Debt Intolerance and the 90% Debt Threshold: Two Impossibility Theorems

Photis Lysandrou[•]
London Metropolitan University

Abstract

Two propositions underpin the U turn from post crisis fiscal expansion to fiscal consolidation recently executed by some G-7 governments. One is that the threat of debt intolerance is general: the reasoning is that no heavily indebted government, those of the G-7 countries included, can ever be free of this threat. The other proposition is that there is a one size debt threshold: the reasoning here is that no government, those of the G-7 countries included, can escape the serious consequences of debt intolerance should its debt to GDP ratio reach 90%. This paper argues that neither of these propositions can have credibility at a time of continuing global economic slowdown and consequent contraction in the global supplies of investable assets. At such a time investors cannot possibly hold up the threat of intolerance to core economy governments because they have no choice but to store substantial portions of their wealth in the latter's bonds, a fact which in turn means that the debt thresholds for core economy governments cannot possibly be the same as the average for other governments.

Key words: Government bonds; Debt intolerance; 90% Debt threshold

JEL Classification: G10; G11

1. Introduction

When the financial crisis broke out in mid-2007 the consensus amongst Western governments was that rapid fiscal expansion was required to prevent the crisis from generating a 1930s style depression. By mid-2010 that consensus had broken down. While some governments remained committed to fiscal expansion other governments, most notably the UK government, embarked on a policy of fiscal consolidation. The rationale for this U turn boils down to a balancing of two risks: against the risk that early fiscal tightening may threaten post-crisis recovery (Stiglitz, 2010; Wolf, 2011) there is the risk that the continued rise in government debt to GDP ratios may trigger a crisis of confidence in the ability to

• Professor of Global Political Economy, London Metropolitan Business School. Contact details: p.lysandrou@londsonmet.ac.uk. I wish to thank Maria Quintero and Thomas Goda for their help in preparing this paper.

repay the debt, an event which may in turn wreak even more economic damage (Cecchetti et.al., 2010; de la Dehesa, 2010; Rother et.al. 2010; Warnock, 2010) History appears to confirm the following ceilings to government debt/GDP ratios beyond which 'debt intolerance' and its ensuing consequences set in: 60% for emerging market economies that borrow in foreign currencies and 90% for advanced market economies that borrow in their own currencies (Reinhart and Rogoff, 2010).

A number of authors have criticised the debt threshold hypothesis on the grounds that while the 90% figure may be valid in relation to the governments of the smaller advanced market economies, it is not valid in relation to the governments of the core market economies that have a superior credit standing (Nersisyan and Wray, 2010a, 2010b; Bivens, 2010; Irons and Bivens, 2010; Levy and Thiruvadanthai, 2011). Although this criticism is here considered to be correct it does not go far enough. The problem is that there is a gap between the proposition that core economy governments can carry higher levels of debt more safely than can other governments and the proposition that global investors are willing to hold core government debt at relatively low interest rates even when the debt to GDP ratio breaches the 90% threshold. However well formulated the arguments advanced in support of the first proposition, these are not sufficient to lend full support to the second proposition, which is what is required if the rationale for early post-crisis fiscal consolidation is to be seriously questioned. This paper attempts to close the gap by focussing attention less on the flow-flow relation between the annual interest payments on a stock of government debt and the annual rate of domestic output than on the stock-stock relation between the global supplies of government debt securities on the one hand and the global investor demand for these securities on the other. From this latter perspective it becomes clear that investors are in no position to threaten core economy governments with debt intolerance regardless of whether they breach 90% threshold because there is simply no where else for them to go.

The structure of this paper is as follows. Section two looks at how the debt intolerance and debt threshold premises are derived from the standard economic theory of the growth-debt nexus. Section three posits the impossibility of general debt intolerance by examining the global demand for securities. Section four posits the impossibility of a one size fits all debt threshold by examining the global supplies of government bonds. Section five draws some policy implications. Section six concludes.

2. The government debt-economic growth nexus

The summer of 2010 marked the point at which, following two years of concerted fiscal expansion by all of the leading Western governments, some of these governments decided that it was time to revert to fiscal consolidation. This policy U turn was not prompted by any clear signs of full recovery from the effects of the great financial crisis of 2007-8. On the contrary, most of the key economic indicators pointed to a continuing downturn or slow growth at best. Rather, the two headline numbers causing concern were the deficit and debt to GDP ratios: as can be seen in Table 1, the cyclically adjusted (structural) deficit to GDP ratio for Western economies ratio rose from an average of 3% in 2007 to over 7% in 2010-11 while the debt to GDP ratio rose from an average of 50% to 100% over the same period. In some respects, these numbers are not without historical precedent: government deficit and debt levels in the US, UK and other major capitalist economies climbed to huge heights during the last two world wars only to subsequently decline as post war economic recovery and growth generated more than sufficient tax revenues to cover government spending (O'Hara, 2009; Nersisyan and Wray, 2010a; Josh and Bivens, 2010). However, what is different about today's deficit and debt levels is that they are peace-time not war-time levels and, unless strong countervailing measures are taken, the prospect is for these levels to continue to rise not only because the costs of subsidising the banks and of supporting higher levels of unemployed are being piled on top of increasing government spending commitments (many of which are linked to demographic changes) but also because (absent any radical changes in current taxation structures) government tax revenues are set to remain flat in line with flat line growth (Cecchetti et.al. 2010; Rother et.al., 2010). The question of course is should governments take strong measures to bring down both their annual deficits and their accumulated stocks of debt? These may in some senses be without precedent, but something more than simple historical comparison is needed to justify fiscal consolidation in the midst of continuing post-crisis economic slowdown. To be more specific, there has to be a compelling explanation as to why it is that once government borrowing to finance fiscal expansion reaches a certain limit the threat to domestic economic stability posed by continued borrowing is potentially greater than the benefits conferred on that stability by continued fiscal expansion. Now an explanation has been given, but whether it is a compelling one is another matter altogether.

Table 1: Fiscal Situation and Prospects

	Fiscal balance			Structural balance			General government debt		
	As a percentage of GDP								
	2007	2010	2011	2007	2010	2011	2007	2010	2011
Austria	–0.7	–5.5	–5.8	–1.4	–3.3	–3.6	62	78	82
France	–2.7	–8.6	–8.0	–3.5	–6.8	–6.3	70	92	99
Germany	0.2	–5.3	–4.6	–0.8	–4.0	–3.7	65	82	85
Greece	–4.0	–9.8	–10.0	–4.5	–6.9	–6.8	104	123	130
Ireland	0.2	–12.2	–11.6	–1.3	–9.0	–9.0	28	81	93
Italy	–1.5	–5.4	–5.1	–2.2	–2.6	–2.8	112	127	130
Japan	–2.5	–8.2	–9.4	–3.4	–7.4	–9.0	167	197	204
Netherlands	0.2	–5.9	–5.3	–0.6	–3.6	–3.1	52	77	82
Portugal	–2.7	–7.6	–7.8	–2.8	–6.1	–6.8	71	91	97
Spain	1.9	–8.5	–7.7	1.6	–5.2	–4.5	42	68	74
United Kingdom	–2.7	–13.3	–12.5	–3.4	–10.5	–9.9	47	83	94
United States	–2.8	–10.7	–9.4	–3.1	–9.2	–8.2	62	92	100
Asia	0.1	–3.5	–3.6	…	…	…	37	40	41
Central Europe	3.7	–4.4	–3.9	…	…	…	23	28	29
Latin America	–1.5	–2.4	–2.0	…	…	…	41	37	35

Source: Cecchetti et.al (2010)

Standard economic theory holds that under certain assumptions both deficits and debt can negatively affect economic growth, the former in the short to intermediate term, the latter over the longer term (Ball and Mankiw, 1995; Elmendorf and Mankiw, 1998). The key assumption in regard to the deficit-growth nexus is that public and private sector borrowers compete for a fixed supply of loans: when a government borrows to finance its deficits, this reduces the supply of loans available to private borrowers thus pushing up the interest rate; this in turn causes households and firms to reduce their investments, which, finally, leads to lower growth. Given that the post-financial crisis period has been marked by deep and prolonged reductions in private sector borrowing and spending, it is hardly surprising that relatively few of those demanding immediate government spending cuts invoke this 'crowding out' line of argument in support of their demand. Rather, their main argument relates to the debt- growth nexus: the longer that government deficits are allowed to accumulate, the higher becomes the debt to GDP ratio and as that ratio approaches a certain critical point the more realistic is the prospect of a large hike in taxes or a large cut in government spending, either of which will in turn undermine growth.

The key assumption here is that of debt intolerance: it is because investors are presumed not to be willing to hold a government's bonds, or only willing to hold them at very high interest, once the stock of those bonds reaches a certain point that the government in question is forced to raise taxes or to make spending cuts at that point. Standard theory concedes that a government may be lucky in that investors take a benign view of its country's growth prospects, in which case the government may never need to raise taxes or cut spending and can simply pay off interest and maturing debt by issuing new debt: as long as the rate of output growth is higher than the interest rate, the ratio of debt to GDP falls over time even as its absolute size grows (Ball and Mankiw, 1995). However, standard theory also states that it is possible that a government gets to be unlucky and investors take a more pessimistic view of its country's future prospects. This is how Ball and Mankiw put the matter in their 1995 paper on government deficits and debt: "Although interest rates on government debt have usually been less than the growth of GDP, these variables fluctuate. It is possible, although not especially likely, that the economy will experience a run of bad luck – say a major recession – in which the growth rate drops below the interest rate for a sustained period. In this case, a policy of rolling over the debt will cause the debt to rise faster than national income. Eventually, the debt may become so large relative to the economy that the government has difficulty in selling it, forcing a tax increase or spending cut. Moreover, these adjustments are especially painful: they are large, and they come when the economy is already suffering from a problem that has caused the debt-income ratio to rise....Thus a policy of rolling over the debt is a gamble: the government is likely to avoid any tax increase or spending cut, but it risks large and painful ones. Faced with this risk, the government may choose to reduce the deficit while the debt is still moderate and the economy is healthy. By raising taxes or cutting spending initially, the government can reduce the risk of more difficult fiscal adjustments later" (pp.102-3)

This passage adumbrates the thinking behind the current calls for post-crisis fiscal consolidation: against the risk that such consolidation can threaten economic recovery there is the potentially greater risk that any deferment of such consolidation can lead to "more difficult fiscal adjustments later". Note again that pivotal to this thinking is the assumption that as the stock of government debt approaches a critical level the government will have increasing "difficulty in selling it". Only in one respect does the above quoted passage strike an odd note. Writing in the period that has come to be labelled the 'great moderation', Ball and Mankiw could be excused for thinking that it is "not especially likely" that any advanced economy will experience a major recession. However, what was then unlikely has become

very likely in the aftermath of the financial crisis, which is why the threat of debt intolerance and its ensuing consequences are today taken very seriously. Just how seriously is illustrated by the following passages taken from a recent article published under the auspices of the BIS: "Should we be concerned about high and sharply rising public debts?..it is possible that investors will continue to put strong faith in industrial countries' ability to repay, and that worries about excessive public debts are exaggerated. Indeed, with only a few exceptions, during the crisis, nominal government bond yields have fallen and remained relatively low. So far, at least, investors have continued to view government bonds as relatively safe...But bond traders are notoriously short-sighted, assuming that they get out before the storm hits: their time horizons are days or weeks, not years or decades....Today, interest rates are exceptionally low and the growth outlook for advanced economies is modest at best. This leads us to conclude that the question is when markets will start putting pressure on governments, not if. When, in the absence of fiscal actions, will investors start demanding a much higher compensation for the risk of holding the increasingly large amounts of public debt that authorities are going to issue to finance their extravagant ways? "(Cecchetti et.al., 2010, p 3)

Standard economic theory may dictate that debt intolerance and its ensuing consequences have to set in at some debt to GDP ratio, but it does not specify that ratio. Is it 50%? 100%? 150%? In the traditional literature on public debt this question is left unanswered, but an answer has to be given if any real pressure is going to be brought to bear on governments to reduce debt. This is a difficult enough task at the best of times but to reduce government debt in the midst of stagnant economic growth and rising unemployment is going to be even more difficult and unpopular and thus unless a single figure is specified as the 'tipping point' debt to GDP ratio, the threshold that governments cannot cross without causing serious damage, even those governments bent on a programme of fiscal austerity will find it hard to muster the moral and political authority to force through that programme. That tipping point figure has been recently provided by Carmen Reinhart and Kenneth Rogoff (2010). Drawing on two hundred years of evidence for a sample of 44 countries, these two economists show that government debt to GDP ratios below 90% have no discernable negative effect on domestic growth, while ratios above this ratio do have a negative effect (this figure is for economies that borrow in their own currency; the debt to GDP threshold is much lower at 60% for emerging market economies that tend to borrow in foreign currencies). Given that by the time that Reinhart and Rogoff published their results many of the leading Western governments were either reaching or had surpassed the 90% threshold, one can see why these results were

quickly incorporated into the general case for post crisis fiscal consolidation (Pozen, 2010; Caner et.al., 2010).

It turns out that for all the prodigious empirical work put into generating the 90% figure it has no solid theoretical foundation. At one point Reinhart and Rogoff invoke Ricardian equivalence as the mechanism linking rising debt to slower growth. To quote: "The simplest connection between public debt and growth is suggested by Robert Barro. Assuming taxes ultimately need to be raised to achieve debt sustainability, the distortionary impact they imply is likely to lower potential output" (2010, p.6). However, only a minority of mainstream economists believe that Barro's equivalence theorem has any practical relevance inasmuch as its underlying assumptions about household behaviour in the face of rising government deficits are too restrictive (Elmendorf and Mankiw, 1998). Thus at another point Reinhart and Rogoff invoke debt intolerance as the central link in the debt-growth nexus. To quote: "Why are there thresholds in debt, and why 90%? This is an important question that merits further research, but we would speculate that the phenomenon is closely linked to [the] logic..of 'debt intolerance'..as debt levels rise towards historical limits, risk premia begin to rise sharply, facing highly indebted governments with difficult tradeoffs. Even countries that are committed to fully repaying their debts are forced to dramatically tighten fiscal policy in order to appear credible to investors and thereby reduce risk premia" (2010b, p. 23). In the opening sentence of this paragraph two questions are posed but only one answer is given inasmuch as the second question is collapsed into the first. Why are there debt thresholds? Because there is a limit to investors' tolerance for debt. Why the 90% figure? We just do not know. All that we do know is that from historical experience this is the figure at which debt intolerance appears to take effect.

Although a number of criticisms have been levelled against the claim that the 90% debt threshold has universal validity –that it applies to all governments at all times - none have fully succeeded in discrediting this claim as is evidenced by the fact that this figure continues to be widely accepted as the dividing line between economic stability and economic catastrophe. The basic explanation for this state of affairs lies in the failure to confront head-on the underlying assumption of debt intolerance. Consider, for example, the criticism that while the Reinhart-Rogoff results may show an historical correlation between government debt levels and economic growth patterns they prove nothing about the direction of causality. The inference drawn by Reinhart and Rogoff is that the direction of causality usually runs from high debt to low growth, but as many critics have argued a more plausible inference to

be drawn from the historical data is that causality runs in the reverse direction from low growth to high debt (Bivens, 2010; Josh and Bivens 2010; Nersisyan and Wray, 2010a). Now this line of criticism may well be accurate but it is also irrelevant to the main issue which has to be addressed. Whatever the particular circumstances that have caused a government's stock of outstanding debt to rise to a high level, the central question that has still to be answered is whether investors will be willing to continue to hold that government's debt without demanding exorbitant risk premiums.

To take a second example, consider the criticism that the Reinhart and Rogoff hypothesis fails to take into account the fact that those governments that borrow in their own currency cannot be forced into insolvency regardless of whether the 90% debt threshold is breached. Vera Nersisyan and L.Randell Wray, the two authors most associated with this line of criticism, argue that in a situation where the prospect of prolonged global economic recession is very real sovereign governments should not be afraid of resorting to the printing press to help combat recession given that any ensuing danger of domestic inflationary pressure is likely to remain weak. Once again there is a problem of relevance. This argument may well be correct, but the reality is that the governments of most of the world's leading economies do continue to fear the potential inflationary effects of domestic money-financed forms of borrowing for which reason they prefer to rely on bond market-financed forms.[1].

To take one last example consider the criticism that while Reinhart and Rogoff conclude from their historical survey that the debt threshold for emerging market economy governments is significantly lower than that for advanced market economy governments, they draw no similar conclusion with regard to this latter group of governments: all without exception are assumed to be subject to the same 90% threshold. GDP differences are of course taken into account given that the debt threshold is expressed as a ratio of the total stock of debt to the total annual flow of domestic output; this said, however, the threshold ratio takes no account of the wide differences in the technological strength of domestic economies or of the differences in the strength of their institutional systems (Levy and Thiruvadanthai, 2011). Of all the criticisms levelled against the idea of a one size debt

[1] This is the point made by Gavyn Davies (2011). While being sympathetic to Nersisyan and Wray's argument that a sovereign government cannot be forced into default, because its central bank can always create domestic currency to pay down debt, he disagrees with their conclusion that governments should continue to finance budget deficits via money creation unless and until they see inflation rates exceed targets. One of the main reasons for his disagreement is "the possible impact on inflation expectations, and then on inflation itself, if governments were to pursue a systematic policy of financing budget deficits by money creation. After all, it is possible for economies to suffer devasting surges of inflation, even while unemployment is above normal levels".

threshold, this one is possibly the most potent: given their relatively greater capacity to carry debt, the risk of debt default on the part of the core economy governments is bound to be relatively lower than the risk of debt default on the part of smaller economy governments. The problem is that, for all its potency, this criticism also fails to home in on the debt intolerance assumption. The crux of the matter, as already stated, is that there is a gap between the proposition that a government such as that of the US is unlikely to default even if the 90% threshold is breached and the proposition that investors will be willing to continue holding US government debt in the event that that threshold is breached. There can no clearer manifestation of this gap than the fact that the leading credit rating agencies are prepared to lower the US government's credit rating even though they are fully aware of its strong credit record. The point bears repeating that all governments today, that of the US included, are entering uncharted waters: today's peak levels of government debt are peacetime not war time levels, levels that look unlikely to come down any time soon given the huge damage to the global capitalist system caused by the banking crisis that broke out at its very centre. In this context, one can understand the claim that no government, regardless of the quality of its past credit record or of the strengths of its present institutions, can escape the threat of debt intolerance unless it implements, or at the very least announces its intention to implement, a debt reduction plan[2].

This claim may be understandable, but it is not irrefutable and only appears to be so given the current boundaries with which the whole debate on public debt is confined. What is remarkable about this debate is the total absence of any discussion on two sets of issues that ought to be at its very heart: (i) The global demand for government bonds. There is everywhere talk of the 'market' for government debt, but who exactly comprises this market? (ii) The global supply of government bonds. Everyone compares the government debt to GDP ratios for different countries but what are these countries' respective contributions to the world supply of government bonds? To repeat, all sides in the current debate on public debt are silent on these issues, but while there is in this sense an equality of procedure there is no corresponding equality of outcome. For those who warn of the dire consequences of breaking the 90% ceiling it pays to say nothing about the requirements of investors and nothing about the different abilities of different governments to meet those requirements. On the contrary,

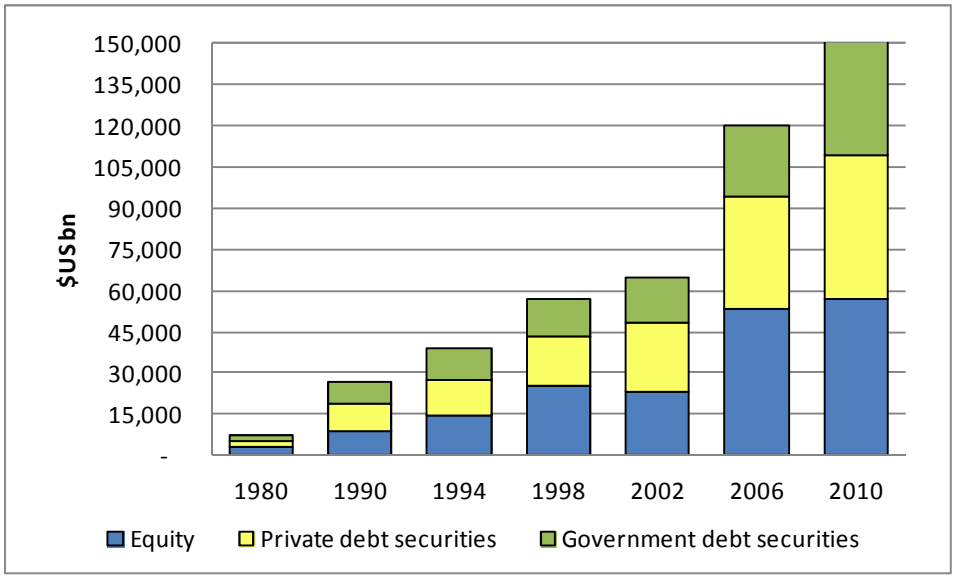
[2] To quote from a recent report in Deutsche Bank Research: " If US policymakers fail to agree on a more drastic consolidation programme than presumed in our baseline scenario, the US debt stock may climb to around 134% of GDP by 2020. As a result, the debt interest burden could rise considerably over time and thus increasingly weigh on sovereign creditworthiness. S& P's recent move to attach a negative outlook to the US sovereign AAA long-term credit rating was a warning shot which deserves to be taken seriously" (2011, p.1)

for those who argue that these warnings are in certain cases greatly exaggerated it pays to subject these issues to close examination.

3. The global demand for securities: the impossibility of general debt intolerance

The past four decades have witnessed an explosive growth in the world's stock of financial securities: as can be seen in Table 2, that stock was roughly equivalent in value to world GDP in 1980 but had grown to double the value of world GDP by 1998 and to two and a half times the value of world GDP by 2010. That this phenomenal increase in the supply of securities could not have happened without a corresponding increase in the demand for them is self evident, but this observation should also alert us to the fact that there have been significant changes in the nature as much as in the quantity of investor demand resulting both from structural changes in capitalist economies and from the accompanying shifts in economic policy. There can be no clearer illustration of this link between asset demand and structural and policy change than the fact that professional asset managers – pension and mutual funds and insurance companies – are now the largest of the world's four major groups of investors listed in Table 3.

Table 2: Global security stocks ($US bn)



Deposits	5,000	16,000	18,000	22,000	29,000	45,000	59,000
GPD	11,000	22,000	26,000	30,000	33,000	49,000	63,000

Source: McKinsey (2008), BIS (2011), WFE (2011), World Bank (2011); own estimations

Table 3: Major Holders of Securities, 2010 (US $ tr)

	Total Assets	Securities	Other
Institutional Investors	**77.4**	**63.0**	**14.4**
Pension Funds	31.1	25.2	5.9
Mutual Funds	24.7	21.4	3.3
Insurance Companies	21.6	16.4	5.2
Banks	**100.1**	**49.0**	**51.1**
High Net Worth Individuals	**42.7**	**26.5**	**16.2**
Governments	**11.4**	**9.3**	**2.1**
Reserves	7.2	5.8	1.4
Sovereign Wealth Funds	4.2	3.5	0.7

Sources: Capgemini & Merrill Lynch (2011); IMF (2011a); IMF (2011b); Monitor (2011); OECD (2011); TheCityUK (2011); own estimations

The recent transformation of professional asset management into a mass industry essentially represents the flip side of the increasing privatisation of pension and other welfare provision: as increasing numbers of individuals are made to take more personal responsibly for their retirement and health care costs so do they become more yield-oriented, a development that explains the trend shift away from traditional bank savings and towards capital market investments, while the fact that most individuals remain risk averse even while they become more yield oriented explains why they tend to make capital market investments not directly but via the intermediation of professionals. As the demands made upon the institutional asset management function have grown, so of course has also the institutional demand for securities as one of the essential means for executing this function. This same observation also applies in part to the large commercial banks. Banks have always held substantial amounts of securities for solvency and other bank function related reasons, but another major reason why their securities holdings have risen sharply in the recent period is that, as profits from their traditional banking function have been squeezed by the changes in corporate borrowing and household savings behaviour, they too have moved into the asset management area.

In the case of high net worth individuals and governments, the next two investor groups in terms of size of asset holdings, the growth in their need for securities has less to do with functional imperatives than with global imbalances. A characterising feature of the contemporary globalisation process is the steep increase in private wealth concentration, and

while those at the poor end of the spectrum face the problem of how to make ends meet and have increasingly to rely on credit to help solve this problem those at the rich end of the spectrum face the problem of how to store their vast sums of wealth and have increasingly to rely on securities to help resolve this problem. As for the recent increase in government holdings of securities, this essentially represents the reverse side of the recent steep increases in the surpluses generated by oil and non-oil commodity exporting emerging market economies: while the majority part of these surpluses continue to be allocated to government (primarily US government) debt securities for liquidity purposes, an increasing portion of these surpluses is being channelled (typically via investment vehicles such as the sovereign wealth funds) into other higher yielding securities.

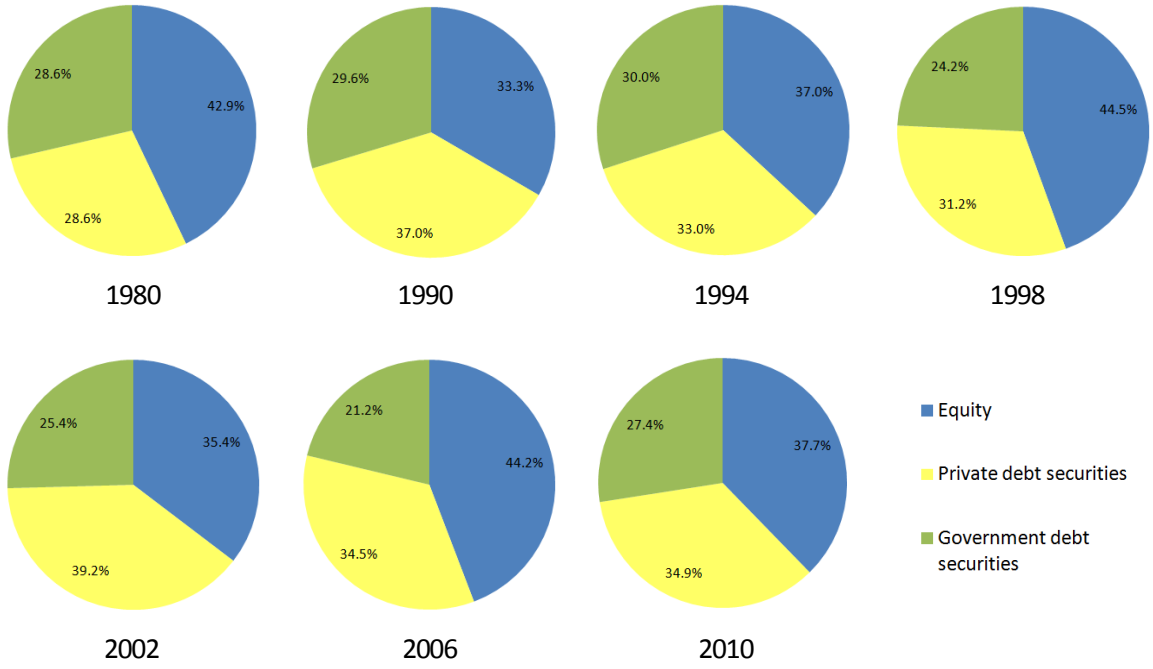
Financial securities are not the only form in which wealth is stored; cash, real estate and certain other material commodities and an assortment of alternative investments also serve this purpose. However, what is clear from Table 3 is that financial securities dominate all other types of assets in the total composition of asset holdings. The chief explanation for this is that the growth in wealth accumulation and the corresponding need to store it has been so rapid in recent decades that financial securities have had to bear the major burden in satisfying this wealth storage need: the rate of supply of cash cannot systematically exceed the rate of GDP growth without seriously impairing its store of value function; there are physical limits on the rate of supply of marketable real estate and other material commodities; and, finally, there are prudential, liquidity and regulatory constraints on the amounts of wealth that can be channelled into hedge funds, private equity and other alternative investment classes. Only financial securities can keep up with the rate of demand for stores of value because these are claims on the future income streams generated by corporations and governments and because the potential for colonising the future to escape the income constraints of the present, while not limitless, is certainly very large indeed. In sum, these observations explain why it is reasonable to assert that investors are now schizophrenic in that they now simultaneously hold two diametrically opposed views of the relation between financial securities and the organisations issuing them: a conventional view in which, as illustrated in Figure 1a, equity and debt securities are merely a means to an end, namely to help finance the production or service function of the issuing organisation; and an inverted view in which, as illustrated in Figure 1b, the primary role of corporations and governments is to provide securities that can serve as stores of value, while their production or service function is merely the means of guaranteeing the tangibility of these stores of value.

Figure 1a: Conventional View of Securities

Figure 1b: Alternative View of Securities

While financial securities as an asset class bear the major burden of meeting investors' wealth storage needs, the distribution of that burden within this asset class varies according to the different phases of the economic cycle. Equity and debt securities differ in the way they combine return and risk, the former generally performing better on returns because these are paid out as a share of profits while the latter tend to have a better record on risk because the payment of interest is obligatory while the payment of dividends is discretionary. These respective differences explain why at any point in time most investors hold a mixture of equity and debt securities in their portfolios (albeit that the proportions vary from one type of investor to another according to the nature of their liabilities) and why across time these mixtures vary according to economic conditions. As can be seen in Table 1, and even more clearly below in Chart 1, which breaks down the composition of global securities stocks in percentage terms, in the mid1980s, mid 1990s and mid 2000s, all periods of economic recovery and expansion and thus where expectations of corporate profitability are high, the global share of equity securities expands at the expense of the share of debt securities while the reverse is true in the early 1990s, early 2000s and again late 2000s, all periods of economic slowdown and uncertainty and thus where investors attach relatively more importance to minimising risk.

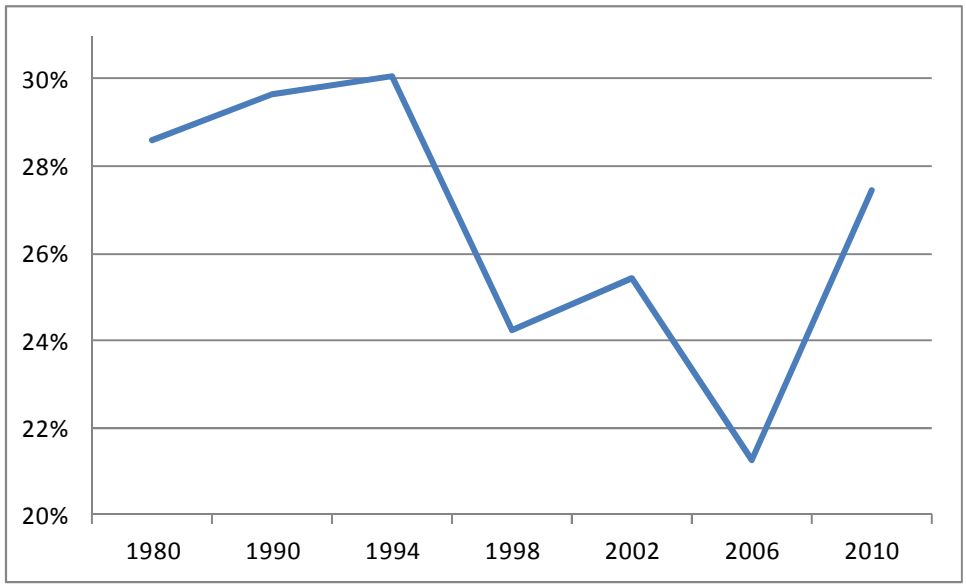
Chart 1: Composition of global security stocks



Source: McKinsey (2008), BIS (2011), WFE (2011), own calculations

The cyclical fluctuations in the compositional balance of corporate securities stocks are not the only striking feature about the growth of securities stocks since 1980. An equally striking feature, made clear in Graph 1, are the wave like fluctuations in the compositional balance between all corporate securities on the one hand and government debt securities on the other. Government bonds always figure to one degree or other in bond portfolios for although they tend to carry lower yields than do corporate bonds –because they tend to carry less risk – they also tend to have greater liquidity because their markets are usually larger and deeper than are those for corporate bonds. This said, it is evident that in growth periods when expectations of corporate profitability are high and the risks of corporate insolvency are relatively low there is a shift away from low yield government securities and towards the high yield corporate securities while in recessionary periods there is a shift in the reverse direction towards the safety of government securities. In effect, government bonds serve as the operational and stabilising core of the global securities stocks, their relative share shrinking when good economic conditions enable the corporate sector to provide investors with safe stores of value in abundance and expanding when adverse economic conditions prevent the corporate sector from supplying safe stores of value in the quantities required by investors.

Graph 1: Share of government bonds in global security stocks



Source: McKinsey (2008), BIS (2011), WFE (2011), own calculation

It is here that one can see why the threat of debt intolerance, when posed as a general threat, is an impossibility. Recall that all governments are said to face this threat when the annual flow of interest payments needed to service their stock of debt exceeds the level which can be safely supported by the annual flow of domestic output for this is when investors will demand higher risk premiums and hold up the prospect of exit to enforce that demand. In other words, what is crucial to the whole idea of intolerance is the assumption that investors always have the option of abandoning government bonds in favour of some other asset class. Now this assumption may make sense from the standpoint of the conventional view of debt security issuance as illustrated in Figure 1a, but it makes no sense from the alternative standpoint as illustrated in Figure 1b: from this second standpoint where government bonds represent not only a type of debt but also a type of commodity whose use value is to serve as a store of value, investors have little choice but to hold government bonds. As already observed, that choice is limited even in the best of economic times given the various constraints on the rates at which other non-security assets can be supplied, but it becomes even more limited at the worst of economic times as the ability of the private corporate sector to supply stores of value comes under serious pressure. What has generally been true in the past is true in the post crisis present and, indeed, it is even more so because the irony here is that while the financial crisis of 2007-8 has done enormous damage to domestic economies and hence to the private sector's ability to supply investable assets it has done no serious or lasting damage to the growth of wealth accumulation and hence to the growth in the need for

wealth containers. Thus investors are currently being forced into holding ever increasing amounts of government bonds, even while they may prefer not to, because at this time of post crisis economic uncertainty and continuing stagnant growth only national governments can create assets in the quantities required to bridge the gap between the global demand for stores of value and their global supply.

This conclusion can of course be countered by the objection that it rests on a line of reasoning that is far too aggregative and hence far too abstract. Even if investors cannot abandon government bonds as an investment class, they still have the option of switching from one government's bonds to those of another. This qualification is absolutely correct, but it is precisely because it is correct that it makes nonsense of the idea that there can be a single debt threshold figure that applies uniformly to all governments regardless of their reputation or position in the global economic system. This idea may or may not have had some validity in capitalism's past but, as will now be argued, it has no validity in capitalism's present.

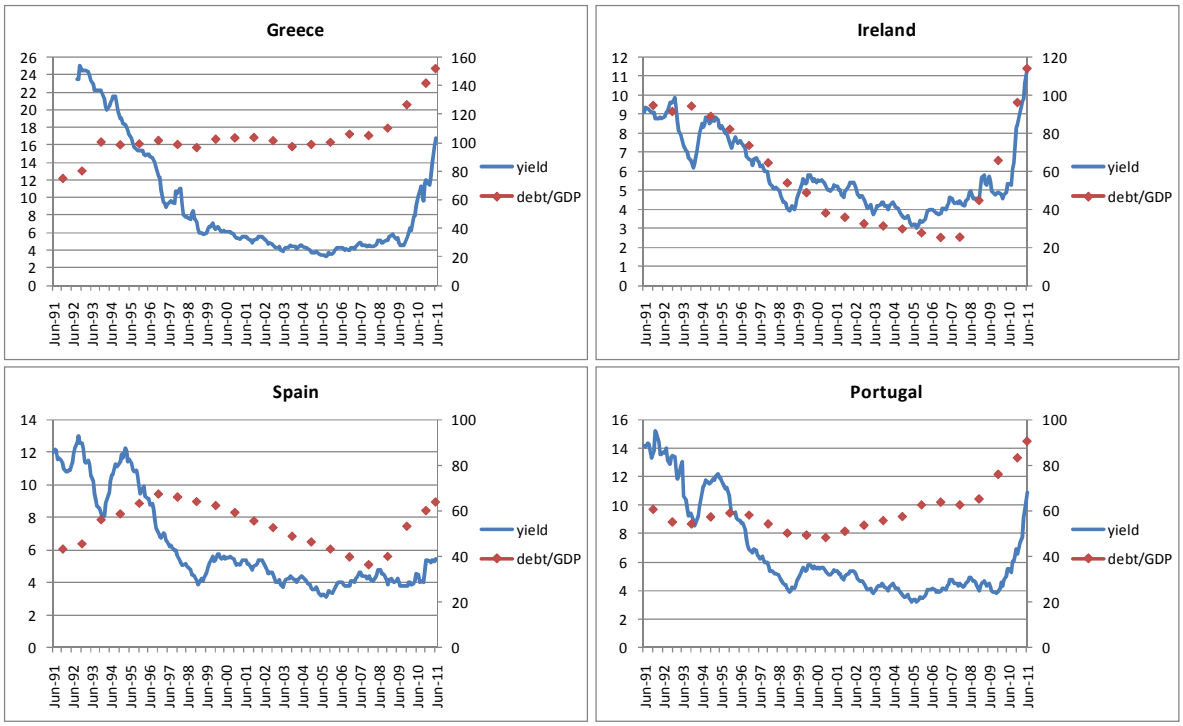
4. The global supply of securities: the impossibility of a uniform debt threshold.

History suggests that a 90% debt to GDP ratio is the point where debt intolerance sets in but, from a purely logical standpoint, the very idea of a single debt rule presupposes the idea of debt independence: one must assume that one government's debt threshold has no direct connection to that of any another government if one is to assert that there can be such a thing as a one size fits all debt threshold. However, this assumption of debt independence is only as safe as the assumption that investors only look upon government bonds as a form of debt and therefore only take into consideration the quantity relation between the flow of interest payments on the debt and the flow of domestic output that constitutes the source of these payments. The situation is very different if it turns out that investors also look upon government bonds as stores of value and therefore also take into account the quantity relation between one government's contribution to the world's supply of these stores of value and that of another government's. From this latter position the respective percentage sizes of government debt thresholds cannot be mutually independent but must, on the contrary, be mutually dependent in which case they can also be unequal. The conclusion is inescapable: if in any period of prolonged economic slowdown private corporations are unable to produce assets with a sufficient enough storage capacity to accommodate investor wealth, it follows that national governments must make up for this shortfall by increasing their bond supplies; but it further follows that if one set of governments are constrained for whatever reason from

contributing to bond supplies on the scale required by investors then the latter have no choice but to rely on another set of governments that can supply bonds on the required scale and, of course, the greater the reliance on these governments the more is their debt threshold pushed above that which is the average for other governments.

The simplest way of judging which of the opposing propositions of debt independence and debt interdependence has greater validity is to look at the behaviour of nominal government bond yields over the three year period from mid-2008, the point at which the subprime crisis mutated into a full blown banking and economic crisis, to mid-2011. Recall from Table 1 that that during this short period government debt to GDP ratios rose from an average of 50% to an average of close to 100%. Now if the idea of debt independence and the concomitant idea of a one size debt threshold are correct, we should expect to see government bond yields rise uniformly in line with the rise in the debt to GDP ratios as investors hold up to all heavily indebted governments without exception the threat of intolerance and exit. Such a development was indeed categorically predicted by those warning of the dire consequences of breaking the 90% debt threshold: any government, regardless of its economic size and credit history, will have to pay higher risk premiums on its bonds should its total stock of debt breach that threshold. As can be seen in Graphs 2 and 3 this prediction has turned out to be false. While there was a strong positive correlation between yields and debt to GDP ratios for certain governments, notably those whose economies are in the periphery of the euro zone, there was no similar correlation in the case of the G-7 governments: nominal yields on their bonds generally remained flat even while their debt levels also rose sharply.

Graph 2: Eurozone periphery: 10-year government bond yields and debt/GDP ratios



Source: IMF (2011c), IMF (2011d)

Graph 3: G7: 10-year government bond yields and debt/GDP ratios

Source: IMF (2011c), IMF (2011d)

Now it has been said that it is early days yet; that it is only a matter of time before the threat of debt intolerance and investor exit, first shown to the weaker, peripheral economy governments, begins to be shown to the stronger core economy governments. Such

statements, however, are in the end purely speculative and while they may be taken seriously by some, for others what is more serious and more a source of dismay is the fact that, contrary to all predictions that the markets would severely punish all heavily indebted governments without exception, the markets have not only been very selective in dealing out punishment but have also in some cases actually rewarded rising government indebtedness with lower risk premiums[3]. This mystery is partially resolved the moment one looks at the geographical composition of global government bond stocks. As already noted, nowhere in the current debate on public debt is this geographical composition taken into account, the presumption being that it has no bearing on the questions of debt intolerance and debt thresholds. On the contrary, it has every bearing on these questions. Table 4 shows that just two governments, those of the US and Japan, currently account for 55% of all government bonds outstanding, while the other five G-7 governments account for 20%, a figure that is higher than the 15% accounted for by the other 20 or so OECD member governments and the 10% accounted for by all other national governments. Thus at the very time that the financial crisis has dealt the world capitalist system its severest blow since the Great Depression, and thus when investors more than ever need government bonds to serve as safe haven stores of value, it transpires that only a handful of governments have the economic and institutional means of supplying bonds in the quantities needed to fulfil this safe haven function. Of course the nominal yields on these governments' bonds will remain flat, even as their debt to GDP ratios continue to rise, because investors simply have no where else to go. Confronted with shortfalls not only in the supplies of corporate securities but also in the supplies of small economy government bonds, they have no option but to channel sizeable proportions of their sizeable amounts of wealth into the bonds of core economy governments.

[3] There can no better example of this sense of dismay than that expressed by Martin Wolf in a recent article in the Financial Times (September 7th, 2011). Contrary to many economists' insistence that "the fiscal skies are falling" and that even major governments such as those of the US, UK and Germany should reduce their debt levels, the bond markets were on the contrary saying to these governments "borrow and spend, please". As Wolf went on to conclude from the observation that yields in the markets for US. UK and German governments remain low: "in a world of excess saving, the last thing we need is for creditworthy governments to slash their borrowings. Markets are loudly saying exactly this. So listen"

Table 4: G7 Government Debt Securities

	1994		*1998*		*2002*		*2006*		*2010*	
G7	**9,540**	**81%**	**10,877**	**79%**	**12,940**	**78%**	**19,016**	**75%**	**31,334**	**75%**
Canada	523	4%	513	4%	518	3%	708	3%	1,139	3%
France	481	4%	686	5%	785	5%	1,241	5%	1,763	4%
Germany	526	4%	658	5%	859	5%	1,479	6%	2,026	5%
Italy	1,101	9%	1,266	9%	1,209	7%	1,760	7%	2,187	5%
Japan	2,365	20%	2,839	20%	4,548	28%	6,751	27%	11,635	28%
United Kingdom	369	3%	476	3%	474	3%	841	3%	1,421	3%
United States	4,176	35%	4,438	32%	4,548	28%	6,236	25%	11,163	27%
World	**11,791**		**13,856**		**16,509**		**25,447**		**41,377**	

Source: BIS (2011)

The case of Italy is particularly interesting in this context. As a consequence of the financial crisis the Italian government debt to GDP ratio rose to above 120%, in other words to a level on a par with that of Portugal, Ireland, Greece (but above that of Spain), which is why Italy, a member of the G7 group of countries is now also classified as a member of the pejoratively labelled PIIGS group of countries. Now if the claims surrounding debt intolerance and the 90% debt threshold do indeed have universally validity we should have expected to see the same steep rise in the nominal yield on Italian government bonds over the period from mid- 2008 to mid- 2011 as occurred in the nominal yields on the bonds of the other governments in the euro zone periphery for we should have expected investors to demand the same exorbitant risk premiums and threaten exit to back up that demand. This did not happen and part of the explanation why it did not lies in the sheer volume of Italian government bonds. As can be seen in Table 5, the three euro zone G7 governments account for the lions' share of all euro zone government bonds, with the Italian government's share being the largest of the three. Given the current size of the Italian government bond market, it follows that few other government bond markets will have the capacity to accommodate investors should they decide to exit the Italian market en masse. Outside of the euro zone only the US Treasury and Japanese government bond markets have this capacity but both of these markets are already heavily congested, the former due to the heavy pressure of demand from Asian governments and private corporations and the latter due to the huge internal demand for government bonds. Inside the euro zone only the German economy has the ability to support a government bond market on the scale required to absorb a heavy influx from Italy but far from further expanding their bond supplies the German government is bent on reducing them.

Table 5: G7 Euro countries government debt securities

	2002		*2006*		*2010*	
G7 Euro countries	**2,852**	**83%**	**4,480**	**77%**	**5,975**	**73%**
France	785	**23%**	1,241	**21%**	1,763	**21%**
Germany	859	**25%**	1,479	**25%**	2,026	**25%**
Italy	1,209	**35%**	1,760	**30%**	2,187	**27%**
Euro countries total	**3,445**		**5,842**		**8,209**	

Source: BIS (2011)

The German government's persistence with fiscal consolidation illustrates even more than does that of the British government's case why rigid adherence to the idea of a one size debt threshold can have seriously negative consequences. For years Germany's export-led economy has benefitted extremely well from euro zone membership but following the outbreak of the global financial crisis the smaller peripheral economies of the euro zone now more than ever need Germany to expand its domestic economy and import absorption. Given that the major impetus for this expansion cannot come from the corporate sector, which is at present busy deleveraging in the effort to restore balance sheets, or from the household sector given that much of it continues to experience wage restraint, it has to come from the public sector in the form of bond-financed fiscal expansion. However, this is something that the German government authorities are extremely reluctant to do because they see their bonds not as stores of value but only as forms of debt and because history has taught them to have a fear of government indebtedness bordering on paranoia. Throw into this powerful concoction the axiom that no government can allow its debt to GDP ratio rise above 90% and still keep intact its credit standing and reputation for sound finance and one can see why extreme reluctance turns into outright refusal.

5. Policy Implications

The major policy implication that falls out of the above analysis is that the US and other G-7 governments have to weigh up not two but three types of risk when deciding on the direction of fiscal policy. The first two are well known. On the one side, there is the risk that the continued rise in these governments' borrowing levels as they try to spend their way out of recession will only serve to undermine the stability of the global capitalist economy in the longer run. Those who give overriding priority to this risk argue that all of the G-7 governments should immediately revert to fiscal consolidation to bring down these borrowing levels. On the other side, there is the risk that the already fragile roots of post-crisis recovery

in the world economy will be crushed completely should the strongest of the G-7governments not continue with their borrowing and spending programmes. Those who give overriding priority to this risk argue that fiscal expansion should be continued and that worries about rising debt levels should be deferred for the time being. The position here is one that supports the latter argument and at the same time takes it a stage further: it supports it by adding to it the argument that the extra amounts of interest that most of the G-7 governments will have to pay on their debt will not be as great as is widely predicted because of the strength of demand for that debt; it takes a stage further by bringing into the picture the third type of risk, namely, that of a resurgent search for yield.

Recall that the search for yield was one of the chief driving forces behind the mass production of collateralised debt securities, the toxic securities that were at the epicentre of the financial crisis of 2007-8. On that occasion, the major global imbalance that helped to depress yields on all conventional debt instruments was that between the global demand for US debt securities and the total supplies of these securities. Following the financial crisis and consequent downturn in the supplies of corporate securities, that global imbalance threatens to become more generalised and therefore even more acute were the US and other G7 governments to stop increasing their bond supplies at the rate required by the world's investors. Nominal yields on core government bonds, which are already at historically low levels, could collapse to zero in the face of a growing imbalance between demand and supply. What this means is that, far from fearing the possible negative effects of debt intolerance were they to continue increasing their borrowing levels, the strongest of the G-7 governments should on the contrary fear the potentially more destructive effects of a resurgent search for yield phenomenon were they not to continue increasing their borrowing levels. The upshot is that these governments have a double duty in sticking with borrow and spend policies at this present time for this will not only help prevent the global capitalist economy from tipping over into a 1930' style depression but will also help boost the supplies of government bonds in the amounts needed by investors.

6. Conclusion

Nothing that has been said should be taken as justification for the current high levels of wealth concentration and the consequent need for G-7 governments to increase their bond supplies to enable investors to store their wealth. It is fully accepted that should the structural trends and macroeconomic policies that helped to cause that wealth concentration again

change in ways that lead to a more equitable distribution of wealth, there would be less pressure on governments to supply bonds for value storage purposes because, on the other side of the equation, investors would have less need for such stores of value. Rather, the point of the argument here is that, given the current parameters, the G-7 governments should not be afraid of allowing their debts to rise above levels that are considered normal in peacetime. The financial crisis that broke out in the US and other major capitalist economies in 2007-8 continues to exert a hugely negative effect on world economic growth for which reason it is imperative that the governments of these economies should continue with bond financed fiscal expansion. However, if they are to continue with this programme it is equally imperative that all of the debt related fears and anxieties surrounding it and that serve as so many impediments to it are dispelled. This paper has sought to contribute to this task.

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