Taxation and the financial crisis

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"I believe that we should now build on the ideas that have emerged in the large financial centres and we should seek consensus on a co-ordinated approach over the coming months, building on four key elements.
First, that a levy on banks seems likely to be the most practical approach.
Second, that the levy should be designed go with the grain of necessary regulatory reform not cut across or remove the need for it.
Third, that the levy should support globalisation and avoid double-taxation of international banks.
And finally that proceeds should be for national governments to use, whether to put them aside in a dedicated insurance fund, to repay interventions or to reduce public debt.
Based on these four principles, we now need to work actively in the G20 to forge an internationally consistent approach." Gordon Brown , Speech on the Economy held a Canary Wharf, 10 March 2010

"[The International Monetary Fund is asked to]...prepare a report for our next meeting June 2010 with regard to the range of options countries have adopted or are considering as to how the financial sector could make a fair and substantial contribution toward paying for any burden associated with government interventions to repair the banking system." G-20 Press Communique, Pittsburgh Summit (September 2009)

Taxation and the financial crisis

1 Introduction

1. In the wake of the financial crisis, the taxation of the financial sector has become a very charged topic and the object of a number of international policy initiatives most notably that of the G-20 (IMF, 2010). As we shall highlight in this paper this broad topic embraces a wide range of issues which can be approached from a variety of viewpoints. At the time of writing, the ultimate outcome of these initiatives and the degree of international coordination which they will entail remains unclear, there can be no doubt that the crisis has opened up a significant debate regarding tax policy towards finance including the tax treatment of individuals employed in the sector and the structure of incentive payments[1].

2. This paper originated as a survey of a conference which the authors organized in Milan in April 2009 and whose proceedings should appear in the near future. That conference addressed the issue of what lessons for tax policy could be drawn from the financial crisis. The papers presented at the conference examined whether tax arrangements in many countries and across jurisdictions may have influenced decision making and been a causal element in the crisis. The general conclusion from those papers was that the tax system had played a minor if any role in triggering the crisis ("a dog that did not bark") but that the crisis had served to underscore a number of weaknesses in existing tax systems.

3. Since that date the policy initiatives have shifted the nature and focus of the debate. The paper has been updated to take account of this shift in emphasis. We shall focus attention on two: the manner in which the financial sector should "pay" for its bailout and the role of taxes in the regulation of the financial sector and their possible coordination with other areas (notably accounting and capital adequacy norms). In addition, the paper draws on papers presented at two conferences held (February in New York and Washington) and the discussions that ensued. These meetings were attended by academics (lawyers, accountants and economists), private sector experts as well as government officials and international institutions. Apart from certain clearly defined "one-off" initiatives which have been passed into law, such as the bonus taxes the status of much of the current debate has the character of a "work in progress".

4. Because the understanding of what occurred in the run up to the crisis is being constantly updated and policy proposals have not been finalized our discussion in many

[1] The IMF opened up a public consultation on the subject : http://www.imf.org/external/np/exr/consult/2009/index.htm

ways is tentative[2] and can be seen as taking stock of existing knowledge and as a very preliminary assessment of various positions which have been aired in numerous fora.

5. This paper is divided into two broad sections. The first examines those elements of the tax system that may have contributed to the crisis. It suggests that there are a number of weaknesses in existing arrangements, some of which have long been known (such as the propensity for tax systems to encourage leverage) while others (such as the excessive reliance on the financial sector and its ephemeral earnings for tax revenue projections) have only become apparent with the benefit of hindsight. The discussion is organized around the tax treatment of households (in particular the deductibility of mortgage interest), non-financial corporate entities (leverage) and financial institutions.

6. The second part of the paper is more tentative; it discusses policy initiatives in respect of the financial sector that are currently being aired. These policy initiatives have been organized under three broad (and often overlapping) headings: (i) special taxes on the financial sector to recover the costs incurred for the bailout; (ii) the use of taxes to correct for distortions (particularly of systemic character) resulting from the safety net which applies to the financial sector; (iii) reforms in the taxation of the financial sector which have been highlighted by the crisis (VAT on financial services, the interaction with accounting and regulatory definitions of income, anti-avoidance measures in particular with respect to tax arbitrage).

2 Did tax policy contribute to the crisis?

2.1 Salient features of the crisis

7. A long "laundry list" of causal factors has been suggested as having caused the financial crisis or contributed to its character and severity:

- Large global macro economic imbalances: persistent and large current account deficits and surpluses resulting in capital flows from capital-poor emerging markets to capital-rich industrial economies, especially the United States
- Protracted period of low interest rates and credit boom in US and UK coinciding with an increase in risk-taking
- Asset bubbles in the housing market in a number of countries
- Concentration of risk in the financial sector
- Leverage of households and financial intermediaries and in some instances corporate entities
- Flaws in techniques to measure used to measure, price and manage risk
- Regulatory failures including the arbitraging of differences across financial centers and significant oversights as a result of "regutalory capture" by financial intermediaries[3].

[2] For example, a significant reassessment of the background to the Lehman bankruptcy has resulted from the Valukas (2010) report that appeared on 11 March .

- Compensation schemes encouraging managers to forsake long-run prospects for short run return.
- Greed and dishonesty

8. While these factors have been often country or jurisdiction specific the financial crisis has been truly global in nature of and involved significant spillovers between financial institutions and across jurisdictions.

9. It is interesting to note that taxation and fiscal policy do not appear in the list of major culprits responsible for the financial crisis. There is a consensus that is reflected in the papers presented in Milan that the tax system appears to have played a secondary role albeit possibly decisive in some circumstances in determining the precise features of certain transactions. The most important appear to have been: (a) the deductibility of mortgage interest by households; (b) the aggressive use of debt financing in M&A and private equity transactions (c) the use of hybrid financial instruments by financial institutions (d) the use of tax havens to structure tax efficient securitization vehicles In assessing the importance of each of these tax drivers it is important to appreciate their role within the broader dynamic changes under way. In other words, the reason why these tax factors may have fostered a more unstable financial environment depend heavily on other changes occurring in the financial environment

2.2 Household sector: indebtedness and tax

10. The returns to owner-occupied housing, which include the value of using the property (the 'imputed rent') and any capital gains from house price appreciation are very lightly taxed in most countries. Imputed rent is taxed in very few countries (including the Netherlands (typically) and Switzerland). Capital gains are taxed in some countries, but typically at a lower rate than other income or after a high threshold (or both, as in the U.S.). Moreover, despite the low taxation of returns to housing, some costs, notably interest costs are deductible (or creditable), subject to limits, in a number of countries (including Denmark, France, Italy, Spain, Italy, France, U.S.).

11. Mortgage interest tax relief encourages the build up of (gross) housing debt and there is evidence that countries offering more favourable tax treatment for home ownership do indeed have higher ratios of mortgage debt (Keen et al. 2010). There is also evidence that mortgages fell significantly relative to home value (in UK and US) after reforms reduced the value of mortgage interest relief (Scandinavia). High levels of mortgage debt are also associated with very low savings rates of the household sector (Agell et al. 1995).

2.

[3] There are essentially two methods via which banks evaded regulatory capital requirements. First, they temporarily placed assets—such as securitized mortgages— in off-balance-sheet entities, so that they did not have to hold significant capital buffers against them. Second, the capital regulations also allowed banks to reduce the amount of capital they held against assets that remained on their balance sheets—if those assets took the form of AAA-rated tranches of securitized mortgages. Thus, by repackaging mortgages into mortgage-backed securities, whether held on or off their balance sheets, banks reduced the amount of capital required against their loans, increasing their ability to make loans many-fold. The principal effect of this regulatory arbitrage, however, was to concentrate the risk of mortgage defaults in the banks and render them insolvent when the housing bubble popped. (Acharya and Richardson 2009)

12. However, the provisions relating to mortgage interest tax relief do not appear sufficient to explain the *timing* and *size* of the increase in leverage of the personal sector and the geographical concentration of the increase in leverage across countries. This contrast with the financial crisis in the Nordic Countries in the early 1990s where changes in the tax system coincided with a very significant decline in housing prices[4]. A number of other policy developments as well as changes in the lending practices of financial intermediaries appear to have played a much more significant role in the current crisis[5] and any tax effect needs to take account of the complex interplay with these other developments (especially on the regulatory front) as well as some other subtle changes in tax provisions. Even in the Scandinavian case where tax appears to have played a more significant role in the financial debacle, the build-up in debt by households was largely driven by a prolonged period of unprecedented financial liberalization.

13. Focusing on the United States, incentives for home-owners to take mortgages were changed over time and the standards for eligibility to mortgages were expanded (Hemmelgarn and Nicodeme, 2009). These measures appear to have had a significant on US housing market dynamics as low- and no-downpayment mortgages expanded very markedly. According to the surveys conducted by the National Association of Realtors, in 2003 the median downpayment for first-time homebuyers was equal to 6 per cent; in the period 2004-2007 it was equal approximately to 2 per cent; also the median downpayment for repeat homebuyers went down starting from 2004, although to a lesser extent[6]. The decrease of mortgage downpayments (i.e. the lifting of a constraint on leverage) may have given resulted decrease in the cost of capital owing to the tax deductibility of debt[7]..

14. The spread of mortgages, in particular subprime loans, was largely helped by the development of new financial instruments, in particular the technique of securitization, which consists of pooling the loans into an investment vehicle and then selling securities backed by payments for these loans. The most common securitizations are

[4] Englund et al (1995) suggest that demand for owner-occupied homes decreased by around 15 per cent including the effects of the withdrawal of interest subsidies. They also estimated that short-run impact on market prices of owner-occupied homes was between 10-15 per cent, or roughly half the fall in real prices recorded between 1990 and 1993

[5] Hilbers and others (2008) present calculations of the user cost of housing and find that its variations since 1995 were mostly driven by interest rates, with a comparatively stable tax component. Poterba and Sinai (2008) calculate the impact of interest deductibility on the user cost of housing in the U.S. and find that on average this provided a tax subsidy equivalent to around 19 percent of the user cost. While the subsidy is greatest for high income households (since the deduction is taken at a higher marginal rate) it is nevertheless around 8 percent for those with low incomes.

[6] See www.realtor.org.

[7] As an example, using the highest marginal tax rate of the federal income tax in 2003 and 2004 (35 per cent), and assuming a downpayment to buy the house equal to 5 per cent in 2003 and 0 per cent in 2004, the effective average tax rate computed with the IMF methodology (see section 2.3) would decrease from -17.97% to -18.92%. Since the reduction of downpayments referred especially to low-income first-time buyers, it is reasonable to compute the change of the effective taxation also with the lowest income tax rate (10%); in this case the effective average tax rate would decrease from -5.13% to -5.41%. Of course, it is difficult to say if and how much these changes in the economic convenience of the housing investment could have been statistically relevant at the margin for housing market dynamics.

Mortgage-Based Securities (MBS) whereby the claims of thousands of mortgages are pooled together in a special purpose vehicle (SPV). The securities are separated in several tranches - senior, mezzanine (or junior) and equity (non-investment grade) – with a sequential preference for the claims (i.e. the senior tranche has preferred claim on the proceeds over the other two and the mezzanine tranche has preference over the equity tranche). By doing so, financial institutions are able to rearrange the risk of the pool and to redistribute it across investors with different risk profiles. This in turn lowers the cost of lending and extents credit to borrowers with lower credit quality

15. This securitization process was itself helped by the emergence of a new class of derivatives which allowed transferring the credit risk to a third party: the Credit Default Swaps (CDS). CDS are common instruments, representing 73% of the USD 2.3 trillion credit derivative products in 2002 (O'Kane, 2005). The principle is that a third party accepts to take the default risk of a specific asset in exchange of an income. This process allows the CDO issuer to shield from the risk and to increase the rating of its bonds. The CDS market has mainly developed outside organised markets (i.e. they were Over-The-Counter operations) and grew exponentially from virtually zero in 2001 to about USD 15 trillion in 2005 and over USD 60 trillion in 2007 (Baily et al., 2008).

16. The role of tax in these securitizations is difficult to evaluate. However, it is clear that the existence of vehicles allowing for a full encumbered (by tax) pass through of mortgage or other forms of payment was necessary for securitizations to prosper. As recently argued by Han et al. (2010) there is some evidence to suggest that the differential tax treatment of loans on banks' books (subject to corporation tax) and the exempt status of securitization vehicles may have been a factor for the growth of securitizations While many vehicles were created on shore the vast majority of securitizations traded internationally were issued through SPVs domiciled in offshore centers where tax conditions for structuring financial securities as well as market regulation was negligible. (Eddins, 2009)

17. The growth in household indebtedness has also focused attention on other weaknesses of the tax system of some countries. The growth of tax deductible mortgage debt is also associated with arbitrage opportunities. This process was well documented in the build up to crisis in the Nordic countries of the early nineties (Agell et al., 1995) where relatively higher levels of inflation opened up significant differences in after tax-returns[8]. The existence of tax-preferred investments in the US (typically pension

[8] In the early 1990s the Nordic countries moved towards a Dual Income from a comprehensive and highly progressive tax system. The tax reform implied a large change in the relative tax treatment of financial and non-financial savings, primarily because of a reduction in the effective tax rates on financial savings. But the tax reform also had important consequences for the treatment of borrowing by households. In Sweden, for example, net interest expenses remained fully deductible against the marginal tax rate until 1982. As the tax system was highly progressive with a top marginal tax of around 80 percent, the tax authorities in effect paid the greater part of the nominal interest cost for many households. The tax reform of 1983-85 reduced the maximum value of interest payments to 50 percent, and a further change in 1989 lowered the cap to 47 percent. The tax reform of 1991 brought the cap in line with the new flat tax rate of 30 per cent. As a result of these declines in marginal tax rates and the fall in the rate of inflation (from almost 13% to less than 3%), between 1981 and 1991 the cost of borrowing rose by fifteen percentage points in real terms.

related) and their growing popularity in recent years may be an indication that such arbitrage opportunities may have influenced the growth in indebtedness[9].

2.3 Corporate sector: leverage

18. In the absence of tax with complete markets and perfect information the parcelling of assets and returns between equity and debt claims has no real consequence since the structure of earnings and the riskiness of assets is independent of financing decisions (Modigliani-Miller, 1958). Market imperfections, asymmetries of information and the existence of transactions costs (for example following a bankruptcy) introduce a range of considerations that can lead to a determinate choice. Issuing debt, for instance, may be a way of constraining managers in their self-interested use of free cash flow (Jensen, 1986)—an argument much made, for instance, in defence of Leveraged Buyouts (see below).

19. The role of taxes has long been recognized: when interest payments are deductible against the corporate income tax (CIT) but returns to equity are not, then, all else equal, firms will have an incentive to issue debt until the expected marginal tax benefit is just offset by the marginal increase in expected bankruptcy costs. These preferences for debt over equity can be mollified in the presence of personal taxes but in practice tax systems appear to favour debt over equity finance. This is particularly true if exempt investors tend to be the dominant source of external finance as has been increasingly the case in recent years (see below).

20. Changes in debt ratios of the non financial corporate sector in the years immediately preceding the financial crisis do not appear to have been significant. According to some measures the leverage of non-financial corporate sector appears to have increased somewhat in the UK and the euro area in recent years (2005-2008) following a period of stability in the 1990s (BIS, 2009). By contrast, the leverage of the US corporate sector has remained unchanged.

21. The tax advantage to debt appears to have been decreasing over time as a result of the generalised decline in inflation rates as well as statutory corporate tax rates across countries (IMF, 2009; Devereux et al.). At the same time other tax factors may have led to an increased reliance on this form of financing such as the elimination of imputation systems and the greater reliance on international capital markets where various forms of tax exempt investors dominate bond markets[10]. The extent to which these developments have mattered varies from country to country. On the basis of these observations there is a broad consensus that the tax advantage afforded to debt did not contribute to the crisis

22. However, there are two elements that deserve attention in assessing the importance of the tax advantage to debt in affecting the potential systemic weakness of the corporate sector. First, the absolute *level* of indebtedness, rather than *changes* in indebtedness, is what matters in terms of systemic risk. Micro-theory focuses on the

[9] See the discussion in Lloyd (2009)

[10] Other factors such as cross-border arbitrage activity in equity markets suggest that the tax privilege of debt over equity may not be so significant.

likely inefficiencies of financial markets—whether there will be too much borrowing or too little—are model-specific. The impact of externalities operating at a more macro level, however, seems clear-cut: when firms borrow, they are likely to internalize the expected bankruptcy costs they themselves incur but not the impact of their own failure and default on others (effects that are not present in the use of equity finance)[11]. Externalities from increased leverage are hard to quantify, but there is evidence that high leverage is associated with greater output losses in bad times. Davis and Stone (2004), for instance, find that higher debt-equity ratios are associated with greater post-crisis output declines, and IMF (2008) that the cumulative output loss following periods of financial stress tends to be larger the greater the run-up in nonfinancial corporate debt before the onset. Given the large potential macroeconomic damage from excess leverage, including balance of payment effects, it is hard to see why debt finance should be systematically tax-favored.

23. The second element of systemic relevance is that leverage ratios tend to be set to withstand external shocks based on historic experience. One area where such an approach may have given rise to potential problems in recent years is that of leverage buyouts which rose to historic highs in the build up to the crisis. The possibility of exploiting higher levels of leverage in target (and potential target) companies to achieve tax savings appears to have been in many instances a contributing motivation to the value the transactions. The benefits of the tax shield depended on the assumption that revenues would grow in line with past experience.

24. Leveraged buyouts, marked by especially heavy use of interest deductions, increased substantially up to mid-2007. Post-acquisition interest deductions can be so large as to eliminate CIT payments for several years. There is likely also to have been an indirect effect in encouraging other firms to increase their borrowing to defend against possible LBOs. Many LBOs cross national borders, moreover, and so are characterized by complex structuring intended to minimize tax liability and in some cases exploit opportunities for 'double dipping'. Between 2003 and 2006, the amount raised by private equity funds, which arrange most LBOs, increased about five-fold, to around US$230 billion; and between 2000 and 2007 their share of merger and acquisition activity in the U.S. rose from 3 to nearly 30 percent.

25. In summary, while tax induced behavior of the non-financial corporate sector does not appear to have been one of the causes of the crisis, the high levels of indebtedness of some sectors may have exacerbated the real effects of the financial crisis.

2.4 The financial sector: regulatory and tax arbitrage

[11] These externalities are likely to be especially large for financial institutions, given their systemic importance. Some aspects of government policy exacerbate these concerns, as with guarantees (explicit or implicit) on bank deposits or corporate debt. There may also be strong effects on the balance of payments: preferential tax treatment of debt can provide an implicit subsidy to corporate and household borrowing, including from abroad, so increasing vulnerabilities through the capital account—as may have happened in Latvia, for example, where the implicit corporate-level tax subsidy made the cost of investments financed by borrowing something like 130 basis points lower than it would have been in the absence of tax.

26. Financial institutions face qualitatively the same tax considerations in balancing equity and debt finance (including deposits) as do non-financial corporations. Banks have traditionally been able to sustain very high debt ratios by virtue of having relatively safe assets, and implicit or explicit deposit guarantees reinforce this. Moreover, the high profitability of financial institutions in recent years will have made debt more attractive for them than for many non-financials, since the low probability of tax exhaustion it implies means a high effective CIT rate.

27. The tax bias to debt runs counter to regulatory objectives. Banks face both an explicit tax advantage of debt and, through regulatory requirements, an implicit penalty—with evident risk of policy incoherence. Tax incentives towards high leverage may have undercut the effectiveness of regulatory requirements.

28. The tension between regulatory objectives is reflected in the emergence of devices that enable debt-like instruments, attracting interest deduction, to be included in Tier 1 capital. Basel guidelines allow up to 15 percent of Tier 1 capital to be in the form of hybrid instruments that may attract interest deductions—in itself suggestive of the tax bias to debt finance that banks face. Beyond this, moreover, devices have emerged by which banks can include as Tier 1 capital what is arguably closer to debt. Prominent among these is the trust preferred security (TruPS), which accounted for a large share of hybrid issues in the U.S. Measures can be conceived to close specific possibilities of this kind, but so long as the underlying tax bias remains so too will an incentive to find other ways of achieving the same end.

29. Though there are important overlaps, the objectives of tax policy need to be recognized as distinct from those of regulatory and accounting practices if each is to serve its proper purpose. Clearly, there are monitoring and compliance advantages in applying common definitions and concepts for tax and accounting purposes, and some see corporate governance advantages in closely aligning tax and book profits (Desai et al, 2007). But the ideal tax base is not necessarily the most accurate measure of current income. There are, for instance, potential advantages in allowing full expensing of investment for tax purpose, and provisioning may be best treated differently for accounting purposes than for those of assessing taxable income.

2.5 New Financial Instruments and tax arbitrage

30. The difficulties in measuring pricing and managing risk are greater for new financial instruments. Differential taxation of dividends, interest and capital gains creates many inconsistencies in capital income taxation Tax inconsistency can be efficiently exploited through the ability of derivatives to replicate a portfolio in a variety of ways expands opportunities to tailor the nature of the payments to the tax preferences of the investor (transforming it into lightly taxed capital gains, for instance). However most observers believe that tax played only a secondary role in encouraging the growth of the derivatives markets. One important reason why tax planning may not have borne greater responsibility for the derivatives explosion, at least in the U.S., is that tax law requires businesses that qualify as dealers in securities to use mark-to-market accounting with respect to all inventory items, and treat all gains and losses on such items in a consistent way. Companies often used the same carefully structured

derivatives transactions to minimize tax liabilities, manipulate reported earnings, avoid regulatory constraints, and minimize the effectiveness of investor oversight. In these over-determined circumstances, tax considerations, standing alone, may not have made a large difference even though they clearly encouraged the underlying transactions.

31. A more direct connection between new financial instruments, tax and the crisis has been suggested by Eddins (2009). He argues that collateralized debt obligations (CDOs) organized as pass-through entities became especially attractive because their owners entered into credit default swaps with sellers that could treat default losses as ordinary loss, while the CDO has pass-through tax treatment and therefore would have to treat defaults as capital losses. The differential tax treatment allowed the CDO tranches to offer a higher after-tax expected rate of return because the expected losses effectively generated more tax offsets by attaching them to the mark-to-market seller of the swaps. The strategy was especially advantageous for the riskier tranches with higher expected default rates. While there is little denying that such arbitrage incentives may have existed, many observers appears to doubt that these factors mattered in practice. Further research is needed to support this argument[12].

2.6 Compensation schemes

32. The level and form of executive compensation has been amongst the most debated aspects of the crisis. With few exceptions and following changes in tax provisions in most countries, tax policy does not appear to have been an element that has distorted most compensation packages. Tax rules for employee stock options are complex and vary substantially across countries and schemes—but in many cases offers limited or no benefit relative to salary. Tax rules in the U.S., however, have encouraged performance-related pay. Since 1993, the deductibility of non-performance related executive salaries has been limited to US$ 1 million—a strong incentive to use more incentivized pay schemes. However, this incentive does not extend to treating incentivized schemes as different from other sources of labour income from the point of view of employees.

33. A somewhat different set of issues arises in the case of private equity and hedge fund managers, who receive most of their compensation as "carried interest" ("performance fees) subject, in some countries, only to relatively light taxation as dividends or long-term capital gains. Critics see this as taxing managers at inappropriately low rates on what is effectively labor income[13]. In the eyes of these same critics, the growth of "hedge funds" and "private equity" firms would appear to be driven in part by these tax considerations.

34. The basic argument used to support the re-characterization of income is that carried interest is compensation for performing a service for the partnership. The sponsor is analogized to a money manager who determines how best to invest a client's funds. Accordingly, the carried interest should be taxed similarly to risky returns given to other

[12] Based on the discussions held in the conference in Milan and New York.

[13] If this income were taxed as earnings, however, coherence would require that a corresponding deduction for payment of compensation be available to other partners— enabling an increase in the pre-tax remuneration of the fund managers (see below).

service providers, such as stock, stock options, or royalties. Investment advisors fees are taxed as ordinary income. This is the case even if the fees are contingent on performance. For example, if investment advisors receive equity compensation, say in the company that employs them, typically either ordinary income tax treatment or the principles governing options applies. According to this view the funds remain the investor's funds. The investor gets taxed on the gains or losses in the funds and potentially can deduct the fees paid to the advisor (Bankman, 2008).

35. According to others (Weisbach, 2008) the structure of a private equity partnership does not perfectly fit this analogy. Typically, an investment advisor is not treated as owning the funds that are invested. Instead, the investment advisor is merely the agent for the investor. In a private equity partnership, the partnership is the owner of the funds and not merely an agent for the investors. An alternative way to view the activities of a sponsor of a private equity fund is as an entrepreneur that raises capital to make investments. The form used for raising capital is a limited partnership in which the sponsor is the general partner and the capital providers are limited partners. The limited partners are paid a market rate of return for their provision of capital and have no more involvement in partnership operations than any third party provider of capital. Under US law, anyone who makes an investment and holds it as a capital asset, even if made with third party capital, receives capital gain or loss on the investment. Accordingly changing the tax treatment of general partners would have wider ranging implications than simply affecting private equity. Another analogy used by supporters of the current treatment of carried interest is that capital gains treatment is given to anyone buying shares through a margin account and profiting on the sale is using in part someone else's money and their own effort and ideas about stock valuations to make money.

36. The discussion of carried interest highlights two key problems in taxing capital income: the distortions to behaviour induced by differences in tax rates and the difficulty of distinguishing labour from capital income. In this as other areas incentives to income shifting are unavoidable and give rise to complexity. There is simply no general method of making this distinction, and attempts to do so are complex and avoidable. Moreover, even if we could devise a rule, the proposed changes would apply only in the partnership context, it would be easily avoidable.

37. As already discussed in other contexts the impact on revenue of re-characterisation of income depends on the tax characteristics of the various parties potentially affected by the re-characterization. Sanchirico (2008) notes that under US partnership rules if private equity managers were taxed at ordinary rates for their services other investors could claim a deduction of equal amount against their ordinary income. If the tax rates for the two parties were identical this would not result in a change in revenues from the current situation. Since overall pre-tax income is unchanged tax revenue in the aggregate would remain unchanged. Naturally investors and managers would need to redistribute income between themselves to keep their after-tax disposable income unchanged.

38. In order to assess the impact on revenues the relevant tax attribute is not the level of taxes faced by the investor but the difference between the tax rate on ordinary income and the tax rates on dividends and capital gains. If this gap for the investor is different

from that of the manager then the reallocation of income may result in changes in overall tax revenues. An increase in revenues – before any behavioural adjustments would certainly occur if the investors in PE and VC funds were pension funds and other tax exempt investors.

39. Finally changes in the tax treatment of "carried interest" are certain to trigger economic responses, with two important potential consequences. First, productive economic activity in the affected sectors may be reduced, as those affected by taxation seek to reduce their exposure to taxation. Second, some of the burden of higher taxation may fall on investors, rather than on the managers themselves. The exact ultimate incidence of tax changes is difficult to assess particularly in an open economy where tax structures and investors can migrate easily to other jurisdictions.

3 Implications for Tax policy

40. The fallout from the financial crisis and the impending budget deficits resulting from government bailout and counter-cyclical interventions has prompted a series of policy initiative which extend the remit of tax policy beyond mere revenue collection.

41. Three conceptually distinct areas have attracted the attention of policy makers in recent months:

(i) Special taxes on the financial sector to recover the costs incurred for the bailout;
(ii) The use of taxes to correct for distortions (particularly of a systemic character) resulting from the safety net which applies to the financial sector;
(iii) Problem areas with the taxation of the financial sector which have been highlighted by the crisis (VAT on financial services, the interaction with accounting and regulatory definitions of income, anti-avoidance measures in particular with respect to tax arbitrage).

42. These topics are not disjointed and in some instances potential policy prescriptions overlap with regulatory measures.

3.1 Special levies on the financial sector

43. Much of the policy debate in recent months has been driven by the desire to placate public anger by limiting the extent to which ultimate bailout-costs are borne by taxpayers and by re-appropriating windfall profits and rents in the financial sector. This approach is much in the same spirit of the suggestions coming from the international supervisory and regulatory community [14]. In this case the approach is basically backward looking and the main objective is to raise revenues from those institutions and

[14] "It is imperative that these profits be retained in financial institutions to rebuild capital …..The international seupervisory and regulatory community is agreed that restricting dividend payments, share buybacks and compensation rates are appropriate means to these ends" FSB (2009) p.2.

individuals which have benefitted most from government intervention [15] . These proposals have taken various forms and in some instances also aim to "undesired" behavior of financial institutions.

3.1.1 The Obama Proposal

44. Some proposals attempt to achieve both efficiency and revenue objectives. The Obama proposal for a Financial Crisis Responsibility Fee at a rate 0.15% on financial firms' liabilities provides a prominent example. It has been presented both as a corrective device [16] and as a means "[…] to compensate taxpayers fully for the extraordinary support they provided."[17] . In essence the fee would apply to the largest financial firms with consolidated assets exceeding $50 billion. Under the initial proposal the base for the tax would be the firm's assets less Tier 1 capital and FDIC assessed deposits. In essence the tax would apply to financial firms' funding in wholesale markets which in the view of many was the engine behind the build-up of leveraged risky portfolios. It also appears to be closely related to the ideas put forth by Paul Volcker to limit proprietary trading activities of commercial banks subject to the "safety net".

3.1.2 The taxation of bonuses

45. Other proposals aim mainly to achieve revenue and fairness objectives as well as a means to support indirectly bank recapitalizations. These motivations were given for the tax on bonuses introduced in a coordinated move by UK and France. The UK bank payroll tax applies to retail and investment banks (including building societies), and to banking groups. The payroll tax is levied at a rate of 50% on all discretionary and contractual bonus awards, to the extent that the bonus exceeds £25,000. It will have effect from the time of the announcement, on 9 December 2009, until 5 April 2010. The French tax applies to bonuses, including deferred payments and awards of stock as well as cash. The current proposal applies to bonus payments in excess of €27,500.

46. Some interesting lessons can be learned from the British and French bonus tax experiment. The first one is that the two governments were well aware of the potential consequences of the tax on the location of financial services as shown by the effort to coordinate their policies and by the one-off nature of the levy.[18] The second is that the tax while formally applying to labour income appears in many instances to have been paid out of profits (via a grossing up of pre-tax compensation). The most recent data suggest that the tax may raise revenue for £2.5bn, an amount about five time bigger than

[15] Some observers, in particular of the US package, have noted that a large number of the banks that are targeted for special tax treatment have already repaid the loans extended under the TARP program and that a number of non-financial corporate entities should also in theory be subject to a special levy.
[16] "As it would be based on an institution's size and exposure to debt, it would also further the Administration's financial reform goals by providing a check against the risky behavior that contributed to this crisis" Budget of the United States Government, Fiscal Year 2011, p. 39
[17] Budget of the United States Government, Fiscal Year 2011, p. 39
[18] In the British case the tax on bonus is only partly one-off as from 6 April 2010 the top marginal rate of the personal income tax will raise from 40% to 50% for income above £150,000.

the government initial estimate.[19] The high tax yield provide evidence of the choice of many banks to absorb the cost by "grossing-up" their bonus pools.[20]. The motivations for the "tax shifting" in the UK appear to originate in the "mobility" of skilled labor. Shareholders appear to have absorbed the tax increase in an attempt to maintain their UK presence also in light of the foreseen increases in the top marginal tax of the personal income tax. This desire to maintain a UK presence may be suggestive of the existence of locational rents associated with a London presence. The nature of these and the extent to which they are durable over time is not clear.

47. Tax shifting raises two issues. The first one is related to the effect of the tax on on bank capitalization. To the extent that the tax is borne by banks' profits through grossed-up bonuses, the levy may have a negative effect on bank capitalization thereby running against the regulatory objective of strengthening the capital base of banks. The second is whether a direct levy on banks' profit may not be a more efficient way for allowing the financial sector to re-pay the cost of the bail-out.

3.1.3 Excess-Profits and "High-Profits" Taxes

48. A possible candidate in this respect is an excess-profit tax. There are several types of excess-profit taxes. In the US an excess-profit tax was levied several times during wartime periods between 1917 and 1953.[21] The various taxes implemented in this period may be classified in two broad families: the first, technically known as a war-profits tax, was designed to recapture the excess over standard of profits that an individual corporation would have earned in the absence of defense- or war-induced expenditures; the second, frequently identified as a "high-profits" tax, is based on the excess over some presumed reasonable standard rate of return on invested capital (Lent, 1951). High-profits tax are also similar to resource rent taxes such as the Petroleum revenue tax in UK or the Australian Petroleum resource rent tax (Fraser, 2002).

49. A high-profit tax may achieve the objectives of the bonus tax and the FCRF: it places the financial burden of the bailout to the institutions which have benefited most and is a means to tax "rents" in the financial sector. To prevent the avoidance of the tax by the distribution of high bonus, compensation above a given threshold should be added-back to profit. Similar levies have been recently proposed by Kleimbard and Edgar (2010) and by the IMF (2010) report.

50. The effects of a high profit tax on incentives depend on the manner in which it implemented. There are two crucial issues. The first concerns whether the tax operates as an additional levy or as an Allowance for Corporate Equity (ACE). In the former case

[19] "Supertax pulls in £2.5bn for UK Treasury", Financial Times 4 March 2010

[20] "UK fails to alter bank bonus culture", Financial Times 6 January 2010. There is also anecdotal evidence that some bank had planned to raise its base salaries for managing directors and others in order to make up for lower bonuses ("France Joins U.K. Bonus Tax; Not Germany, U.S.", Wall Street Journal, 14 December, 2010). The discussion to date about the extent of the tax revenue windfall does not appear to have taken account of the reduction in the corporate tax base associated with higher gross compensation.

[21] The first Canadian experiment with a corporation income tax, enacted in 1916, was also based on the high-profits principle.

the excess profits tax would apply only on profits in excess of threshold amount whereas the standard (normal) return on capital would be taxed at the general statutory rate. It is easy to show that this would leave existing incentives to capital structure unchanged since at the margin debt equity decision would be driven by the standard rate of tax on "normal profit"[22]. Furthermore, an additional levy might lead to greater risk-taking if the excess return were not a pure rent but a return to risk-taking (Kaplow, 1994). By contrast, under an ACE the cost of debt and equity capital would be the same. This would favor the recapitalization of financial institutions and potentially offset the effects on greater risk taking resulting from the higher rates of tax on the excess returns.

51. In addition, an ACE tax could be aligned with bank regulation. To the extent that the standard rate of return is calculated on regulatory (i.e. Tier 1) capital the high-profit tax may provide a tax incentive to increase regulatory capital. A further advantage of an excess profit tax of the ACE type, is that it could be implemented as a structural reform rather than a temporary or one-off measure and can be coordinated with a more general attempt to reduce the debt bias of the corporate tax.

52. Under current circumstances, the introduction of high profits taxes or additional levies would need to take account of the stock of losses carried forward by many financial institutions. Taxpayers would benefit from a shift to an ACE the higher the excess profits tax rate (relative to the ordinary rate) and the greater the size of the losses[23].

3.2 Correcting market failures

53. Broadly speaking the financial sector is prone to two types of problems requiring correction (i) distorted incentive structures and undesired behavior of economic agents (moral hazard) and/or (ii) externalities within the financial sector (the failure of an institution propagating amongst one another) and from the financial sector to the real economy[24] (*systemic risk*). Corrective taxes are part of wider array of policy instruments including banking supervision, the application of capital requirements and fees, typically to pay for deposit insurance, as well as general regulation of financial markets by both governments and financial intermediaries themselves[25].

54. Proposals to utilize taxes to correct for moral hazard and externalities are relatively new and apply both to economic agents and to financial market transactions. They aim to correct different distortions but appear to have the overarching aim of reducing the importance of the financial sector (Shackelford et al, 2010). It is inevitable that such taxes may also provide important sources of revenue and the border line between

[22] An recent example of such an excess profits tax was the Italian DIT (dual income tax). Under this arrangement, however, the normal return on equity was subject to rate below the standard rate of tax. See Alworth and Lovisolo (1997) and Bordignon, Giannini and Panteghini (2001) for a discussion of the incentives in the context of cost of capital framework.

[23] A solution to this issue would be to allow loss carry forwards at the pre-ACE statutory rate.

[24] There are also many positive externatilities resulting from well functioning financial markets World Bank (199)

[25] For example, futures markets have a number of features, such as margin calls, that are meant to safeguard against a default by one of its members.

revenue collection and corrective objectives often tends to be blurred[26]. Moreover in some circumstances the discussion between user charges, capital requirements and taxes is very tenuous, and typical revenue authorities may not ultimately be responsible for administering the "tax". The discussion which follows focuses on taxes but most of current policy discussions cover a much wider array of measures.

3.2.1 Micro-prudential taxes: systemic risk-sensitive deposit insurance

55. Prudential regulation of financial institutions takes the form on the one hand of solvency or capital adequacy ratios which aim through the imposition of minimum standards at preventing the failure of individual institutions. On the other prudential regulation aims at preventing liquidity crises resulting from the mismatch between banks' assets and liabilities and the potential risk of bank runs; the most common instrument used for this purpose are implicit or explicit deposit guarantees especially for retail deposits. Demand deposits are explicitly or implicitly insured in most countries up to some threshold amount per individual (or deposit account). While regulators in some countries have realized the need to establish a deposit insurance fund only during the 2007-9 financial crisis, others have established funds much earlier (Demirgüç-Kunt, Karacaovali, and Laeven, 2005). Furthermore, during the crisis of 2007-09, some countries, including developed countries such as Australia and New Zealand, introduced guarantees for the first time, whereas a significant majority of others increased or widened their insurance coverage. In most cases, the capital in these deposit insurance funds is the reserve built up over time through the collection of insurance premiums from banks that receive the benefits of deposit insurance.

56. While the appropriate form of deposit insurance schemes has been the subject of longstanding debates, the financial crisis has highlighted the intimate need for deposit insurance-related reforms that would improve the efficiency of the financial system. As shown by Acharya et al. (2010) and Pennacchi (2009) FDIC deposit insurance premiums in the US have either been risk-insensitive or relied only on individual bank failure risk. They have never focused on systemic risk. Furthermore, even when premiums have been risk-sensitive, the focus has been on maintaining reserves at an "appropriate" level. For example, when the deposit insurance fund's reserves become sufficiently high relative to the size of insured deposits, the FDIC in effect returns premiums to banks. This type of approach to premiums is divorced from incentive properties.

57. Pennacchi (2009) argues that fair premium must exceed a bank's expected losses due to the skewed nature of bank failures. If premiums are set to expected losses at the beginning of a year, the insurer will tend to experience small net profits in most years that will be wiped out by significant net losses in a smaller number of years. Moreover, because bank failures tend to occur during economic downturns (recessions), the net profits and losses of underwriting deposit insurance will have risk that varies systematically with the economy and the value of other assets.[27] Thus, to compensate an

[26] This close connection was already apparent in the previous discussion regarding ACE.

[27] In terms of the Capital Asset Pricing Model (CAPM), underwriting deposit insurance is a positive 'beta' investment: during economic expansions (*recessions*) when stock market returns are high (*low*), a

insurer for the risk that losses will be highest during severe recessions, fair premiums must exceed expected losses. In other words, fair market deposit insurance premiums will contain a *systematic* risk premium in addition to expected losses so that a deposit insurer charging fair premiums will earn positive average profits.[28]

58. If a deposit insurer does not include a charge for systematic risk when setting premiums, insured deposits will be subsidized relative to other forms of uninsured funding. This leads to financial system distortions that excessively expand deposit insurance the government safety net and lead banks to make investments that have extreme systematic risk: 1) Banks will prefer financing using insured deposits rather than uninsured deposits or debt, thereby reducing market discipline; 2) Non-bank financial intermediaries will lose market share relative to subsidized banks, in part as non-bank institutions convert to banks[29]; 3) banks that make investments with higher systematic risk enjoy a greater financing subsidy relative to banks that make investments with lower systematic risk.

59. One method for charging fair premiums is to rely on market information such as CDS spreads on banks' senior unsecured debt. Because CDS spreads differ across banks, this premium setting method discriminates between high and low risk banks. Furthermore, because CDS spreads are likely to incorporate a systematic risk premium, this method also avoids subsidizing systematic risk. While CDS markets typically exist for major banks' senior unsecured debt, market information on these spreads is not directly applicable to setting insurance premiums on deposits because deposits are an even more senior claim on a bank's assets. However, models exist for converting the CDS spreads on less senior debt to fair insurance premiums on more senior deposits. Furthermore, if the bank has publically traded equity (stock), information on stock prices can be used to determine fair deposit insurance rates. Moreover, Falkenheim and Pennacchi (2003) and Duffie, Jarrow, Purnanandam, and Yang (2003) provide techniques for estimating fair deposit insurance rates for privately-held banks.

3.2.2 Systemic risk: taxes, user charges, capital requirements

60. However, the charge for systematic risk which accounts only for the skewness in bank failure distribution is not sufficient to correctly internalize the external effects of a

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deposit insurer will make profits (*losses*) because premiums will be greater (*less*) than loss claims from bank failures.

[28] Pennacchi (2009) reviews empirical evidence that firms' actual credit spreads on uninsured debt contain, in addition to an expected loss component, a significant systematic risk premium. Thus, these uninsured debt holders, who can be viewed investing in default-free debt along with underwriting debt insurance, earn average returns greater than a holder of only default-free debt.

[29] A prime example, reported by Pennacchi (2009) occurred after passage of the Financial Services Modernization (Gramm-Leach-Bliley) Act of 1999 which allowed securities firms to acquire banks. Recall that during the period 1996 to 2006, deposit insurance premiums clearly were subsidized because they were set at zero for the vast majority of banks. As a result, retail securities firms chose to transfer hundreds of billions of dollars of their customers' sweep accounts out of money market mutual funds and into FDIC insured money market deposit accounts (MMDA). During the five years from the end of 1999 to the end of 2004, balances in MMDAs grew at a 16.4 percent annual rate while assets of retail money funds *declined* at a 3.0 percent annual rate, a phenomenon that Crane and Krasner (2004) refer to as "re-intermediation."

single bank failure over the financial and economic system (*systemic risk*[30]). As argued by Acharya et al. (2010) when a bank with insured deposits fails, the deposit insurance fund takes over the bank and sells it as a going concern or piecemeal. During periods of widespread bank failure, it is difficult to sell failed banks at attractive prices because other banks are also experiencing financial constraints. Hence, in a systemic crisis, the deposit insurance fund suffers from low recovery from the liquidation of failed banks' assets. This, in turn, leads to higher drawdowns per dollar of insured deposits. As a result the actuarially fair deposit insurance premium—the premium that exactly covers the expected cost to the deposit insurance provider—should not only increase in relation to individual bank failure risk but also in relation to *joint* bank failure risk.

61. In addition, the failures of large banks lead to greater firesale discounts. This occurrence has the potential to generate a significant pecuniary externality that can have adverse contagion-style effects on other banks and the real economy (compared with the effects stemming from the failure of smaller banks). Hence, the resolution of large banks is more costly for the deposit insurance regulator, directly in terms of losses from liquidating large banks and indirectly from contagion effects. This provides an argument to apply higher premiums for large banks per dollar of insured deposit compared with that for small banks.

62. Finally, forbearance during systemic crisis creates incentives for banks to herd and become interconnected; thus, when they fail, they do so with others—and this increases their chance of a bailout. Given this collective moral hazard, the incentive-efficient premium that discourages banks from excessive correlation in their investments features a higher charge for joint bank failure risk than the actuarially fair premium. In other words, from a normative standpoint, the deposit insurance premium charged to banks is increasing in systemic risk.

63. To summarize, the "user charges" that can be used to correct for distorted incentives and for externalities can be decomposed into two components. The first is akin the FDIC insurance fee and should cover the expected cost of failure for each single institution, where the expected cost takes also into account systematic risk. The second component should measure the external cost of failure and should also discourage moral-hazard due to the implicit insurance to institutions which are deem to be too-big to fail. This second component would be essentially Pigouvian, aimed at

[30] Systemic risk is a negative externality and is defined by the extent of propagation of an initial shock (failure of one institution) through the financial system and it tends to be highly non-linear on the downside. There are two main channels of propagation: Direct propagation occurs through direct links between institutions (e.g. through counterparty connections); indirect propagation occurs through fire sales (e.g. due to correlated positions). Systemic risk is sometimes described as a form of (financial) pollution. However the analogy with environmental externalities is imperfect because it overlooks an important difference: The amount of systemic risk is endogenous to the reaction function of the public sector. In the financial sector, the bigger the accident, the higher are the chances to be rescued. While a car driver does not have an incentive to be involved in a big accident, a financial institution does. Thus, an additional source of the extent of systemic risk is incentive structures in the public sector. In particular, the extent to which supervisory authorities are expected to exercise forbearance and to offer bail-outs (time inconsistency problem). Hence a systemic risk is defined both by characteristics of private financial institutions and incentives in the public sector.

making banks internalize the negative systemic effects of their behavior. Various alternative proposals are currently being debated.

3.2.3 Fees based on the composition of liabilities

64. A lesson from this and other crises is that whatever the initial shock, the scale and speed of liquidity runs are the primary causes of propagation. Banks that rely excessively on short-term uninsured funding contribute to fire sales in a panic, and thus to excess propagation. In turn, propagation compounds losses, undermines confidence and access to finance, causing economic disruption. Perotti and Suarez (2009) propose a system of liquidity risk charges for correcting the negative externalities caused by banks' excessive reliance on short-term, "uninsured" funding. The proposal, which in many ways is similar to that put forth by the Obama administration (see above), acknowledges that central banks and governments will be forced during a systemic crisis to provide significant liquidity insurance even for nominally uninsured funding.

65. These charges would be essentially Pigouvian, aimed at making banks internalize the negative systemic effects of fragile funding strategies. The goal is to prevent excess reliance on short-term funding in good times. As taxes they would complement deposit insurance charges, without creating any explicit commitment to liquidity support. As a principle, a unit of short-term funding should be taxed in proportion to its marginal contribution to a bank's contribution to systemic vulnerability. A general approach would estimate the systemic contribution of more bank characteristics (Adrian and Brunnermeier, 2009), a challenging task.

66. An alternative approach discussed by Di Mauro (2010) proposes that the tax base should be composed of all liabilities, excluding insured deposits (since they are already insured) and capital. The tax rate should vary with the size of the externality. The degree of systemic relevance could be estimated based on a series of indicators which would include measures of size, interconnectedness and complexity. These indicators could then be compressed (with a simple average of the ranks) into a risk score. Each risk score would be assigned a tax rate.

67. The tax rate should be set at such a level to eliminate the implicit subsidy to systemic institutions. There are several approaches that would help establish at least a range for the value of the subsidy. Weder di Mauro (2010) suggests measuring the subsidy by comparing the cost of funding of small and large institutions before and after the "too systemic to fail policy" was official established. The idea is that the tax rate should eliminate extra profitability resulting from being able to tap capital markets with a "Too-systemic-to-fail" guarantee.

68. Baker and McArthur (2009) provide such a calculation of for US institutions and find that the funding advantage of big banks before September 2008 was 29 bp. One may assume that the Pre-Lehman funding advantage mostly reflected economies of scale, e.g. diversification effects since there may have been an implicit guarantee but the "too big to fail policy" was it was not explicit yet. After September 2008 the funding advantage of big banks after increases to 78 bp. It is highly likely that this increase in the spread it the result of updated beliefs on bail-out probabilities. Thus, the difference

of 49 bp represents a measure of the funding advantage that should be eliminated through the tax.

3.3 Transaction taxes[31]

69. The introduction of a financial transaction tax as a tool to stabilize financial markets and improve their functioning is one of the policy options that are being discussed for correcting potential market imperfection. In the most recent discussions on proposals for a financial transaction tax, it is argued that such tax could solve three problems at the same time:

a) Stabilize the financial markets by reducing speculative and technical trading, especially in the derivatives market by increasing transaction costs.

b) Raise substantial tax revenue while creating only small distortions in the real economy.

c) Serve as a contribution of the financial sector to the financing of bail-out costs caused by the financial crisis.

3.3.1 The Proposals

70. Financial transaction taxes have existed for a long time in various guises and represent a significant source of revenue in many countries (especially in Latin America). Discussion of their use as an instrument to correct for "distortions" in the financial markets, especially after economic downturns, started with Keynes' (1936) reflections on stock markets following the Great Depression.[32] The idea of a financial transaction tax is also linked to the proposal of James Tobin on an international uniform tax on all spot currency conversions. Tobin (1974, 1978) argued that the increased mobility of private financial capital - especially after the end of the Bretton Woods system - might lead to excessive shifts of funds that create real economic costs for national governments and economies. Tobin reasoned that the tax would increase the effectiveness of domestic monetary policy.

71. While Keynes (1936) focused on stock markets and Tobin (1974, 1978) focused on currency transactions, most current proposals (e.g. Schulmeister, Schratzenstaller and Picek, 2008) advocate a general and uniform supra-national financial transaction tax

[31] This section is based largely on Hemmelgarn and Nicodeme (2010)

[32] He argued that a "substantial government transfer tax on all transactions might prove the most serviceable reform available with a view to mitigating the predominance of speculation over enterprise in the United States." (Chapter 12, VI, p. 143). The rationale for his statement was that firms would concentrate on short-term performance rather than long-run prospects because of speculation. On the other hand, Keynes also pointed out that "If individual purchases of investments were rendered illiquid, this might seriously impede new investment, so long as alternative ways in which to hold his savings are available to the individual. This is the dilemma." (Chapter 12, VI, p. 144).

that would be imposed on transactions in all types of financial assets[33] including spot and derivative exchange-traded and OLTC (over-the-counter) instruments.

72. The statutory tax rates proposed would be low and range from 0.01% to 0.05%.

The tax base would be the notional value of the asset, defined as the value of a derivative's underlying assets at the spot price. In the case of options or futures contracts, this is the number of units of the asset underlying the contract, multiplied by the spot price of the asset. The administrative costs of collecting a financial transaction tax could be very low compared to other taxes. Data from the United Kingdom (UK) show that the collection cost for the stamp duty is around 0.11 Pence per Pound collected, to be compared with 1.59 Pence for the income tax.[34]

3.3.2 Pros, Cons and Past Experience

73. The proponents of an intervention argue that the tax could improve the functioning of financial markets by reducing speculative short-term activities, which they consider as a reason for price volatilities and price bubbles. The basic idea is that this tax would decrease the volume of speculative activity that is considered to be detrimental to the stability and functioning of financial markets and which could lead to overshooting prices. The mechanism behind this argument is straightforward: The introduction of a tax would increase transaction costs in financial markets and this would in turn reduce the number of transactions. It is argued that especially potentially harmful financial activities like short-term speculation and technical trading with a high amount of transactions per day would be reduced even by a very low tax rate. On the other hand, long-run investments would not be distorted by such a low tax rate due to their low frequency of transactions. Essentially, the debate on financial transaction taxes boils down to the question of the influence that transaction costs have on trade volume, price volatility, and if they can serve as a corrective device to reduce the number of allegedly harmful short-term traders. The theoretical literature does not provide clear cut answers.

74. Proponents of the financial transaction tax argue that this tax would reduce noise and that technical trade would in turn increase the share of trade based on economic fundamentals and make financial markets more stable and less volatile. However Dooley (1996) argues that the assumption that the tax falls differentially on different types of investors is invalid and it is not clear that investors who base their decisions on fundamentals have longer holding periods than pure speculators. Mixed results are reported by Subrahmanyam (1998) who finds that transaction taxes do indeed reduce market liquidity but also reduce rent-seeking behaviour for obtaining private information. Schwert and Seguin (1993) surveyed the arguments for and against transaction taxes. They conclude that there is little evidence that the potential beneficial

[33] The idea of a more general securities transaction tax has also been put forward by Stiglitz (1989) and Summers and Summers (1989). They argue that noise traders drive stock prices away from fundamentals, which might lead to higher volatility and price bubbles. Higher transaction costs would reduce the amount of speculative trading and in turn give more room to trading based on fundamental economic data. Stiglitz (1989) argues that the private return of gathering information in order to respond quicker to market changes is higher than the social return of this activity..

[34] See Bond, Hawkins and Klemm (2004).

effects of a transaction tax outweigh the potential costs due to tax avoidance and to unclear tax incidence. In conclusion, the theoretical discussions provide a mixed picture of the po,tential effects of financial transaction taxes.

75. At first glance, even the various empirical studies fail to detect a strong relationship between an increase in transaction costs (either via taxes or other means) and the functioning of markets. While most studies find that trade volume is reduced, the effects on volatility and prices are less clear even though results based on panel data and estimation approaches that better identify transaction cost effects seem to find more often a positive relationship between transactions costs and volatility.[35]

76. As argued above, a general transaction tax is advocated not only as a means for correcting market failure, but also as an efficient way to raise revenue. Schulmeister, Schratzenstaller and Picek, (2008) estimate that in Europe revenues from a FTT at a rate of 0.01% would lie between 0.59% and 0.78% of GDP an amount roughly similar to the estimated loss in revenue due to the exemption of financial services from VAT.[36] However, as argued by IMF (2010) the argument that an FTT would cause little distortion because it would be levied at a very low rate on a very broad base is not persuasive once account is taken of the potential incidence of the tax: If the sole policy objective is to raise revenue then taxing transactions between businesses (which many financial transactions are) is unwise: distorting business decisions reduces total output, so that more could be raised by taxing that outputdirectly. A tax levied on transactions at one stage 'cascades' into prices at all furtherstages of production.

77. The international experience shows that tax design is crucial both for the effect of the tax on the functioning of the market and for revenues. Two cases that have been extensively studied are the Security Transaction Tax levied in Sweden from 1984 to 1991 and the stamp duty in the United Kingdom.

78. The Swedish STT is widely considered a failure by the financial literature. In January 1984, Sweden introduced a tax of 0.5% on the purchase and sale of equities,

[35] In the last two decades, a number of empirical studies have been conducted to measure the effect of changes in transaction costs and many of them lead to opposite results. Many papers based on time series face problems in identifying increases in transaction costs and in disentangling those from other potential effects on trade volume and volatility (Umlauf, 1993; Saporta and Kan, 1997).
More recent papers have improved this by using panel data and estimations technique that allow separating market-wide volatility from volatility caused by transaction cost changes. Hau (2006) shows that transaction costs increase volatility using panel data from the Paris Stock Exchange. The effect of stamp duties on prices was analysed for the UK by Bond, Hawkins and Klemm (2004). A similar approach with difference-in-differences estimation was taken by Jones and Seguin (1997) for data on the reduction of commission fees at the New York stock exchange. They reject the hypothesis that a decrease of transaction costs increases volatility. Two other recent papers using time series show that results can indeed be conflicting. Baltagi, Li and Li (2006) use data from stock exchanges in China and show that stamp tax rate increases from 0.3% to 0.5% leads to a trading volume decrease by a third. This translates into an elasticity of turnover with respect to a stamp tax of -0.5. They also find that volatility increases significantly. On the other hand, Liu and Zhu (2009) find that the relationship between transaction costs and price volatility is negative in Japan.

[36] Schulmeister, Schratzenstaller and Picek, (2008) estimate a revenue loss from financial services VAT exemption of about 0.7% of GDP assuming a share of the financial sector in overall value added of 3.5% and an average VAT rate of 20%.

adding up to 1% per round trip. Additionally, a tax on stock options of 2% per round trip was introduced (1% on the option premium plus 1% for the exercise of the option since it was treated like a transaction in the underlying stock). Political pressure led Parliament to double the tax rates in July 1986 and broaden its coverage in 1987. Furthermore, following large losses in interest futures and options (most notably by the City of Stockholm), the tax was extended to transactions in fixed-income securities, including government debt and the corresponding derivatives in 1989.

79. The revenue performance of the tax was disappointing. According to the Finance Ministry of Sweden, the government collected SEK 2.63 billion in 1986. After doubling the tax rates the government was able to collect SEK 4 billion in 1988. Thus a 100 percent increase in the tax rate resulted in a 22 percent increase in revenue. In addition, as taxable trading volumes fell, so did revenues from capital gains taxes, entirely offsetting revenues from the tax on equity transactions (Umlauf, 1993).

80. The tax spawned widespread avoidance. Foreign investors avoided the tax by placing their orders with brokers in London or New York. Domestic investors avoided it by first establishing off-shore accounts (and paying the tax equal three times the round-trip tax on equity funds moved off-shore) and than using foreign brokers. The scale of avoidance was manifested by a massive migration of stock trading volume from Stockholm to other financial centers. For example, following the doubling of the tax, 60% of the volume of the 11 most actively traded Swedish stocks migrated to London. The migrated volume represented over 30% of all trading volume in Swedish equities. By 1990, that share increased to around 50%.

81. Broadening the tax to fixed-income instruments resulted in a sharp drop in trading volume in Swedish government bills and bonds and in fixed-income derivatives contracts. This significantly undermined the ability of the Bank of Sweden to conduct monetary policy and made government borrowing more expensive. In contrast to what had happened in the markets for equity transactions, trading did not move abroad. Instead, the strong reactions of the fixed-income volume can be attributed to "the relative ease with which substitutes for bonds can be created" (Campbell – Froot, 1993, p. 9). Tax avoidance turned out to be easy and loopholes manifold: the markets for instruments not subject to the tax (debentures, forward rate agreements, swaps) or exchanged without a dealer (variable-rate agreements) grew rapidly. As a result, the turnover tax on fixed-income securities raised little revenue: on average, only SEK 50 million per year instead of the projected SEK 1,500 million were realized. As Campbell – Froot (1993, p. 10) note, had there not been even cheaper alternatives in the local market and presumably less foreign investors engaged in Swedish fixed-income securities trading, offshore migration might have occurred since there were no barriers to trading SEK-denominated instruments in foreign markets.

82. In the end, the Swedish turnover tax failed due to a bad tax design and the resulting migration of trading volume. The Swedish experience, suggests that the tax should possibly be applied to all countries of the respective time zone with a market for securities, since this will prevent spatial substitution. This is the approach taken in the UK: tax liability for trading in UK companies is worldwide, whereas in Sweden one

only had to pay when the transaction was carried out by a Swedish broker, which made tax avoidance relatively easy.

83. In spite of its better design features the UK stamp duty has not proved immune to financial innovation and avoidance activity. In particular it has given rise to a very deep market for contracts for differences (CFDs), single stock derivative contracts which are not subject to stamp duty. Furthermore the tax also appears to have had an impact on securities prices (LSE, 2001a).

3.4 Redesigning the taxation of financial institutions

84. The financial crisis has highlighted the distinctive features of the financial sector raising the issue of whether financial institutions deserve a special tax treatment because of the peculiar nature of their activities or whether their taxation should be subsumed under general principles applying to income and consumption taxation. Possible reforms can be grouped into two distinct set: a) piecemeal revisions of existing taxes or b) more radical reform of the taxation of the financial sector.

3.4.1 Financial and Tax Accounting

85. Despite the fact that banks are generally subjected to the same general tax provisions as non-financial companies, existing tax rules acknowledge the specific nature of their activities by allowing several differential tax treatments and exceptions to the rules which apply generally to business income. Banks are unique in that interest income and expenses represent the core of cash flows, depreciation allowances for fixed assets are relatively minimal, and the valuation of complex financial transactions (such as activities in the foreign exchange markets, trading in securities and operations in derivative products) is recurrent. High degrees of leverage also typically characterize banking activity. The valuation of assets and liabilities is also subject to different criteria depending on whether the assets and liabilities are held in trading or investment portfolios. Trading portfolios they are typically marked-to-market but also investment portfolios are being increasingly subject to "fair value" rules. Finally, in recent years tax banks have aimed to shift activity off their balance sheet by engaging in complex securitizations that have involved moving assets off their balance sheets as well as being major users of complex hybrid securities financing.

86. The conformity of financial accounting and tax accounting (book-tax conformity) is of great importance for banks. Financial accounting standards and tax laws frequently provide specific, and often different, rules for how to report income for book and tax purposes, even though both income reports are based on the same underlying fundamental transactions. While there is considerable conformity between book and tax treatment in many countries changes in financial accounting practices and more significantly a wave of innovations have at times led to substantial differences. The most important areas for banks concern on the one hand the valuation of assets and liabilities (the use of fair value criteria and the treatment of bad and doubtful debt) and on the other the use of balance sheet and hybrid debt financings.

3.4.2 Marking to Market

87. Marking gains and losses to market and treating them as current appears to be the right direction for tax policy. It also means that banks are neutral in respect of transactions that involve simultaneous gains and losses such as wash sales. The taxation of gains (or losses) on asset transactions only when realized, rather than as they accrue, can create significant distortions, creating an incentive to defer the realization of gains and accelerate that of losses. Capital gains thus become inherently more favorably treated than other forms of income, such as interest, that is taxed on an accrual basis.

88. There are some potential pitfalls in marking to market. A potential difficulty is that taxation on fair market value may induce the sale of assets to finance the accruing liability, though there is little sign that this has been a significant problem in the financial sector. Schizer (2000) has argued that the extent to which marking to market has been used for tax purposes may have created problems because dealers may have become "accommodation parties" in transactions that artificially defer income for one party while accelerating losses for another. It has also been suggested that extensive use of marking-to-market in the taxation of financial institutions may increase the volatility of revenue.

3.4.3 Provisioning for loan losses

89. The crisis has also drawn attention to difficulties in the tax treatment loan losses. Losses are an inevitable cost that banks incur in providing credit and are recognized as an expense for both financial, regulatory and tax purposes. The principal issues surrounding the treatment of loan losses concern the timing and manner in which expenses are recognized. These may differ depending on the different objectives pursued by auditors, regulators and the tax authorities

90. Three constraints affect the level of provisioning and the amount of write-offs which a bank may decide to make. First, company law lays down what banks are required to disclose in their balance sheets and profit and loss accounts. Secondly, supervisors are concerned to see that banks follow a prudent and responsible approach to making provisions. For this purpose they allow general reserves, which have not been earmarked, to be included in bank capital and have generally excluded specific provisions from such calculations. Finally, the tax authorities set out specific guidelines as to what they regard as allowable deductions against profits. One of the problems in understanding provisioning and its possible effects is that each of these various types of valuation may differ markedly within a single country.

91. For financial and regulatory accounting purposes banks may set aside either specific or general provisions to reflect the possible deterioration in the value of their assets. In the first instance it falls to the banks to decide what they consider to be the correct value of their assets and, consequently, to choose the appropriate level of provisioning which should be made. Specific provisions (or reserves) are made against clearly identifiable problems, which can be expected to occur in connection with the affairs of a particular customer or group of customers. General provisions permit a blanket cover against all possible expected future as well as current losses. For financial

accounting purposes (IAS 30, 2002) general provisions relating to losses that are present in existing portfolios of loans but have not been identified specifically are treated as an expense. However provisions relating to future losses are accounted as appropriations of reserves.

92. Provisioning is materially assisted by the possibility of an offset against tax for the annual charge which is made in the profit and loss account. Decisions on tax deductions are made by the fiscal authorities and need not be consistent with regulatory and supervisory requirements.

93. Tax accounting practices do not generally conform with financial accounting practices and prudential regulation. The broad objective of both tax and financial accounting is measuring income. However, the objective of financial and especially prudential accounting is conservatism, i.e. to delay income and anticipate expenses. Tax accounting is designed to ensure that income is not understated. Non-conformity give rise to timing differences.

94. The tax treatment varies widely across countries. There are broadly two approaches. The so-called *charge-off method* recognizes a tax deduction only when loans become worthless. Countries which follow this approach are the United States, Australia, Korea, Malaysia and the Philippines. The tax authorities in most other countries for which information is available tend to allow ***specific provisions*** but differ widely in terms of the degree of conformity with financial and accounting for loan losses, the required evidence regarding the deterioration in asset values and in some instances the maximum amount of loan-losses allowed in a single year. The most favourable countries from this standpoint appear to be France, Germany and the Netherlands, Finally a few countries (for example, Germany and Singapore) also allow general provisions (as a percentage of qualifying loans) but these are subject to limitations.

95. Provisioning rules can have several effects on the international activities of banks of different nationalities and the allocation of banks' assets across financial centers. Banks may decide to allocated their loans in centers where provisioning is most generous. First, generous provisioning policy can be an implicit subsidy to banking relative to other forms of financial intermediation and can affect interest rates charged on differing forms of financing. Generous provisioning may allow certain financial institutions to shield a sizeable part of their income from tax and thereby obtain a competitive advantage. Second, where accounting and fiscal definitions of income do not broadly coincide, banks may be unwilling to set aside an appropriate level of provisions unless the tax authorities permit tax deductibility. Finally, different tax provisioning policies can affect the character of risk-taking by banks and the distribution of their profits over time. The treatment of claims on problem debtor countries was one area where differing tax provisioning rules led banks to adopt diverse attitudes. In those countries where tax provisioning for such claims was limited, there was an incentive for banks to realize losses outright, through sales of their loans in secondary markets or by establishing losses through specially authorized loan sales[37].

[37]. In the United States the value of a tax deduction depends in part on whether it is applied against domestic or foreign source income. Since many banks have only limited potential liabilities in respect of foreign

By contrast the possibility of tax deductions for provisions has encouraged banks in some countries to allocate large amounts of their capital to LDC assets, possibly inhibiting the disposal of their assets on the secondary market for country loans[38] [39].

96. Though there are important overlaps, the objectives of tax policy need to be recognized as distinct from those of regulatory and accounting practices if all are to be well-aligned with one another. Tax policy towards financial decisions is appropriately charged with raising revenue without creating excessive distortions. Any remaining non-tax distortions to financial decisions are then best left to regulatory policy. Clearly there are monitoring and compliance advantages in applying common definitions and concepts for tax and accounting purposes, and there has been substantive discussion of possible corporate governance advantages in closely aligning tax and book profits. But the ideal tax base is not necessarily the most accurate measure of current income. There are, for instance, and as will be seen, potential advantages in allowing full expensing of investment for tax purpose. And even where, or if, marking to market were felt to be inappropriate for financial accounting purposes, a strong tax rationale for doing so—as much to avoid distortions as it is to fine-tune the measurement of income or wealth—would remain.

97. Issues concerning the tax treatment of provisions for bad loans would be raised by moving towards dynamic provisioning. Dynamic provisioning would include a systematic and mandatory countercyclical element of general provisioning, raising questions as to their tax treatment. To the extent that dynamic provisioning would be analogous to depreciation allowances for physical assets that reflect their expected reduction in value (or sometimes more, if accelerated depreciation is allowed), deductibility could be argued to be appropriate. Other approaches would be appropriate if the CIT were to be fundamentally reformed.

3.5 Other issues

3.6 Revisiting hard to tax areas

98. More recent discussions appear to have taken the direction of suggesting that financial institutions and market should be subjected to special tax treatment. While

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source income by virtue of the tax credits from double taxation relief, tax deductions against foreign source income reduce the value of these tax credits.

[38] In Japan, where tax deductibility for provisions against loans to problem debtor countries has until recently been limited, losses realised on loan sales in the secondary market have generally not been recognized. However, in some instances these restrictions have been waived and Japanese banks have been able to sell existing loans to a factoring company set up jointly by the major banks.

[39] One of the clearest examples of the subtle tax distinctions between various nationality groups of banks occurred at the time of the Mexican financing package (1990) put together under the Brady debt relief initiative. Under that scheme banks agreed to convert their rescheduled credits (amounting to about 85 per cent of Mexico's external debt) into bonds at a reduced face value (65 per cent) and market interest rates (LIBOR + 13/16), into bonds having the same face value but a reduced and fixed interest rate (6.25 per cent), or to provide new loans equal to 25 per cent of banks' exposure. A survey of the major banks involved indicated that tax considerations together with regulatory and business strategies with Mexico were the major factor determining the decision of which instrument to choose (Hay and Paul, 1991).

many of the proposals overlap with the topics covered already in the previous sections. However, mention should also be made of proposals to change the current VAT status of financial institutions. These proposals which have only been suggested informally[40] may be seen as an alternative to corrective taxes, as a manner to reduce the excessive size of the sector as well as a efficient means to raise revenues in a relatively efficient way by reaping the rents of the sector.

3.6.1 The treatment of Tax Havens

99. Tax havens have been the object of intense scrutiny in recent years. The focus has been on both the lax tax regimes of these jurisdictions as well as the often weak regulatory framework particularly in respect of hedge funds and various types of special purpose vehicles. Often, the centres are said to facilitate criminal activities since some centres do not to comply with GAFI rules in respect of Anti-money Laundering regulations.

100. The crisis has coincided with a step up in a generalized clampdown on undeclared offshore counts which had been building up over the past decade. A number of very publicised episodes have involved the transfer to the tax authorities of the names of holders of offshore accounts. Individual financial institutions have been held responsible for encouraging unlawful activity and faced significant fines. The authorities appear to have exploited the wave of anti-bank feeling to extend their extra-territorial powers and step up international cooperation to push through further anti-evasion measures.

101.The exploiting of regulatory and tax arbitrage involving offshore centres raises a different set of issues. The use of offshore centres to create corporate or other types of vehicle is often driven by the absence of adequate onshore forms of intermediation particularly for foreign investors. This may due to delays in creating enabling legislation and uncertainty in respect of the nature of domestic legislation.

4 Conclusions

102.While there is little conclusive evidence that the tax system played a major role in triggering the tax crisis, there is growing support for making taxes play a prominent role in policy responses. A number of special taxes have been introduced and proposed to recover the cost of the "bailout". These have involved both special taxes on financial institutions as well as taxes on bonuses. The revenues of these special taxes have been quite significant but the ultimate incidence of these measures remains uncertain. It is also unclear whether these measures will continue in the future.

103.The ongoing debate has also highlighted that taxation may be used as corrective instrument to complement prudential regulation of the banking sector. Some corrective tax proposals aim to curtail the activity in the financial sector ("Tobin taxes") on the grounds that a large number of transactions are either speculative or of no social use. No

[40] This suggestion appears implicitly in IMF (2009).

international consensus has emerged to date as to the most appropriate approach. Without some of global coordination such measures would inevitably create competitive distortions across countries and market segments as suggested by numerous past experiences.

The crisis has also drawn attention to a number of well known weaknesses in the taxation of the banking sector particularly in respect of loan loss provisioning, the relationship between financial and tax accounting, mark-to-market accounting and value added taxation. These issues are by no means new. The crisis has added saliency to finding longer-tern solutions. Unfortunately, after renewed attention to these questions the political climate no longer appears propitious to address the needed structural reforms.

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