

**AHRC FinCris Project Report:**

**Balancing the Regulation and Taxation of Banking**

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## **1. Introduction**

Since the ‘Global, or Great, Financial Crisis’ (GFC) of 2007-9, policy makers and regulators have been seeking the best approach to ‘taxing’ financial institutions and their activities in the financial markets. There are a number of ways of taxing banks, with the goals of improving their stability, and dissuading them from engaging in overly risky activities whilst also raising tax revenue. One way is through regulations and another is through imposing direct ‘fiscal’ taxes that raise revenues. Hitherto, regulations have been the dominant approach to ensuring the stability of banks and the banking sector. The post crisis Basel III framework strengthens the minimum risk related capital requirements required by Basel I and Basel II and also introduces new regulations in the form of bank liquidity requirements and bank leverage ratios.

Nevertheless, the big banks remain implicitly insured by taxpayers and can consequently raise funds more cheaply than less strategically important banks that are deemed not to be too big or complex to be allowed to fail. This gives the big banks a competitive advantage and re-enforces their dominance. In response to this, systemically important financial institutions (SIFIs) are increasingly required to hold supplementary capital as recommended by the Financial Stability Board (FSB, 2011) and attention is now turning to TLAC, the total loss absorbing capacity of banks and the banking system (Mullineux, 2014).

The GFC revealed problems with the regulatory approach to addressing externalities arising from excessive bank risk taking and from the ‘too big (or complex) to fail’ problem. A structural proposal 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’, or infrastructural, part of the bank, so that it can keep functioning without unduly disrupting payments systems and economic activity.

In the UK’s Financial Services (Banking Reform) Act (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’ in London. Meanwhile, the EU is still considering the Liikanen Report proposals

(Liikanen, 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 and elsewhere in continental Europe.

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 back stop.

Nonetheless, we consider regulatory reforms to be moving in the right direction.

Keeping in mind the usefulness of regulations to ensure financial stability, we argue that the aforementioned regulatory and structural measures should be augmented by (fiscal) taxation and also that a fair balance between regulation and fiscal taxation should be aspired to. We propose that Adam Smith's (Smith, 1776) widely accepted 'principles' of fairness and efficiency in taxation 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 ultimate aim should be to tax banking activities, not just banks as variously defined in different countries and regionally regulated blocs, so as to include 'shadow banking' as well as mainstream banking.

In this report, we study how banks are regulated and taxed in a number of countries and analyse 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 instrument trading (the Financial Transaction Tax, or FTT); of financial activities (the Financial Activities Tax, or FAT); and banking products and services

using a Value Added Tax (VAT) or GST (Goods and Services Tax), as it is called in Australia and new Zealand..

We note that revenue from such taxes could be hypothecated in order to build ‘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. Differential rates of taxation, like varying risk weights in the Basle risk-related capital adequacy requirements, might potentially be used to ‘tax’ risk taking at appropriate rates in order to promote financial stability and could be varied over time as a macro-prudential policy tool.

We support the 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 and reducing bank leverage to make banks safer. This in turn raises the question of whether tax deductibility of interest on debt should be removed from banks alone, as they are the licenced creators on credit.

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. But 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 and now forms the basis of central bank interest rate setting operations.

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. Nevertheless, we might support a suitably low 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’ by throwing ‘sand in the wheels’ of the stock market.

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) for the UK and the Henry Report (2010), for Australia. It would also discourage over use of financial services and the elimination of the distortionary UK ‘free banking’ system, based on cross-subsidisation, and promote efficiency in the payments 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.

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. The best use of a bank levy, as proposed in the Eurozone, is to fund the build-up of a bank resolution and deposit insurance fund. Once the fund reaches a sufficient size, the levy should be phased-out and replaced by a risk related deposit insurance premium, as in the US, leaving banks' profits in the UK to be taxed in line with other companies once it is deemed that they have made a 'true and fair contribution' to the fiscal consolidation made necessary by the banking crisis and the major recession it precipitated.

Finally, we conclude that 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. As with deposit insurance, the principle of pooling risks should underpin liquidity insurance and so ever larger liquidity reserves within banks should be mitigated by a redefinition of a modern fit for purpose lender of last resort liquidity support regime operated by central banks. As with deposit insurance, the implicit premium implied by conditions of access to the facilities should be risk related, in line with the Bagehot (1873) principals that have been relaxed since the onset of the GFC and further undermined in the face of the Eurozone crisis. In other words, deposit insurance premiums and conditions for access to central bank liquidity insurance should 'tax' risk taking.

The remainder of this AHRC 'FinCris' project report for its 'Taxing Banks Fairly' work stream is organised as follows: Section 2 draws a comparison between bank regulation and taxation; Section 3 reviews the causes of the GFC; Section 4 describes the fiscal

costs of the GFC; Section 5 provides an overview of existing taxation and related issues; Section 6 discusses the taxation of financial instruments; and Section 7 provides a summary and conclusion.

## ***2. Regulations and Taxation***

The IMF (2010) proposes the use of taxes and regulations to counteract micro- and macro-prudential risk in the financial system. Although regulations have traditionally been used to try to assure banking stability, their focus has primarily been on micro-prudential regulation and supervision. The GFC emphasized the need for a macro prudential framework that can address systemic risks and hence focus on the stability of the financial system as a whole. We portray the taxation of banks as a macro-prudential regulation. This idea of using regulatory ‘taxes’ and other micro- and macro-prudential policy measures, including the implementation of fiscal taxes and surcharges and credit controls, has been pursued by policy makers around the world for some time. For instance, a number of Asian countries, including Hong Kong, have long used restrictions on loan-to-value ratios, capital inflows and other ad hoc measures to limit internal or external vulnerabilities. Over a decade ago, the General Manager of the Bank for International Settlements (BIS), Andrew Crockett (2000), proposed marrying the bank specific micro-prudential and the systemic macro-prudential dimensions of financial stability in a speech that proved prescient.

Keen (2011) considers the choice between taxation and regulation measures to bring

about the stability of a financial system. He lists the following factors that can help balance tax and regulatory measures: 1) income effects; 2) uncertainty; 3) asymmetric information; and 4) institutional issues.

1) 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.

2) The comparison between taxation and regulation depends on the shape of private marginal cost (PMC) and marginal external benefit (MEB), as demonstrated by Weitzman (1974). If the externalities are small, taxation will dominate (the MEB curve then being horizontal, at zero). However, in the case of a major bank failure, regulation is preferred because the external cost of failure exceeds the private benefits.

3) There is information asymmetry between the policy makers and the management of financial institutions with regard to the riskiness of their financial affairs, as well as the quality of their management. Banks differ in their ability to manage risk and to set up an optimal policy. In this case, a minimum capital requirement is useful to limit the risk taking ability of banks. However, a nonlinear tax, with an increasing marginal rate on bank borrowing, can still be helpful.



4) Finally, as far as regulations are concerned, there have been some coordinated efforts towards the implementation of regulations at the global level; for example, Basel III. However, there has been little global effort to coordinate the enforcement of taxation. Nevertheless, there have been unilateral taxation innovations in different parts of the world. Recently, the European Parliament has taken an initiative to ask banks to report a breakdown of the taxes they pay in different jurisdictions; it is expected that the same practice will be implemented worldwide.

De Nicolò 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.

The prevailing Basel II regulations were not able to prevent banks from taking excessive risks, forcing governments to either let them fail or bail them out in the GFC. Basel II consisted of three pillars: a minimum risk-weighted capital requirement, a supervisory review and market discipline. The calculation of credit risk exposures relied on assessment of risk-weighted assets. The idea is that because some assets are riskier than

others, banks should hold more capital against riskier assets. There are two major problems attached to this: the calculation of risk weights was backward looking and thus assumed that the relative riskiness of assets would not change over time. In addition, it was assumed that sovereign bonds were riskless; regardless of which developed country issued them. Because Greece was part of the European Union, the bonds issued by the Greek Government carried the same zero weight as those issued by their German counterpart. The problem with this approach became evident with the onset of the Eurozone crisis in 2010, after which Greek government bonds carried a higher risk premium in the bond markets than German ‘bunds’.

Further, banks with similar portfolios can potentially use quite different risk weights in their modeling of portfolio risks. The supervisors allow big banks with large trading books to use their own internal models to determine the riskiness of their asset portfolios and to hold capital based on their own risk assessments. On the other hand, there are explicit risk weighted capital requirements for traditional loans. Consequently, bigger banks with large trading books can hold proportionately less capital and still report higher capital ratios, compared to smaller banks whose portfolios contain mostly traditional loans.

Furthermore, the preferred approach for the calculation of market risk was value-at-risk (VaR).<sup>1</sup> Taleb (2010) famously highlighted the ignorance of underestimation of the risks in the falsely assumed normal distribution tails. Nocera (2009) argues that the whole value-at-risk structure gives banks an incentive to push risk into the ‘tails’ of the

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<sup>1</sup> Value-at-risk (VaR) is a statistical model that gives the probability of certainty (X%) that more than a certain amount of dollars will not be lost in the next N days. For example, if we have \$10 million of daily VaR with a 99% confidence interval, it means that we are 99% confident that we will not lose more than \$10 million today.

statistical distribution, which essentially ‘fattens’ them and significantly increases banking risk. Therefore, it is important that we can estimate the ‘tail-risks’ of banks.

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. Furthermore, as highlighted by Mullineux (2012), the increased emphasis on core equity will put the small mutual saving banks at a disadvantage because they cannot issue equity, potentially reducing diversity in banking: which is widely seen as beneficial (Mullineux, 2014).

An issue highlighted by which the Parliamentary Commission on Banking Standards (PCBS, 2013a) report, is that the proposed Basel III capital leverage ratio<sup>2</sup> of 3% is too low, and that it should be substantially higher than this level.<sup>3</sup> Admati and 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 crunch perhaps. The parallel Basel risk-weighted capital adequacy requirements would limit this tendency, however and the balance between the leverage and risk weighted

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<sup>2</sup> 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 to their risk.

<sup>3</sup> 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.

capital ratios needs to be carefully thought through to avoid double taxation and distortions.

The issue of whether increased capital (and liquidity) ratios will impede lending, especially to the largely bank-dependent SMEs (Bernanke and Gertler, 1995) is of major political and economic importance. The Modigliani and Miller (1958) suggests it should not matter in what proportions banks use debt and equity funding, provided, crucially in this case, there were no tax distortions, *inter alia*. But, clearly the tax system contains a bias towards debt finance that needs to be addressed. One option is to remove tax deductibility of interest for all firms, or perhaps just banks; and certainly not SMEs given that they remain largely bank dependent although with ‘crowd-funding’ and ‘invoice discounting’ via the internet increasingly available, the dependency may decline over time. Another is to create equivalent deductibility with regard to dividend payments, and thereby removing the often alleged ‘double taxation’ of saving. Admati and Hellwig (2013), with support from the IMF (Klein, 2014), go further in arguing that well capitalised (and regulated and supervised) banks may actually lend more to SMEs and in general and will be better able to manage their risks.

In considering the balance between regulatory and fiscal taxes, the principle of ‘risk pooling’ in insurance (Bodie et al., 2013) should be borne in mind. Capital (and liquidity) requirements are imposed on individual banks and can be regarded as in-house insurance funds. It is generally cheaper and more efficient for those seeking insure to pay into a pooled fund, rather than hold sizeable precautionary reserves against risks such as houses burning down or car accidents or theft. Pooling reduces the average risk and is thus cheaper.

Thus if the banks pay into deposit insurance and bank resolution funds, they need hold less in-house insurance. Further the central bank, as ‘lender of last resort’, can decide on the extent and at what cost it provides liquidity insurance to the banks, and thus the size of the liquidity reserves they need hold. As long as the insurance premiums are appropriately risk-related, there should be no moral hazard issues. The risk weights upon which the premiums would be based are related to those used in calculating risk-related capital adequacy under the Basel III framework. To minimise distortions and unintended consequences, the trick is to get the risk weights, and thus the risk premiums right. The resolution and deposit insurance funds can be raised via risk related levees on individual banks, which is probably least distortionary and directly taxes riskiness, or out of financial sector taxes, as proposed with the Eurozone-wide bank levy (EC, 2010).

Financial stability can be regarded as a ‘Public Good (Samuelson, 1954) and so taxpayers may indeed be expected to contribute to the cost of its provision and must decide how much of it they want. To be perfectly safe, ‘banks’ would have to eschew credit risk exposures and cease lending, but if bank lending contributes significantly to growth, then we want banks to take risks, but to manage them appropriately, so that implicit taxpayer insurance is reduced. But how far should it in fact be reduced? This is a public policy issue (Mullineux, 2013 and 2014). Further, ‘taxing’ banks risks pushing some parts of banking into the ‘shadows’ to avoid regulatory and pecuniary taxation and requires extending appropriate regulation and taxation, including consideration of relative corporate, income and Capital Gains Tax (CGT) levels, to the ‘shadow banking’ sector, as proposed by the FSB in October 2014 (FSB, 2014).

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)<sup>4</sup> 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. After the advent of the 2007 financial crisis, improved measures 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.

Macro-prudential supervision primarily focuses on reducing asset price inflation and preventing 'bubbles', and thus the need to insure against bank failure when asset price 'bubbles' burst. Hence it protects taxpayers from the need for bail-outs. The proposed tools include (mortgage or home loan the (house price) to value' and 'loan to income' ratios; which can be raised in response to increasing asset price inflation. They are 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

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<sup>4</sup> Bank of England (2009), 'The Role of Macroeconomics Policy: A Discussion Paper'.  
<http://www.bankofengland.co.uk/publications/Documents/other/financialstability/roleofmacroprudentialpolicy091121.pdf>.

of average time-to-maturity of a bank; 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).

These macro-prudential instruments are largely untested as yet, although the US Federal Deposit Insurance Fund collects risk-related insurance premiums from banks and serves as a resolution fund for banks that are not ‘too big to fail’ and the Hong Kong Monetary Authority had been setting loan to value ratios for home loan for some time (HKMA, 2013). There is a worry that it may prove politically difficult for public access to affordable mortgage finance to be limited through loan-to-value and loan-to-income ratios manipulated by an unelected PRA at the Bank of England.

The Eurozone member countries reached an agreement on 18 December 2013 to form a ‘Banking Union’ which will have three pillars: a Single Supervisory Mechanism (SSM), a Single Resolution Mechanism (SRM) and a common deposit guarantee scheme (DGS). The SSM came into operation, co-ordinated and overseen by the European Central Bank (ECB) working with national central banks of the member countries, in November 2014 following a Comprehensive Assessment of the banks to be supervised. The assessment involved an Asset Quality Review undertaken by the ECB and Stress Tests of the banks by the European Banking Authority, the EU banking regulator. It is proposed that a common bank levy is used to build up, over a number of years, a Bank Recovery and Resolution Fund. The aim is to protect taxpayers from having to bail out banks. To achieve this, however, a very large, hopefully normally idle, fund would be

required. In the US, the FDIC is underwritten by the Treasury and cannot afford to resolve the problems of large banks. The FDIC, it should be noted is funded using risk-related premiums levied on banks and ‘holidays’ are granted when funds reach target levels in times when there are few calls on the funds.

The UK could possibly use its Bank Levy to establish pre-funded resolution fund to make the recently enacted ‘depositor preference’, or debt seniority over all bond holders, a reality; but a deposit guarantee scheme funded using risk related premiums paid by banks, in line with the US, might be better. The trouble is that most of UK banking is done by a few large banks that could not be bailed out using the fund. For a UK deposit insurance corporation to work along US lines, the big banks would have to be broken up.

The UK Financial Services (Banking Reform) Act and EU Banking Union agreement both establish depositor preference, with the Eurozone providing for the ‘bailing-in’ of junior and senior bondholders in accordance with credit standings. This means that the bondholders have to share losses in accordance with their credit seniority, once shareholders have taken their losses, before government assistance to rescue banks is provided.

Alongside all 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 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.

Other studies such as those of Shaviro (2011) and Ceriani et al. (2011) have, however, argued that taxes have the potential to exacerbate behaviours 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 and Gordon, 2002). Bank lending by borrowing short, increasingly in the wholesale money markets, to make long

term home loans, and thus engaging in positive asset transformation, which exposed them to increasing liquidity risk, increasing their leverage clearly increased financial fragility; but in order to lend, there must be willing borrowers (Mian and Sufi, 2014).

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 these three kinds of taxation contributed to the global financial crisis and that 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, however, encourage managers to aim 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.

Next, we briefly review the, still debated, causes of the financial crisis in order to identify the regulatory issues at stake and the political motivation to increase the level and range of taxes on the financial sector.

### **3. Causes of the Global (or Great) Financial Crisis (GFC)**

### **3.1. Micro-economic Causes**

The Bank for International Settlements (BIS, 2010) states that the ‘micro-economic’ causes of the GFC fall into three main categories: flawed incentives; failures of risk measurement and management; and weaknesses in regulation and supervision. Together, these shortcomings allowed the entire financial industry to book profits too early, too easily and without proper risk adjustment.

The crisis revealed distorted incentives for consumers and investors, financial sector employees, and rating agencies. Many consumers over-borrowed and savers invested in complex and opaque products whose riskiness was difficult to understand. Meanwhile, agents of financial firms were encouraged by compensation schemes to increase ‘sales’ volumes, leading to increased leverage and the accumulation of risks. Rating agencies, where overwhelmed by the flood of complex structured products, but unable to resist the profits from taking on the business and failed to correctly evaluate credit and other counterparty risks.

The inadequate governance of bank risk management, under which a lack of control by top management undermined the designated risk controllers, created additional problems.<sup>5</sup> Additionally, supervisory systems were too indulgent and regulations were

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<sup>5</sup> The BIS (2010) report argues that measuring, pricing and managing risk all require modern statistical tools, which are based largely on historical experiences. Despite data series with a long history, the belief that the world evolves slowly but permanently meant down weighting the importance of the more distant past and its upheavals. Therefore, the long but more recent period of relative stability created the perception that risk had permanently fallen, resulting in an increasing willingness to buy and sell risk very cheaply. See also the CRMPG (2008) report.

lax and too easily evaded. The BIS (2010) report states that overreliance by regulators and supervisors on market discipline, including the discipline supposedly imposed by credit rating agencies, led to what can only be characterised as an extremely ‘light touch’ in some countries at the core of the global financial system, particularly the UK. When the light touch itself proved too much to bear, financial institutions found it easy to shift selected activities outside the regulatory perimeter to ‘off-balance sheet’ activities, ‘off-shore financial centres’ and the ‘shadow banking’ sector, resulting in an enormous build-up of leverage and riskiness.

### **3.2. Macro-economic Causes**

The BIS (2010) report states that the ‘macro-economic’ causes fall into two broad categories: problems associated with the build-up of imbalances in international claims; and difficulties created by the long period of low real interest rates, particularly on the US.

For most of the decade preceding the crisis, persistent and large current account surpluses and deficits generated net capital flows from ‘emerging market’ countries to ‘developed economies’, the reverse of what is expected in the longer run. The BIS (2010) report argues that there are competing views on the origin of these global ‘imbalances’ and the resulting build-up of cross-country claims and puzzlingly low long term interest rates and consequent rise in consumption and leverage in a number of major advanced economies, particularly the US and the UK. These include: a savings glut in the capital exporting countries, particularly China and some other Asian, countries; a dearth of investment opportunities in some exporting and also in importing

countries; demand for international low-risk assets for portfolio diversification; and a build-up of foreign exchange by emerging market economies, including China, following the Asian Financial Crisis in the late 1990s.

The key point is that the symbiotic relationships between export-led growth in one set of countries and leverage-led growth in another set had generated the large gross flows and huge stocks of claims by residents of the capital exporting countries on the residents of the capital importing countries, or ‘global imbalances’. These flows and claims contributed to the mispricing of risky assets and to global contagion following the collapse of Lehman Brothers in September 2008.

The protracted period of low real policy rates and low ‘real’ long-term interest rates that began in 2001 following the US ‘Dot-Com’ stock price crash also had a number of important effects. Among them was the boom in credit, particularly in mortgages advanced to households in many advanced economies. This fuelled some unsustainable increases in housing prices, and the ‘search for yield’; which drove institutional investors to take on significant additional risk.

In sum, plentiful liquidity and low interest rates, or ‘cheap money’, were the major underlying factors behind the asset price, particularly house price, bubbles that preceded the GFC in various countries and markets. Many have also argued that financial innovation, including the expansion of mortgage-backed securitization and the development of the credit derivatives markets, including CDOs in particular, amplified and accelerated the consequences of the excess liquidity and rapid credit expansion.<sup>6</sup>

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<sup>6</sup> Hemmelgarn et al. (2011), Hemmelgarn & Nicodeme (2010), and the de Larosi re Report (2009)

In an environment of historically low interest rates, low returns and plentiful liquidity, investors actively sought opportunities for higher yields. Risk was widely mispriced due to lax controls. As a result, an increased number of innovative and complex instruments were designed to offer more attractive yields, often combined with an increased leverage. Specifically, financial institutions securitized their loans into mortgage-backed securities, which were subsequently converted into collateralized obligations (CDOs and CLOs), generating a dramatic expansion of leverage within the financial system as a whole.<sup>7</sup>

Financial institutions, often as counterparties, engaged in very high capital leverage ratios in pursuit of historically high returns on their equity, of beyond thirty, and in some cases as high as sixty; leaving them highly vulnerable to even a small decline in underlying asset (property) values, or even their rate of increase. The institutional shareholders seemingly encouraged this, and governments, particularly the UK, where the financial sector was nearly four times GDP, were happy to reap the consequently large tax revenues. Further, the real wages of the middle income earners had been stagnant in the US for a number of years and so there was a ‘growth imperative’ and a need for easy access to cheap credit to boost the consumption levels of an important set of voters (Rajan, 2011).

When asset prices began to fall in autumn 2007, following the fall in US house prices in the summer of 2006, the resulting expected losses could not easily be gauged and seemed unlikely be absorbable by the common equity holdings of the exposed banks; leading to a serious liquidity crisis through fear of counterparty risks. This resulted from

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provide a more detailed analysis of the roots of the crisis.

<sup>7</sup> See the de Larosi re Report (2009) for more detail.

uncertainty surrounding the value of the underlying assets, and the probably inadequacy of provisioning for losses and the underlying capital buffers; thereby exposing the interconnected traditional and rapidly growing ‘shadow banking’ system to substantial risk.

Failures in risk assessment and management were further aggravated by the remuneration and incentive schemes within the financial institutions. These contributed to excessive risk-taking by rewarding the short-term expansion of the volume of sub-prime mortgage lending and risky trades; rather than the long-term profitability of patient investment. Moreover, these pressures were not contained by regulatory or supervisory policy or practice and regulations were not effective in mitigating these risks. For example, capital requirements were particularly light on proprietary trading transactions, while the risks involved in these transactions proved to be much higher than the banks’ internal models had predicted (EC, 2011).

Both at the global level and within the EU, many governments realized that allowing major individual banks and other systemic financial institutions to fail might have been detrimental to the whole global economy. On the other hand, there was no simple way for a ‘systemically important’ bank to continue to provide essential banking functions whilst in insolvency, and in the case of a failure of a large bank, those functions could not simply be shut down without significant systemic damage. Although the actions that governments were forced to take in order to deal with banking institutions in distress (capital injections, guarantees and loans) managed to stabilize their financial systems, they also propped up failing institutions and supported shareholders, bondholders and depositors, at a huge potential cost to taxpayers. Further, as noted above, the tax-deductibility of interest has the potential to exacerbate behaviours that may have

contributed to the crisis (Shaviro, 2011; Ceriani et al., 2011).

#### **4. Fiscal Costs of the Global Financial Crisis**

Many G20 countries provided significant support to their financial sectors during the GFC.<sup>8</sup> Although the magnitude and nature of support measures varied across countries, with support in advanced countries being preponderant, interventions were been generally bold. These support measures included recapitalization and partial nationalization, asset purchases and swaps, asset/liability guarantees, deposit insurance, and liquidity support.

##### **4.1. Initial Financing Requirements and Pledged Support**

There was significant variation in the announced or pledged support for capital injections and purchase of assets across developed and emerging economies. By the end of December 2009, the advanced G20 economies had pledged \$1220 billion of capital injections and \$756 billion of asset purchases, respectively, equivalent to 3.8 and 2.4 percent of GDP (Table 1). The corresponding amounts in the emerging G20 economies were \$90 and \$18 billion, respectively; 0.7 and 0.1 percent of GDP (Table 1). In addition, Table 1 shows that within both the groups, there was significant variation in the announced amounts allocated in these two categories, with the bulk in advanced economies accounted for by Germany, Japan, the UK, and the US, while others

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<sup>8</sup> Information in this section is based on the information provided in Appendix 1 of the IMF (2010) report, which is based on responses to survey questionnaires sent to all G20 members in early December 2009. In the questionnaire, countries were then requested to review and update staff estimates of direct support to financial sectors, consisting of recapitalization and asset purchases; liquidity support comprising asset swaps and treasury purchases; and contingent support consisting of deposit insurance and guarantees. The period covered for the survey was June 2007 to December 2009.



provided no support. The IMF (2010) shows that substantial funds were pledged to guarantee banks' wholesale debt and interbank liabilities, almost entirely in advanced economies (10.9 percent of the GDP of advanced G20 economies, as shown in Table 1). Central bank support was provided primarily through the expansion of credit lines; scaling-up of liquidity provisions; purchases of asset-backed securities; widening of the list of assets eligible as collateral; and lengthening of the maturities of long-term refinancing operations (7.7 percent of GDP of advanced G20 economies, as shown in Table 1). Several governments also expanded the coverage of deposit insurance to different types of deposits or raised the limits for the amounts covered so as to maintain depositor confidence. Moreover, these governments show that financing requirements largely reflected injection of capital and purchase of assets, with the upfront commitment of such support estimated at 5.0 and 0.2 percent of GDP for the advanced and emerging G20 countries, respectively. Although guarantees, as well as central bank support and liquidity provisions, did not require upfront financing in most cases, they led to a significant build-up of contingent liabilities.

**Table 1: Amount Announced or Pledged for Financial Sector Services, by Country (In percentage of 2009 GDP unless otherwise stated)**

Country	Capital Injection	Purchase of Assets and Lending by Treasury*	Direct Support*	Guarantees***	Asset Swap and Purchase of Financial Assets, including Treasuries, by Central Bank	Upfront Government Financing****
	(A)	(B)	(A+B)	(C)	(D)	(E)
<b>Advanced Economies</b>						
Australia	0	0	0	13.2	0	0
Canada	0	9.1	9.1	0	0	9.1
France	1.3	0.2	1.5	16.9	0	1.1
Germany	3.4	0	3.4	17.2	0	3.4
Italy	1.3	0	1.3	0	2.7	2.7
Japan	2.5	4.1	6.6	7.2	0	0.4
Korea	1.2	1.5	2.7	11.6	0	0.8
United Kingdom	8.2	3.7	11.9	40	28.2	8.7
United States	5.1	2.3	7.4	7.5	12.1	7.4
<b>Emerging Economies</b>						
Brazil	0	0.8	0.8	0.5	0	0
Russia	7.1	0.5	7.7	0	0	1.9
<b>G-20 Average</b>	<b>2.6</b>	<b>1.4</b>	<b>4</b>	<b>6.4</b>	<b>4.6</b>	<b>3.1</b>
Advanced Economies	3.8	2.4	6.2	10.9	7.7	5
In billions of US \$	1,220	756	1,976	3,530	2,400	1,610
Emerging Economies	0.7	0.1	0.8	0	0	0.2
In billions of US \$	90	18	108	7	0	24

Note: (1) The figures in the table are IMF staff estimates based on the G20 survey where columns A,B, C, D, and E indicate announced or pledged amounts, and not actual uptake. (2) The table is adapted from IMF (2010).  
 \*excludes treasury funds provided in support of central bank operations.  
 \*\*includes some elements that do not require upfront government financing.  
 \*\*\*excludes deposit insurance provided by deposit insurance agencies.  
 \*\*\*\*includes gross support measures that require upfront government outlays. Excludes recovery from the sale of acquired assets.

## 4.2. Utilization of the Support to the Financial Sector

An IMF survey (IMF, 2010) finds that the utilized amounts of financial sector support have been much less than the pledged amounts. Table 2 indicates that for advanced G20 economies, the average amount utilized for capital injection was 2.1 percent of GDP, that is, \$653 billion, or just over half the pledged amount. The figures in Table 2 indicate that France, Germany, the US and the UK accounted for over 90 percent of this. For the advanced economies, the utilized amount for asset purchases was around 1.4 percent of GDP, less than two-thirds of the pledged amount, while the uptake of guarantees has been markedly less than pledged. The amounts utilized in the G20 emerging market countries have been proportionately lower.

<b>Table 2: Financial Sector Support Utilized Relative to Announcement, by Country (In percentage of 2009 GDP unless otherwise stated)</b>				
	<b>Capital Injection</b>		<b>Purchase of Assets and Lending by Treasury</b>	
	<b>Amount used</b>	<b>In percentage of Announcement</b>	<b>Amount used</b>	<b>In percentage of Announcement</b>
<b>Advanced Economies</b>				
Canada	0	...	4.4	48.4
France	1.1	83.2	0	0
Germany	1.2	35	3.7	..
Italy	0.3	20.3	0	...
Japan	0.1	2.4	0.1	1.4
Korea	0.4	32.5	0.1	3.8
United Kingdom	6.4	78.5	0.1	4
United States	2.9	57	1.9	84
<b>Emerging Economies</b>				
Brazil	0	..	0.3	43.5
Russia	3.1	43	0	0
<b>G-20 Average</b>	<b>1.3</b>	<b>51.7</b>	<b>0.9</b>	<b>60.2</b>
Advanced Economies	2	52.3	1.4	61
In billions of US\$	639	..	461	..
Emerging Economies	0.3	43	0.03	27.5
In billion of US\$	38.4	..	5	..
Note: The figures in this table are from the IMF staff estimates based on the G20 survey. The table is adapted from IMF (2010).				

The IMF (2010) report identified several reasons for the generally low amounts utilized. Firstly, they reflect the precautionary nature of initial pledges as a result of the uncertainties prevailing at the time and the need to err on the side of caution so as to increase market confidence. Secondly, they reflect more efficient use of government resources, such as using capital injections rather than asset purchases. Thirdly, they reflect the increasing stability of market conditions and improving bank liquidity following significant ‘lender of last resort’ intervention by central banks to pump liquidity into banking systems. Lastly, lags in implementation of programs for recapitalization and purchase of assets may have played a role, as has perhaps been the case in the Eurozone.

#### **4.3. Net Cost of Support Measures (Instruments) and Recovery of Assets**

The IMF (2010) report notes that many of the support arrangements were structured in such a fashion that the financial sector would pay, at least in part, for the cost of the support over time. For instance, recoveries related to the capitalization efforts would reflect repurchases, dividends, and the sale of warrants. Banks paid to participate in

asset protection schemes, and were charged sign-up and exit fees. Fees were also received for the provision of guarantees by governments, as in the UK. To boost the deposit insurance funds, monies were sometimes recouped from special levies imposed on the banking sector.

Once the financial markets had stabilized post-March 2009, some recovery of asset prices began.<sup>9</sup> Figures from the survey responses presented in Table 3 suggest that, for advanced G20 economies, recovery was sustained largely through repurchases of shares, fees, and interest income, and to a very small extent, the sale of assets. Taking into account these data, the net direct cost of recapitalization and asset purchases was estimated to average 2.8 percent of GDP, equivalent to \$877 billion, and 1.8 percent of GDP for the G20 as a whole. Guarantee measures were used more extensively than in previous crises, while total expenditures in public recapitalization to address the crisis were slightly below historical norms.

<b>Table 3: Recovery of Outlays and Net Direct Cost of Financial Sector Support (In percentage of 2009 GDP unless otherwise stated)</b>				
	<b>Direct Support</b>		<b>Recovery</b>	<b>Net Direct Cost</b>
	<b>Pledged</b>	<b>Utilized</b>		
<b>G-20 Average</b>	<b>4</b>	<b>2.2</b>	<b>0.4</b>	<b>1.8</b>
Advanced Economies	6.2	3.5	0.8	2.8
In billion of US\$	1,976	1,114	237	877
Emerging Economies	0.8	0.3	-	0.3
In billions of US\$	108	43	-	43
Note: The figures in the table are from the IMF staff estimates based on the G20 survey (IMF, 2010).				

<sup>9</sup> The IMF (2010) states that for cross-country consistency, 'recovery' here does not include unrealized gains on assets acquired by the public sector as part of the financial sector support package, but occurs only when these gains are realized as the assets are divested.

The direct net budgetary cost appears to be below historical norms, reflecting extensive use of containment measures, such as widespread central bank intervention utilizing unconventional monetary policy (asset purchases and easy lending to banks) in order to hold interest rates close to the zero lower bound, which reduced the actual cost and boosted asset prices, aiding recovery rates on sales of impaired assets and assets pledged in return for support. Historically, the net cost of guarantees has tended to be much lower than that of capital injections or asset purchases. Moreover, the IMF (2010) argues that general fiscal support to the economy through ‘automatic stabilizers’ and discretionary fiscal stimuli helped stabilize the financial sector and improve the prospects for recovery by limiting the negative feedback loops between the financial sector and the real economy.

Historically, countries have had to engage in ‘fiscal consolidation’, or deficit reduction, post crisis and this is the phase that the US and many European countries, including the UK entered from 2010. The speed of reduction and degree of ‘austerity’ required is a market conditioned political choice, but there is a trade-off between the speed and nature of the fiscal retrenchment (mix of government expenditure cuts and tax increases) and current and future economic growth prospects.

The IMF (2010) report states that for those G20 countries that experienced systemic financial crisis, the costs are comparable to earlier episodes. In fact, the broader measures of costs, in terms of the fiscal impact of induced recessions and real economic costs, are estimated to be broadly similar to past crisis episodes. For instance, Laeven and Valencia (2010) show the average increase in public debt to be about 24 percent of GDP and the output losses to be about 26 percent of potential GDP for those countries,

which experienced a systemic banking crisis in 2007-2009. They note that these estimates are not significantly different from historical averages, and argue that this time around policies to address potential banking insolvency were implemented much more promptly than in the past; which may have contributed to keeping direct outlays relatively low.

The IMF (2010) report also notes that total debt burdens had risen dramatically for almost all G20 countries as a result of the crisis and, in addition, uncertainty in the markets persisted, in part relating to the high-risk exposures of sovereign balance sheets.

#### **4.4. Addressing the Causes of the Financial Crisis**

The BIS (2010) report argues that to address the causes of the financial crisis, it is crucial that we draw the correct conclusions from them. Although one might argue that certain activities such as securitization or over-the-counter trading, and certain financial instruments such as collateralized debt obligations (CDOs) or credit default swaps (CDS), could be banned so as to prevent another meltdown; the BIS (2010) suggests taking a flexible and forward-looking approach that addresses the externalities that allowed the specific activities to inflict systemic damage.

As discussed in the IMF (2010) report, building a more resilient financial system requires addressing the risks arising from two types of externalities in that system: the micro-prudential externalities stemming from limited liability and asymmetric information (relating to individual institutions); and the macro-prudential externalities relating to systemic risks. The following two sections summarize the major reforms or

corrective tools in the form of taxes or regulations required to address those externalities and provide an overview of how they fit together.

#### **4.4.1. Reducing Micro-prudential Externalities**

Micro-prudential externalities are predominantly driven by limited liability and asymmetric information; where limited liability means that bank losses in excess of equity capital are of no direct concern to owners or managers and so, to the extent that risk is not fully priced by creditors at the margin, lead to excessive risk-taking (IMF, 2010). Although corrective tools such as risk-related deposit insurance premiums can help to offset such inefficiency, the superior information of the financial institutions makes appropriate risk adjustment of the premiums problematic. Besides, even when the risk is properly priced by creditors, the effects of limited liability can be augmented by explicit or implicit government, or taxpayer, guarantees; which will further reduce market discipline by allowing lower borrowing rates. In such situations, market forces alone cannot correct excessive risk-taking and the consequent misallocation of resources. Regulators of banks, insurers, and other financial institutions respond to these externalities by imposing a series of capital and liquidity requirements and other micro-prudential regulations, coupled with in-depth supervision and the power to impose corrective measures. Moreover, the BIS (2010) argues that the probability that a financial institution will fail can be reduced by using a variety of tools that: (i) affect the size, composition and riskiness of the balance sheet; (ii) improve the governance of the institution and the incentives of its executives; and (iii) enhance market discipline. Jointly, these should reduce risk-taking, increase the ability of institutions to absorb losses, and make failure less likely, but each is has proved hard to implement in practice.

Keeping the first goal in mind, the Basel Committee on Banking Supervision (BCBS) has recommended four types of balance sheet measures, all of which should lead banks to hold capital and liquidity that better reflects their risk exposures.<sup>10</sup> The first recommendation improves the quantity and quality of capital in banks so that they can better withstand unexpected declines in the values of their assets. The second BCBS balance sheet proposal guards against illiquidity by limiting both the extent of maturity transformation by banks (borrowing short to lend long) and their reliance on wholesale funding. The third proposal improves risk coverage with respect to counterparty credit exposures arising from derivatives, repurchase agreements, securities lending and complex securities activities. The fourth proposal complements complex, risk-weighted capital requirements with a supplementary backstop, a capital leverage ratio. Since leverage amplifies losses as well as profits, it increases the risk of failure in bad times.

Some countries, particularly Switzerland and Ireland, and to some extent the UK, have imposed more stringent capital requirements and leverage ratios on their banks. For instance, in November 2008, Switzerland's banking regulator introduced cyclical capital buffers and liquidity ratios for the two largest Swiss banks. By 2013, the capital requirements to be implemented were 50- 100% above those set in Pillar 1 of the pre-

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<sup>10</sup> The BCBS, in December 2009, published two major papers outlining proposals to strengthen capital and liquidity regulations, including a set of measures to raise the quality, consistency and transparency of the capital base (*Strengthening the resilience of the banking sector and international framework for liquidity risk measurement, standards and monitoring*, Consultative Documents, 17 December 2009). On a similar note, the IASB has proposed a forward-looking approach (International Accounting Standards Board, *Financial instruments: amortised cost and impairment*, Exposure draft ED/2009/12, November, 2009).



crisis Basel II standard. Ireland's financial regulator announced in March 2010 that by the end of that year banks in Ireland would be required to hold capital amounting to 8% of core Tier 1 capital, and capital of the highest quality (equity) must account for 7 percentage points of that amount. Any further amounts, specific to each institution, are to be added in the calculation of future loan losses. Similarly, authorities in the UK and the US have essentially done something similar through their stress-testing procedures. The anticipation of such requirements, in combination with investor demands, has already led many institutions to make significant additions to their capital bases.

The second set of tools aims to reduce the risk of failure for individual institutions by addressing governance and managerial incentives. Many countries have enhanced their supervision to ensure better risk management at financial institutions. Several measures create special bank resolution regimes, including 'living wills'. This is done in the anticipation that management will be more aware of the risks inside their own firms and better able to shut down risky activities whilst maintaining core retail banking activities and the payments systems.<sup>11</sup>

It should be noted that the 'too big to fail' problem was worsened by the absorption of sizeable troubled banks by less troubled but larger banks, resulting in increased concentration in banking markets. The resulting banking giants are yet more complex and difficult to resolve, especially when they have international reach. As a result they are implicitly insured and can raise capital more cheaply than potential 'challenger'

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<sup>11</sup> Several countries, including Germany, Switzerland, the United Kingdom and the United States, have proposed or introduced special resolution regimes for large financial firms. Cross-border resolution plans are also being considered, but it remains problematic to achieve international co-ordination.

banks. Consequently, banking market competition is also distorted; adding to the list of adverse externalities (Mullineux, 2012 and 2013).

Attempts to align compensation structures with prudent risk-taking aim to reduce the perverse incentives that drive traders and bank management to seek short-term profits without regard to the long-term risks imposed on the firm and the system.<sup>12</sup>

A third set of tools aims to increase transparency in order to enhance market discipline. For instance, the enhancements to the Basel II regulatory framework published by the BCBS in July 2009 addressed weakness in the disclosure of securitization exposure at banks. Other tools include those sought by the International Accounting Standards Board (IASB) and the US Financial Accounting Standards Board (FASB) to increase the international harmonization of accounting standards; implementation of regulations proposed by the International Organization of Securities Commissions (IOSCO) to address the need for stronger standards and oversight for credit rating agencies; and improvements of disclosures more generally.

#### **4.4.2. Reducing Macro-prudential Externalities**

Macro-prudential externalities relate to systemic risk in which the failure or distress of one institution can have contagion effects on other institutions or clients, leading to a system-wide failure. Studies such as that of Brunnermeier et al. (2009) argue that key channels for the diffusion of macro-prudential externalities include direct financial

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<sup>12</sup> The Financial Stability Board (FSB) has presented guidelines for the reform of the regulatory and supervisory framework that addresses these concerns (see *FSB principles for sound compensation practices – implementation standards*, September 2009, based on an April 2009 report issued by the predecessor organization, the Financial Stability Forum). Progress in the implementation of those standards was reviewed by FSB in *Thematic review of compensation* (BIS 80<sup>th</sup> Annual Report, March, 2010).

exposures; market exposures (when leverage and funding constraints at many institutions lead to fire-sales and downward asset price spirals); or reputation exposures (when asymmetric information causes creditors to ‘run’ from many financial institutions when faced with uncertainty). In fact, the problem of common exposures is relatively straightforward. By definition, it would mean that a financial landscape dotted with a large number of small yet identical institutions will be just as prone to challenge as a system with a small number of financial behemoths. Therefore, to guard against either type of weakness, the regulators and supervisors have to ensure that not all intermediaries are subject to the same stresses at the same time.

In addition, size and complexity can further augment financial sector externalities, particularly macro-prudential ones. In the case of large and complex systemically important financial institutions (SIFIs), the consequences of whose failure would be extremely severe, financial markets will expect governments to support them in order to avoid further adverse effects. This leads to compounded moral hazard in the form of SIFIs taking on more risks, and shifting risks from shareholders to taxpayers, and perhaps to bond holders, if governments can ‘bail them in’ to protect taxpayers (Mullineux, 2013). Consequently, much of the current policy agenda is aimed at reducing the risks associated with institutions that are TBTF, or SIFIs, including supplementary capital requirements (Mullineux, 2013)

The inherent pro-cyclicality of the financial system, under which, during cyclical upswings, financial institutions build up leverage and risk without having the incentive to sufficiently account for the fallout for the rest of the financial system and the real economy of the adjustment that will become necessary when asset price increases do

eventually reverse. In these circumstances, risk is typically under- priced, leading to rapid asset price appreciation and financial institutions taking on additional exposures whilst lowering of credit or lending standards. Such booms, in turn, often involve increases in non- core short- term liabilities, including foreign exchange imbalances accumulated through ‘carry- trades’.<sup>13</sup>

#### **4.4.2.1. Reducing the Risks of Common Exposures and Inter-linkages or Systemic Risk**

We do not want a system in which too many financial institutions fail at once; either because they have a common exposure to risk, or because a single institution is so large or interconnected that its failure brings about a system-wide crisis, creating a cascade of insolvencies.

The biggest challenge is thus to prevent a single financial institution from creating a ‘domino effect’ of failures. This involves three tasks: (i) reducing the systemic importance of financial institutions; (ii) minimizing spill overs from an institution’s failure by ensuring that the costs of failure will be borne by its unsecured creditors; and (iii) bringing all systemically relevant financial institutions and activities, including parts of the ‘shadow banking’ sector, within the regulatory perimeter and keeping them there (BIS, 2010).

The first task of reducing systemic risk involves preventing a financial institution from

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<sup>13</sup> Carry trade is the borrowing of a currency in a country where the interest rate is low; converting it to a currency in a country where the interest rate is higher and investing the amount in the highest rated bonds of that country.

becoming so big or so interconnected that their failure could not be tolerated. The BIS (2010) argues that there are a variety of means that could be used to discourage institutions from contributing to systemic risk; among them are scope constraints and pricing policies. With regards to scope constraints, policy makers have contemplated rules that would variously limit the extent of financial intermediaries' activities or simply limit the asset size of institutions. For instance, Volcker, in his statement before the Committee on Banking, Housing and Urban Affairs on 2<sup>nd</sup> February 2010, proposed banning deposit taking banks in the United States from engaging in proprietary trading and this was subsequently incorporated in the US Dodd-Frank Act (Dodd-Frank Act, 2010).

With regards to the pricing policies, banks and other institutions could be forced to pay for increasing systemic risk. The BIS (2010) proposes a so-called systemic capital charge in the form of capital or liquidity charges, which would compel systemically important institutions to hold relatively more capital and liquidity, thereby reducing the probability of their failure and the FSB (FSB, 2011) subsequently took this forward.

The BIS (2010) report also argues that a tax system could, in principle, achieve many of the same objectives, with the same incidence, as a systemic capital charge, but the ultimate complexities of the solution made it unappealing to do so. Alternatively, they propose a 'polluter pays' approach, in which financial institutions are taxed *ex post* for the costs that large failures impose on the real economy and current and future taxpayers. The issue with this tax is that it arguably provides no effective disincentive to take additional risk, but this is debateable since institutions are essentially fined and might come to expect to be fined in the future if they transgress again. However, if

generally applied across the sector, it may end up being borne in part by potentially blameless survivors, whilst failed institutions escape paying it!

The BIS (2010) report argues that reducing or limiting the systemic importance of institutions will help achieve the second task of containing resolution costs and spill overs. Containing the latter can be achieved by making an institution's liability holders bear all the costs of a failure through 'bail-ins', or required 'Co-co' (contingent convertible) bond issuance (Mullineux, 2013).

Better resolution of failed banks can be achieved if, before any failure occurs, the authorities are able to identify where risk is concentrated in the system and if transparent and fair resolution processes ('living-wills') are put in place that reflect creditor 'seniority'. Resolution processes should include cross-border crisis management and cost of resolution sharing in order to limit international spillovers from the failure of large, globally active financial institutions. The BIS (2010) report argues that the implementation of measures aimed at coordinating the international supervision of SIFIs, to ensure consistency across national authorities, will allow regulators to terminate crises more promptly. Again, these are proving hard to put in place.

As far as the market efficiency is concerned, it should be remembered that information asymmetries and uncertainties lie at the root of financial panics. In the GFC, contagion was ignited by uncertainty over counterparty-risk exposures – not knowing who would bear the losses if they occurred. Therefore, transparency and increased disclosure are keys to any solution. Hence, one of the core reforms to market infrastructure is the conceptually simple but technically complex move to establish central counterparties

(CCPs) and require that more trading of derivatives as well as standard financial instruments, takes place on registered exchanges. This has a number of clear benefits and has subsequently been implemented in the EU and the US. Firstly, it improves the management of counterparty risk because the CCP is the counterparty for both sides of any transaction. Secondly, it makes multilateral netting of exposures and payments straightforward. Lastly, it increases transparency by making information on market activity and exposures – both prices and quantities – available to regulators and the public.<sup>14</sup>

The third task, the establishment of a comprehensive regulatory perimeter and keeping all systemically relevant financial institutions and activities within it, arises from the very high cost of the GFC. Although progress has been made in this area, led by the FSB, as banks have ‘deleveraged’, ‘shadow banking’ has recovered from its post-crisis implosion and has expanded rapidly to fill the space left by retrenchment in the mainstream banking system.

#### **4.4.2.2. Reducing the Risks Associated with Pro-cyclicality**

Building a more resilient financial system also requires reducing pro-cyclicality. As an economy expands, banks become flush with funds and highly profitable, borrowers are more creditworthy, and the value of collateral assets (houses and stocks and shares) increases. In such circumstances, lending tends to become easier and cheaper as credit standards are relaxed. However, when the economy is in a post-bubble downturn, these conditions are reversed. Borrowers become less creditworthy, collateral value falls, and banks are forced to absorb unexpected losses, which makes them less well capitalized,

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<sup>14</sup> See Cecchetti et al. (2009) for details.

so they must reduce their asset portfolios and deleverage. Further mark to market accounting rules exacerbate the impact of asset price fluctuations on bank's balance sheets, Basel capital adequacy risk weights within the big banks models are also procyclical and provisioning against bad and doubtful debts tends to be backward looking, adding to the problem.

As BIS (2010) explains, financial and monetary policy makers are developing automatic stabilizers that complement discretionary monetary policy to reduce the natural amplification ('financial accelerator') effects at work in the financial system. These stabilizers include capital buffers that are calibrated to aggregate levels of credit relative to economic activity so that they rise in booms and fall in busts; forward looking provisioning; and 'margin' and 'haircut' practices at lenders that are more stable over the business cycle.<sup>15</sup>

A variety of countercyclical supervisory instruments, including variation in maximum allowable loan-to-value and loan-to-income ratios, and limits on currency mismatching in mortgage lending, are also under development. Table 4 details the prudential instruments that directly constrain elements of financial institution activity and Table 5 lists the countercyclical prudential instruments in use, or proposed, in various countries.

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<sup>15</sup> See the BIS (2010) report for more detail on the role of margin requirements and haircuts in procyclicality and on the recommendations and suggestions with regards to the use of margin requirements and haircuts to reduce financial system procyclicality.



<b>Table 4: Prudential Instruments to Directly Constrain Elements of Financial Institution Activity</b>		
	Instrument	Mechanism
Lending Contracts	Caps on LTV ratios for property lending	Limits lender's exposure to property market downturn; limits highly leveraged property investment
	Caps on ratios of debt service to income for household lending	Limits chances of borrower default; limits highly leveraged property investment
Funding Contracts	Countercyclical variation in minimum margins or haircuts on funding contracts (tied to capital requirements)	Discourages under pricing of systemic risks created by secured lending with low haircuts; reduces risk of sharp contraction in the supply of secured funding if risk perceptions of collateral quality are abruptly revised
Financial Institution	Countercyclical capital surcharge	Builds up countercyclical capital buffers in good times to restrain risk-taking, and runs down the buffers in bad times to allow the financial system to absorb emerging strains more easily
Balance Sheets		
	Adjustments to risk weights	Ensures that capital buffers are sensitive to build-ups of risk in specific sectors
	Statistical provisioning	Reduces risk of under provisioning during booms by anticipating the impairments expected to arise when the economy turns down
	Caps on loan-to-deposit ratio, core funding ratio and other liquidity requirements	Reduces the tendency to rely on short-term or unstable funding markets to support rapid lending growth
Note: The table has been adapted from BIS (2010) 80 <sup>th</sup> Report.		

<b>Table 5: Countercyclical Prudential Instruments in Use or Proposed</b>	
<b>IN USE</b>	
Caps on LTV ratios for property lending	Hong Kong SAR, Korea, Malaysia, Singapore
Caps on ratios of debt service to income for household lending	Hong Kong SAR, Korea
Adjustments to risk weights	India, Turkey
Statistical Provisioning	Spain
Caps on loan-to-deposit ratio, core funding ratios, reserve and other liquidity requirements	Argentina, China, Hong Kong SAR, Korea, New Zealand
<b>PROPOSED</b>	
Countercyclical variation in minimum margins or haircuts on funding contracts (tied to capital requirements)	Proposed by the Committee on the Global Financial System
Countercyclical capital surcharge	Under consideration by the Basel Committee on Banking Supervision
Note: Table has been adapted from the BIS (2010) 80 <sup>th</sup> Report.	

## 5. An Overview of Existing Taxation

We next give a comprehensive overview of the existing tax regimes applied to the financial sector. Following EC (2011), we consider four areas of taxation: corporate income tax; labour taxation, value- added tax (VAT) and the taxation of financial instruments and special bank levies.

### 5.1. Corporate Income Tax

There are two main differences between financial and non- financial corporations. This

concerns 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. These differences in treatment can be attributed to the structure of the business in the financial sector for which interest received and paid constitute part of the banking business and not just the financing of activities. Before the GFC, the financial sector accounted for a substantial share of corporate tax receipts. The values for the EU27 are similar to those for many non- EU G20 countries: about one quarter in Canada, Italy, and Turkey and about a fifth in Australia, France, the UK and US.

<b>Table 6: G20 Corporate Taxes Paid by the Financial Sector (In Percent)</b>			
	Period	Share of Corporate Taxes	Share of Total Tax Revenue
Argentina	2006-2008	6	1
Australia	FY 2007	15	2.8
Brazil	2006-2008	15.4	1.8
Canada	2006-2007	23.5	2.6
France	2006-2008	18	1.9
Italy	2006-2008	26.3	1.7
Mexico	2006-2008	11.2	3.1
South Africa	FY 2007 – 2008	13.7	3.5
South Korea	2006-2008	17.7	3
Turkey	2006-2008	23.6	2.1
United Kingdom	FY 2006-2008	20.9	1.9
United States	FY 2006-2007	18.2	1.9
Unweighted Average		17.5	2.3
Note: The figures in this table are based on the IMF staff estimates based on G20 survey.			

## 5.2. Specific Anti- avoidance Rules or Debt Bias

In order to reduce the tax due, companies utilize the applicable tax regime to their advantage. For example, they can choose to be funded via equity or debt. Debt financing generally brings additional tax benefits, compared to equity financing, because interest expenses are generally tax- deductible (whereas dividends are distributed after tax and are not deductible).

The IMF (2010) argues that a preference for 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 and Klautke (2008) show that debt bias 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.

With the objective of discouraging excessive or abusive use of financing methods that impact the tax base, the majority of countries have introduced anti- avoidance rules, which may be general or specific.<sup>16</sup>

### **5.2.1. Thin Capitalization Rules**

To limit risk in the case of excessive debt financing, which creates solvency risk for creditors, and so minimize the adverse tax consequences of excessive interest ‘expensing’, several countries have set up ‘thin capitalization rules’, or rules limiting interest deductibility. These rules deny interest deduction once debt ratios or interest payment exceed some threshold. In other words, thin capitalization rules determine how much of the interest paid on corporate debt is deductible for tax purposes, thus limiting

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<sup>16</sup> The IMF (2010) notes that there are possibilities beyond those listed here, such as movement to ‘cash-flow’ forms of CIT.

the amount of interest deducted when a certain debt- equity ratio is exceeded. In certain countries, including the Netherlands, rules also provide for a limitation of interest expenses, for instance when they exceed interest income. Countries where the thin capitalization rules apply may be divided into three groups: Austria, Germany, Lithuania, the Netherlands, Poland, Portugal and the USA, in which thin capitalization rules apply in the same way to the banking sector as they do to the other sectors; and the Czech Republic, Hungary, Switzerland, the UK and China, in which the thin capitalization rules apply to banks, but in a different way. The difference could be for various reasons. For instance, it may be in the applicable debt-to-equity ratio. For example, in China and Czech Republic, the debt-to-equity ratio applicable to banks is higher. Alternatively, the difference may also be present in the borrowings, which have to be taken into account to compute the debt-to- equity ratio. For instance, in Hungary, banks do not take into account their liabilities in connection with their financial services activities, and in the UK, a group's external borrowings are not taken into account to determine the debt cap restriction. The third group includes: Bulgaria, Denmark, France, Greece, Latvia, Romania, Slovenia and Spain, in which banks are excluded from the thin capitalization rules. In Germany, thin capitalization rules are similar for banks and companies in other sectors. In practice, however, due to the fact that interest expenses are always deductible to the extent they do not exceed interest income earned, banks will not be burdened by the thin capitalization rules in this country.

Table 7: Thin Capitalization Rules					
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
CYPRUS	No	N/A	N/A	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
ESTONIA	No	N/A	N/A	No	N/A
FINLAND	No	N/A	N/A	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 deductible at 96%, whereas for companies of other sectors/non-banks, interest expenses are fully deductible provide that they do not exceed specific ratios.

Table 7: Thin Capitalization Rules					
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
MALTA	No	N/A	N/A	No	N/A
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
SLOVAKIA	No	N/A	N/A	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, <b>excluding financial institutions</b> , 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 located 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
SWEDEN	No	N/A	N/A	N/A	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.
SINGAPORE	No	N/A	N/A	No	N/A
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: Information in this table is adapted from the EU report of 2011.

### **5.2.2. A Comprehensive Business Income Tax (CBIT)**

The IMF (2010) proposes a CBIT, which would deny interest deductibility for CIT altogether. Similarly, it would exempt interest received, in order to avoid multiple taxation within the corporate sector. Although CBIT would also result in financial institutions paying little or no CIT by virtue of having no tax due on interest received, but non-interest deductible costs, in aggregate this might be more than offset by increased payments by other companies. The transitional problems in moving to a CBIT would be significant, especially when debt is issued in full expectation of deductibility.

### **5.2.3. An Allowance for Corporate Equity (ACE)**

Countries may also apply positive tax incentive rules to encourage companies to use equity funding. Under an allowance for corporate equity, companies would retain interest deductibility but also allow a deduction for a notional return on equity. For instance, Brazil has had a CIT with these features for many years. Austria, Croatia and Italy have all had CITs with an element of an ACE. Belgium has recently introduced a notional interest deduction regime, which mainly consists of a tax deduction corresponding to a notional interest cost computed on adjusted equity capital. This regime was introduced with the aim to equilibrate the tax treatment of equity-funded and debt funded companies. Studies by Staderini (2001), Pricen (2010) and Klemm (2007), review the wider experience with ACE and provide evidence that such schemes have indeed reduced debt financing.<sup>17</sup>

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<sup>17</sup> An overview of the design issues of ACE can be found in OECD (2007) and IMF (2009).

Although the adoption of the ACE would result in revenue loss, the IMF (2010) argues that transitional provisions can limit this. Moreover, the gain would also be less for financial firms than other firms, since they tend to be much more highly geared. The use of an ACE can further be limited by applying the same notional return, which should approximate some risk- free return, to equity, as well as to debt. This would have the further advantage of eliminating any distinction between debt and equity for tax purposes. Table 8 below gives an overview of ACE around the world.

**Table 8: 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)

## 5.2.4. Other Anti- Avoidance Rules

Not all countries have anti- avoidance rules. It should be noted that in those countries where domestic legislation does set down anti- avoidance rules, they generally apply to all companies, and thus not specifically or solely to banks. In this regard, only the US has reported certain specific anti- avoidance rules applying to the financial sector, and thus to banks, many of which relate to profit off- shoring. The case law of the Court of Justice of the European Union has set



stringent regulations for the application of these rules in the light of freedom.

To summarize, very few countries have enacted specific tax rules to limit interest deductibility by banks. This may be because accepting deposits from customers, and advancing loans, coupled with the payment of interest on those deposits, is the core activity of the retail banking sector. Therefore, there is little tax incentive attached to the deduction of interest payments, as they are more a business characteristic inherent to the retail banking sector; but this does not apply to the wider financial sector.

Moreover, the EC (2011) report states that at least one member country felt that banks' funding should be sufficiently regulated using capital and liquidity ratios that further corrective tax-based measures were unnecessary.

Whilst the application of the above tax proposals to financial institutions might seem tempting, they could create tax arbitraging opportunities. For instance, providing ACE treatment only for banks would require anti-avoidance rules to prevent 'shadow banks' from exploiting the situation. Moreover, changes to personal taxation may also be needed along with these reforms. Nevertheless, although such tax reforms would be difficult to implement, the payoff from reducing the fundamental bias to excess leverage could be substantial.

### **5.3. Labour Taxation**

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 (EC, 2010), 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. In the shadow banking sphere, however, widespread use is made of ‘carried interest’ taxed at the lower CGT rate.

Using a novel database of executive directors for the period 2002-2007 for both EU and non-EU countries, Egger et al. (2012) show that there is a significant earnings premium in the financial sector, which for the overall sample available (including both EU and non-EU countries) amounts to about 40% after conditioning out observable director-specific and firm-specific characteristics. Nevertheless, considerable heterogeneity of earnings across different types of businesses within the financial sector exists. In fact, one should expect that compensation levels differ sharply between more conservative commercial banks and riskier investment companies. Using the conservative commercial banks as a reference point, they show that individuals in the real estate sector, the insurance sector and a number of other financial businesses earn significantly higher compensation. This finding holds true for the whole sample, as well as for the EU one.

For the US, Philippon and Reshef (2009) use detailed data on wages in the country’s financial sector between 1930 and 2006 to identify the existence of economic rents in the sector, which can explain the wage differential of 30 to 50 percent. They provide evidence that these wages reached excessively high levels, especially around 1930 and between 1995 and 2006. On one hand, their results suggest that complex corporate activities such as Initial Public Offerings (IPO) or credit risk have a positive effect on the demand for skilled workers, whereas on the other hand, stricter regulation has a negative effect on the demand for skilled workers.

## **6. Taxation of Financial Instruments**

The IMF (2010) argues that there may be reasons to consider additional, more permanent, tax measures beyond a special bank levy. This is because the large fiscal, economic, and social costs of financial crises, and implicit insurance by taxpayers, may require a contribution from the financial sector to general revenues beyond covering the fiscal costs of direct support. 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 risks; and corrective taxes related to systemic risks and interconnectedness. The prevailing view is that receipts from these taxes would contribute to general revenue and that they need not equal the damage that they seek to limit or avert.<sup>18</sup>

Explicitly corrective taxes, on systemic risk for instance, would need to be considered in close coordination with regulatory charges to assure capital and liquidity adequacy. The remainder of the section focuses on two possible instruments directed largely to revenue generation,<sup>19</sup> although in each case their behavioural and hence potentially corrective or distortionary impact cannot be ignored.

### **6.1 Financial Transactions Tax (FTT)**

From the beginning of the financial crisis, the design and implementation of an FTT has received

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<sup>18</sup> The reason is that corrective taxes need to address the marginal social damage from some activity, which may differ from the average damage.

<sup>19</sup> The EC (2010) reports other possibilities, including for instance a surcharge on the rate of corporate income tax applied to financial institutions.

much support from various circles of society, including the ‘occupy’ protesters, policy makers and academics. 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 of 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 this moral hazard, thereby enhancing the potential efficiency and stability of financial markets.

The IMF (2010) argues that various proposals for some form of FTT differ, including its goals and degrees of detail. For instance, one particular form is a ‘Tobin tax’ (Tobin, 1978) on foreign exchange transactions. This would be an internationally uniform tax on all spot conversions of one currency into another, proportional to the size of the transaction. The underlying presumption is that the tax would deter short-term financial ‘round trip’ currency conversions, or wasteful ‘over-trading’. Tobin (1978) proposes that each government would administrate the tax over its own jurisdiction and the tax revenues could be paid to the IMF or World Bank. Although he recognizes that “ingenious patterns of evasion” would occur in response to the tax, he argues that the benefit would outweigh the costs. He postulates that the disadvantages are small compared to the inefficiency and wastefulness of the current system.

Tobin’s proposal on exchange rates remain 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 potentially wasteful transactions. More specifically, FTT would be applied to all financial transactions and particularly to those carried out in organized markets (Schamp, 2011). The EC (2010) states that it would be levied each time the underlying asset is traded at a relatively low statutory rate; minimising distortions whilst generating potentially considerable revenue. Advocates of FTT

argue that its implementation would raise substantial revenue: 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 percent of world GDP at a tax rate of 0.1 percent. In the EU, it is estimated that tax revenues would be 2.1 percent of GDP if a similar tax were imposed.<sup>20</sup>

Furthermore, FTT cannot be dismissed on the grounds of administrative impracticability. 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 percent 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.

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

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<sup>20</sup> 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 percent and 5 percent respectively. Moreover, the reduction of trading volume of exchange-traded derivatives as well as of over-the-counter (OTC) transactions would lie between 60 and 70 percent (Schulmeister et al. 2008)

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 the tax to focus on the central question of whether there would be any substantial costs from implementing an FTT.

France and Italy introduced an FTT on 1 August 2012 and 1 March 2013 respectively. The FTT in France is a tax on equity transactions, high frequency trading in equities, and ‘naked’ exposure in CDS<sup>21</sup> in EU sovereign debt. In Italy, it is broader in scope and taxes equities, equity-like financial instruments and derivatives, as well as high frequency trading. The FTT in France is quite similar to UK stamp duty, apart from: the higher rate of 0.2% , although it had been 0.1% before February 2013; the exclusion of companies with a market capitalization of less than €1 billion; and the fact that it is applied to the broker, dealer or custodian at the time of settlement, as opposed to the buyer in the case of UK stamp duty. Furthermore, the French FTT also taxes high frequency trading in equities and ‘naked’ CDS exposures in EU sovereign debt.

Initial evidence<sup>22</sup> 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.

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<sup>21</sup> A credit default swap (CDS) is a [swap](#) agreement between the buyer and the seller that the seller of the CDS will compensate the buyer in the event of a loan [default](#) (by the debtor). A CDS where the buyer does not own the underlying debt is known as a naked CDS.

<sup>22</sup> <http://marketsmedia.com/italian-french-trading-volumes-hit-fft/> dated April 23, 2014, <http://www.ftseglobalmarkets.com/news/fft-drag-down-italian-stock-trading-volumes.html> dated April 23, 2014.

(2013) and Haferkorn & 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.

#### **6.1.1. Some advantages and disadvantages of implementing FTT<sup>23</sup>**

Proponents of an FTT argue that its implementation has significant revenue potential. However, the actual amount raised greatly depends on the design of the tax. For instance, the level of collection has a major influence on revenue raised (Schamp, 2011). Therefore, tax collection at the level of the trading markets would target only a small proportion of financial transactions, given the fragmentation of the trading landscape and the growing importance of OTC derivatives (UN, 2010), although this has been reversed by legislation in the US and the EU requiring exchange trading of most derivatives. In addition, tax revenue depends on the base and rate of the FTT. Nevertheless, the United Nation's high-level Advisory Group on Climate Change Financing (AGF) calculated that the amount of revenue would be significant, even with a very low tax rate.

Moreover, an FTT is an innovative source of financing (EC, 2010). This means that no money is extracted from other budgets. Therefore, the considerable revenues collected could be used for

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<sup>23</sup> See Schamp (2011) for more details.



the achievement of policy goals on a supranational level. For instance, global public goods, such as development aid or climate control, could be financed (Schamp, 2011). Alternatively, the revenue raised could be hypothecated to fund bank resolution regimes and regulation and supervision.

The implementation of an FTT would be accompanied by administrative, monitoring and collection costs. However, as discussed previously with regard to the experience in the United Kingdom, if the tax is properly designed, then the administrative costs can be negligible. For instance, in the UK a tax is levied on electronic paperless share transactions purchases, called the Stamp Duty Reserve Tax. In this case, collection is made through the electronic transaction system of the London Stock Exchange and the cost is remarkably low, i.e. 0.2 pence per pound sterling of revenue collected (Schamp, 2011).

In fact, Schamp (2011) argues that the implementation of the FTT is rather simple and that it could be operational quickly. Moreover, the proposed FTT can build on past experiences of transaction taxes and financial infrastructures, which can operate as central points. To conclude, as the UN (2010) states, in this respect “the implementation of an FTT is not a question of feasibility, although strong will is necessary to oppose traditional objections” (UN, 2010, p.6). However, during the G20 summit in Toronto (June, 2010), the finance ministers decided that a global FTT was no longer feasible.

Turning to the potential disadvantages, the IMF (2010) argues that an FTT is “not the best way to finance a resolution mechanism” as the volume of transactions is not a good proxy for either the benefits it conveys to particular institutions or the costs they are likely to impose on it. Moreover, it is not focused on the core sources of financial instability, as it would not target any of the key

attributes that give rise to systemic risk: institution size; interconnectedness; and substitutability. Adjusting the tax rate to reflect such considerations would be possible in principle, but highly complex in practice. The IMF (2010) states that if the aim is to discourage particular types of transactions, taxing or regulating them directly could do this more effectively.

Moreover, 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 UN (2010) and Cortez and Vogel (2011) argue that 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. In contrast, a global application is needed to ensure a worldwide playing field for global financial players.

Even if an FTT were implemented, Schamp (2011) argues that it is likely that 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. Since the cost of capital for a company is influenced by the minimum rate of return demanded by investors, the introduction of an FTT might increase in the cost of capital for companies. Therefore, the impact of the FTT on a company's cost of capital will depend on the frequency with which its equity securities are traded. 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 and Vogel (2011) argue that the increase in the cost of capital could be ameliorated 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.

Most importantly, the real burden of the 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.<sup>24</sup> 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*.<sup>25</sup> 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<sup>26</sup> FTT taxes transactions between businesses; including indirectly through the impact on the prices of non-financial products. The argument that a FTT

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<sup>24</sup> Schwert and Seguin (1993) estimate that a 0.5 percent securities transaction tax in the U.S. would increase the cost of capital by 10-18 basis points.

<sup>25</sup> 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).

<sup>26</sup> See Schmidt (2007), Schulmeister et al. (2008), and Spratt (2006) for further details.

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 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 or transactions taxes.<sup>27</sup> For revenue- raising, there are more efficient instruments than an FTT.

Further, experience shows that financial transactions seem to be particularly vulnerable to avoidance or evasion. For instance, in the United Kingdom ‘contracts for 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 by incorporating new financial instruments in the tax base (Schamp, 2011).

Finally, Schamp (2011) notes that national and international legal constraints should be considered. The underlying belief is that the host country of the financial infrastructure should collect the proposed FTT on behalf of the international community. Therefore, at the national level, parliamentary authorization to collect the tax is necessary and a legal scheme should be

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<sup>27</sup> 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.

designed for collection. Additionally, the compatibility of the FTT with the EU free movement of capital directive should be assessed.

There is general consensus in the empirical literature that FTT reduces in market volume and liquidity and increases market volatility and the cost of capital (Amihud and Mendelson, 1992; Umlauf, 1993; Jones & Seguin, 1997; Baltagi et al., 2006; Bloomfield et al., 2009; Pomeranets & Weaver, 2011). The study by Pomeranets and 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, which it increased to 2% in 1986. The purpose of the tax was the same as that of the EU FTT: to raise revenue and to improve the efficiency of the market by reducing speculative transactions. Umlauf (1993) studied the impact of these changes on the Swedish market and 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 markets, but did not reduce their volatility. Table 9 below gives an overview of Securities Transaction Tax around the world.

**Table 9: 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 Transactions 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 Transactions 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 commission 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 recognized 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).

## 6.2. Financial Activities Tax (FAT)

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 a 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 be used in pursuit of a range of objectives.<sup>28</sup> 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 as a result of its treatment under existing VAT arrangements, where financial services are exempt. Moreover, to avoid aggravating 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 percent FAT, with all salaries and bonuses included in the base, might raise about 0.3 percent of GDP. Moreover, the IMF (2010) argues that with the inclusion only of profits above some acceptable threshold rate of return, a FAT would become a tax on ‘excessive’ returns, or rents, in the financial sector. The underlying belief is that it would mitigate the

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<sup>28</sup> See Appendix 6 of the IMF (2010) report for an elaboration on the design and revenue potential of these alternative forms of FAT.

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.<sup>29</sup> 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 draw 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 avoidance, and might not greatly change them if adopted at broadly similar rates in a range of 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 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 a major difference from VAT, in that the tax would fall on businesses rather than directly on final consumers.

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<sup>29</sup> John et al. (1991) develop the argument for progressive profit taxation on these grounds.



Shaviro (2012) also favours a FAT over a 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 a 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.

### **6.3. Value Added Tax (VAT) on Financial Services**

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 and 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 and Stiglitz (1976) and Mirrlees et al., (2011, Chapter 6) argue for taxation of

financial services at a relatively low rate so that favourable treatment helps counteract the general tendency of taxation to discourage work effort. Since the adoption of the Sixth EC 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 complicates the implementation of the invoice-credit VAT system. Nevertheless, this difficulty seems to be surmountable. For instance, in Germany, where the granting of loans is subject to VAT under the Directive's option to tax, an acceptable methodology seems to have been found to tax these margin-based operations.<sup>30</sup> 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 and Winker (1997) for Germany (7 billion DM for 1994), Huizinga (2002) for the EU-15 (12 billion EUR for 1998 or 0.15% of GDP) and the UK Treasury<sup>31</sup> for the UK

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<sup>30</sup> 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.

<sup>31</sup> [http://www.hmrc.gov.uk/stats/tax\\_expenditures/table1-5.pdf](http://www.hmrc.gov.uk/stats/tax_expenditures/table1-5.pdf)

(£9.05 billion or about 0.6% of GDP) indicate that there might be a sizeable tax advantage (measured as VAT not collected). Arguments are also put forth that claim that irrecoverable VAT is the largest tax burden for the sector.

The EC (2011) report presents a new estimate of the magnitude of the problem. The calculations are based on European Sector Accounts on the consumption of financial services by sectors, in which data restricted to financial intermediation and other tax exempt financial services are not covered. By applying methodologies proposed by Huizinga (2002) and Lockwood (2010), the data are used to estimate the potential advantage for the financial sector from VAT exemption.

Table 8 presents three estimations where the difference between them is the data basis for the calculation of the irrecoverable VAT, which in the case of a VAT application would be fully deductible. The most reliable estimates are from estimation (1), where the intermediate consumption of the financial intermediation can be directly measured using an input- output table. Although the data are very rough approximations and should be interpreted with caution, the estimates suggest that VAT exemption leads to an advantage for the financial sector in the range of 0.11% to 0.17% of GDP (the results are in line with the results of Huizinga (2002) of around 0.15% of GDP). Overall, the results indicate that the VAT exemption of financial services might 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.

It should further be noted that all three estimates do not take into account the behavioural response due to price changes when applying VAT to financial services. 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 alongside 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 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, with more household consumption of financial services, than it would be under a single rate VAT.

However, Grubert and 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 and Keen (2003) argue that there are many goods and services that one would question should be taxed using a GST. They all 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 having 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 and 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 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.<sup>32</sup> 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 remain 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.<sup>33</sup> It taxes gross premiums, but gives insurers the ability to reclaim deemed input tax on indemnification of

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<sup>32</sup> See GST Guidelines for Working with New Zero Rating Rules for Financial Services, published by policy advice division of the Inland Revenue Department (New Zealand), October 2004.

<sup>33</sup> 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%.

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. 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, or the self-supplying of inputs to avoid paying GST to suppliers, and to facilitate outsourcing, from a cost efficiency perspective. The inputs that give rise to a RITC are itemized in regulations, but broadly include the following: transaction banking and cash management services; payment and fund transfer services; securities transaction services; loan services; debt collection services; funds management services; insurance brokerage and claims handling services; trustee and custodial services; and suppliers for which financial supply facilitators are paid a commission.

A PWC (2005) report identifies advantages and disadvantages associated with the implementation of the RITC mechanisms.

Advantages of the Australian RITC scheme are: that it removes the necessity to make supplies to

financial institutions VAT exempt and hence, tax compliance is easier for suppliers to financial institutions, which remain fully taxable; it is the recipients' responsibility to determine the RITC rather than placing the burden on the suppliers; and the RITC scheme is compatible with the existing VAT framework (i.e. direct attribution and allocation). For instance, the RITC can apply to supplies used for taxable and exempt purposes. The recipient then works out the extent of taxable use (an apportionment is made) and then applies the reduced input tax credit to the extent of exempt use. To put this in figures, if an entity makes 50% taxable and 50% exempt supplies, then it can claim back 87.5% of the GST incurred by applying RITC (say 75%) to the remaining 50% exempt use (PWC, 2006).

Disadvantages of the Australian RITC regime are: clear definitions and guidance are needed to identify when the RITC will apply and to what kinds of goods/services; the mechanism requires unanimous support from all States and Territories before the law can be amended-a similar principle applies in the EU; before a RITC can be applied, an apportionment is required to overhead expenditure; it is the recipient that makes an apportionment between taxable and exempt use and then applies the RITC, thereby allowing a RITC to manipulate the apportionment in favour of taxable use to maximize input VAT recovery; it does not apply to all services that may lead to irrecoverable input VAT, or instance, it may not apply to the recharge of shared service centre costs from a group company (but outside the GST Group); there is no scientific way of determining RITC as the credit of 75% was chosen after consultation with the industry. Hence, it is difficult to know what the correct RITC should be. In any case, it was agreed that if the service was provided in-house, there should be a GST cost on overheads and some directly attributable costs, and therefore a 100% credit would be inappropriate.



Although some of these services may qualify for exemption in their own right under the Sixth EU VAT Directive, the RITC scheme is an interesting concept and may contribute to the elimination of the bias against outsourcing inherent in other systems.

Financial services are 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 GST is generally similar to the European one with regard to exemption of financial services. However, there is a list of fee-based services that is taxed.<sup>34</sup> The Canadian 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 arguably overtax many financial services. Firstly, financial services are exempt from VAT, meaning that financial institutions cannot recover the VAT paid on their purchases and secondly, banks are required to pay tax on the aggregate of their wages and profits (Schenk and 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 and Oldman, 2007).

Virtually all fee-based financial services are taxable or zero-rated under VAT in South Africa.

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<sup>34</sup> GST/HST Memoranda Series, Canada Customs and Revenue Agency, April 2000.

However, margin-based services are still exempted and 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 and Oldman, 2007).

**Table 10: VAT Option to Tax, Payroll Taxes, and Insurance Premium Tax**

Country (April 2011)	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 specific 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 specific financial services mentioned in article 135 (1) (b) to (c) of Directive 2006/112/EC		

Note: This table is adapted from EC (2011).

### **6.3.1. Effects of Removing VAT exemption on Financial Services**

As noted in Mirrlees (2011), 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 complex 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 and 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 the savers and borrowers. 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.

Mirrlees (2010) does not clearly distinguish financial services from other major areas (like property and PNC (public, non-profit and charitable) where VAT is not optimal because of less than general coverage, less than optimal rate structure, and less than perfect administration. Nevertheless, the Mirrlees (2010) suggests Viable Integrated VAT (VIVAT) as a solution for the UK and the EU. VIVAT proposes that all sales to registered businesses are taxed at a uniform 'intermediate' rate of 17.5%. However, Cnossen (2010), commenting on Crawford et al.'s chapter on VAT in the Mirrlees (2010, Chapter 4), argues that VIVAT involves substantial additional administrative complexity and may violate tax autonomy. It leads to a break in the VAT-audit trail, making it difficult to control compliance. Dickson and White (2010) consider a uniform standard rate of 17.5% a step in the right direction. Given the regressive compliance cost of GST, they are of the view, because of basic necessities of life, that the economic position of the poor should be adjusted via income taxation and social welfare provisions, rather than GST exemption.

There are two methods of VAT charging: the subtraction method and the credit-invoice method. The subtraction method exists in Japan, whereas most countries (Europe, Australia, New Zealand, Canada etc.) use the credit-invoice method. However, Toder and Rosenberg (2010) explain that the subtraction method in Japan is not very different from the credit-invoice method. Under the subtraction method, VAT is calculated on the difference between the value of sales and the value of purchases. On the other hand, in the credit-invoice method, sales by businesses are taxable. However, they reclaim the tax they have paid on their purchases. The credit-invoice method is preferable over the subtraction method if anyone in the chain is exempted from tax.

The credit-invoice method is further divided into the Cash Flow Method, Cash Flow Method with Tax Collection Account and Modified Reverse Charge Approach.

The cash flow method is more widely used and the simplest method to tackle the valuation of VAT under credit-invoice tax. Under this method, all cash inflows are treated as sales to customers and all cash outflows are treated as the purchase of inputs. Consequently, financial institutions have to pay tax on all purchases (cash outflows) and charge tax on all sales (cash inflows). Financial institutions will reclaim the tax paid on purchases. Although the cash flow method is simple and straightforward to implement, there are two difficulties attached to it, but only for margin-based services. These are related to payment of tax at the time of borrowing and transitional adjustments at the beginning of the system and at the time of tax rate change.

Poddar and English (1997) propose a cash flow method with Tax Collection Account (TCA) to resolve the problems attached to this method. They argue that the TCA is a tax suspense account created to obviate the payment of tax by taxpayers and of credits by government during the period that cash inflows and outflows of a capital nature occur. Tax that would otherwise be payable/creditable is instead debited/credited to the TCA and carried forward to the period during which the capital transaction is reversed. The TCA mechanism thus allows deferral of tax on cash inflows and of tax credits on cash outflows. However, these deferrals are subject to interest charges at the government borrowing rate (Poddar and English, 1997, p.11)

Zee (2004, p.3) proposes a 'modified reverse-charging' method to tax financial services under a VAT. This proposal involves: the application of a reverse charge that shifts the collection of the VAT on deposit interest from depositors to banks, in conjunction with the establishment of a

franking mechanism managed by banks that effectively transfers the VAT so collected to borrowers as credits against the VAT on their loan interest on a transaction-by-transaction basis. The proposal is fully compatible with an invoice-credit VAT and is capable of delivering the correct theoretical result at minimal administrative costs (Zee, 2004, p.3).

Zee claims that this approach delivers the correct theoretical result but entails minimal administrative costs in terms of either enforcement or compliance. As explained by Kerrigan (2010), both the TCA and the modified reverse-charge methods provide a workable solution. However, the TCA method has been field tested with a panel of financial institutions and has been found workable. Therefore, this method is preferred.

Crawford et al. (2010) argue that financial institutions would need to distinguish between registered and non-registered buyers and suggest VIVAT as the best solution for the UK and the EU. Keen (2000) also makes the same argument and compares VIVAT with Compensating VAT (CVAT), explaining that CVAT (which requires sellers to discriminate between buyers located in different provinces of a federation) is designed for countries like Brazil and India where there is a significant central federal tax authority.

The removal of exemption on financial services would mean that in the UK a 20% VAT 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 bank 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 overly strict policies, keeping in mind the tax and regulation heterogeneity that exists across countries and regions.

#### **6.4. A Bank Levy**

A supplementary bank levy, or tax, can be interpreted as an additional duty imposed on financial institutions, predominantly banks. Several countries have taken legislative initiatives in this respect, such as an additional levy applicable to 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 in 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 primarily on liabilities include Austria, which also covers some aspects of FTT because the tax is also levied on the volume of derivatives transactions,



Belgium, including two other bank taxes explained below, Cyprus, Germany, Hungary, Iceland which also taxes remuneration in much the same way as a FAT, Portugal, Romania, Slovakia, Sweden, the Netherlands, where the usual rate is multiplied by a factor of 1.1 if one member of the board receives non-fixed remuneration of more than 25% of fixed income, the UK and the US - both the UK and the US give a 50% discount on the usual rate for more stable funding sources. On the other hand, the base of the French bank levy is regulatory capital, while that of Slovenia is total assets.

Some countries, such as The Netherlands, the UK and the US, tax only the banks whose liabilities exceed a certain threshold. For example, there is threshold of €20 billion in the Netherlands, one of GBP £20 billion in the UK and of US \$50 billion in the US. The bank tax in most countries (e.g., Austria, Hungary, France, Iceland, Portugal, Slovakia, Slovenia, The Netherlands and 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 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.

Because the bank levy is not covered by 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 1st January 2011, which allows a proportion of the French levy to be credited against the UK levy.

In the UK, the Chancellor of the Exchequer 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 lowered the corporate tax rate from 28% (in April 2010) to 23% (in April 2013) and then to 21%, (in April 2014) which will further decrease to 20% from April 2015. The bank levy was increased in order to remove 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 the bank levy means that the Chancellor 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 wholesale funding. Table 11 below provides an overview of Bank Levies around the world.

Table 11: An Overview of Bank Levies Around the World							
	Scope						
	"Bank" definition	Domestic Bank (local legal entity)	Foreign branches of domestic bank (Outbounds)	Branches of foreign banks (Inbounds)	Branches of EU Passported Banks	Broker dealers	Non-banking groups with bank within group
<b>Austria</b> Stability levy Effective from January 1, 2011 Contributes to Treasury	Credit institutions according to the Austrian Banking Act.	Yes	May be included.	Yes, but the tax is only levied on the branch's adjusted total balance sheet.	Yes	Yes, if a credit institution under Austrian regulatory rules.	Levy payable by the bank only.
<b>Belgium</b> Contribution to the Special Protection Fund for deposits, life insurances and capital of recognized cooperative companies Effective from 1 January 2012 Contributes to Special Protection Fund	Credit institutions that are established in Belgium. A "credit institution" is defined as follows: a Belgian or non-resident enterprise of which the professional activities consist of the receiving of deposits or other repayable funds and the granting of credits on its own account, as well as the issuing of payment instruments in the form of electronic money.	Yes	Yes	In principle not applicable to foreign branches, except:  - for Belgian branches of credit institutions established in other member states of the EEA that have opted to be a facultative member of the Special Protection Fund  - for 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.	No, other than in the instance of Belgian branches of credit institutions established in other member states of the EEA, that have opted to be a facultative member of the Special Protection Fund.	Yes, if fall within the definition of a credit institution.	Levy payable by the bank only.
<b>Belgium</b> Contribution to the Resolution Fund Effective from 1 January 2012 Contributes to Resolution Fund	Same definition as that used for contributions to the Special Protection Fund with an exception for institutions for electronic money as meant in Title IIbis of the 1993 Law.	Yes	Yes	No	No	Yes, if fall within the definition of a credit institution.	Levy payable by the bank only.
<b>Belgium</b> Annual tax on credit institutions (1) Payable yearly on 1 July, and for the first time on 1 July 2012 (1) Please note that we based our comments regarding this tax on a draft bill that is currently pending and which is not yet approved in Parliament	Credit institutions (same definition as that used for contributions to the Special Protection Fund) that are mentioned on a list of licenced credit institutions made by the Belgian National Bank.	Yes	Yes	Yes, applicable to Belgian branches of credit institutions resident in a member state of the EEA. Furthermore, applicable to Belgian branches of credit institutions resident in other states provided that no similar deposit protection system is foreseen as in Belgium.	Yes under the same conditions as 'branches of foreign banks'.	Yes, if fall within the definition of a credit institution.	Levy payable by the bank only.

**Table 11: An Overview of Bank Levies Around the World - Continued**

	Tax base and rates					Other issues	
	Tax base	Exclusion from tax base	Threshold	Rates	Cap/Floor	Double taxation risk? (1)	Deductible for corporate tax purposes?
<b>Austria</b> Stability levy Effective from January 1, 2011 Contributes to 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 calendar quarters and the end of the financial year.	Nominal capital and reserves, assured bank deposits and certain liabilities from the liquidity requirements of the Banking Act.	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.	N/A	Possible. Will not be a tax under standard tax treaties.	Yes
<b>Belgium</b> Contribution to the Special Protection Fund for deposits, life insurances and capital of recognized cooperative companies Effective from 1 January 2012 Contributes to 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	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.	N/A	Possible. Will not be a tax under standard tax treaties.	Yes
<b>Belgium</b> Contribution to the Resolution Fund Effective from 1 January 2012 Contributes to 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	N/A	0.035%	N/A	Possible. Will not be a tax under standard tax treaties.	Yes
<b>Belgium</b> Annual tax on credit institutions (1) Payable yearly on 1 July, and for the first time on 1 July 2012 (1) Please note that we based our comments regarding this tax on a draft bill that is currently pending and which is not yet approved in Parliament	Part of the total savings deposits as defined in article 21, 5° BITC. This part amounts to the portion of the exempt interest compared to the total amount of interest paid.	N/A	N/A	0.05%, multiplied by a factor depending on the amount of European loans not granted to financial institutions (60%-240%).	N/A	Possible. Will not be a tax under standard tax treaties. Even double taxation with Contribution to Special Protection Fund (partially same tax base).	Yes

**Table 11: An Overview of Bank Levies Around the World - Continued**

Table 17: Full Overview of Bank Levies Around the World (continued)							
	"Bank" definition	Domestic Bank (local legal entity)	Foreign branches of domestic bank (Outbounds)	Scope Branches of foreign banks (Inbounds)	Branches of EU Passported Banks	Broker dealers	Non-banking groups with bank within group
<b>Cyprus</b> <b>Bank Levy/Tax</b> Effective from April 29, 2011 Contributes to Independent Financial Stability Fund (2.)	A person operating under the Banking Laws of 1997 to 2009 or a co-operative society operating under the Co-operative Societies Law of 1985 to 2010.	Yes	No	Yes	Yes	No	Yes if operating locally.
<b>France</b> <b>("Tax on Banks")</b> Effective from January 1, 2011 Contributes to Treasury	Broad definition, which includes credit institutions, investment companies (other than portfolio management companies), market operators ("entreprises de marché"), members of a clearing house, payment institutions, regulated financial companies and bank holding companies.	Yes, on a consolidated basis including subsidiaries and foreign branches (excluding the French Development Agency - "Agence française de développement"). Only the consolidating parent is subject to the tax in groups subject to regulatory supervision on a consolidated basis. Since December 30, 2011, the group definition used to determine the consolidated basis has been precisely defined, and includes networks of mutual and cooperative banks.	Yes	Yes, if regulated in France, except if the branch's head-office is in the EEU (EU plus Norway, Iceland and Liechtenstein). Tax levied on the branch's balance sheet only.	No	Yes	Yes if regulated, tax due on the bank's balance-sheet only (but in practice should be exempt due to the taxation threshold).
<b>Germany</b> <b>("Bank Levy")</b> Effective from January 1, 2011 Contributes to Banking fund	By reference to the German Banking Act, including all credit institutes which have a permission under the Act.	Yes	May be included.	Yes, if have regulatory permission under the German Banking Act (i.e. German activity only)	Unclear. As proposals stand the levy only seems to apply to banks with permissions under the German Banking Act. i.e. EU passported banks have an advantage.	Only if they have a permission according to the German Banking Act, in particular broker dealers who act in their own name but for account of a third party ("principal broking service").	Levy payable by the bank only.

**Table 11: An Overview of Bank Levies Around the World - Continued**

	Tax base and rates					Other issues	
	Tax base	Exclusion from tax base	Threshold	Rates	Cap/Floor	Double taxation risk? (1)	Deductible for corporate tax purposes?
<b>Cyprus</b> <b>Bank Levy/Tax</b> Effective from April 29, 2011 Contributes to Independent Financial Stability Fund (2.)	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 Tier 1 Capital is excluded from taxable base.	From 2013 there will be no threshold.	From 1 January 2013 the rate of contribution will be 0.03% on the relevant liabilities.	No Cap from 2013.	Possible. Will not be a tax under standard tax treaties.	No
<b>France</b> <b>("Tax on Banks")</b> Effective from January 1, 2011 Contributes to 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.	No (due to the tax base definition).	EUR 500 million of minimal own funds requirement.	0.25%	N/A	Possible. Will not be a tax under standard tax treaties, although the draft text aims at avoiding double taxation. A tax credit is granted to any French entity subject to this tax if its head-office or consolidating parent is established in another country in which a similar bank levy has been established, but only if this other country grants similar benefit to local entities with a French head-offi or consolidating parent. The list of countries for which the tax credit will be granted should be determined by the Ministry of Finance; in February 2012, the UK became the fi country on the list. When available, the tax credit equals the portion of the foreign tax paid by the foreign head-offi or consolidating parent by reason of the existence of the French entity, for the same year; it is capped at the amount of the French tax due by the French entity.	Yes
<b>Germany</b> <b>("Bank Levy")</b> Effective from January 1, 2011 Contributes to Banking fund	Relevant liabilities of the prior year balance sheet (local) based on legal entity accounts.	Customer deposits and other liabilities toward non-banks. Equity capital.	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.	Cap proposed at 15 % of annual net income; minimum 5% of annual charge (in years where losses are generated).	Possible. Will not be a tax under standard tax treaties. Draft double tax agreement made between UK and Germany not yet enacted.	No

**Table 11: An Overview of Bank Levies Around the World - Continued**

Table IV.A.1. Overview of Bank Taxes from the World Countries							
	Scope						
	“Bank” definition	Domestic Bank (local legal entity)	Foreign branches of domestic bank (Outbounds)	Branches of foreign banks (Inbounds)	Branches of EU Passported Banks	Broker dealers	Non-banking groups with bank within group
<b>Hungary</b> <b>Tax on financial institutions / Tax on credit institutions</b> Effective from September 27, 2010 Contributes to Treasury	According to the Hungarian Act on Credit Institutions and Financial Enterprises. Generally credit institutions and co-operative societies. Please note, that the tax is levied on other financial institutions not only on banks (i.e. insurance companies, financial enterprises, fund management companies, the stock exchange, broker dealers).	Yes	Most likely included.	Yes, but the tax is only levied on the branch’s adjusted total balance sheet.	No exemption for EU passported bank branches. Only entities which prepare Hungarian annual reports are subject to this tax i.e. foreign legal entities which are not established (not having a branch) in Hungary are currently out of the scope of the legislation.	Broker dealers are subject to this tax, even if not regulated as banks. Different tax base and tax rate apply to other financial institutions (i.e. broker dealers).	Levy payable by financial institutions (i.e. other non- banking members of the group are also subject to this tax [but different tax base & rate apply]).
<b>Iceland</b> <b>Special tax on financial institutions</b> Effective from December 30, 2010 Contributes to Treasury	Institutions, which have been operating as a commercial, savings or credit bank, and other entities authorized to accept deposits. Exempt are a) companies that are established under a separate law to be owned by public bodies, and b) institutions according to this article which are being liquidated.	Yes	No, the liabilities of the foreign branch would be included in the overall tax base.	Yes, for branches of foreign banks that accept deposits or have equivalent work permits as commercial, savings or credit banks.	Yes, in respect of domestic branches.	No	No special provision addressing this issue but the financial institution is most likely to be liable.
<b>Iceland</b> <b>Financial Management Tax</b> Effective from January 1, 2012 Contributes to Treasury	Commercial banks, savings banks, credit institutions, security companies, security brokerages, mutual funds management companies and other financial institutions cf. Act no. 161/2002, on Financial Undertakings, which for commercial reasons perform work or services that are exempt from VAT.	Yes	Yes, but only in relation to employee remuneration paid to Icelandic tax residents.	Yes	Yes	Yes	No, but not addressed specifically.

Table 11: An Overview of Bank Levies Around the World - Continued

	Tax base and rates					Other issues	
	Tax base	Exclusion from tax base	Threshold	Rates	Cap/Floor	Double taxation risk? (1)	Deductible for corporate tax purposes?
<b>Hungary</b> <b>Tax on financial institutions</b> <b>/ Tax on credit institutions</b> Effective from September 27, 2010 Contributes to 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.	Debt receivables arising from interbank loans, securities and shares issued by other credit institutions, financial enterprises or investment companies. Loans, subordinated loans and supplementary subordinated loans granted to financial enterprises and investment companies (including reverse placement transactions, repurchase agreements and delivery repurchase agreements concluded with such institutions). In 2012 there will be special tax allowances based on any losses arising at a credit institution due to applicable debt restructuring (mortgage loans for private persons). Please note, that there are special (more detailed) rules regarding these items.	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).	N/A	Possible. Will not be a tax under standard tax treaties The profit based part of this tax may arguably be creditable abroad. This would require through further investigation.	Yes, but not for the profit based part.
<b>Iceland</b> <b>Special tax on financial institutions</b> Effective from December 30, 2010 Contributes to 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.	No	None	0.1285%	N/A	Yes, the tax will not be considered a tax which falls under a double tax treaty.	No
<b>Iceland</b> <b>Financial Management Tax</b> Effective from January 1, 2012 Contributes to 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.	Retirement and pension payments, remuneration which can be linked to activity which is not VAT exempted, and payments made in relation to paternity leave, to the extent that they are not in excess of what can be claimed from the Paternity Leave Fund.	None	Progressive rates: <= 1 bn ISK = 5.45% > 1 bn ISK = 6.0%.	No	Possible. Likely will not be a tax under standard treaties.	Yes, as long as the tax is determined by reference to salaries which are deductible for tax purposes.



**Table 11: An Overview of Bank Levies Around the World - Continued**

	“Bank” definition	Domestic Bank (local legal entity)	Foreign branches of domestic bank (Outbounds)	Scope			
				Branches of foreign banks (Inbounds)	Branches of EU Passported Banks	Broker dealers	Non-banking groups with bank within group
<b>Korea (Republic of)</b> <b>A levy for foreign currency stability (Bank levy)</b> Effective from August 1, 2011 Contributes to The Financial Exchange Equalization Fund	Financial institutions established with approval under the Banking Act as well as state banks.	Yes	Yes. The domestic bank would pay the bank levy collectively for the head office and its foreign branches.	Yes	Yes, in respect of domestic branches.	No	Levy payable by banks only currently.
<b>Portugal</b> <b>Contribution on the banking sector</b> Effective from January 1, 2011 Contributes to Treasury	Credit institutions domiciled in Portugal (including affiliates of foreign credit institutions) and Portuguese branches of credit institutions domiciled outside the EU. The concept of a credit institution is not limited to banks but also includes other financial entities, namely leasing companies, factoring companies and specific credit financial institutions specializing in consumer credit operations.	Yes	Yes. The domestic credit institution pays the bank levy collectively for the head office and its foreign branches.	Yes, but only for Portuguese branches of credit institutions domiciled outside the EU.	No	No	Levy payable by the credit institution only.
<b>Romania</b> <b>Contribution to the Special Fund for Compensations</b> Effective from June 2, 2011 Used to provide compensation for persons affected as a result of a special administrative procedure initiated against a credit institution (i.e. such a procedure may be initiated, for example, in the case of banks that encounter liquidity problems or difficulties in complying with prudential requirements).	Credit institutions incorporated in Romania.	Yes	Yes	No	No	No. However, if the broker-dealer qualifies as a credit institution under Romanian regulatory rules, the contribution would be due.	Levy payable by the bank only.

**Table 11: An Overview of Bank Levies Around the World - Continued**

	Tax base and rates					Other issues	
	Tax base	Exclusion from tax base	Threshold	Rates	Cap/Floor	Double taxation risk? (1)	Deductible for corporate tax purposes?
<b>Korea (Republic of)</b> <b>A levy for foreign currency stability (Bank levy)</b> Effective from August 1, 2011 Contributes to The 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.	Outstanding balances of non-deposit foreign currency liability will be calculated on the basis of daily average balances. Non-deposit foreign currency liability can be calculated on the total amount of foreign liabilities minus deposit foreign currency. Temporary liabilities such as those arising from foreign exchange transactions and derivatives transactions, and liabilities arising for policy purposes will be exempted from the levy.	None	Imposed by reference to liability maturity. $\leq 1 \text{ year} = 0.2\%$ $> 1 \text{ year} \leq 3 \text{ years} = 0.1\%$ $> 3 \text{ years} \leq 5 \text{ years} = 0.05\%$ $> 5 \text{ years} = 0.02\%$ 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.	N/A	Possible. Will not be a tax under standard tax treaties.	Yes. However, currently there are uncertainties around which tax year the deduction should be taken in (i.e. accrued date or actual assessed date).
<b>Portugal</b> <b>Contribution on the banking sector</b> Effective from January 1, 2011 Contributes to 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).	(i) Total liabilities: exclusion of Tier 1 and Tier 2 capital, deposits covered by the Portuguese Deposit Guarantee Fund ("FGD") and specific non debt items from liabilities (such as provisions or fair value of financial derivatives); (ii) Notional amounts of derivatives: exclusion of hedging derivatives and back-to-back derivatives.	None	(i) Total liabilities subject to a rate of 0.05%; (ii) Notional amount of financial derivatives subject to a rate of 0.00015%.	N/A	Possible. Will not be a tax under standard tax treaties and no credit relief will be applicable in Portugal for foreign levies (namely on the foreign branches of Portuguese credit institutions).	No
<b>Romania</b> <b>Contribution to the Special Fund for Compensations</b> Effective from June 2, 2011 Used to provide compensation for persons affected as a result of a special administrative procedure initiated against a credit institution (i.e. such a procedure may be initiated, for example, in the case of banks that encounter liquidity problems or difficulties in complying with prudential requirements).	Total liabilities	Amount of guaranteed deposits as at 31 December of the preceding year.	None	0.1%	No cap in respect to the contribution base. Rate capped at 0.1%.	Possible. Will not be a tax under standard tax treaties.	Yes

**Table 11: An Overview of Bank Levies Around the World - Continued**

Table 17: Full Overview of Bank Levies Around the World - Continued							
		Scope					
	“Bank” definition	Domestic Bank (local legal entity)	Foreign branches of domestic bank (Outbounds)	Branches of foreign banks (Inbounds)	Branches of EU Passported Banks	Broker dealers	Non-banking groups with bank within group
<b>Slovakia</b> <b>levy of selected financial institution (“Act on bank levy”)</b> Effective from January 1, 2012 Contributes to State budget	A legal person established in Slovakia, founded as a joint stock company, that provides loans and receives deposits under a banking license granted by the National Bank of Slovakia.	Yes	May be included (via founder being a Slovak bank).	Yes. A branch of a foreign bank is a branch located in Slovakia that directly provides mainly banking activities as defined by the Slovak Act on banks (i.e. provides loans and receives deposits).	Yes, in respect of domestic branches. (A branch of a foreign bank is a branch located in Slovakia that directly provides mainly banking activities as defined by the Slovak Act on banks (i.e. provides loans and receives deposits)).	No	No
<b>Slovenia</b> <b>Tax on banks balance sheet assets</b> Effective from August 1, 2011 Contributes to State budget	Banks regulated in Slovenia.	Yes	No.	Yes	Bank with a seat in another EU member state, which is entitled to provide banking and other such services in Slovenia indirectly (via established branch office) or directly (freedom of services). In the case of direct operations in Slovenia, such a bank is treated as a tax payer for this tax only if it is deemed to have a permanent establishment in Slovenia in accordance with the Corporate Income Tax Act.	No	No
<b>Sweden</b> <b>Stability levy</b> Effective from December 30, 2009 Contributes to the Stability fund	Regulated credit institutions (kreditinstitut), (i.e. having their legal seat in Sweden) including Swedish entities established by the credit institution as part of a reconstruction. The term credit institution includes banks and credit market companies (e.g. leasing companies).	Yes	Yes	No	No	Yes, if it is a credit institution under Swedish regulatory rules. In general, broker dealers are not included. However, a separate assessment should always be made to determine whether the broker dealer could be deemed to be a credit institution.	Payable on a standalone basis by each and any entity that falls within the definition of a credit institution.

Table 11: An Overview of Bank Levies Around the World - Continued

	Tax base and rates					Other issues	
	Tax base	Exclusion from tax base	Threshold	Rates	Cap/Floor	Double taxation risk? (1)	Deductible for corporate tax purposes?
<b>Slovakia</b> <b>levy of selected financial institution ("Act on bank levy")</b> Effective from January 1, 2012 Contributes to State budget	The levy is calculated by reference to the bank's liabilities.	Bank's equity (if positive), long term funds provided to branches of foreign banks, subordinated debt and deposits received by the bank in the territory of the Slovak Republic, which are protected by Slovak law or the law of another member state.	None	0.4%	N/A	Possible. Will not be a tax under standard tax treaties.	Yes
<b>Slovenia</b> <b>Tax on banks balance sheet assets</b> Effective from August 1, 2011 Contributes to 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.	1) This tax is not paid by banks, where the balance of loans granted to non-financial institutions and sole entrepreneurs in the calendar year for which the tax should be paid, is higher than the balance of these loans during the previous calendar year, by at least 5% of total assets of the previous calendar year. Total assets are calculated as an average value on the last day of each month in the calendar year. 2) This tax is also not paid by taxpayers, where the balance of loans granted to non-financial institutions and sole entrepreneurs, on the last day of the month when the Act of implementation of this tax shall come into force, is less than 20% of total assets.	None	0.1% of the tax base	Cap calculated as 0.167% of the balance of loans, given to non-financial institutions and sole entrepreneurs.	The Slovene Tax Act defines a bank's balance sheet assets as only the obligation of those banks operating in the territory of Slovenia.	Not known yet
<b>Sweden</b> <b>Stability levy</b> Effective from December 30, 2009 Contributes to the Stability fund	Sum of the liabilities and provisions (excluding untaxed reserves) as included in the year end balance sheet.	Corresponding liabilities to other fee-paying undertakings in the same group. Subordinated debt securities that may be included in the capital base under the Capital Adequacy and Large Exposures Act. The average amount of debt securities guaranteed by the Swedish National Debt Office according to specific rules. There are ongoing discussions relating to potential rules changes to take account of the risk profile of the credit institution.	None	0.036% but a 50% reduced rate for 2009 and 2010.	N/A	Possible. Will not be a tax under standard tax treaties. Lobbying to ensure consideration as a tax.	Possibly (3)

**Table 11: An Overview of Bank Levies Around the World - Continued**

		Scope					
	"Bank" definition	Domestic Bank (local legal entity)	Foreign branches of domestic bank (Outbounds)	Branches of foreign banks (Inbounds)	Branches of EU Passport Banks	Broker dealers	Non-banking groups with bank within group
<b>The Netherlands</b> <b>Bank tax</b> Intended to be effective mid-2012 Contributes to Treasury	Regulatory banking definition applies (art. 1:1 of the Financial Supervision Act (Wet op het financieel toezicht (Wft))). Must be licensed by Dutch Central Bank (or hold European Passport).	Yes	Yes	Yes, if licensed by the Dutch Central Bank or holding a "European Passport".	Yes	No	Yes, unless the stand-alone balance sheets of all the banks are less than EUR 20 billion or less than 10% of the consolidated balance sheet of the non-banking group.
<b>UNITED KINGDOM</b> <b>Bank Levy</b> Effective from January 1, 2011 Contributes to Treasury	Banking groups and building societies which extends to include broker dealers.	Yes, based on global consolidated accounts.	Yes	Levy based on UK activity, with reference to worldwide balance sheet for branches. Requirement to aggregate all relevant UK subsidiaries and branches, plus entities held/ branches under the UK.	Yes	Yes	Levy payable by the bank only.
<b>UNITED STATES OF AMERICA</b> <b>Financial Crisis Responsibility Fee</b> Intended to be effective from January 1, 2014 Proposed Fee intended to recoup costs of Troubled Asset Relief Program (TARP)	Broad definition: U.S.-based bank holding companies (large securities houses became such entities to qualify for TARP), thrift holding companies, certain broker-dealers, companies that control certain broker-dealers and insured depository institutions. U.S. companies owning and controlling these types of entities as of January 14, 2010 would also be subject to the fee.	Yes, based on global consolidated accounts.	Yes	Yes, if regulated in the US, but the fee is only levied on the US based liabilities.	N/A	Certain broker/ dealer entities are included, though some of them are also bank holding companies as they converted to avail themselves of TARP funds.	Not clear

**Table 11: An Overview of Bank Levies Around the World - Continued**

	Tax base and rates					Other issues	
	Tax base	Exclusion from tax base	Threshold	Rates	Cap/Floor	Double taxation risk? (1)	Deductible for corporate tax purposes?
<b>The Netherlands</b> <b>Bank tax</b> Intended to be effective mid-2012 Contributes to Treasury	The stand-alone balance sheet or, if applicable, the worldwide consolidated balance sheet, less relevant liabilities, in excess of EUR 20 billion.	Regulatory capital, deposits covered by deposit guarantee schemes, insurance business related liabilities.	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.	N/A	Yes. The tax is not regarded as covered by standard double tax treaties. The Dutch government is considering unilateral (and possibly bilateral) relief measures that would reflect international practice, i.e. the Netherlands would give relief where a Dutch branch or subsidiary was subject to a bank levy in the head office/parent's jurisdiction.	No
<b>UNITED KINGDOM</b> <b>Bank Levy</b> Effective from January 1, 2011 Contributes to Treasury	Relevant liabilities; 50% tax rate for "stickier" funding (>1 year maturity); relevant liabilities up to £20bn not chargeable.	Main exclusions include: Tier 1 capital, "protected" deposits (e.g. retail deposits covered by insurance schemes and government guarantees), certain insurance business, segregated client money, repo liabilities secured against sovereign debt, revaluation reserve for assets, tax, pension, currency and FSCS liabilities, netting of e.g. derivatives where there is a legal right to offset assets and liabilities for respective counter parties. Reduction of relevant liabilities by high quality liquid assets held for FSA regulatory purposes.	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%.	N/A	Yes. Levy will not be a tax under standard tax treaties. UK Tax Authorities continue to liaise with German and French Authorities. UK and Germany have entered into a draft double taxation agreement which has been enacted in the UK but not yet in Germany. Once enacted, this will provide for credit relief by reference to amounts deemed attributable to the branch by the Head Office jurisdiction rather than paid. The year in which the credit can be taken will be mismatched between the two jurisdictions due to different approaches to the tax base. UK regulations are now in place for accounting periods ending on or after 1 January 2011 that allow a proportion of the French levy to be credited against the UK levy. The proportion is calculated as relevant UK assets subject to the French levy/total assets subject to the French levy.	No
<b>UNITED STATES OF AMERICA</b> <b>Financial Crisis Responsibility Fee</b> Intended to be effective from January 1, 2014 Proposed Fee intended to recoup costs of Troubled Asset Relief Program (TARP)	Fee would be based on the "covered" liabilities of a financial firm, which are generally the consolidated risk-weighted assets of the firm.	The financial firm's capital, insured deposits, and certain loans to small business are excluded from the tax base. For insurance companies, certain insurance policy reserves and other policyholder obligations are also excluded.	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.	N/A	Yes; no credit relief for foreign levies; expense relief may be available.	Yes

## **7. Conclusion and Policy Recommendations**

The optimal combination of regulations and fiscal taxes that would 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 risks, remains to be discovered. The impact of these externalities on the growth and development of several countries also remains a source of concern amongst policy makers, academics, and several national and international bodies. Macro-prudential supervision is an evolving 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 the proposed macro-prudential policy instruments are untried and untested.

We highlight the inconsistencies within the taxation system and also the inconsistencies between the taxation and regulation with particular focus on bank and provide an overview of the differing tax regimes between countries.

Current business tax rules arguably encourage excessive leveraging because of the tax deductibility or ‘expensing’ of interest on debt, in contrast dividend payments on equity, which are arguably double taxed. Tax expensing should perhaps be removed to give debt equal treatment to equity, at least for banks. However, the increased emphasis on core equity will put the small saving, and particularly mutual, banks at a disadvantage because they cannot issue equity or quasi equity very easily, if at all.

There is concern about the continuing viability of universal banks. The UK’s Independent Commission on Banking (ICB, 2011) recommended ‘ring fencing’ retail banking within universal banks. Ring fencing would impose higher costs on the universal banks and might encourage some of them to divest their retail banking businesses in pursuit of more risky and

higher RoE generating investment banking and other banking business (Mullineux, 2012). The UK's Parliamentary Commission on Banking Standards (PCBS, 2013) highlighted that whilst ring-fenced banks would carry out the majority of their infrastructural economic functions relating to the payments system, which need protecting, it is important to be clear that it is these functions that will enjoy protection, and not the banks, or their shareholders or creditors, other than depositors. There should be no government guarantee for ring-fenced banks, or a perception of one, just depositor protection. Ring fencing does not imply that risks from non-ring-fenced banking activities can be ignored; institutions will remain systemic and difficult to resolve. Based on ICB (2011) and PCBS (2013) recommendations, the UK passed the Financial Services (Banking Reform) Act (2013). However, the EU is still considering the Liikanen (2012) proposals for limited separation of retail and investment banking. With the Volcker Rule passed in the US in 2014 under an amendment to the Dodd-Frank Act (2010), the UK's Prudential Regulatory Authority is to consider such a rule to more severely limit proprietary trading by UK banks and prevent them from running hedge funds. Nevertheless, this is a major ongoing issue with the big banks lobbying hard for a relaxation in the constraints.

In 2014, the UK Treasury increased the bank levy for a sixth time since it was introduced in 2010 in order to compensate for the benefits banks enjoy from the falling corporate tax rate. The initial purpose of the bank levy was to tax the unsecured borrowings of the banking sector whilst forcing banks to contribute to the fiscal consolidation their failures had made necessary. Since the objective of the Basel III Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR) is also to reduce reliance on short-term borrowings, there is potential overlap. As the stock of non-core liabilities reflects the under-pricing of risk in the financial system, we are of the view that a (risk-related) levy on non-core liabilities may perhaps mitigate the distortions.



Further progress was made towards an EU Banking Union following an agreement on 18 December 2013, which included a proposal to use a bank levy to build up, over a number of years, a Bank Resolution and Recovery Fund to protect against the need for taxpayer-funded bank bailouts. We propose that the UK use its bank levy to take similar action.

The literature reporting on the empirical analysis of the effects of a financial transaction tax (FTT), which involves a fixed levy on the value of a currency or a financial asset (e.g. shares) traded, finds that it can be distortionary, as it reduces market trading volume and liquidity, and increases market volatility and cost of capital for firms. There is also the risk of a double ‘taxation’ of liquidity: once via an FTT and then from the higher liquidity reserve requirements under Basel III. To assure market liquidity, ideally there should be large number of buyers and sellers of an asset. Because Basel III requires banks to hold more liquidity on their balance sheets, it will decrease the number of buyers in the market and this situation could cause difficulties in times when many banks are seeking to sell their liquid assets following a major event, leading to ‘fire sale’ losses or a breakdown in interbank lending as in to August 2007 North Atlantic Liquidity Squeeze. If an FTT is to be implemented, then its level should be carefully calibrated.

Under Basel III and at the instigation of the Financial Stability Board (FSB, 2014), banks must also hold more capital to absorb losses, making them less risky. Their increased Total Loss Absorbing Capacity (TLAC) makes them less risky, which should make it cheaper for them to raise capital and so they may not necessarily lend significantly less (Admati & Hellwig, 2013). Furthermore, if the tax distortions favouring debt over equity are redressed or reversed, with perhaps a bias towards equity instead, the higher regulatory capital ratios need not lead to lower

bank lending in ‘normal’ times. Further, the return on equity (RoE) expected by institutional investors in banks was arguably excessive ahead of the crisis. Shifting the emphasis toward return on assets (RoA) is recommended as an alternative. To the extent that an FTT leads to an increased cost of the raising capital, it might offset some of these benefits, but then the costs may be passed on to other market participants by the banks.

There is a fear that the proposed EU FTT might adversely impact the repo market, which is already being undermined by the Volcker Rule in the US. Because central banks use the repo rate as a key monetary policy instrument, a substantial increase in the cost of repo transactions would require alternative monetary policy tools to be developed, and there is evidence that this may be required as ‘Quantitative Easing’ is unwound anyway. However, it might also substantially increase the cost of liquidity management for other market participants.

The originally proposed EU FTT is applicable to other non-participating member countries and to third countries if they are counterparty to financial transaction trading in an FTT zone jurisdiction and in the UK transactions might be subject to both UK Stamp Duty and the EU FTT, so there is clearly a risk of double taxation for non-participating member countries. Moreover, the 2010 ‘Mirrlees Review’ (Mirrlees, 2010) of the UK tax system and the 2010 ‘Henry Review’ (Henry, 2010) of the Australian tax system warn against the distortionary effects of transaction taxes in general. Are there better alternatives and should a low level FTT, at least on equity trading, be used to discourage overtrading and short termism as proposed by Tobin (1984)?

Financial services are currently ‘exempt’ from Value Added Tax (VAT) in the EU, including the UK. Hence, banks cannot reclaim input VAT paid on their purchases relative to other firms. The removal of the exemption of VAT on financial services and the segregation of fee-based services and interest margin-based services is proposed. Removal of the exemption would increase revenue for the government, but consumers would be liable to pay additional taxes on the use of financial services. This might increase efficiency because it would discourage wasteful use of these services and eliminate the distortionary cross-subsidisation that underpins ‘free-banking’ in the UK. Furthermore, it would reduce the incentive for vertical integration in financial institutions to avoid paying VAT that cannot be claimed to suppliers, which reinforces their ‘bigness’ and complexity in banking. Given the operational difficulties linked to the removal of exemption from VAT, the cash flow method with a Tax Collection Account (TCA) proposed by Poddar & English (1997) is recommended. It should be noted that the more recently developed value added based Goods and Sales Tax (GST) systems in Australia, and especially New Zealand, raise (proportionally, given their lower tax rates) considerably more revenues from taxing financial goods and services.

Because of particular operational difficulties associated with levying VAT on interest margin based financial services, as opposed to fee based service provision, FAT is sometimes recommended as an alternative solution. FAT is a tax on aggregate bonuses plus profits of a banking firm, which is equivalent to aggregate ‘value added’. A FAT might be preferred over an FTT because it is less easily avoided through choice of geographic location; its incidence is more certain and it would generate fewer distortions. 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,

and has the potential advantage of taxing the bonus pool. It does not however have the potentiality to beneficially affect consumer behaviour, in the way that a VAT levied directly on financial products and services might have, or to discourage overtrading and short termism, as an FTT might do.

The importance of international co-operation has never been so clear, given the externalities and the potentiality for international ‘spillovers’ involved in globalised financial markets. Not only must regulation and supervision be uniformly applied to achieve a ‘level playing field’, but financial, and other, taxes need to be harmonised to a much greater extent to reduce the incentive for regulatory and other tax arbitrage. This will become all the more important as attention switches to domestically oriented ‘macro-prudential’ tools, or ‘taxes’.

The Financial Services Board, which is leading the drive for international co-ordination, is well aware the reforms needs to be carefully designed so as to not hinder the banking sector’s ability to increase TLAC, and to ensure that ‘shadow banking’ is not unduly advantaged by ‘over-regulating’ or ‘over-taxing’ banks. With this in mind, the FSB (2013) introduced ‘haircuts’ on stock lending for repos to limit the build-up of excessive leverage outside the banking system, which may also reduce procyclicality of that leverage and there have been moves to enhance the capital adequacy of money market mutual funds (FSOC, 2012).

The overall message seems to be that the focus should shift to taxing banking, rather than banks *per se*, and wider financial activities, goods and services, as well as profits and bonuses. Additionally, pooled insurance solutions with risk-related premiums (or ‘taxes’) should be sought to protect deposits and liquidity, requiring a redefinition of conditions for access to central bank liquidity provision, so that individual banks do not need to hold unnecessarily

excessive in-house reserves. Bank regulatory and tax systems are advancing gradually, but there is much yet to be done and the globalisation of finance requires substantial international co-operation which will be severely tested in the event of the need for the resolution of a major international bank.

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