenue raised by the FTT. This in turn would increase the demand for non-government securities and consequently increase the rate of return on non-government securities.

Most importantly, the real burden of an FTT may fall largely on final consumers rather than, as often seems to be supposed, earnings in the financial sector. Although, undoubtedly, some of the tax would be borne by the owners and managers of financial institutions, a large part of this burden may well be passed on to the users of financial services, both businesses and individuals, in the form of reduced returns on savings or higher costs of borrowing.[9] According to the IMF (2010), this is because an FTT is levied on every transaction, so the cumulative, 'cascading' effects of the tax, charged on values that reflect the payment of tax at earlier stages, can be significant and non-transparent. Moreover, it is not obvious that the incidence would fall mainly on either the better-off or financial sector rentiers.[10] In sum, since the incidence of an FTT remains unclear, it should not be thought of as a well-targeted way of taxing any rents earned in the financial sector.

Further, the IMF (2010) argues that care should be taken in assessing the potential efficiency of an FTT in raising revenue, because[11] an FTT taxes transactions between businesses; including indirectly through the impact on the prices of non-financial products. The argument that an FTT would cause little distortion because it would be levied at a very low rate on a very broad base is not very persuasive. In fact, a central principle of public finance is that if the sole policy objective is to raise revenue, then taxing transactions between businesses, which many financial transactions are, is

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[9] Schwert & Seguin (1993) estimate that a 0.5% securities transaction tax in the U.S. would increase the cost of capital by 10-18 basis points.

[10] Although most current proponents of an FTT do not envisage that its base would include current account bank transactions, it is cautionary to recall that while some have advocated this as a relatively progressive form of taxation, such evidence as there is suggests the opposite (Arbelaez et al., 2005).

[11] See Schmidt (2007), Schulmeister et al. (2008), and Spratt (2006) for further details.

unwise because distorting business decisions reduces total output; while taxing that output directly can raise more taxes. Technically, a tax levied on transactions at one stage 'cascades' into prices at all further stages of production. Hence, for instance, most countries have found that VAT, which effectively excludes transactions between businesses, is a more efficient revenue-raiser than turnover taxes.[12] For revenue-raising, there are more efficient instruments than an FTT.

There is a general consensus in the empirical literature that FTT reduces in market volume and liquidity and increases market volatility and the cost of capital (Amihud & Mendelson, 1992; Umlauf, 1993; Jones & Seguin, 1997; Baltagi et al. 2006; Bloomfield et al., 2009; Pomeranets & Weaver, 2011). The study by Pomeranets & Weaver (2011) examines changes in market quality associated with nine modifications to the New York State Securities Transaction Tax (STT) between 1932 and 1981. They find that the New York FTT increased individual stock volatility, widened bid-ask spreads, increased price impact, and decreased volume on the New York Stock Exchange.

There is also the notorious example of an FTT in Sweden in 1984, which introduced a 1% tax on equity transactions in 1984, which it increased to 2% in 1986 (Umlauf, 1993). He found that stock prices and turnover declined after an increase in the rate of FTT to 2% in 1986. Trading volume fell by 30%, and 60% of the 11 most traded shares migrated to London to avoid the tax. In 1989, the scope of the tax was broadened to include bonds, which led to 85% and 98% reductions in bond trading volume and bond derivatives trading volumes respectively. The tax reduced the liquidity of the market but did not reduce their volatility.

Initial evidence[13] shows that the FTT in France and Italy has reduced volume and liquidity in the market. The French FTT has also failed to raise the expected revenue due to reduction in the volume of over-the-counter OTC transactions. In the available academic literature, there is consensus that the French STT (Securities Transaction Tax) has reduced the traded values and turnover (Capelle-Blancard & Havrylchyk, 2013; Colliard & Hoffman, 2013; Meyer et al., 2013; Parwada et al., 2013); however, the evidence on liquidity and volatility is mixed. Parwada et al. (2013) and Haferkorn &

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[12] In the case of a turnover tax, tax paid on inputs 'sticks'. However, with VAT, a credit is provided for input tax so as to ensure that, while tax is collected from the seller, it ultimately does not affect businesses' input prices.

[13] http://marketsmedia.com/italian-french-trading-volumes-hit-ftt/ dated April 23, 2014, http://www.ftseglobalmarkets.com/news/ftt-drags-down-italian-stock-trading-volumes.html dated April 23, 2014.

Zimmermann (2013) give empirical evidence of reduction in liquidity while Capelle-Blancard & Havrylchyk (2013) and Meyer et al. (2013) find no evidence of reduction in liquidity with the introduction of the French STT. The impact of STT is statistically insignificant in the studies by Capelle-Blancard & Havrylchyk (2013), Colliard & Hoffman (2013) and Haferkorn & Zimmermann (2013) while Becchetti et al., (2013) give evidence of negative effect of STT on the volatility (see Capelle-Blancard, 2014 for detail).

The originally proposed EU FTT is broader, than UK, French and Italian stamp duty, in the sense that it taxes cash and derivatives across all asset classes, with the exception of spot foreign exchange. The EU FTT proposal was to levy 0.1% on stock and bond trades and 0.01% on derivatives. It was to be applicable on any transaction involving one financial institution with its headquarters in the tax area, or trading on behalf of a client based in the tax area. However, to date (October 22, 2014) the participating member states are struggling to make much progress despite the expression of their desire to see real progress with the proposed EU FTT earlier this year. The differences are on the scope and on the revenue allocation. For the scope, it is not clear whether it will have a narrow scope similar to existing French and Italian FTTs or a broad scope as advocated by the German Government. Next, whether the residence or issuance principle should prevail as far as the implementation scope of the tax is concerned. Under residence principle, the FTT will be applicable to transactions entered into by a financial institutions resident the FTT area, even if the subject assets are not from the FTT area while issuance principle is much like UK stamp duty or the French and Italian FTTs where the FTT will be applicable to transactions on assets issued by a financial institution in the FTT area. Regarding the revenue allocation, no agreement has been reached on alternative allocation models and potential sharing of models.

Critics were of the view that such a generally applied FFT would damage the repo market, which is important for interbank financing and as a conduit for central bank monetary policy implementation, because it taxes on both buy and sell legs of repo, and reverse repo, trades. Repo trades also play an important role clearing of activities, collateralization of payments between banks, and provision of market liquidity for smaller currency areas.

3.2. Value Added Tax (VAT)

A VAT is a consumption tax that is collected on the value added at each stage of production. This is different to a retail sales tax (RST), which is charged on sales to final consumers. In order to understand a VAT (or Government Sales Tax, GST) on financial services, it is important to distinguish between the purchase of financial services by businesses and consumers. The literature

concludes (Firth & McKenzie, 2012) that purchases of financial services by businesses should not be subject to GST, whereas for purchases by consumers the answer is not so clear. Firth & McKenzie (2012) observe that the non-taxation of intermediate financial transactions with businesses can be achieved in two fundamental ways. If GST is levied on the purchase of a financial service, regardless of whether or not the underlying price is explicit or implicit by way of the margin (and ignoring measurement issues with regard to the latter for now; this issue will be discussed below), the business should obtain a full input credit for the GST paid on the service, and the financial institution providing the service should obtain full credit for the GST paid on the inputs purchased to produce the service. If no GST is levied on the transaction, then the GST levied on the inputs used by the financial intermediary to provide the service to businesses should still be fully credited on the part of the financial intermediary, achieving 'zero-rating'.

It is important to note that it is a very common practice to exempt financial products and services from VAT, meaning that the tax is not charged to the consumer, but tax paid on related inputs is not recovered. Therefore, financial services are effectively 'input-taxed'. On one hand, the reason behind the implementation of VAT exemption on financial services lies in the conceptual difficulty that arises when payment for service is implicit in an interest rate spread, between borrowing and lending rates, for instance. Taxing the overall spread may be easy, but proper operation of the VAT requires some way of allocating that tax between the two sides of the transaction so as to ensure that registered businesses receive a credit, but final consumers do not.

Exemption means that business use of financial services tends to be over-taxed, but use by final consumers is under-taxed. Hence, prices charged by the financial institutions are likely to reflect the unrecovered VAT charged on their inputs, so that business users will pay more than they would have in the absence of the VAT. Generally, the credit mechanism of the VAT ensures that it does not affect prices paid by registered users on their purchase. But, exemption means that this is not so, either for financial institutions themselves, or their customers and, through further cascading, the customers of their customers. Of course, this runs counter to the principle underlying the VAT, that transactions between businesses should not be taxed unless doing so addresses some clear market failure. Moreover, exemption for final consumers is likely to mean under-taxation, since the price they pay does not reflect the full value added by financial service providers, but only their use of taxable inputs. Further, cheaper financial services may encourage over consumption of them. Why should there be a low rate of VAT on the use of financial services? Atkinson & Stiglitz (1976) and Mirrlees et al., (2011), Chapter 6) argue for taxation of financial services at a relatively low rate because of their use of free time for paid work, so that favourable treatment helps counteract the general tendency

of taxation to discourage work effort. Since the adoption of the Sixth VAT Directive in 1977 (Article 135 (1) of the VAT Directive), the EU's common value added tax system has generally exempted mainstream financial services, including insurance and investment funds.

The Directive reflects an uncertain approach, in that it allows EU member states the option of taxing financial services. However, the difficulty arises of technically defining the price for specific financial operations. Studies such as those by Kerrigan (2010) and Mirrlees et al. (2011, Chapter 8) provide a detailed discussion of the problem of VAT on financial services, arguing that around two-thirds of all financial services are margin-based, which makes the implementation of the invoice-credit VAT system very difficult in this respect. Nevertheless, this difficulty seems to be surmountable. For instance, in Germany, where the granting of loans is subject to VAT under the option to tax, an acceptable methodology seems to have been found to tax these margin-based operations.[14] Yet, the extent to which applying VAT to the financial sector (and its clients) would raise additional tax revenues and, consequently, the extent to which the exemption constitutes a tax advantage for the financial sector remains an unsettled empirical question. Known as the 'irrecoverable VAT problem', the exemption means that the financial sector does not charge VAT on most of its output, so it cannot deduct the VAT charged on its input. Estimates by Genser & Winker (1997) and EC (2011) indicate that the VAT exemption of financial services will be an advantage for the financial sector. The EC (2011) report notes that the results do not change significantly when other estimates for the irrecoverable VAT based on sector account data are used. See Table 4 in the Appendix for detail.

Although the inclusion of the financial sector in VAT would indeed lead to price changes, such changes should be seen as the correction to an existing distortion rather than a new distortion. The reason is that next to the question of whether VAT on financial services would raise revenues, there is an economic distortion arising from the current VAT exemption. While services provided to households are too cheap, services to businesses are more expensive, leading to a misallocation of the consumption of financial services. Moreover, it can be deduced (following IMF, 2010), that the net impact of exemption is likely to be less tax revenue and a larger financial sector. Evidence suggests that revenue would be increased by only taxing the final use of financial services at the standard VAT rate (Huizinga, 2002; Genser & Winkler, 1997). At the same time, the effect on the size of the sector depends on the relative price sensitivities of business and final use, even though the same evidence creates some presumption that the exemption of many financial services under current VAT results in the financial sector being larger than it would be under a perfectly functioning, single rate VAT.

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[14] Satya & Morley (1997) propose the application of a transaction-based VAT known as the 'Truncated Cash-Flow Method with Tax Calculation Account' as another theoretical possibility. Ernst & Young (1996) have considered such alternative approaches.

However, Grubert & Mackie (2000) argue that financial services are not purchased for their consumption value, but rather to facilitate final consumption and should not be taxed. Boadway & Keen (2003) argue that many goods and services that one would question should be taxed using a GST. They have a similar characteristic because they are a means to an end rather than ends in themselves, and are therefore intermediate transactions. Indeed, virtually every good may be thought of in those terms, in the sense that they are inputs into some notion of well-being or production process, but the idea of VAT is to concentrate on the value added. As per the Corlett-Hague (1953) rule, to minimize the costs of distortions caused by the tax system, goods that are more complementary with the consumption of leisure, which is generally viewed as being non-taxable, should be taxed at higher rates. Since financial services are exempt from VAT, they are implicitly considered equivalent to a necessity, with a view not to pass on the tax burden to the final consumers. In sum, VAT exemption results in the preferential treatment of the financial sector compared with other sectors of the economy, as well as in distortions of prices.

New Zealand and Australia have been put forward as a more efficient and a fair model that seems to avoid some of the potential distortive impacts of the implementation of VAT. New Zealand introduced a uniform GST in 1986 (VAT is called GST in New Zealand) and considered it efficient because of relatively fewer exemptions than in the UK and the EU. Dickson & White (2012) describe the compliance and administrative costs of GST as regressive; however, relief to the poor strata of society is provided via the income tax and social welfare systems. As reported by PriceWaterHouseCoopers (PWC, 2006), in New Zealand, although exemption is afforded to many supplies of financial services, these supplies can be zero rated (at the option of the supplier) when made to principally taxable persons.[15] This guarantees that financial service providers can recover a substantial or significant GST incurred on inputs purchased from third-party suppliers.

In addition, in New Zealand, GST exemption does not include non-life insurance, provision of advisory services, equipment leasing, creditor protection policies and some other financial intermediation services. However, transactions dealing with money, issuance of securities, provision of credit and loans and provision of life insurance are still exempted (Poddar & Kalita, 2008). The New Zealand system of taxation of non-life insurance would seem to have been followed in a number of other countries, including South Africa and Australia,[16] and very broadly it taxes gross premiums

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[15] See GST Guidelines for Working with New Zero Rating Rules for Financial Services, published by the policy advice division of the Inland Revenue Department (New Zealand), October 2004.

[16] The Value Added Tax Act, no 89 of 1991, states that various financial services are exempt from VAT, for example long term insurance (sec 2(1)(i) and sec 12(a)). Yet short term insurance and commission received from selling long term and short term insurance are taxable supplies and subject to VAT at 14%.

but gives insurers the ability to reclaim deemed input tax on indemnification of payments, whether or not made to GST-registered insured parties. In this case, the model uses taxes on insurers' cash flows as a surrogate for value added.

The narrow definition of financial services, in the form of Business to Business (BTB) or Business to Consumer (BTC) transactions, has made many of them taxable, which otherwise would have been exempt. The exemption does not apply to brokering and facilitating services; it includes only borrowing and lending. With respect to Australia, the exemption approach to financial services applies in principle so that a denial of input credit entitlement arises for GST incurred on related costs. In spite of this, the distortive impact of the input credit provision is mitigated by what is termed the Reduced Input Tax Credit (RITC) scheme. This scheme, a unique feature of the Australian GST code, allows suppliers of financial services to recover 75% of tax paid on specified inputs. A relative of a RITC was chosen because of the significant proportion of labour costs typically incurred in providing the RITC services. The main objective of the RITC scheme is to eliminate the bias to vertical integration (self-supplying inputs) and to facilitate outsourcing, presumably from a cost efficiency perspective.[17]

Financial services are also exempt from VAT in the EU and banks do not charge any VAT on their financial services, nor do they not recover VAT paid on their business inputs. However, there are some exceptions of specified fee-based services, such as safety deposit box fees, financial advisory services and the zero rating of exported financial services. The Canadian Goods and Services Tax is generally similar to the European one with regard to exemption of financial services. However, there is a list of fee-based services that are taxed[18]. The GST is a credit-invoice tax rather than a subtraction method tax, which was once proposed in Canada (Schenk, 2010).

The cases of Israel and Argentina are severe, in the sense that they overtax many financial services. Firstly, financial services are exempt from VAT, meaning that they cannot recover the tax on their purchases and secondly, banks are required to pay tax on the aggregate of their wages and profits (Schenk & Oldman, 2007). In order to contain inflationary pressures, or for that matter to reduce the wasteful use of financial services, Argentina taxes gross interest on loans under a VAT at different rates. The VAT on these loans to registered businesses is creditable (Schenk & Oldman, 2007).

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[17] See PWC (2006) report for detail.

[18] GST/HST Memoranda Series, Canada Customs and Revenue Agency, April 2000.

Virtually all fee-based financial services are taxable or zero-rated under VAT in South Africa. However, margin-based services are still exempted. The banks can reclaim input VAT for fee-based services. In Singapore, financial services rendered to taxable customers are zero rated because financial institutions can claim input credits for VAT. For input VAT that is not attributable to taxable supplies or to exempt supplies, a financial service provider must allocate the input tax in proportion to the ratio of taxable supplies to total supplies (Schenk & Oldman, 2007).

3.2.1. Effects of Removing VAT exemption on Financial Services

As noted in Mirrlees (2011) review, exemption from VAT is against the logic of the tax as it breaks down the chain, leaving financial institutions unable to reclaim the input tax. It is clearly distortionary, as exemption makes VAT a production tax. Perhaps the biggest distortion is that it encourages financial institutions to produce inputs in-house and thus to integrate vertically in order to reduce input VAT that is not creditable for financial institutions. In addition to the discrimination against outside suppliers, vertical integration could perhaps be the reason that financial institutions take the shape of conglomerates, making them 'too big to fail'. Because financial institutions across the EU face different input costs, exemption creates another distortion, leaving the financial institutions with higher input costs uncompetitive.

Another distortion identified by Schenk & Oldman (2007) is that exemption of financial services may encourage financial institutions to outsource overseas, which is discrimination against domestic suppliers. They explain that if a financial institution obtains an exempted service within the EU, the cost may include some disallowed input VAT. However, this is not the case if a service is imported from a country with zero-rating on the export of that service.

One of the problems in taxing financial services identified by Benedict (2011) is the valuation issue. Apart from some technical problems involved in it, one factor that is desirable from the risk management point of view is the transparency of banks' earnings. It is generally argued that the tax can be imposed on the interest rate spread and apportioned between transactors (customers of lending and borrowing). This valuation process would result in a transparency of the margins, not only for the revenue authorities but also for the public at large. This would reduce the information asymmetries, which are considered to have been one of the causes of the crisis.

The removal of exemption on financial services would mean that banks' 20% (in the case of the UK) tax on financial products and services would be paid by consumers, and banks would be allowed to

reclaim VAT on inputs, which would reduce their costs. It would also increase revenue for the government. The only affected party in the case of removal of exemption from VAT would be the consumers. It might also improve efficiency because consumers would be discouraged from over-consuming financial services. Zero rating of financial services reduces VAT revenue, but there will be some compensation from increased tax revenue from increased profitability of the banks.

It is important to segregate financial services into fee-based services and margin-based services when removing VAT exemption on them. Fee-based services can be categorized as a luxury, with margin-based services as a necessity. Therefore, tax on such services should be levied based on their elasticity of demand. We argued above that raising equity would increase the cost of lending for smaller banks and hence will unfavourably impact them and leaving them at disadvantage. However, the removal of exemption of VAT would decrease the undue pressure on banks and give them a level playing field, similar to other companies. As highlighted by Mishkin (2012), increased competition, resulting from the financial innovation that decreased the profitability of banks, may have encouraged the excessive risk taking by banks which led to the crisis. We therefore support a combination of both approaches of imposing taxation and new regulations, so that the banks would not be adversely affected by very strict policies, keeping in mind the tax and regulation heterogeneity that exists across countries and regions.

3.3. A Bank Levy

A bank levy, or tax, is as an additional duty imposed on financial institutions, predominantly banks, to discourage risky activities and to build some fund that can be drawn upon for bailing out. The UK Bank Levy (HM Treasury, **2010**) was initially designed to discourage reliance on wholesale money market funding in favour of retail deposits taking, but has increasingly been used to hit revenue-raising targets. The EU is also planning to introduce a bank levy to create a bank resolution fund. Several countries have already taken legislative initiatives in this respect to introduce levies on banks that are considered to pose a systemic risk to the economy. Such bank levies are not applied to the profits of the bank (as the case of CIT), but are in principle levied on its (relevant) assets, liabilities or capital. For example, countries which chose to apply a levy on liabilities broadly speaking include Austria, Belgium,Cyprus, Germany, Hungary, Iceland Portugal, Romania, Slovakia, Sweden, the Netherlands, the UK and the US. On the other hand, the base of the French bank levy is regulatory capital, while that of Slovenia is total assets. Although these bases are clearly related, it shows the focus of the bank tax.

A few countries such as The Netherlands, the UK and the US seem to tax only bigger banks and liabilities if they are beyond a certain threshold. The bank tax in most countries (e.g., Austria, Hungary, France, Iceland, Portugal, Slovakia, Slovenia, the Netherlands and the United Kingdom) contributes to the general reserve; however, there is a dedicated resolution fund to draw upon in case of a crisis in some other countries (e.g., Cyprus, Germany, Korea, Romania and Sweden). In the US, the purpose of the bank tax called the 'Financial Crisis Responsibility fee' is different, in the sense that it is ex-post and is aimed at recovering any direct costs incurred by the failure of financial institutions under the Troubled Asset Relief Program (TARP). Belgium has three different kinds of bank taxes: one similar to the usual bank levies calculated on total liabilities, which contributes to the Resolution Fund; and a new bank levy which uses regulated savings deposits as the basis for calculating the tax due, contributing to the deposit protection fund and the financial stability contribution. Finally, there is a contribution to the Special Protection Fund for the deposits, life insurances and capital of recognised cooperative companies, which is calculated taking into account certain risk factors. The Table 5 in the Appendix provides an overview of Bank Levies around the world.

Because the bank levy is not being taxed under standard tax treaties, there is a risk of double taxation. In order to avoid this, the UK, German and French authorities are entering into a 'double taxation agreement', which will allow a proportion of the levy in one country to be credited against the levy in the other. This agreement has been enacted in the UK with respect to France from 1 January 2011, which allows a proportion of the French levy to be credited against the UK one.

In the UK, the treasury secretary has increased the bank levy from 0.105% to 0.13% to 0.142% with effect from 1 January 2014. This is the sixth increase in the levy since it was introduced in 2010. The Government has lowered the corporate tax rate from 28% to 24% and then to 22%, which will further decrease to 21% from April 2014. The bank levy was increased in order to take away the benefit of this reduction from the banking sector and with a view to raise revenue from it. In the UK, the levy is applicable to global consolidated balance sheet liabilities less tier 1 capital, protected deposits, sovereign repo liabilities and derivatives on a net basis. Therefore, an increase in bank levy means that the treasury secretary is aiming to tax the unsecured borrowings of the banking sector. There seems to be an overlap between the increase in the bank levy and the proposed Basel III Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR). LCR and NSFR incentivize banks to use more stable funding sources by reducing the reliance on short-term ones.

3.4. Financial Activities Tax (FAT)

Another tax that can generate revenue and reduce excessive risk-taking but broader in its scope than a

banks levy is FAT. FAT is applied to the sum of an institution's profits and remuneration.

As an alternative to an FTT, the IMF (2010) proposes the implementation of a FAT levied on the sum of profits and remuneration of financial institutions, although the two taxes are not mutually exclusive. Since aggregate value added is the sum of profits and remuneration, a FAT in effect taxes the net transactions of financial institutions, whereas an FTT taxes gross transactions. However, like an FTT, a FAT would, in the absence of special arrangements, tax business transactions because no credit would be given to their customers for a FAT paid by financial institutions. Alternative definitions of profits and remuneration for inclusion in the base of a FAT would enable it to pursue a range of objectives.[19] For instance, with the inclusion of all remuneration, the IMF (2010) argues that a FAT would effectively be a tax on value added, and so would partially offset the risk of the financial sector becoming unduly large because of its favourable treatment under existing VAT arrangements, where financial services are exempt. Moreover, to avoid worsening distortions, the tax rate would need to be below current standard VAT rates. Because financial services are commonly VAT-exempt, the financial sector may be under-taxed and hence perhaps 'too big', relative to other sectors. In fact, the size of the gross financial sector value-added in many countries suggests that even a relatively low-rate FAT could raise significant revenue in a fair and reasonably efficient way. For instance, the IMF (2010) report shows that in the UK, a 5% FAT, with all salaries included in the base, might raise about 0.3% of GDP.

Moreover, the IMF (2010) argues that with the inclusion of profits above some acceptable threshold rate rate of return, a FAT would become a tax on 'excessive' returns in the financial sector. The underlying belief is that it would mitigate the excessive risk-taking that can arise from the undervaluation by private sector decision-makers of losses in bad times, because they are expected to be borne by others, or 'socialised' since it would reduce the after-tax return in good times.[20] It should be noted that there might be more effective, tax and/or regulatory ways to do this.

The IMF (2010) also states that the implementation of a FAT should be relatively straightforward, as it would be drawn on the practices of established taxes. Naturally, there would be technical issues to resolve, but the IMF argues that most are of a kind that tax administrations are used to dealing with. Even though there would be difficulties in the potential shifting of profits and remuneration to low-tax jurisdictions, a low rate FAT might not add greatly to current incentives for tax planning, and as a matter of fact would not greatly change them if adopted at broadly similar rates in a range of

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[19] See Appendix 6 of the IMF (2010) report for elaboration on the design and revenue potential of these alternative forms of FAT.

[20] John et al. (1991) develop the argument for progressive profit taxation on these grounds.

countries.

A FAT would tend to reduce the size of the financial sector and will fall on intermediate transactions. Hence its implementation does not directly distort the activities of the financial institutions and because a FAT is essentially a levy on economic rents, it would tend to reduce the size of the sector without changing its activities. The IMF (2010) argues that in many respects a FAT has the nature of VAT in the sense that like VAT, there would be no direct impact on the structure of the activities undertaken by financial institutions themselves, as liability depends on profit, not on how it is earned or on the volume of turnover. Of course, there would be one difference from VAT, in that the tax would also fall on businesses, not just on final consumers.

Shaviro (2012) also favours a FAT over an FTT because of the broad 'net' measure of FAT compared to a narrow 'gross' measure of financial sector activity. The Parliamentary Commission on Banking Standards (PCBS, 2013b) report also quotes different parties who prefer a FAT over an FTT for three reasons: it is less easily avoidable through relocations; incidence is more certain; and it would generate the same amount of revenue with fewer distortions.

4. Policy Recommendations

While several policy measures, including taxes, levies and regulatory measures, have been in place, and for that matter, many are still under discussion and consideration, the question of what should truly circumvent the negative micro-prudential externalities stemming from limited liability and asymmetric information (relating to individual institutions) and macro-prudential externalities relating to systemic risk still remains unanswered. More importantly, the impact of these externalities on the growth and development of several countries remains a source of worry amongst policy makers, academics, and several national and international bodies. Macro-prudential supervision as is a device for reducing asset price inflation and thus the need to insure against bank failure via capital ratios and deposit insurance and resolution funds, but again is untried and untested as yet. Whilst we see regulatory reforms are moving in the right direction and keeping in mind the usefulness of regulations to ensure financial stability, we argue that the regulatory and structural measures should be augmented by (fiscal) taxation and also that a balance between regulation and taxation should be aimed for. We note that revenue from such taxes can serve as a deposit guarantee and resolution fund for smaller banks. Once the fund is build with a special bank levy, as proposed in the Eurozone, it could be dropped and replaced with US-style risk related deposit insurance that would be levied to top up the

funds as required. Whilst some banks remain 'TBTF', special arrangements for SIFIs will be required. We provide the following policy recommendations regarding 'fiscal' taxation:

We propose elimination of the tax deductibility of the 'expensing' of interest on debt because current business tax rules encourage excessive debt issuance and favours debt over equity. This is in direct opposition to what bank regulations require, namely raising extra equity to make banks safer. This is in turn raises the question of whether the tax deductibility should be removed from banks alone, as they are the licenced creators of credit. However, the increased emphasis on core equity will put the small saving banks at a disadvantage because they cannot issue equity very easily. In line with this argument, there is a concern about the viability of universal banks. A structural proposal put forward to help solve the problem is to separate the investment and commercial banking activities of 'universal banks' within bank holding companies (BHCs) and to require them to operate as separately capitalized subsidiaries, with the aim of making it easier to let parts of the BHC fail whilst 'resolving' problems in the 'utility' part of the bank, so that it can keep functioning without unduly disrupting economic activity. In the UK Financial Services (Banking Reform) Act, passed on 18 December 2013, the 'ring fencing' of retail banking and some commercial banking, and thus the household and small business deposits, in line with the Independent Commission on Banking (ICB, 2011) and the Parliamentary Commission on Banking Standards (PCBS, 2013a) recommendations, was required to be implemented. Further, the UK's Prudential Regulatory Authority is to consider whether a US Volcker Rule (SEC, 2013), which limits the scope of the 'proprietary' trading and hedge fund business a bank can undertake with the aim of restricting the risk to which bank deposits can be exposed, is appropriate for the City. Meanwhile, the EU is still considering the Liikanen Report proposals (Liikanan, 2012) for a more limited separation of retail and investment banking than now required in the UK. A less strict separation seems likely given the long tradition of universal banking in Germany.

The debate about the pros and cons of universal banking is ongoing. Calomiris (2013) argues strongly that there are significant economies of scale and scope in banking and also major benefits from the cross border operation and competition of universal banks, whilst acknowledging, that size matters and robust internationally agreed resolution regimes need to be implemented as a backstop.

We support the prevailing view that a Financial Transactions Tax (FTT) is economically inefficient because it reduces market trading volume and liquidity and increases volatility and the cost of capital for firms. This is especially the case if it is applied to the gross value at each stage of the settlement

chain of a financial transaction, as initially proposed by the European Commission (EC), unlike VAT; which is applicable at the end of the chain. The cumulative effect of charging each agent in a multi-step execution process can be substantial. An FTT may seem like a tax on banks and other financial institutions, but it is highly likely that a good proportion of the costs would be passed on to the end investors. A narrower and relatively low tax, such as the UK 'Stamp Duty' on equity sales (and house sales), is likely to be much less distortionary and now seems more likely to be adopted by the EU, or the Eurozone alone. It would however raise less revenue. Furthermore, imposing an FTT on government bond sales would both raise the cost of government funding and be detrimental to the 'repo market', which underpins the interbank markets and thus liquidity in the banking system. The originally proposed EU FTT was applicable to other non-participating member countries and to third countries if they were counterparty to financial transaction trading in an FTT jurisdiction. Equity issuance is already relatively more costly than debt issuance due to the tax deductibility of interest, but not dividend payments, and UK-style stamp duty adds to the cost of selling equities; but we might support stamp duty as a revenue raiser whose major benefit might be to serve as a 'Tobin Tax' (Tobin, 1958) discouraging wasteful over-trading of shares and 'short-termism'.

We further propose the removal of the exemption of financial services from VAT in order to achieve greater efficiency in taxation, as recommended in the Mirrlees Report (Mirrlees, 2010), and to discourage over use of financial services and the elimination of the distortionary UK 'free banking' system (Mullineux, 2012). Given the operational difficulties linked to the removal of exemption from VAT, the cash flow method with Tax Collection Account (TCA) proposed by Poddar and English (1997) is recommended. Because of operational difficulties attached to levying VAT on margin based financial services, FAT is sometimes given as an alternative solution. As value added is equivalent to the wages plus profits of an institution, a FAT would serve as a tax on value added. A FAT is also preferred over an FTT because it is less easily avoidable through relocations; its incidence is more certain and it would generate the same amount of revenue with fewer inefficiencies. A FAT is also considered to be a broad 'net' measure of a VAT compared to an FTT's narrow 'gross' measure of financial sector activity.

We note the overlap between the UK Bank Levy (HM Treasury, 2010), which was initially designed to discourage reliance on wholesale money market funding in favour of retail deposits taking, but has increasingly been used to hit revenue raising targets, and the proposed Basel III Liquidity Coverage Ratio (LCR). This should to be rectified to eliminate double taxation.

Finally, the proposed EU FTT is likely to reduce market liquidity whilst the proposed Basel III

liquidity ratios (LCR and the Net Stable Funding Ratio) may also reduce money market liquidity because they require banks to hold more liquidity assets on their balance sheets. This may reduce the number of buyers in the market and could cause difficulties when many banks are seeking to sell liquid assets following a major adverse event. We thus propose a cautious approach to the implementation of FTT on top of the Basel III liquidity ratios, especially as it undermines the 'repo' market, which underpins the interbank markets and the central banks' liquidity management channel.

5. Conclusion:

The Global Financial Crisis (GFC) revealed problems with the regulatory approach to addressing externalities arising from excessive bank risk taking. To address these externalities, in this paper, we study how banks are regulated and taxed in a number of countries and analyze how they could be taxed to achieve a fair and efficient balance between regulatory and fiscal taxes. We highlight overlap between regulations and taxation and counteracting effects of each other to remove distortions. We note that revenue from such taxes can be used to build both 'bank resolution' and deposit guarantee funds, and can be dropped once due reparations have been paid and the pooled insurance funds have been built up and replaced by risk related premiums levied as required to top up the funds. We propose elimination of the tax deductibility of the 'expensing' of interest on debt, removal of the exemption of financial services from VAT. In line with the view of European Commission (EC, 2011), we consider taxation, in addition to regulations, to be a corrective measure to reduce the risk taking activities by the financial sector. Secondly, it is a source of revenue through which banks, underpinned by taxpayers, can make a 'fair contribution' to public finances; and thirdly, it is a source of funding for the resolution of failed banks. The UK Bank Levy is perhaps best regarded as making a fair contribution to compensate taxpayers for the fiscal consolidation, or 'austerity', made necessary by the need to bail them out and mount a fiscal stimulus to head off a full blown economic recession following the GFC. The use of taxes alongside regulations to reduce risk taking activity requires them to be carefully balance in order to avoid double taxation, as we have noted.

Moreover, as highlighted by the IMF (2010) report, the implementation of several discussed tax and regulatory measures needs to be co-ordinated with that of the wider regulatory reform agenda, and the effects on the wider economy need to be carefully assessed. So far, regulatory and tax policies towards the financial sector have been formed largely independently of each other. Therefore, a more holistic approach is needed to ensure that they are properly aligned in both the incentives and the overall burden they imply for the sector.

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Appendix

Table 1: Overview of Thin Capitalization Rules Around the World

Country	1. Do you have thin capitalization rules in your country?	2. Are these thin capitalization rules applicable to related-party interest?	3. Are these thin capitalization rules applicable to third-party interest?	4. Do thin capitalization rules apply to banks?	If your answer to question 4 is yes, please specify, if applicable, the difference between the thin capitalization rules for banks and the thin cap rules for companies of other sectors/non-banks
AUSTRIA	Yes	Yes	No	Yes	A specific minimum equity is required for banks (according to Basel II). Generally, for branches of foreign banks endowment capital has to be attributed for taxation purposes only (e.g. based on the equity requirements imposed by the Austrian Banking Act) according to the OECD report on the attribution of profits to permanent establishments dated July 17, 2008.
BELGIUM	No general thin cap rules. A debt-equity ratio may apply in the following cases: · 7:1 if interest is paid to taxpayers benefiting from a tax regime more advantageous than the Belgian one on the income received and provided certain limits are exceeded. · 1:1 if interest is paid to a director or a person exercising similar functions and to the extent certain limits are exceeded.	No	No	No	N/A
BULGARIA	Yes	Yes	Yes	No	N/A
CZECH REPUBLIC	Yes	Yes	No	Yes	The debt-to-equity ratio for banks and insurance companies is 6:1, whereas for other companies the ratio is set at 4:1.
DENMARK	Yes	Yes	The calculation of the 4:1 debt-to-equity ratio is made based on all debt in the company. However, only related debt would be subject to limitations.	No	N/A
FRANCE	Yes	Yes	No	No	N/A
GERMANY	Yes	Yes	Yes	Yes	The German thin cap rules are also applicable to banks. However, according to the mechanism of the German interest capping rules (interest expenses are always tax deductible to the extent they do not exceed interest income earned) banks are typically not burdened by the German thin cap rules.
GREECE	Yes: interest corresponding to loans exceeding the 3:1 debt-to-equity ratio is not tax deductible.	Yes	No. However, loans granted by third parties and guaranteed by a related party are taken into account for the calculation of the 3:1 ratio.	No	N/A
HUNGARY	Yes	Yes (except related party in the bank sector)	Yes (except third-party in the bank sector)	Yes	For the computation of the debt-to-equity ratio (=3:1), banks do not have to take into consideration their liabilities in connection with their financial services activities, whereas other companies do.
IRELAND	No (However, certain requalifications may apply when interest payments are made to a 75% non-resident group member.)	N/A	N/A	No	N/A
ITALY	No	N/A	N/A	No	Interesting to mention is that interest expenses incurred by banks are deducible at 96%, whereas for companies of other sectors/non-banks, interest expenses are fully deductible provide that they do not exceed specific ratios.

Table 1: An Overview of Thin Capitalization Rules Around the World - Continued

Country	1. Do you have thin capitalization rules in your country?	2. Are these thin capitalization rules applicable to related-party interest?	3. Are these thin capitalization rules applicable to third-party interest?	4. Do thin capitalization rules apply to banks?	If your answer to question 4 is yes, please specify, if applicable, the difference between the thin capitalization rules for banks and the thin cap rules for companies of other sectors/non-banks
LATVIA	Yes	Yes	Yes, except for interest on loans from credit institutions (banks) resident in EU, EEA and double tax treaty countries and some other specified institutions (e.g. EBRD, WB, etc)	No	N/A
LITHUANIA	Yes	Yes	Yes, provided that third party loan is guaranteed by related party.	Yes	The thin cap rules do not apply to financial institutions providing financial leasing services. There are no exceptions/differences for banks and companies of other sector/non-banks.
LUXEMBOURG	Yes	Yes	In principle NO. But it could be applicable in specific cases	Yes	No difference between banks and non-banks
NETHERLANDS	Yes	Yes, the amount of non-deductible interest should only be limited to the extent that intercompany interest paid exceeds intercompany interest received.	Yes	Yes	No difference between banks and non-banks.
POLAND	Yes	Yes	No	Yes	No difference between banks and non-banks.
PORTUGAL	Yes, a 2:1 debt-to-equity ratio applies. A safeguard clause is available, in case the taxpayer is able to demonstrate that the level of debt and other conditions are at arm's length.	Yes, on interest from a related party that is resident outside the EU.	Yes, if guaranteed by a related party.	Yes	No differences
ROMANIA	Yes (also safe harbour rule according to which the deductibility of interest expenses on loans provided by entities other than banks/financial institutions is capped at a specific interest rate, which depends on the currency of the loans).	Yes	Yes	No	N/A
SLOVENIA	Yes	Yes	No, unless the loan is guaranteed by a related party	No [the tax haven rules apply to all entities and are not thin cap rules]	For non-bank entities, the thin cap rules restrict the tax deductibility of interest on loans from direct or indirect parents or subsidiaries (where the shareholding relationship is at least 25%), to the extent that the loan amounts exceed 4 times equity (from 2012 onwards, and 5:1 for 2011). This restriction does not apply to banks.
SPAIN	Yes. According to article 20 Corporate Tax Act, when the net remunerated direct or indirect borrowing of an equity from other related person or entities which are not resident in Spanish territory, excluding financial institutions, exceeds the result of applying the coefficient of 3 to the fiscal capital, the accrued interest which corresponds to the excess will be regarded as dividends. Thin cap rule does not apply when the non-resident equity is locates in an EU country (except tax havens jurisdiction).	Yes, this rule applies exclusively to related persons or entities (directly or indirectly)	No	No (except for interest related to payments to tax havens).	N/A
UK	Yes	Yes	Yes	Yes	Banks cannot apply 'safe-harbours' and thin cap rules are based on the regulatory capital position. The 'debt cap' restrictions which limit interest deductions available in the UK by reference to the group's external borrowing do not apply to banks.
CHINA	Yes	Yes	No	Yes	The debt-to-equity ratio for banks (and for all the financial industry) is 5:1, whereas for the non-financial sector the ratio is set at 2:1.
SWITZERLAND	Yes	Yes	No	Yes (but not the same rules as for non-financial service, see next column)	For Swiss regulated banks, the minimal equity required for tax purposes is equal to the minimal equity required for Swiss regulatory purposes.
USA	Yes	Please complete	Please complete	Yes	Please complete

Note: This table is adapted from the European Commission report of 2011 (EC, 2011).

Table 2: Overview of Allowance for Corporate Equity (ACE) Around the World

Country	Period	Name	Base/Rate	Details
AUSTRIA	2000–04	Notional interest 1/	Book value of new (post-reform) equity/ Average return of government bonds in secondary markets plus 0.8 pp	The notional return is taxed at a reduced rate of 25 percent instead of 34 percent.
BELGIUM	Since 2006	Risk capital deduction / notional interest deduction	Book value of equity/Average monthly government bond rate of year preceding fiscal year by two years. Rate capped at 6.5 percent and cannot change by more than 1 pp from year to year. Special SME rate is 0.5 pp higher.	The notional return is deductible.
BRAZIL	Since 1996	Remuneration of equity	Book value of equity/Rate applicable to long-term loans	Up to the level of the notional return, dividends can be paid as "interest on equity". This is deductible for all corporate income taxes and subject to the usual withholding tax on interest.
GROATIA	1994– 2000	Protective interest	Book value of equity/5 percent plus inflation rate of industrial goods if positive.	The notional return is deductible.
ITALY	1997– 2003	Dual income tax	Book value of new (post-reform) equity. From 2000: 120 percent of new equity. In 2001: 140 percent of new equity, then again 100 percent of new equity/ 7 percent 1997–2000, 6 percent 2001	The notional return is taxed at a reduced rate of 19 percent. Other profits are taxed at 37 percent (34 percent in 2003). Before 2001, the average tax must be at least 27 percent

Notes: This table is adapted from Klemm (2006)

Table 3: Overview of Securities Transaction Tax Around the World

Country	Securities transaction taxes applicable in principle	On regulated markets	Type of securities in scope	Rate	Revenue	Remarks
BELGIUM	Tax on Stock Exchange Transactions	Yes	All securities	0.17% (or 0.5% or 0.07% depending on the type of security)	EUR 134 million	There is an exemption for non-residents and the Financial Sector acting for its own account
CYPRUS	Levy on transactions effected in respect of securities listed at the Cypriot Stock Exchange	Yes	'Titles', meaning shares, stocks, debentures, founding and other titles of companies that are listed at the Stock Exchange	0.15%	EUR 1.4 million	This legislation ceases to be of effect from 31 December 2011
	Stamp Duty	No, exempt if listed at stock exchange	Securities issued by Cypriot-resident companies	0.15% (on the first EUR 170,860) plus 0.2% (on amounts over 170,860)	N/A	Stamp duty is applicable to the agreement and not to the transaction
FINLAND	Transfer tax	No, exempt if traded on a qualifying market	Finnish securities, e.g. equities, PPL, stock options, but not debt securities or derivatives	1.60%	N/A	
FRANCE	STT	Yes	Transactions on shares of publicly traded companies established in France, whose capital is over EUR 1 billion. High frequency and automated trading operations, taxable at a rate of 0.01% on the amount of cancelled or modified orders above a ceiling, which will be defined by a Ministerial Decree; and Purchase of a Credit Default Swap (CDS) by a French Company, taxable at a rate of 0.01% on the amount	0.1% for shares, 0.01% for HFT and CDS	N/A	The French Securities Transactiosn Tax is In effect from 1 August 2012.
GREECE	Transaction duty	Yes, OTC transfers of Greek listed shares are subject to the duty	Greek or foreign listed shares and compound products such as equity swaps, call options, futures	0.15%	EUR 54 million in 2010	Draft bill in which amendments are proposed, for example abolition of transaction duty for the sale of listed shares initially acquired after 1.1.2012
IRELAND	Stamp duty		Stocks or marketable securities (including derivatives) of an Irish company or Irish immovable property	1% but possibly up to 6%	N/A	
ITALY	FTT	Yes	Shares, equity-like financial instruments and derivatives, as well as high-frequency trading	0.10% per exchange transaction and 0.20% on over-the-counter trades	N/A	The Italian Securities Transactiosn Tax is In effect from 1 March 2013.
POLAND	Taxation of sale or exchange of property rights	No, exemption for transactions within an organised market	Securities and derivatives, except Polish treasury bonds etc.	1.00%	N/A	
ROMANIA	Securities transaction taxes	Yes, whether on the regulated market or not	All types of securities	A commission of a EUR maximum of 0.08% or a monitoring fee of 0.15%; a commision of 0.10 RON when derivatives are involved	EUR 4,022 million in 2009	
UK	Stamp Duty and Stamp Duty Reserve Tax		Equities, certain equity derivatives (cash-settled derivatives excluded) and some loans having equity-like features	0.5% (or 1.5%)	N/A	Certain reconnized intermediaries (Financial sector traders) are given an exemption
SINGAPORE	Stamp duty	No, not applicable to transactions on the Singapore Exchange via the scripless settlement system	Stocks and shares, including debt with certain features	0.20%	EUR 1,157 million in 2007	
SWITZERLAND	Transfer stamp tax	Yes	Bonds, shares (including shares in investment funds)	0.15% for domestic securities and 0.3% for foreign securities		Foreign banks and securities dealers are exempt parties, amongst others

Notes: Part of this table is adapted from European Commission report of 2011 (EC, 2011).

Table 4: VAT Option to Tax, Payroll Taxes, and Insurance Premium Tax

Country	Option to Tax	Payroll Tax (similar to payroll tax base of FAT)	Others
AUSTRIA	Option to tax adopted to a very limited extent, i.e. for certain very specific financial services mentioned in article 135 (1) (b) and (c) of Directive 2006/112/EC		
BELGIUM	Option for taxation adopted to a very limited extent, i.e. for certain very specified financial services mentioned in article 135 (1) (d) of Directive 2006/112/EC		
BULGARIA	Option for taxation adopted to a very limited extent, i.e. for certain very specific financial services mentioned in article 135 (1) (b) of Directive 2006/112/EC		
DENMARK	N/A	Most VAT exempt activities, including VAT exempt financial activities, are liable to a Special Payroll Tax. Also branches and representative offices are liable if they have employees in Denmark. Financial service companies (or companies whose main activity is financial services) must pay the highest tax rate, namely 10.5% of the payroll related to VAT exempt activities. The taxable base will as a main rule include all payroll and all taxable benefits.	
ESTONIA	Option for taxation adopted for financial services mentioned in article 135 (1) (b) to (g) of Directive 2006/112/EC		
FRANCE	The scope of the option is widely defined by a legal provision. However, another provision explicitly excludes from that scope a series of transactions or of kinds of transactions	Not applicable to transactions but paid by a French-established employer on the salaries (progressive in accordance of salary threshold) to the extent that its turnover is either VAT exempt (without credit) or outside scope of VAT. In this respect, the Payroll Tax is apportioned on the basis of the following ratio: Numerator: the VAT exempt and the outside scope of VAT revenue, and Denominator: the total revenue (taxable, VAT exempt and outside scope of VAT)	Turnover tax: A 'value added contribution' is assessed on the added value of French companies. This applies to banks and other companies where their turnover exceeds EUR 152,500. The tax is computed by applying a progressive rate ranging between 0% and 1.5% on the added value of the company. Both turnover and the added value are calculated according to special provisions for banks (e.g. 95% of dividends deriving from long-term investments are not taken into account instead of a complete exemption).
GERMANY	Option for taxation adopted for financial services mentioned in article 135 (1) (b) to (f) of Directive 2006/112/EC Not applicable for insurance transactions according to article 135 (1) (a) of Directive 2006/112/EC and management of special investment funds according to article 135 (1) (g) of Directive 2006/112/EC.		
LITHUANIA	Option for taxation adopted to a limited extent, i.e. for certain very specified financial services mentioned in article 135 (1) (b) to (e) of Directive 2006/112/EC		

Note: This table is adapted from the European commission report of 2011 (EC, 2011).

Country	Start Date	Funds raised contribute to	Tax base	Threshold	Rates
AUSTRIA Stability levy	1-Jan-11	Treasury	Unconsolidated balance sheet total. In addition, there will be a tax levied on the transaction volume derived from derivatives. The taxable amount will be based on the nominal amount of all derivatives reported on the trading book and of all short option positions. The tax base is calculated as the average of the relevant figures at the end of the first three calender quarters and the end of the financial year.	Tax base of EUR 1 Billion.	Progressive rates: >= € 1 bn <= € 20 bn = 0.055% > € 20 bn = 0.085% Derivatives are taxed at 0.013% of their tax base. For 2012-2017 there will be a surcharge of 25% of the total tax calculated.
BELGIUM Contribution to the Special Protection Fund for deposits, life insurances and capital of recognized cooperative companies	1-Jan-12	Special Protection Fund	Total amount of deposits guaranteed by the Special Protection Fund as at 31 December of the preceding year. For Belgian credit institutions (excluding branches of credit institutions established in other member states of the EEA and excluding Belgian branches of credit institutions established in non-EEA states that do not currently have in place a deposit protection scheme equivalent to the Belgium scheme), the levy is calculated taking into account certain risk factors.	N/A	0.10%. However, for 2012 and 2013 the rates will be 0.245% and 0.15% respectively. Currently a bill is pending according to which the percentage would be adjusted to 0,08%. For 2012 and 2013 the percentages would amount to 0.26% and 0.13% respectively.
BELGIUM Contribution to the Resolution Fund	1-Jan-12	Resolution Fund	Total liabilities as at 31 December of the preceding year reduced by the sum of (i) the deposits guaranteed by the Belgian Special Protection Fund and (ii) the amount of equity.	N/A	0.035%
CYPRUS Bank levy/tax	29-Apr-11	Financial Stability Fund	From 2013 onwards they will be liable to contribute 0,03% on their relevant liabilities (excluding Tier 1 Capital) to the Independent Financial Stability Fund, which aims to provide assistance to distressed financial institutions.	From 2013 there will be no threshold.	From 1 January 2013 the rate of contribution will be 0.03% on the relevant liabilities.
FRANCE Tax on banks	1-Jan-11	Treasury	Based on minimal amount of own funds required to comply with the coverage ratios' obligations as determined by the regulator, for the preceding calendar year. This is by reference to the accounts subject to French supervision e.g. if regulated on a stand-alone rather than a consolidated basis or vice versa the levy will follow that basis.	EUR 500 million of minimal own funds requirement.	0.25%
GERMANY Bank levy	1-Jan-11	Banking Fund	Relevant liabilities of the prior year balance sheet (local) based on legal entity accounts.	None	Progressive rates for "relevant liabilities": <= € 10 bn = 0.02% > € 10 bn) € 100 bn = 0.03% > € 100 bn = 0.04% 0.00015% for off balance sheet derivatives.
HUNGARY Tax on financial institutions	27-Dec-10	Treasury	The adjusted balance sheet total (total assets). The adjusted balance sheet total is the balance-sheet total for 2009 decreased by the items listed below From 2011, profitable credit institutions could be subject to a newly introduced profit-based surtax (partly or fully replacing the levy introduced in 2010). However, this is somewhat a nominal change only as the overall surtax payable will remain unchanged (assessed in substance from balance sheet total figures). The tax base is different for other financial institutions (i.e. insurance companies, financial enterprises, the stock exchange, fund management companies, broker dealers), including such things as premium income, profits, or value of managed funds.	None	Progressive rates: <= HUF 50 bn = 0.15% > HUF 50 bn = 0.53% The tax rate is different for other classes of financial institutions (i.e. an insurance company, financial enterprises, stock exchange, fund management companies, broker dealers).

Table 5: Overview of Bank Levies Around the World - Continued

Country	Start Date	Funds raised contribute to	Tax base	Threshold	Rates
ICELAND Special tax on financial institutions	30-Dec-10	Treasury	Total liabilities at the end of the fiscal year as listed in the financial institution tax return, cf. Act no. 90/2003, on Income Tax. It is not permissible to net off the assets and liabilities within individual items or categories when calculating the tax base.	None	0.1285%
ICELAND Financial Management Tax	1-Jan-12	Treasury	Any kind of salaries or remuneration paid to Icelandic tax residents in respect of a taxable employment. This includes any kind of remuneration whether it is allowances, daily living expenses, compensation, loans to employees, gifts or other benefits.	None	Progressive rates: <= 1 bn ISK = 5.45% > 1 bn ISK = 6.0%.
KOREA (Republic of) Bank levy	1-Aug-11	Financial Exchange Equalization Fund	Annual average daily balance of non-depository foreign borrowing as indicated in the bank's balance sheet. Annual average daily balance is calculated as the sum of daily balance during the levy period divided by 365 or 366 if the levy period is a leap year. Outstanding balances of non-deposit foreign currency liability will be calculated on the basis of daily average balances. Non-deposit foreign currency liability is to be calculated on the total amount of foreign liabilities minus deposit foreign currency. Local banks (i.e. banks that do not operate nationwide) will be given 50% tax reduction on their non-deposit foreign currency liabilities taken out from domestic banks.	None	Imposed by reference to liability maturity. <= 1 year = 0.2% > 1 year <= 3 years = 0.1% > 3 years <= 5 years = 0.05% > 5 years = 0.02% The rate may be raised by up to 1% for six months at most when emergencies happen such as instability in the global financial markets and massive inflow of foreign funds into the country.
PORTUGAL Contribution on the banking sector	1-Jan-11	Treasury	Based on the amounts included in the stand-alone accounts for the following items (i) total liabilities, and (ii) notional amounts of financial derivatives entered into by the credit institution. The stand-alone accounts to be prepared in accordance with Portuguese banking GAAP (adjusted IFRS).	None	(i) Total liabilities subject to a rate of 0.05%; (ii) Notional amount of financial derivatives subject to a rate of 0.00015%.
ROMANIA Special Fund for Compensation	2-Jun-11	Special Fund	Total liabilities	None	0.1%
SLOVAKIA Bank levy	1-Jan-12	State Budget	The levy is calculated by reference to the bank's liabilities.	None	0.4%
SLOVENIA Tax on banks	1-Aug-11	State Budget	Total assets as shown in the statement of financial position of the bank, calculated as an average value on the last day of each month in the calendar year. For non-Slovenian banks, subject to below, total assets of the branch office, calculated as provided in first paragraph. For EU banks that have a tax permanent establishment (no physical branch), it is the proportionate share of total assets, taking into account the volume of business in Slovenia.	None	0.1% of the tax base
SWEDEN Stability levy	20-Dec-09	Stability Fund	Sum of the liabilities and provisions (excluding untaxed reserves) as included in the year end balance sheet.	None	0.036% but a 50% reduced rate for 2009 and 2010.
THE NETHERLANDS Bank tax	1-Jul-12	Treasury	The stand-alone balance sheet or, if applicable, the worldwide consolidated balance sheet, less relevant liabilities, in excess of EUR 20 billion.	EUR 20 billion.	0.044%, and 0.022% for long-term funding (more than one year). If one member of the board receives non-fixed remuneration of more than 25% of fixed income, the rates will be multiplied by the factor 1.1.
UNITED KINGDOM Bank levy	1-Jan-11	Treasury	Relevant liabilities; 50% tax rate for "stickier" funding (>1 year maturity); relevant liabilities up to £20bn not chargeable.	GBP £20 billion "relevant" liabilities	For 2011 rates were 0.075% and 0.0375% for longer maturity funding in practice (effective rate for a December year end); 2012 rates have increased to 0.088% and 0.044%; 2013 rates to increase to 0.105% and 0.0525%.
UNITED STATES OF AMERICA Financial Crisis Responsibility Fee	Still a proposal as of October 2011	Fund to recoup costs of TARP	Fee would be based on the "covered" liabilities of a financial firm, which are generally the consolidated risk-weighted assets of the firm.	US$50 billion of worldwide consolidated assets	0.17% of "covered" liabilities, with a 50-percent discount for more stable sources of funding, including long-term liabilities.