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## **The Real National Debt: A Decade of Reckless Growth**

**By Mike Denham**

The unchecked growth of Britain's National Debt places an increasing burden on Britain's taxpayers and poses a serious risk to our future prosperity. According to a recent report from the Bank for International Settlements (BIS), on current policies by 2040 our public debt will exceed 500 per cent of GDP, higher than any other major economy they studied. Debt of that magnitude would be way beyond previous experience and would exact a heavy price, "driving down capital accumulation, productivity growth and long-term potential growth".<sup>2</sup>

But what if our real National Debt had already grown to the level projected by the BIS? What if the problem had already arrived, and was here with us today?

**This paper presents calculations of the UK's real national debt and for the first time charts its growth over the last decade.** The picture that emerges is highly troubling and underscores the urgency of current attempts at closing the deficit.

The real national debt extends far beyond the Government's formal measurements. It also includes substantial liabilities in relation to unfunded public sector pensions, unfunded state pensions, the Private Finance Initiative (PFI), Network Rail, nuclear decommissioning and a number of other items. Moreover, since 2007 there have been considerable additional liabilities arising from the bank bail-outs.

Drawing on a wide range of official sources and independent analyses we have calculated the real national debt for every year since 2000-01:

- At the end of 2009-10, the **real national debt** stood at **£7.9 trillion**, over **£300,000 for every single household in Britain.**

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<sup>2</sup> *The future of public debt: prospects and implications*, BIS Working Papers No 300, March 2010



- During the last decade **the debt has more than tripled**, soaring from 230 per cent of GDP (£2.3 trillion) up to **560 per cent of GDP** (£7.9 trillion). This already exceeds the BIS projection for 2050.
- The **official national debt** – the one quoted by the Chancellor in his budget – hugely **understates taxpayer liabilities**; it now constitutes barely **one-tenth of our real national debt**.
- Relative to GDP this is **by far the biggest national debt we have ever had** since records began.
- It should also be noted that our figures may be underestimates. In addition to the debts we have examined, the public sector has a wide range of possible contingent liabilities – estimated to be as high as £543 billion. We have not been able to include them because information on their extent is worryingly sketchy.

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## Summary

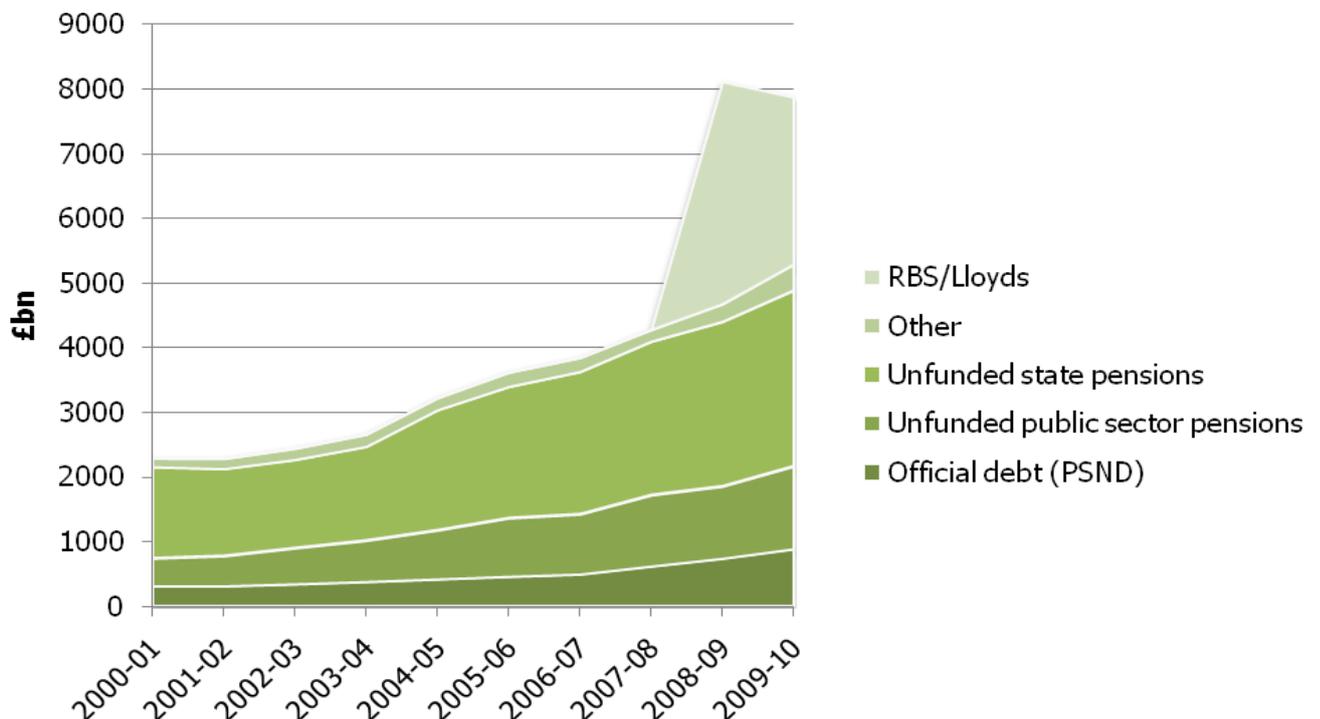
Our measure of the real national debt is gross debt (total debt) valued at market prices (the market value of the debt). It includes the following items (totals relate to 2009-10):

- The official public sector debt quoted in the budget – £890 billion (£0.89 trillion)
- Unfunded public sector pensions – estimated at £1,283 billion<sup>3</sup> (£1.28 trillion)
- Unfunded state pensions – estimated at £2,717 billion<sup>4</sup> (£2.7 trillion)
- RBS/Lloyds debt – £2,585 billion (£2.6 trillion)
- Other – including the Local Government Pension deficit, PF1, and nuclear decommissioning – £398 billion (£0.4 trillion)

At March 2010, we calculate the total debt stood at £7,873 billion. (£7.9 trillion)

As can be seen below, all components of the debt have grown hugely over the last decade, even setting aside the boost from the RBS/Lloyds bail-outs in 2008:

Chart 1: Growth of the Real National Debt



<sup>3</sup> Estimate provided by Neil Record – see below

<sup>4</sup> Estimate provided by Nick Silver – see below

Chart 1 shows that over the whole decade, our total debt soared by an astonishing £5,600 billion (£5.6 trillion) – nearly four times current GDP. But only £600 billion (£0.6 trillion) of that was accounted for by growth in the official national debt.

Of the rest, roughly half is attributable to the RBS and Lloyds bailouts. The bailouts moved both banks into the public sector, which meant that suddenly their liabilities became taxpayers' liabilities. At a stroke well over £3,000 billion (£3 trillion) was added to the national debt, although a reduction of the liabilities on the banks' balance sheets subsequently brought it down to £2,600 billion (£2.6 trillion) at December 2009.

But even if we set RBS and Lloyds aside as being in some sense a temporary and reversible liability, the published £600 billion (£0.6 trillion) growth in official debt comes nowhere near the true overall growth in the government's debts. In particular, it pales against the £2,200 billion (£2.2 trillion) hike in the public sector's unfunded pension liabilities.

Detailed figures on all the components of debt are set out in Table 3, at the end of the report. In summary, they are as follows:

Table 1: Composition of Real National Debt 2000-01 to 2009-10

£billion	2000-01	2005-06	2006-07	2007-08	2008-09	2009-10
Official national debt (PSND)	311	462	498	622	742	890
<i>Plus</i>						
Unfunded public sector pensions	434	907	931	1,104	1,119	1,283
Deficit on Local Government PS	6	32	27	42	53	53
Unfunded state pensions	1,411	2,028	2,199	2,370	2,542	2,717
RBS/Lloyds debt	0	0	0	0	3,439	2,585
PFI (capital only*)	10	24	28	35	35	38
Network Rail debt	0	18	18	20	22	23
Nuclear decommissioning	14	31	37	44	45	45
Other**	103	116	106	39	118	239
<b>Real National Debt</b>	<b>2,289</b>	<b>3,617</b>	<b>3,844</b>	<b>4,276</b>	<b>8,114</b>	<b>7,873</b>
<b>Real National Debt as % of GDP</b>	<b>231%</b>	<b>285%</b>	<b>286%</b>	<b>302%</b>	<b>566%</b>	<b>560%</b>

*\*PFI debt relates only to liability in respect of capital facility, excluding future service payments; it is net of financing leases already included in the official measure of debt. \*\*Other comprises adjustments to PSND to make it a measure of gross debt valued at market prices – see below.*

A debt build-up on this scale is without precedent in Britain. The previous peak was during the Napoleonic Wars, when the National Debt reached over 250 per cent of GDP. True, that was just the official debt, but at the time the government had very few unfunded pension liabilities on top – the official National Debt was pretty much identical to the real national debt.

More than a century later, the Second World War pushed our debt almost back to the same level relative to GDP, but again, pension liabilities were very much smaller than today.<sup>5</sup> A real national debt well in excess of five times GDP has taken us into entirely uncharted and dangerous waters.

In case it should be thought our estimates are an exaggeration, it should be noted that we have been deliberately cautious in some of our key assumptions. As already mentioned, we are not including a wide range of contingent liabilities. We also do not include taxpayers' full contractual liabilities under PFI, or other long-term commercial contracts (see below).

And importantly we do not include anything for the very real prospect that the Government will need to borrow increasing amounts just to fund the growth in future debt interest payments. One recent estimate incorporating the latter effect alongside the unfunded pension liabilities concluded that the UK's real Government debt already exceeded 500 per cent of GDP in 2004 – the highest of any country studied.<sup>6</sup>

Finally, we have included nothing to fund the escalating costs of healthcare and long-term care for our aging population. Yet many argue this is a huge implicit liability, a liability reinforced by the strong NHS spending commitments given by the coalition. We simply note that according to the most recent government projections, annual expenditure in that area is set to rise to 12.4% of GDP by 2050, an increase of more than one-third compared to current levels.<sup>7</sup>

The remainder of this note discusses the shortcomings in the current official measure of government debt, explains the basis of our more comprehensive measure, and describes how we have calculated our numbers.

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<sup>5</sup> For a further discussion of the National Debt through history, see this post on the TaxPayers' Alliance website - <http://www.taxpayersalliance.com/waste/2010/02/debt-trap---lessons-from-history.html>

<sup>6</sup> *Public Debt and Demography: An International Comparison Using Generational Accounting*, Hagist, Moog, Raffelhauschen, and Vatter, CESifo, 2009

<sup>7</sup> See for example *Pre-Budget Forecast, June 2010*, Office for Budget Responsibility

## The current official debt measure and its shortcomings

### What do we mean by the National Debt?

A standard definition of debt goes as follows:

*“A sum of money or other property owed by one person or organisation to another. Debt comes into being through the granting of credit or through raising loan capital.”<sup>8</sup>*

On that basis, the National Debt ought to be the total value of money or property owed by the government to those who have extended it credit or loans in the past. A simple enough definition but as we'll see it is not one that is currently followed in the official definition.

### Official definition

Britain's National Debt was defined historically as the gross liabilities of the National Loans Fund; mainly comprising HM Government's accumulated unredeemed issues of gilt-edged stock and treasury bills.

But that definition confined coverage to the debts of central Government and as the public sector grew larger during the last century, coverage had to be broadened to include the debts of local authorities and public corporations. Whether explicitly or implicitly, all of them were generally reckoned to be ultimately guaranteed by the government, and ought to be included. Moreover, the authorities wanted a definition of the debt that was consistent with the Public Sector Borrowing Requirement.

So today's main official measure comprises the consolidated debt of central Government, local authorities, and public corporations. And rather than being called the National Debt, it's called the Public Sector Net Debt (PSND).

At the end of March 2010, the PSND stood at £890 billion.<sup>9</sup>

### Limitations of the official definition

Although the PSND is the most widely quoted figure for UK government debt, and is presented as a key number in every budget, it is in fact a much narrower definition of

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<sup>8</sup> Penguin Dictionary of Economics

<sup>9</sup> Source: Public Sector Finances, May 2010, ONS

debt than the one we started with. It is also inconsistent with the debt accounting conventions used elsewhere in the national accounts.

First, it measures net debt (total debt minus assets) rather than gross (total debt), which not only reduces the total apparent liability (by £122 billion at end-March 2010)<sup>10</sup> but also puts it out of step with the conventional treatment of debt in both company and national accounts. Conventionally, debt is shown gross, with assets being shown separately on the other side of the balance sheet. Moreover, a net treatment is at odds with the government debt limit set out under the Maastricht Treaty, which is also defined in gross terms.

Second, it measures debt in nominal (i.e. at face value) terms, rather than revaluing it at the prevailing market prices as is normal practice in the national accounts. At the end of March 2010, more accurate market pricing would have increased the debt by another £124 billion.<sup>11</sup>

Thus, under normal national accounting conventions, public sector debt at the end of March 2010 totalled £1,136 billion rather than the £890 billion quoted in the public sector finance statistics and the budget.

But even that higher total is not what most of us would mean by the National Debt. And that's because it excludes several major liabilities owed to those who in one way or another have lent the government money.

### What's missing?

The major liabilities excluded from the official measure of debt are:

- **Public sector pensions:** Most public sector pension schemes are unfunded, and the members of those schemes have in effect lent the government money against the promise of a post-retirement pension.
- **State pensions:** Successive governments have promised to pay an inflation-linked state pension, and everyone working is made to contribute to it through National Insurance. As with public pensions the accrued liability, which is unfunded, is debt as we've defined it.
- **Private Finance Initiative:** The vast majority of PFI contracts are excluded, even though the contractors have in effect lent the government money to construct the capital facilities concerned.

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<sup>10</sup> Source: Financial Statistics, June 2010, ONS

<sup>11</sup> Source: Debt Management Office Quarterly Review, March 2010

- **Network Rail debt:** This is kept off the government's books only by means of a flimsy definitional fudge.
- **Public sector bank debt:** Post-bail out, RBS and Lloyds are both now public sector entities, yet their huge debts have still not been included in PSND.
- **Nuclear decommissioning:** The government has taken on the substantial costs of cleaning up Britain's nuclear sites, Although this is not quite debt in terms of our original definition – that is, there is no explicit lender on the other side – it is clearly a liability to future payments on account of services consumed in the past; we might think of it as a debt to those who were obliged to accept the nuclear sites being built on their doorstep.

In fairness to the Office for National Statistics (ONS), they have recently been re-examining the entire basis of their public sector debt statistics. Recent papers from them have identified all of the above items as possible contenders for inclusion in a broader measure of debt to be published alongside the narrow official definition.<sup>12</sup>

We welcome that development, and await the results with keen interest. Meanwhile, we have constructed our own broader debt measure, drawing both on official sources, and analyses already published by leading actuaries and others outside Government.

### Contingent liabilities

In addition to the definite liabilities listed above, the Government also has a wide range of contingent liabilities, such as financial guarantees.

For example, substantial guarantees were issued during the financial crisis, most of which are still on the table. According to the ONS, by the end of 2009, the government had taken on contingent liabilities in support of the banks totalling £543 billion.<sup>13</sup>

Obviously such guarantees are not straightforward debt because they are contingent on adverse events that may not happen. But neither should they be ignored. The collapse of Metronet cost the taxpayer up to £0.4 billion<sup>14</sup> precisely because the public sector had guaranteed the company's debts – even though it was supposedly in the private sector.

Such guarantees can also come back to bite years after they're issued. For example, during the privatisation programmes of the 1980s and 1990s, Crown Guarantees were issued covering the accrued pension liabilities of some of the privatised companies, such

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<sup>12</sup> See for example *Wider Measures of Public Sector Debt*, Dave Hobbs, ONS, 2010

<sup>13</sup> *Wider Measures of Public Sector Debt* (Table 11), Dave Hobbs, ONS, 2010

<sup>14</sup> *Private Finance Projects and Off-Balance Sheet Debt*, House of Lords Select Committee on Economic Affairs, 2010



as BT. The guarantee was to be called only if the pension fund concerned both had insufficient assets to cover its own liabilities, and its sponsoring company was unable to make up the shortfall.

It might have been hoped by now that such guarantees would have been lost in the mists of time, investment volatility, and actuarial smoothing. But with these funds now in substantial deficit, and their sponsoring companies also under pressure, trustees are quite understandably pursuing a government pay-out, including action through the courts.<sup>15</sup>

The problem we have in assessing these contingent liabilities is that information is very sketchy. As noted above, the ONS provides a summary of the £543 billion liabilities taken on in connection with financial support operations. It also records a further £25 billion of financial guarantees (the bulk of which relates to Network Rail debt). But as the ONS itself acknowledges, that is an understatement. We simply don't know the full extent of such contingent liabilities because there is no published central record.

Going forward, government departments are now committed to publishing full details of their complete contingent liabilities. And there is also a project to publish Whole of Government Accounts (WGA), which should give us details of all significant risks and uncertainties consolidated across the whole of government.

However, in the meantime, we can do little, other than to note that such liabilities exist, they are large, and we urgently need to discover more. In this paper we have not included any contingent liabilities in our totals for the real national debt.

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<sup>15</sup> *Court looks at Crown Guarantee for BT*, FT, 11 July 2010

## Basis of our calculation

In any calculation of the national debt there are a number of conceptual and definitional issues that must be settled first.

### Government or public sector?

As described earlier, the traditional definition of the National Debt confined itself to the debts of central Government. But that is far too narrow today, given that taxpayers are also liable for substantial debts incurred by the broader public sector.

The current Organisation for Economic Cooperation and Development (OECD) and Maastricht definitions are broader. They include local and regional authority debt, basing published statistics on the combined consolidated debt of the so-called General Government sector. That is certainly a more meaningful total, but still fails to account for the debt of government owned companies, which at a time of wholesale bank nationalisations is a rather large omission.

We have based our calculations on the consolidated debt of the public sector as a whole, including central government, local authorities, and publicly owned companies. Importantly, we include the debt of all those banks now officially classified as being in the public sector (Northern Rock, Bradford and Bingley, Lloyds, and RBS).<sup>16</sup>

### Gross or net?

As explained earlier, the main official measure of the National Debt – the Public Sector Net Debt (PSND) – is calculated net of certain liquid assets. The idea is that such assets are both secure and readily realisable, so it's quite reasonable to net them off against the gross debt before declaring the published total.

We believe that is an unsatisfactory basis for the calculation.

To begin with, taxpayers are on the line for the Government's gross debt in its entirety. For sure, the Government has substantial assets, just as a bank has substantial assets. And those assets are in a broad sense backing for the liabilities. But just as with a bank, to understand the exposures properly we need to look at the gross liabilities against the gross assets. We always need to look at both sides of the balance sheet in their entirety.

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<sup>16</sup> Lloyds and RBS were reclassified by the ONS from the private to the public sector as from October 2008; see for example, *The public sector balance sheet*, Jim O'Donoghue, ONS, 2009

Secondly, the liquid assets the Government nets off the PSND are not nearly as secure as they would have us believe. For one thing, they include our foreign currency reserves, which by definition are denominated in foreign currency. And as any novice investor soon learns, assets denominated in foreign currency are much less secure and stable than those denominated in sterling – their sterling value can be extremely volatile.

Just as serious, these liquid assets are by no means always held in rock-solid blue chip investments. For example, they include local authority money market funds, some of which were famously placed with the busted Icelandic banks. The losses on such supposedly secure investments are still not finally known but could be the best part of £1 billion (and this is not the first time local authorities have lost money in supposedly safe bank deposits: 20 years ago several lost millions in Bank of Credit and Commerce International).<sup>17</sup>

We also need to remember that the UK Government is the very highest quality credit in the sterling debt market (both because it has tax raising power, and more fundamentally, because it owns the printing press for sterling). So netting off sterling assets invested with anyone else is always going to be an apples and oranges calculation: we are not comparing like with like.

In the case of our recently nationalised banks, it can be argued that their gross debt hugely overstates the real taxpayer liability. Because bank debt is backed by the asset side of their balance sheets, the real liability is almost certainly much less. Realistically, the liability is confined to possible losses the banks may, or may not, make on those assets, which previous debt analyses have pitched at between £70 billion and £130 billion.<sup>18</sup>

Clearly, there's some truth in that argument – it is highly unlikely that the entire asset side of the banks' balance sheets will turn out to be worthless. Or rather, if it does, we will be in an apocalyptic world in which the UK government will likely not be in a fit state to honour any of its debt obligations.

But again, with these banks in the public sector, taxpayers are on the hook for the entirety of their liabilities. Yes, there are some assets on the other side, which provide some comfort. But we live in very uncertain times, and simple old fashioned prudence suggests we should recognise and acknowledge the full extent of our gross liability.

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<sup>17</sup> *Collapse of Icelandic banks has put town halls £830m in red*, Daily Mail, 7 January 2010

<sup>18</sup> In his 2009 CPS paper *The hidden debt bombshell*, Brooks Newmark quotes the IMF estimate of £130bn losses. More recently, Nick Silver gives an overall estimate of £73bn in his 2010 IEA paper *A Bankruptcy Foretold 2010: Post-Financial-Crisis Update*



For our calculation of the real National Debt we focus on gross debt, with no netting. As a separate memo item we also show the public sector's liquid assets, including those estimated for the banks.

### Nominal or market values?

As already noted, the main official measure of PSND is calculated at nominal (i.e. at face value) values. That is, the debt is not revalued in line with prevailing market prices (it is not "marked to market").

That is contrary to normal national accounts practice and contrary to international accounting standards for companies. Debt that trades in liquid markets, such as the gilt market, has a clear and agreed current price, and it is generally accepted that fair valuation requires the use of that price in valuing both assets and liabilities.

Our calculation uses mark to market current pricing to value the public sector's traded debt.

### Explicit vs implicit debt

It is often said that Government debt is a spectrum, running from debt that is explicit and certain (such as gilts), through to debt that is implicit and uncertain (such as state pension liabilities).<sup>19</sup> The implication is that the official definition of debt is built on strong foundations, whereas anything beyond that is little more than speculation.

But simply because we may not be able to quantify a liability as precisely is no reason to ignore it. Moreover, the distinction between explicit and implicit liabilities may be more apparent than real. After all, there is a strong and reasonable expectation that the Government will not default on its long-standing commitment to pay state pensions, and on the other side, even British Governments have in the past defaulted on their explicit debts.<sup>20</sup> What we really need to see is the best estimate of all the Government's liabilities.

Our calculation includes the most important implicit debt, namely the accrued liability to pay state pensions.

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<sup>19</sup> See *Government financial liabilities beyond public sector net debt*, by Fenella Maitland-Smith, Economic and Labour Market Review, July 2009, ONS

<sup>20</sup> The most recent default by HM Government was the forced conversion of War Loan in 1932, cutting its coupon interest from 5% to 3.5%.



## Debt, contractual commitments, and PFI

Our original simple definition of debt tells us that debt comes into being through the granting of credit or the raising of loan capital. In other words, it is a backward looking concept, relating to money or services provided in the past.

But the public sector also has forward looking commitments, where it has entered into a contract to pay for services yet to be delivered. For example, it has several long-term contracts with suppliers of IT services.

Such contracts are not debt in the sense that no money is owed until the service has been supplied. And that won't happen until sometime in the future. But they clearly represent an enforceable future claim on taxpayers, which gives them an obvious debt-like characteristic.

The issue has particular significance for the treatment of PFI contracts.<sup>21</sup> The most recent Treasury figures list 666 such contracts, with future payments totalling £220 billion (undiscounted) out to 2048-49. That is a substantial commitment, and the question is whether those payments should be included in the calculation of the National Debt?

PFI charges are unitary – that is, the public sector customer makes one regular payment to the private sector supplier throughout the life of the contract. But conceptually the charges comprise two underlying elements. The first is the capital cost of providing the facility (the new school or hospital, etc) amortised over the term of the contract and including the cost of finance (debt interest etc). The second is a service payment for keeping the facility maintained and operating throughout the future term of the contract.

Given our definition of debt, the natural approach would be to count the capital cost of each project in with our debt figure, but exclude the service element. Unfortunately, there is no breakdown of those PFI unitary charges, so we can't straightforwardly do that – see below.

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<sup>21</sup> HM Treasury *Signed PFI projects* website.

## Calculation details

Our yearly estimates for each component of the debt are set out in Table 3 at the end of the report. Our figures relate to public sector consolidated gross debt valued at market prices. We have derived the figures as follows:

### Official debt

Data on official debt was sourced directly from the ONS.<sup>22</sup> We used the series *Public sector consolidated total debt: Nominal values (BKQA)*. This measures gross public sector debt, and we adjusted the data to market values using the market value adjustment given in the ONS statistical bulletin *Government deficit and debt under the Maastricht Treaty*<sup>23</sup> (the adjustment is only approximate, since it applies to consolidated general Government debt rather than the public sector as a whole).

### Public sector pensions

The Government publishes regular estimates of unfunded public sector pension liabilities. The most recent gives a figure of £770 billion for end-March 2008.<sup>24</sup>

Unfortunately, these official estimates are not suitable for current purposes because they seriously understate the true liability.

The main problem is their use of a discount rate that is too high. The appropriate discount rate for the government's index-linked liabilities (which public sector pensions are) is the current yield on index-linked gilts, which is the government's true cost of funding. However, for at least the last decade, the official estimates have been based on unrealistically high discount rates, which have the effect of artificially reducing the apparent liability.<sup>25</sup>

Instead we have used estimates provided by Neil Record, who has written definitively on these liabilities for the Institute of Economic Affairs (IEA).<sup>26</sup> His work highlights the Government's use of unrealistic discount rates, and shows how much the liability increases if actual market yields on index-linked gilts are used instead. For example, for March 2006,

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<sup>22</sup> Data is consistent with Financial Statistics, June 2010, ONS

<sup>23</sup> *Government deficit and debt under the Maastricht Treaty*, September 2009, ONS

<sup>24</sup> *Pension Trends*, 2010, ONS

<sup>25</sup> Historically the Treasury mandated its own assumed discount rate for use in the calculation; more recently, it has switched to using an AA corporate bond yield, which although mirroring pensions accounting practice in the private sector, is not the appropriate discount rate for government liabilities.

<sup>26</sup> See *Sir Humphrey's Legacy - Facing up to the Cost of Public Sector Pensions*, Neil Record, IEA Hobart Paper 156, September 2006. Also *Sir Humphrey's Legacy: An Update*, IEA, 2008.

he calculates that using market yields increases the estimated liability by over 40 per cent. He also adjusts the official liability figures for more realistic assumptions on earnings growth and mortality.

On this basis, Neil has kindly provided us with annual liability estimates going back to 2000-01. These are incorporated in our total debt calculation without further modification.

In addition, we have accounted for the deficits in the Local Government Pension Scheme. This is a funded scheme, but has been in deficit throughout the decade. It is fully revalued every three years, the last being for March 2007, when the deficit was £27billion. Since then individual local authorities have conducted interim valuations for 2008 and 2009, showing deficits of £42 billion and £53 billion respectively.<sup>27</sup>

We have assumed the 2009 deficit remained unchanged through to March 2010 (although many believe it has increased), and for earlier years we have based our estimates on the triennial revaluations in 2001 and 2004.

### State pensions

At one time the government published annual estimates of accrued state pension liabilities, but these stopped in 2003. Since then there has been just one further estimate from the Government Actuary's Department (GAD), for March 2005.<sup>28</sup>

Unfortunately – just as with the public sector pensions estimates – all of these official<sup>29</sup> estimates are based on unrealistically high discount rates, which produce an understatement of the true liability. So, mirroring the public sector pensions calculation, we have adjusted them. Whereas the official estimate assumes a discount rate of 3.5 per cent for all years, we have used the actual average market yield on index-linked gilts, which was substantially lower throughout the period. For example, in 2005, the index-linked yield was just 1 per cent, and we have adjusted the GAD liability estimate upwards by over 40 per cent.<sup>30</sup>

For the years after 2005, there are no official estimates at all. However, we are able to draw on the work of Nick Silver, a consulting actuary, who has produced two landmark

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<sup>27</sup> See Council *Pensions: the £53bn black hole*, TPA Research Note 61

<sup>28</sup> For further detail see *Wider Measures of Public Sector Debt*, Dave Hobbs, ONS, 2010

<sup>29</sup> Bizarrely, the Treasury do not accept the 2005 GAD figure as an official number – even though it was produced by the relevant government agency. That may be because it showed a substantial increase in the estimated liability from the published 2003 figure.

<sup>30</sup> In the absence of a published official estimate, we have assumed state pension liabilities have an average duration of 18 years (roughly the same as the estimated duration of public pension liabilities – see Neil Record's IEA papers referenced earlier). In reality, it could be higher than that, which would result in an even bigger adjustment to the official liability estimates.

papers on state pension liabilities for the IEA.<sup>31</sup> His calculations cover liabilities under the basic state pension, the State Earnings Related Pension Scheme (SERPS), and the State Second Pension (S2P). Unlike the earlier government estimates, he has correctly used actual market yields on index-linked gilts as the discount rate. He has produced two point estimates for the accrued liability: £2,191 billion in September 2008; and £2,717 billion in April 2010.

Our composite series relates to estimated positions at the end of each fiscal year. For years where we have no bottom-up liability estimates at all we have used simple interpolation from the years for which we do have estimates.

### Private Finance Initiative

As things stand, the ONS only includes PFI contracts in their measure of public sector debt if they are deemed to be so-called finance lease liabilities (i.e. if they are deemed to be primarily a means of financing the acquisition of a capital asset whose ownership risks reside with the public sector rather than the private sector operator). That only applies to a very small number of PFI contracts, with the public sector's total finance lease liabilities put at just £5.2 billion at the end of 2009.<sup>32</sup>

In contrast, the Treasury's estimated capital value of the various facilities built or being built under PFI contracts now stands at £56.5 billion. And if those facilities had been built under the traditional approach, directly funded by Government borrowing, all of that would appear in the official measure of Government debt. Moreover, because PFI projects are funded by privately raised money, which is always more expensive than gilt funding, it is likely that the overall cost is actually somewhat higher than implied by the £56.5 billion estimated value of the facilities themselves.

Ideally, we wish our real debt figure to include the liability in respect of the capital facility, but to exclude the liability in respect of future services. Unfortunately, PFI contracts are paid for via a unitary charge – that is, a charge that doesn't distinguish between the cost of the capital facility and the cost of future related services. So we can't properly identify the element of our PFI liability that is real debt in the sense we have defined it.

That is why for our main estimate we include just the liability in respect of the capital value of the facilities. It will understate the true liability because it excludes the cost of

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<sup>31</sup> *A Bankruptcy Foretold: The UK's Implicit Pension Debt*, Silver, IEA, 2008. Also *A Bankruptcy Foretold 2010:*

*Post-Financial-Crisis Update*, Silver, IEA, 2010

<sup>32</sup> *Wider Measures of Public Sector Debt*, Dave Hobbs, ONS, 2010

finance, but it's the closest we can get. For reference we have also calculated the capitalised value of the unitary payments (see Table 3 at the end of the report).

Our data on PFI capital values and future payments is sourced from HM Treasury.<sup>33</sup> For each year we have identified the capital values and future payments associated with projects that had reached financial close by that year-end. Future payments for each of those projects have been discounted using the average market yield on long maturity index-linked gilts for the relevant year.<sup>34</sup> The outstanding liability in respect of capital facilities has been calculated to reflect the proportion of each project's total service payments already made in previous years.

The results are as follows:

Table 2: PFI Liabilities

£billion	Liability in respect of capital facilities	Total liability including service element
2000-01	12.4	69.2
2001-02	13.9	72.8
2002-03	16.9	85.7
2003-04	21.0	102.7
2004-05	23.2	117.0
2005-06	27.6	143.9
2006-07	32.7	156.4
2007-08	39.9	180.7
2008-09	40.2	193.1
2009-10	42.8	207.6

As can be seen, in 2009-10, the total liability in respect of the unitary payments amounted to some £200 billion – five times the liability in respect of the capital facilities. And that total has tripled over the last decade. So although we do not include those higher numbers in our debt total, PFI has nevertheless imposed a substantial contractual commitment on future taxpayers.

Finally, as already mentioned, a small element of the PFI liability is already included in the official figures for public sector debt. To avoid double counting we have excluded that element from our overall PFI total included in the real national debt.

<sup>33</sup> HM Treasury *Signed PFI projects* website. It should be noted that the Treasury list contains a number of anomalies, including projects that are listed with their capital values but have no service payments shown. We have cleaned these anomalies as best we can given the published information.

<sup>34</sup> Source – *Financial Statistics*, various, ONS.

## Network Rail debt

To all intents and purposes, Network Rail is a nationalised company. Its debts are fully guaranteed by the Government. However, because of a tenuous definitional fudge its debts have been kept off the government's balance sheet.

We include the debts in totality, drawing the information from the ONS<sup>35</sup> and the most recent Network Rail annual report.

## Nuclear decommissioning

The future cost of nuclear decommissioning is highly uncertain, and that uncertainty is reflected in some sharp increases in the official estimates from the Nuclear Decommissioning Authority (NDA) over time. Nevertheless, they are the best estimates available so we have taken them in their entirety.<sup>36</sup>

For the years prior to 2004-05 – the first year covered by the NDA estimates – we have simply scaled the 2004-05 figure relative to nominal GDP.

The NDA calculation employs a fixed discount rate of 2.2 per cent, and in principle we ought to adjust their results onto a current market rate basis. However, 2.2 per cent is much closer to market rates than those used by government in their calculation of pension liabilities, and given that the figures are so uncertain anyway, we have not made any further adjustment. That means our figures probably understate the liability somewhat.

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<sup>35</sup> *Wider Measures of Public Sector Debt*, Dave Hobbs, ONS, 2010

<sup>36</sup> Figures transcribed from *Wider Measures of Public Sector Debt*, Dave Hobbs, ONS, 2010

Table 3: The Real National Debt in Detail

£billion	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
1. Official National Debt (PSND)	311	314	346	382	422	462	498	622	742	890
2. Public sector consolidated gross debt (nominal)	382	380	409	447	486	537	579	617	798	1,005
3. Market value adjustment	32	20	34	27	25	41	25	44	62	124
4. Public sector consolidated gross debt (market value = 2+3)	414	400	444	474	511	578	604	661	860	1,129
5. Unfunded public sector pensions	434	467	557	639	758	907	931	1,104	1,119	1,283
6. Local Government Pension Scheme deficit	6	42	42	42	37	32	27	42	53	53
6. Unfunded state pensions	1,411	1,345	1,365	1,451	1,856	2,028	2,199	2,370	2,542	2,717
7. RBS/Lloyds debt	0	0	0	0	0	0	0	0	3,439	2,585
8. PFI (capital net of finance leases)	10	11	14	18	20	24	28	35	35	38
9. Network Rail debt	0	0	0	13	16	18	18	20	22	23
10. Nuclear decommissioning	14	18	21	23	24	31	37	44	45	45
<b>Real National Debt (= 4+5+6+7+8+9+10)</b>	<b>2,289</b>	<b>2,283</b>	<b>2,442</b>	<b>2,659</b>	<b>3,222</b>	<b>3,617</b>	<b>3,844</b>	<b>4,276</b>	<b>8,114</b>	<b>7,873</b>
<b>Real National Debt as % of GDP</b>	<b>231%</b>	<b>221%</b>	<b>224%</b>	<b>230%</b>	<b>265%</b>	<b>285%</b>	<b>286%</b>	<b>302%</b>	<b>566%</b>	<b>560%</b>
<b>Public sector liquid assets</b>	<b>70</b>	<b>65</b>	<b>62</b>	<b>64</b>	<b>62</b>	<b>73</b>	<b>79</b>	<b>88</b>	<b>124</b>	<b>213</b>
<b>O/W RBS/Lloyds</b>	<b>0</b>	<b>20</b>	<b>91</b>							