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Moral Hazard and Equity Finance

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1. Introduction

Whereas this Chapter was written before the coronavirus pandemic struck, I see no reason to amend or alter any of its contents and arguments. Its thesis is that macroeconomic policy remained sub-optimal in the years between the Great Financial Crisis (GFC) and the onset of Covid-19. The main reason why this has been so is that there has been a generalised failure to appreciate the moral hazard that was introduced into the modern capitalist economy by the legal institution of limited liability for all equity holders. The incentive structure induced by limited liability has led corporate managers, notably bank managers, to seek excessive risk and leverage in the pursuit of return on equity (RoE), egged on by shareholders. There has been a tendency to accuse bankers of moral failings; whereas there is little evidence that bankers are significantly different from other humans, except, perhaps, in having better numerical and computational skills. An associated failing has been to anthropomorphise banks, and treat them as if they were human beings, whereas non-sentient institutions banks have no emotions and cannot make decisions; only bankers can do that. While the policy measures of requiring banks, especially larger banks (SIFIs), to hold significantly more equity capital, has been correct and helpful, the failure to deal with the underlying moral hazard has meant that bankers still have a strong incentive, in pursuit of RoE, to avoid or evade, and manipulate, the regulations, rather than internalise the optimal level of social risk taking. Section II gives a fuller analysis of the implications of the moral hazard inherent in limited liability for all equity shareholders.

This has been one of the factors, amongst several, which has led to investment ratios remaining low, and a surplus developing for the non-financial corporate sectors, in many of our countries, despite the extraordinarily expansionary monetary policies and the high corporate profitability enjoyed by the corporate sectors in most advanced countries. This is documented and further described in Section III. Again, whereas the expansionary monetary policy was certainly a great improvement on

doing nothing, nevertheless it has been accompanied by relatively low investment, stagnant productivity and low wage growth.

This has also led our economies to fall into a debt trap. Although the leverage ratios of banking sectors, and of households in those countries most effected by the GFC, have been pared back, the debt ratios of non-financial corporates and of the public sector have, in many, perhaps even most, cases risen sharply during the last ten years. Such debt ratios have grown so large that it will be difficult for central banks to raise interest rates significantly, or fast, without increasing debt service payments to a level that will potentially place corporate solvency at risk, or in the case of the public sector, be yet another factor leading to the need for increased taxation, with worsening intergenerational inequality. This is discussed in Section IV.

I conclude in Section V by suggesting alternative policies which could help to extract us from this debt trap. This has two main planks, both of which involve institutional change, with the purpose of bringing about a major shift in the financial structure of our economies towards equity finance, and away from debt finance.

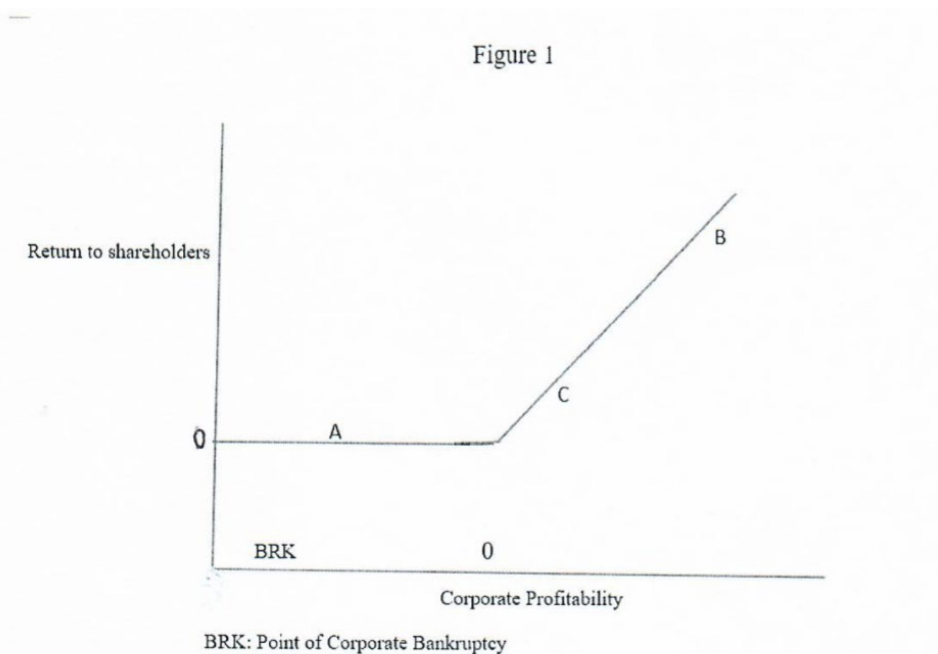
The first institutional change would be to eliminate the fiscal advantage that debt finance currently enjoys over equity finance. This has already been proposed, and suggestions made as to how this might be introduced first, in the Mirrlees' book, *Tax By Design: The Mirrlees Review*, (2011), and, second, in the paper on 'Destination Basel Cash Flow Taxation' (often otherwise called 'Border Taxation', see Auerbach, et al, 2017a and b).

The second institutional change would involve introducing a legal distinction within equity finance, whereby there are separate categories of shareholders. The first category would involve insiders, i.e. those who have both inside information and the ability either to influence or control the decisions which the corporations makes. These would have multiple liability, possibly, in the case of the CEO, unlimited liability. The second category would be outsiders, who have neither inside information, nor the ability to influence or to control corporate decisions. They would retain limited liability, as at present. The case for doing this is set out in greater length in the associated paper by Professor Rosa Lastra and myself, , 'Equity Finance: Matching Liability to Power', (*Journal of Financial*

Regulation, March 2020). Again, an alternative would be to require the same set of insiders to be paid primarily in bail-inable debt, see T. Huertas, 'Pay to Play', (2019).

2. The Moral Hazard of Limited Liability

A consequence of limited liability for shareholders is that the return to their investment, as a function of the profitability of the firm in which they have an equity share, is flat when the company is doing badly or becomes insolvent, but is strongly upwards sloping when the public company is doing well. This is shown graphically in Figure 1 below.



With a return structure of this kind, the shareholders are led to prefer a riskier strategy, as shown in the figure, with an even chance of an outcome of A and B, rather than a completely safe policy, receiving a return equal to the mean profit to the corporation of AB, as shown in the diagram at point C. So, shareholders have an innate preference to encourage management to take on riskier activities. Such shareholder preference for risk is somewhat abated by loss aversion, see for example Kahneman (2012). But that, in turn, is reduced by appropriate diversification, so that the loss involved on any single portfolio holding is limited. So, the implication is that limited liability naturally leads shareholders to push management to adopt riskier strategies than would be socially optimal.

In earlier years this pressure on management was mitigated by the fact that managers were primarily paid by a cash salary unrelated to equity valuation. Moreover, other considerations, such as reputation and pride in developing a successful company over the long term, had the effect of constraining managers willingness to take on risk. But, one of the other possible incentives on managerial behaviour, as a result, was to spend resources on activities that might bolster managerial reputation and personal comfort, rather than maximising profits. Such considerations involved size and spending money on managerial perks, including not only such perks as company planes and chauffeur driven cars, but also fancy, prestigious architecture, head offices, etc. The cry went up, as a result, that managerial incentives should become better aligned with the interests of shareholders, possibly one of the worst ideas developed by academic economists in recent decades!

Partly in response to public attitudes then, about soaring managerial pay and perks, President Clinton introduced measures in 1993,

“when he effectively set a \$1 million limit on directors’ pay by making anything above that level non-tax deductible for companies. However, in the small print of his legislation, was a clause that specified payments with performance conditions were exempt from the \$1 million rule. That effectively meant company boards boosted all salaries to \$1 million and paid bonuses and extras in stock options that directors could cash in for shares at a later date. This prompted an explosion in executive awards...”, Hargreaves, op cit., page 77.

The result of such alignment of managerial incentives with those of shareholders, in some large part consciously done, resulted in there being the exact same incentive on management to give priority to policies that would maximise equity valuation; naturally this would generally lead them to pursue additional risk. Moreover, the expected lifetime incumbency of most CEOs is relatively short, five years or less, and that means that the incentive on them is to maximise short-term equity valuations. This can most easily be achieved by accepting a riskier financial structure, e.g. buybacks to increase leverage and raise RoE, reducing the headcount of employment, and cutting out such longer-term investment, notably in R&D, whose return was unlikely to become clear for a long time.¹

¹ There is a counter-argument pointing to the high stock market valuations of tech companies which during their early lives can be expected to pay out nothing; with the implication that this shows that shareholders and management do give proper full valuation to longer-term future returns. But the prospects for such

So, the criticism of modern capitalism has several facets; it is argued that it leads to managers assuming excessive risk, being overpaid, and failing to undertake sufficient long-term investment, especially R&D. The first two criticisms, excessive risk and excessive pay, were particularly levied at banks and other financial intermediaries in the aftermath of the GFC. There have been a variety of proposals aimed at checking or preventing such malfunctions. One set of such proposals has focussed on limiting the business structures of banks and other financial intermediaries. Examples of such proposals include narrow banking in various guises, ringfencing of core retail financial structures, and a variety of other regulatory measures. A recent addition to this set is by Conti-Brown, arguing for the abolition of limited liability for SIFIs, unless they become very highly capitalised.

Another set of responses, aimed more widely at the general governance structure of (public) corporations, has considered such remedies as two-tier governing boards, a la the German system, and changing the statutory duty of governing boards, for example as argued by Schwarcz (2014).

A third, and final, set of proposals, including those in the accompanying paper by myself and Rosa Lastra, would adjust the link aligning the interests of shareholders and managers, by imposing additional duties on managers, either through tougher legal requirements, (see Kokkinis, 2018), or by changing the incentive and remuneration terms for management.

3. Why has Non-Financial Corporate Investment been so Low?

Ever since the financial panic accompanying the GFC abated in 2009, conditions for the corporate sectors in most advanced economies have become extremely favourable. The share of corporate profits in national income over the years 2010-2017 has increased strongly in most countries, Italy being an exception, and has become much higher than during the years 1990-2005.

companies are inherently risky, and it is the lure of potentially massive future returns, with an offsetting significant probability of total collapse, that attracts investors, rather than the long-term nature of their activities per se.

During these same recent years interest rates, both real and nominal, have declined sharply, and equity valuations have increased in a continuing bull market, except in Japan.

Under these circumstances, one might have expected that fixed investment would have increased strongly. Instead, however, investment ratios in western economies have remained stagnant, although the investment ratio in China has remained elevated.

The result is that the non-financial corporate sectors in several advanced western economies have been in surplus in recent decades. The main exception is China, where investment has continued apace, largely financed by higher debt.

During the last 30, or so, years, there has been a major demographic shift and sweet spot, whereby the working population has increased sharply relative to their dependents, the young below 20, and the old, above 60. With increasing expectations of both longer lives and higher working incomes, this has led to a strong increase in the personal sector savings ratio in most countries. With both the non-financial corporate sector and the personal sector being net savers and in surplus, the inevitable counterpart, in order to keep our economies in balance, has had to be, on a world-wide basis, an increase in the public sector deficit. Of course, in individual countries, such as Germany and certain oil-producing countries, the combined surplus of the corporate and personal sectors can be matched and off-set by the deficit of the Rest of the World to them, i.e. by their positive current account balance. But that just shifts the matching need for public sector deficits worldwide onto those countries running current account deficits. In this respect the accusations of President Trump that the US deficit was in some large part a consequence of the policies followed by current account surplus countries has some merit.

Even though the demographic sweet spot will now be rapidly disappearing in most western countries and in China, as it already has in Japan, it will be difficult to cut back on public sector deficit finance, especially given the need for pensions and health care of the massively expanding cohorts of the old, so long as the investment ratios of the advanced economies remain so low.

So, a key question is what has caused such investment ratios to be so low, despite the otherwise favourable circumstances that have seemed to have held during recent years? There are several competing explanations, none of which are mutually exclusive, and all of which may have played some role in this. There are, perhaps, four main candidates as explanations. These are:-

- 1) Growing corporate concentration and monopolisation
- 2) Technology
- 3) Managerial incentives
- 4) Cheap labour

1) Growing corporate monopolisation

There is some evidence, mostly relating to the USA, that there has been an increasing degree of concentration and monopolisation in the corporate sector, see for example Autor, et al, (2017a and b), Philippon (2019). If so, then that would lead to higher profit margins, a greater share of profits in national income than otherwise, and lower investment. In a NBER Working Paper, Liu et al, (January 2019) have argued that the continuation of very low interest rates has itself led to greater market concentration, reduced dynamism and slower productivity growth. Also, see the references to the earlier literature on the relationship between lower interest rates and the rise in industry concentration and higher corporate profit share, included in footnote 2 on page 5 of that paper.

2) Technology

The leading sector currently comprises technological companies, who rely much more on human capital than on fixed capital in the form of steel, buildings, heavy machinery, etc. The development of software, for example, requires a lot of human skills and effort, but relatively little fixed investment. Insofar as technology is shifting the balance towards human capital and away from fixed investment, the ratio of expenditures on fixed capital to total revenues and output is likely to decline, possibly quite sharply.

3) Managerial incentives

As already noted, in Section 2, the alignment of managerial incentives with those of shareholders enjoying limited liability is likely to lead to a focus by managers on maximising short-term equity

values. This can be done most easily by buybacks, i.e. using profits to increase leverage by substituting debt for equity; but short-term profitability can also be enhanced by cutting back on longer-term fixed investment and R&D. This line of argument has been stressed by Smithers in several books, (see Smithers, 2009 and 2013).

4) Labour has become cheap

The combination of globalisation and the demographic sweet spot has led to an unprecedented jump in the available global supply of workers within the world trading system. Why invest in expensive equipment at home, in order to raise productivity, when one can increase output at lower cost by shifting production abroad, e.g. to China or Eastern Europe, or employ immigrants? Meanwhile competition from such potential outsourcing, and inward migration, has reduced the power of private sector trade unions, and held down real wages over the last few decades. Under these conditions, investment has migrated to those countries where labour has been particularly cheap, and has taken the form of labour-using and capital-saving techniques.

What the balance might be between these four explanations is not easy to discern, and we make no attempt to do so here. But we think that all these potential explanations have merit, perhaps particularly the final two, that managerial incentives have been, from the point of view of society as a whole, misaligned, and that investment in most western economies has been held down by the shift of production to China and Eastern Europe.

The trends of globalisation and of demography are now beginning to reverse. Populism and protectionism have become powerful political influences in the context of economies where real wages have stagnated over the last 30 years. Meanwhile, the demographic sweet spot, leading to a massive increase in the workforce and fall in dependency ratios, are on the verge of reversing sharply, as has already happened in Japan. This will have the effect of raising real wages in most western economies, and that is likely to lead businessmen to invest more in order to raise productivity and to hold down unit labour costs.

But insofar as the low investment ratio has been due to the short-termism of managers, owing to the incentive structure under which they operate, this particular cause of low fixed investment will continue.

What has happened over the last decade has been that a combination of exceptionally low interest rates, combined with low fixed investment, and an incentive to issue debt rather than equity, has led to a massive increase in leverage and debt ratios for most countries and most sectors. There are a few exceptions to the generalised increase in debt ratios. Thus the banking sectors in most economies have reduced leverage under the influence of stronger regulation. The personal sectors in those countries most hit by the housing boom/bust cycle, e.g. US/UK/Ireland/Spain, have mostly reduced their debt ratios, and debt ratios in Germany have generally gone down. But for the rest, debt ratios have generally increased, though the balance between the rising ratios for the corporate, personal and public sectors have varied from country to country.

This has been leading the advanced economies of the world into a debt trap. We turn to this next.

4. The Debt Trap, and How to Escape It

As set out in the accompanying tables at the end of the last section, debt ratios, i.e. the ratio of debt to GDP, has been rising for most sectors in most countries, (with the exception of the banking sector and Germany), and now stands at a level considerably higher than at the time of the GFC in 2008/9. This has not, so far, led to any great difficulties for debtors, because the decline in interest rates has, more or less exactly offset, the increase in the debt ratios, leaving debt service payments roughly constant as a ratio to GDP. Thus the debt service ratio for the public sectors has, in most countries, remained roughly constant and, similarly, with profits remaining high, the debt to surplus ratio for non-financial corporates has remained stable. But the rising debt ratios could make servicing such debt increasingly uncomfortable as and when nominal real interest rates rise, and corporate profitability declines. Indeed, the increase in debt ratios has been so great that there is a danger that we have already entered a debt trap.

The debt trap operates as follows. The financial fragility of an over-indebted world economy is such that it may well preclude any sharp or significant rise in nominal interest rates, out of a, possibly justified, fear that any such increases in rates would lead to such financial difficulties among major sectors that it could provoke a further recession, which would, in turn, have adverse fiscal consequences. But if rates, therefore, have got to be kept low, with only gradual increases, that will lead to financial conditions under which borrowers will consider it still advantageous to raise further debt, thereby possibly raising debt ratios even higher.

So how could we get out of this debt trap? The best, and most attractive, way of doing so is by faster real growth. If real growth is greater than the level of real interest rates, then, with a zero sectoral deficit, the debt ratios would inevitably be falling. Indeed, if real growth is sufficiently high relative to real interest rates, the sectoral deficit can become higher, whilst still allowing for a fall in debt ratios.

The problem that the world, particularly most advanced economies, face is that the conjuncture is highly unlikely to be conducive to growth in excess of real interest rates. This is for several reasons:

- i) There is going to be a strong increasing demand for public sector expenditures to provide pensions and health care and support for the sharply increasing proportion of the aged in our economies, as life expectancies have risen and could rise yet further. The prospect for such additional public expenditure in future decades is concerning, see the Office for Budget Responsibility (OBR), *Report on Fiscal Sustainability, 2018*, pp 75-85, especially Box 3.3. Meanwhile the taxable capacity of those of working age is limited [refer to recent article on that subject].
- ii) Meanwhile demography is bringing about not only a decline in the rate of growth of, but in many countries, e.g. in Europe and China, an absolute decline in the number of workers.

Even if productivity were to return to the more favourable growth rates of the decades up to 2008, such declines in the workforce mean that aggregate real output will continue to grow at a slow rate. The growth of output per worker in Japan has been rising rather faster than the growth of output per worker in most other advanced economies.

Table 1: Percentage Change for GDP Per Hour Worked

	USA	Germany	UK	France	Japan
2010	2.83%	2.47%	2.16%	1.31%	3.27%
2011	0.16%	2.06%	0.32%	0.89%	0.23%
2012	0.26%	0.62%	-0.53%	0.20%	0.94%
2013	0.38%	0.78%	0.25%	1.35%	2.06%
2014	0.44%	1.02%	0.17%	0.95%	0.08%
2015	0.75%	0.58%	1.67%	0.77%	1.50%
2016	0.26%	1.42%	-0.55%	0.05%	0.28%
2017	1.00%	0.89%	0.77%	0.97%	0.92%
Sum	6.08%	9.84%	4.01%	6.49%	9.28%

Source: OECD

But, nevertheless, the growth of real output in aggregate in Japan has been slow, at about 1% per annum, because of the declining workforce there in recent years. Similar problems will weigh heavily on many European countries and China over future decades, though the US and UK are in a slightly more favourable position, in part because of inward migration in recent decades.

- iii) Real interest rates have become exceptionally low, partly because demographic pressures, particularly in China, have led to savings 'gluts', while investment ratios outside of China, as earlier argued, have remained extremely low, partly under the influence of the globalised availability of additional cheap labour. Both these factors are going into reverse. As the dependency ratio rises, personal sector savings ratios are likely to decline, unless governments consciously restrict the future generosity of their pensions and medical assistance for the aged, which could be politically challenging. At

the same time the recovery in the power of labour, as workers become scarce, and taxation rises to meet extra public sector expenditures, will lead to rising real unit labour costs. In order to offset that, corporates are likely to increase their investment demand. So, the likelihood is that the balance between investment and saving, i.e. the demand and supply of loanable funds, may well lead to a recovery in real interest rates. If so, forthcoming pressures may lower growth rates, at the same time as real interest rates rise, making it increasingly difficult simply to grow out of current high debt ratios.

If we cannot grow out of the current high debt ratio levels, then debtors could meet claims on them by failing to pay back as much initially as implicitly promised. Again, there are three ways of doing so:

4(a) Unexpected Inflation

The first, and simplest, way of reducing the real debt burden is through (unexpected) inflation; note that inflation expectations are currently 'well anchored' and held at low levels, around 2%. Such anchoring of inflationary expectations depends, considerably, on investor confidence that central banks will be able to maintain their inflation target into the foreseeable future. But will they? Over the last two and a half decades since inflation targetry became generally adopted, nominal and real interest rates have trended downwards. This has made central banks the best friend of indebted Ministers of Finance and their bosses (Prime Ministers). If nominal interest rates are now on a rising track again, even if gradually, this will put them in conflict with the immediate desires and interests of Ministers of Finance and other politicians, as has already been evident in certain countries, such as the US and Turkey. In almost every country, the central bank's independence was brought about by an act of the legislature; the exception is Europe where the independence of the ECB is enshrined in a common Treaty. Whereas the independence of the ECB would be hard to revoke, the independence of other central banks can be reversed by a further Act. If the politicians find that central bank policies to achieve price stability get in their way of objectives for faster growth and lower taxes, they may seek to end, or sharply reduce the independence of central banks. If so, that vaunted independence might ultimately prove a somewhat weak reed as protection against a more inflationary future.

4(b) Renegotiation

But the ECB's independence is more solidly based. In their case debtors, including national member governments, would not be able to get out of their commitments by inflating them away. The same would be true in those other countries where central bank independence (CBI) holds firm. In such cases, when the pressure of debt service becomes too great, the next possible alternative is renegotiation of promised cash flows to ease the debt service burden. Such renegotiations generally go under the heading of 'Extend and Pretend', whereby the cash flows in the form of regular interest payments are either reduced and/or pushed further back in time, thereby alleviating the immediate cash flow burden on the debtor. Normally, this is done in such a way that, although the present value of the debtors' future cash flows is reduced, the accountants feel able to leave the nominal value of such debt unchanged on the books of the creditors. In this way, debtor relief need not necessarily be accompanied by any reduction in the apparent financial strength of creditors. That is, of course, 'smoke and mirrors', but since much finance depends on confidence and trust, 'smoke and mirrors' can be a beneficial device.

4(c) Default

The final mechanism for debtor relief is straight default, either partial or total, writing down the nominal amounts of cash flows to be paid back to creditors. Such default, of course, prevents the debtor involved from accessing credit markets for a period of time. But the history, for example of sovereign default, implies that memories are relatively short, so that a prospective recovery of the defaulting debtor need not prevent a return to financial markets for very long. Nevertheless, in such circumstances, where there is a clear-cut default, the creditor involved has to take an offsetting immediate hit to their own balance sheet. Thus, default can have far greater systemic effects than renegotiation; the problems of the 'doom loop' between banks and sovereigns is a case in point. So, both because of the costly implications of default for borrowers, and the widening systemic effect of such default on creditors, default by borrowers is an extreme, and unhappy, response to excessive debt burdens, perhaps more so than either renegotiation or a slightly higher rate of inflation. Nevertheless, all these three alternatives, i.e. inflation, renegotiation and default, are costly and undesirable.

So, if growing out of debt seems improbable, and failing to meet commitments by one, or another, form of default on debtor promises, is also highly undesirable, what else could be done? The argument here is that what could be done, should have been done, and has not been done, is to revise the balance of refinancing dramatically towards equity finance, and away from debt finance. This is perhaps easiest to see in the case of corporate finance.

Households borrow primarily on fixed interest mortgages, in order to buy houses. This too could be switched more onto an equity basis. During periods when housing prices were expected to rise at a rate faster than the CPI, financial institutions might be glad to provide an equity element to housing finance, but borrowers might be resistant. But the regulators might adjust the required loan to value ratio to give an advantage to equity finance, rather than fixed interest finance, for mortgage borrowing, in some large part on the grounds that it would protect the borrower. On the other hand, equity finance for housing would require the development of future markets for housing prices wherein lenders could hedge their inflation risk exposure. While difficult, this could probably be done. During periods when housing prices were expected to fall, relative to the CPI, even if only temporarily, lenders would not be happy to take out such equity finance. In such circumstances the public sector might have to provide a backstop for equity finance for housing. Over the very long run, technical innovation in building houses has lagged severely behind innovation in most other manufacturing production. Moreover, much of the price of housing relates to land values, and land is in fixed supply. Partly as a result, again over such very long periods, housing prices have generally trended above the CPI. If that should remain there in future, a government-provided equity finance backstop, along the lines of 'Help-to-Buy' would actually provide, in the medium term, a profitable opportunity for the public sector.

Finally, the public sector itself could turn to a more equity-based form of finance by offering nominal income bonds, in place of fixed interest debt. While such issues have been advocated from time to time quite frequently during recent years, they have yet to be taken up on any large scale. But given the uncertainties about productivity and the availability of labour over future decades, it might well be a propitious moment for yet a further reconsideration.

There are two main problems that need to be addressed fairly soon, if there should be any sustained shift by the corporate sector to equity finance. The first of these is that debt finance has, at least for

the corporate sector, considerable fiscal advantage over equity finance. This would have to be rectified and equity finance made as advantageous for corporates as debt finance already is, if there were to be any success in introducing such a shift. We discuss this in 5.1, below.

The second problem is that the combination of limited liability for all equity holders, and the alignment of the incentives of managers with their equity shareholders, has led to a tendency towards short-termism and low investment, as noted earlier, and discussed further in the associated paper by Goodhart and Lastra, and also by Huertas (2019).

4.1 Levelling the Net Fiscal Advantages of Debt and Equity

There are two main sets of proposals, of which I am aware, that address the issue of removing the fiscal advantage of debt for corporates and levelling the playing field between equity and debt finance. These are, first, the allowance for Corporate Equity, included in the Mirrlees Review (2011), and the second is the proposal for 'Destination-based Cash Flow Taxation' (DBCFT), now more usually described as Border Taxes, as described in the Oxford University Centre for Business Taxation, paper of the same title, (WP17/01), January 2017. These are further described in order below.

5.1(a) ACE

The Mirrlees Review for the Institute for Fiscal Studies, *Tax by Design*, (2011), notes in its Chapter on 'Taxing Corporate Income', Chapter 17, p. 413,

"... unlike the interest cost of debt finance, which appears as an explicit charge in company accounts, this 'opportunity cost' of equity finance is not deductible from taxable profits. Consequently, for an equivalent equity-financed investment to be viable, the project must generate a higher pre-tax return to provide the company and its shareholders a net return... after payment of corporate income tax. This implies that the standard corporate tax base favours debt rather than equity finance, and tends to discourage corporate investment to the extent that companies rely on equity finance."

Thus, p. 418,

"... the standard corporate income tax is likely to distort company behaviour in several ways that may be undesirable. Borrowing is favoured over retained profits or new equity as a source of finance for corporate investment, leaving firms more exposed to the risk of bankruptcy. This tax bias in favour of debt increases with the rate of inflation. The tax treatment of depreciation favours investment in particular assets where tax allowances are relatively generous compared with true depreciation costs. Overall, the corporate income

tax increases the cost of capital and reduces investment. This principally reflects the inclusion of the normal return on equity-financed investment in the standard corporate income tax base.”

After considering a couple of alternative proposals, the Mirrlees Review preferred measure for rebalancing the net fiscal advantage of debt and equity was to introduce an Allowance for Corporate Equity (ACE), (e.g. p. 421),

“A different approach to equalizing the tax treatment of debt and equity finance was proposed by the IFS Capital Taxes Group (1991). The basic idea is to provide explicit tax relief for the imputed opportunity cost of using shareholders’ funds to finance the operations of the company. This ‘allowance for corporate equity (ACE)’ can be thought of in two ways: either as a counterpart to allowing the interest cost of debt finance to be tax deductible, or as a series of deferred tax allowances which compensate for the absence of the up-front 100% allowance for equity-financed investment expenditure provided by the cash-flow taxes. These two interpretations are broadly equivalent in examples with perfect certainty about future returns, while the second interpretation turns out to be more appropriate in the presence of risk and uncertainty. The effect is again to remove the normal return on equity-financed investment from the corporate tax base.”

In an internationally competitive context, it would not be viable to remove the tax deductibility of interest payments from UK firms unilaterally. So, in order to level the fiscal advantages of debt and equity, the normal return component of profits would equally have to go untaxed, thereby narrowing the corporate tax base. Although such a reform was introduced in Belgium in 2008, its main drawback is that it would have a “significant revenue cost”, as admitted in Mirrlees concluding, Chapter 20, e.g. p. 493:-

“The introduction of an allowance reflecting the underlying cost of using equity finance would have a significant revenue cost. This could be recouped by raising the corporate tax rate, but in our view this would be a mistake. The appropriate rate at which to tax rents earned in the corporate sector must balance the advantages of taxing sources of rent that are largely immobile against the disadvantages of (attempting to) tax sources of rent that are highly mobile and that are likely to relocate to other jurisdictions should the UK tax rate become out of line. Inevitably, this depends on corporate tax rates in other countries, which have fallen over the last three decades and which may well fall further with increased economic integration. Increasing the corporate tax rate would also increase incentives for multinational firms to shift taxable profits out of the UK. If the current UK corporate tax rate is more or less appropriate, the implication is that by taxing the normal return on equity-financed investments, we are currently raising too much revenue from corporate taxation. Our recommendations are thus to introduce an ACE without increasing the corporate tax rate, to accept that less revenue will be collected from the corporate tax, and to rebalance the shares of revenue from corporate and other taxes as part of an overall package of reforms to the tax system as a whole.”

5.1(b) DBCFT

This is best described in the Executive Summary of the paper mentioned above, as follows:-

“The DBCFT has two basic components.

- The "cash flow" element gives immediate relief to all expenditure, including capital expenditure, and taxes revenues as they accrue.
- The "destination-based" element introduces border adjustments of the same form as under the value added tax (VAT): exports are untaxed, while imports are taxed.

This is equivalent in its economic impact to introducing a broad-based, uniform rate Value Added Tax (VAT) - or achieving the same effect through an existing VAT - and making a corresponding reduction in taxes on wages and salaries.

The paper evaluates the DBCFT against five criteria: economic efficiency, robustness to avoidance and evasion, ease of administration, fairness and stability. And it does so both for the case of universal adoption by all countries and the more plausible case of unilateral adoption.

In contrast with existing systems of taxing corporate profit, especially in an international environment, the DBCFT and VAT-based equivalent have significant attractions:

- A central motivation for the DBCFT is to improve economic efficiency by taxing business income in a relatively immobile location - that is, the location of final purchasers of goods and services (the "destination"). The DBCFT should not distort either the scale or the location of business investment and eliminates the tax bias towards debt finance by assuring neutral treatment of debt and equity as sources of finance.
- Taxing business income in the place of destination also has the considerable advantage that the DBCFT is also robust against avoidance through inter-company transactions. Common means of tax avoidance - including the use of inter-company debt, locating intangible property in low-tax jurisdictions and mispricing inter-company transactions - would not be successful in reducing tax liabilities under a DBCFT.

Here however the distinction between universal and unilateral adoption is important. With adoption by only a subset of countries, those not adopting are likely to find their profit shifting problems to be intensified: companies operating in high tax countries, for instance, which may seek to artificially over-price their imports, will face no countervailing tax when sourcing them by exporting from related companies in DBCFT countries.

- By the same token, the DBCFT provides long term stability since countries would broadly have an incentive to adopt it - either to gain a competitive advantage over countries with a conventional origin-based tax, or to avoid a competitive disadvantage relative to countries that had already implemented a DBCFT. It would also be resistant to tax competition in tax rates.”

Given all these attractions and benefits of a DBCFT, one might reasonably ask why it has not already been adopted? It was seriously considered by the incoming Republican administration in 2017, but then dropped. There are, however, numerous drawbacks.

- It would represent a major change in the direction and assignment of taxation. As in any such major change, it would have large groups of sizeable losers and winners. Losers usually are more vocal in remonstrating than winners are in support.
- The main losers would be importers. It would be seen, and subject to objection, as equivalent to a temporary devaluation. There may be some query whether it is acceptable under WTO rules.
- It would (temporarily) raise domestic inflation, especially of goods/services with a high import content.
- While the intention is to combine the rise in VAT with a reduction in taxes on labour income, there is no certainty that this would, or could, be done so as to leave labour real post-tax incomes unchanged.
- Even more seriously, the poor, e.g. old, unemployed, sick, would not be protected, and, absent a general re-rating of benefits would lose. So the scheme could be attached as potentially highly regressive.
- Since investment is pro-cyclical and volatile, as are corporate losses, DBCFT tax receipts would be more procyclical and volatile than with the current forms of corporate tax, (Hebous, et al, 2019).
- It could generate schemes for fraudulent loss-making.

Thus, to introduce DCBFT without provoking a political storm would probably have to involve reworking much of the structure of transfer payments, as well as taxes on wages and salaries. So, it would be a massive exercise, which would dampen the enthusiasm for such a reform of most Ministers of Finance.

Rather than do this, they might prefer to explore other channels for dealing with the tax avoidance mechanisms that so many international corporations can now put in place.

While the benefits of a DBCFT are clear, the costs of making such a large jump to a new, and untried, system create a sizeable hurdle, so far preventing its acceptance.

4.2 Reforming the Incentive Structure for Corporate Managers

Current criticism of modern capitalism has several facets; it is argued that it leads to managers assuming excessive risk, being overpaid, and failing to undertake sufficient long-term investment, especially R&D.² The first two criticisms, excessive risk and excessive pay, were particularly levied at banks and other financial intermediaries in the aftermath of the GFC. There have been a variety of proposals aimed at checking or preventing such malfunctions. One set of such proposals has focussed on limiting the business structures of banks and other financial intermediaries. Examples of such proposals include narrow banking in various guises, ringfencing of core retail financial structures, and a variety of other regulatory measures.

Our proposal, instead, is to apply a distinction between a class of ‘insiders’, who should be subject to multiple liability, and ‘outsiders’, who would retain limited liability, as at present. So, for the ordinary shareholder there would be no change. Such a scheme obviously involves making a distinction, which must be inevitably somewhat arbitrary, between ‘insiders’ and ‘outsiders’.

Our basic proposal is that there should be two separate categories of equity investors, ‘outside’ investors who maintain limited liability, as now, and ‘insiders’, who should have varying degrees of further liability, as outlined below. But how do you distinguish between these two categories? In principle, the distinction is straightforward. ‘Insiders’ have access to significantly greater information about the working of the enterprise than ‘outsiders’, and the potential to use that information to prevent excessively risky actions. In practice, of course, the distinction is not so easy to make. ‘Insiders’ would include all of the Board of Directors, including the externals. For employees, we would suggest a two-fold categorisation, by status within the company, and by scale of remuneration. Thus any employee on the Executive Board, or who was Chief of a Division would be included. But the key players in a company are frequently indicated by the scale of their

² In an article entitled ‘Rethink the purpose of the corporation’ (Financial Times, 12 December 2018), Martin Wolf criticises the mantra of shareholder value maximization affirming that in the cases of highly leveraged banking the Anglo American model of corporate governance does not work. He refers to a number of books – including Colin Mayer’s 2018 *Prosperity* – that suggest that capitalism is substantially broken.

remuneration rather than by their formal position. So any employee who was earning a salary in excess of, say, 50% of that of the CEO, would also be assessed as an 'Insider'. Nevertheless, if the potential sanction of multiple liability arising from failure was regarded as severe, there could be attempts to adjust titles and salaries so as to avoid being categorised as an 'Insider'. So, the regulatory authority should have the right to designate anyone in a particular company as being an 'insider', subject to judicial review.

Large shareholders are also in a position to access inside information, and to exert influence on the course that a company might follow. So any shareholder with a holding greater than, say, 5% of the company, should also be regarded as an 'insider'. There is no particular key threshold, above which a large shareholders should be regarded as an 'insider'. It is arguable that one should give shareholders holding between 2 and 5% of the value of the shares the ability to choose whether to count as an 'outsider', or as an 'insider'. If they want to count as an 'outsider', they would have to give up all voting rights, and not participate in policy discussions, e.g. at AGMs.

The base to which the liability should apply would be the remuneration of all those counted as 'insiders', cumulated from the date that they took on that role. This would apply to all forms of remuneration, except those provided in the form of bail-inable debt, with all subsequent transactions in such debt having to be notified. This would apply to the directors and employees. Shareholders would be liable according to the par value of their shares.

Not all 'insiders' are equal. In particular, the CEO has much more information and power than any of his subordinates, other members of the Board, or the auditors. One might think that the CEO's liability could be three times the accumulated relevant value of remuneration (ex bail-inables) from the time that he or she had taken up the role of CEO. Board members and chief officers of the company might have two-times liability, and every other 'insider' employee a single liability equal to their accumulated revenue. Similarly, large shareholders with greater than 5% holdings might have double liability, i.e. for an additional twice par value of their shares, while 'insider' shareholders, between 2 and 5%, might be liable to pay in an additional par value of their shares, as in the American National Bank system before the 1930s.

That raises two further questions. The first is what should happen when an 'insider' ceases to play that role, e.g. an employee leaves the company, or a large shareholder sells their shares. The second

is that an 'insider' may be aware that the company is entering dangerous territory, but cannot persuade management to change direction. In that case, how could they avoid being sanctioned for a policy that they would not themselves advocate?

In the first case, of departure from the role of 'insider', it would seem appropriate to taper the liability according to the degree of 'insider' knowledge and power. Thus, if it was agreed that the CEO should have a three times extra liability, then that liability would decline at a constant rate over the following three years, leaving the CEO with zero further liability exactly three years after they had left. By the same token, those with a two times additional liability, should have it taper at a constant rate until they were free of any further liability after two years; and so on for those with a one-time additional liability.

Then we come to the second issue, which is the question of how those with additional liability can avoid sanction in those cases where they have opposed the policy, but have failed to succeed in changing it. Our suggestion in this case is that those in such a position should address a formal, but confidential and private, letter to the relevant regulators, setting out their concerns about the policy being followed. The regulator would have to formally acknowledge receipt of such letters, and they could then be used in mitigation, or often abandonment of any sanction, should the company then fail. Moreover, in the event of the company failing, for the reasons indicated in such a letter(s), this would in turn act as a form of accountability for the regulators. All such letters would have to be made publicly available in the event of failure. It would be a legal offence for the regulator then not to publish any such letter.

There is a more difficult question, whether the regulator, having received such a private confidential letter of warning, perhaps from the auditor, or an unhappy employee, should make them public. In our view, such warnings need to be investigated further by an independent body, such as the regulator or a financial ombudsman before being made publicly available, since in many cases, they may well be groundless with the maintained policy of the company being appropriate. But if the regulator, after investigation, should feel that the warnings had merit, the first step would then be to have a private discussion with management on the merits of the case, and, if management remained unmoved, the next stage would be to publish the warning (anonymously) together with the regulator's own assessment, at the same time offering management the opportunity to state

publicly their own side of the case. When the latter process had been completed, 'outsiders' would then be as well informed as 'insiders' on the merits of the issue.

Note that it puts regulators in the firing line for at least severe reputational damage, if they receive such warnings, fail to act upon them, and the warnings prove prescient.

The purpose of the exercise is to provide appropriate sanctions for failure on those with 'insider' knowledge and power. The particular illustrative numbers chosen in the above section are, obviously, somewhat arbitrary. But the exercise can be calibrated to impose appropriate sanctions for all such 'insiders', whether large shareholders, key employees, or regulators. We think that this would be a better form of governance.

5. Conclusions

Despite favourable macro-economic conditions, corporate investment has remained low for the last decade. One of the several reasons for this has been that the structure of corporate governance privileges buy-backs, to raise the return on equity, over longer-term fixed investment. This, in turn, has been one of the factors leading to a generalised, but not universal, increase in debt ratios. The effects of this have been masked until now by declining nominal, and real, interest rates, leaving debt service ratios roughly constant. But interest rates are now rising from their effective lower bound.

We find ourselves in a debt trap. Debt ratios have become so high that any sharp, or major, increase in interest rates would precipitate a new recession. But the current low level of rates still encourages further debt accumulation. Faster real growth is not an option; indeed currently adverse demographic trends are likely to slow growth further, absent a productivity miracle. Unexpected inflation may well ensue, as populist politicians put pressure on Central Banks to go easy on the achievement of inflation targets, and Central Bank Independence withers. There will be debt defaults and renegotiation.

But none of the above will be pleasant. The proposal made here, instead, is to shift the balance of finance from debt to equity finance. This will require a number of key reforms. Two such reforms are highlighted. The first is to remove the fiscal advantage of debt vis-à-vis equity. The second is to change the structure of corporate governance so as to apply greater sanctions and penalties to management in the event of corporate failure.

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