Office for
Budget
Responsibility

Fiscal sustainability analytical paper: Public sector balance sheet

July 2016

1 Introduction and context

1.1 Each year since 2011, the Office for Budget Responsibility (OBR) has published a *Fiscal sustainability report (FSR)*, in which we consider the fiscal consequences of *past* government activity, as reflected in the assets and liabilities on the public sector's balance sheet, and the consequences of *future* government activity, through the use of long-term demographically driven projections beyond our latest medium-term forecast horizon.

1.2 Due to the uncertainty that has followed the result of the 23 June referendum on the UK's membership of the European Union, we have decided to cancel the *FSR* that we had planned to publish on 12 July. The long-term projections would have been based on our pre-referendum March 2016 medium-term forecast and on assumptions about the future path of migration flows and productivity growth that would be affected by the Government's preferred choice of trade regime outside the EU. So it is likely that some of the conclusions would not be informative at the present time. But, notwithstanding the referendum result, we remain committed to transparency in pursuing our statutory duty to examine and report on the sustainability of the public finances, so where possible we are publishing elements of the analytical work that would have featured in July's *FSR* as 'fiscal sustainability analytical papers'. This work will also help inform our first *Fiscal risks report*, which we plan to publish next year.

1.3 In this analytical paper, we present:

- balance sheet measures based on the **National Accounts** framework, including public sector net debt and the broader public sector net worth;
- balance sheet and other measures presented in the **Whole of Government Accounts**, which consolidate the private-sector-style accounts of over 6,000 public sector entities;[1] and
- some **conclusions** that can be drawn from these balance sheet measures.

1.4 In producing this paper we have drawn on the help and expertise of officials across Government, to whom we are most grateful. In particular, we would like to note contributions from HM Treasury, HM Revenue and Customs, the Department for Business, Innovation and Skills, the Department of Energy and Climate Change, the Pension Protection Fund and the Office for National Statistics. The analysis, views and conclusions in this report represent the collective view of the three independent members of the OBR's Budget Responsibility Committee.

[1] HM Treasury (2016), *Whole of Government Accounts, year ended 31 March 2015*. We provided a detailed discussion of the information available in the WGA in our 2011 *FSR*.

1.5 The National Accounts outturn data used in this report are consistent with the *2015 National Balance Sheet* statistical bulletin and the *Public Sector Finances May 2016* statistical bulletin (released in June). The Whole of Government Accounts data used in this report are consistent with the *Whole of Government Accounts, year ended 31 March 2015*, and underlying departmental accounts.

2 Balance sheet measures in the National Accounts

2.1 In this section we consider two balance sheet measures that are based on the National Accounts framework. These two measures are public sector net debt (PSND) and public sector net worth (PSNW). As shown in Figures 2.1 and 2.2, both measures capture an entirely backward-looking subset of the government's activities.

Figure 2.1: Coverage of public sector net debt

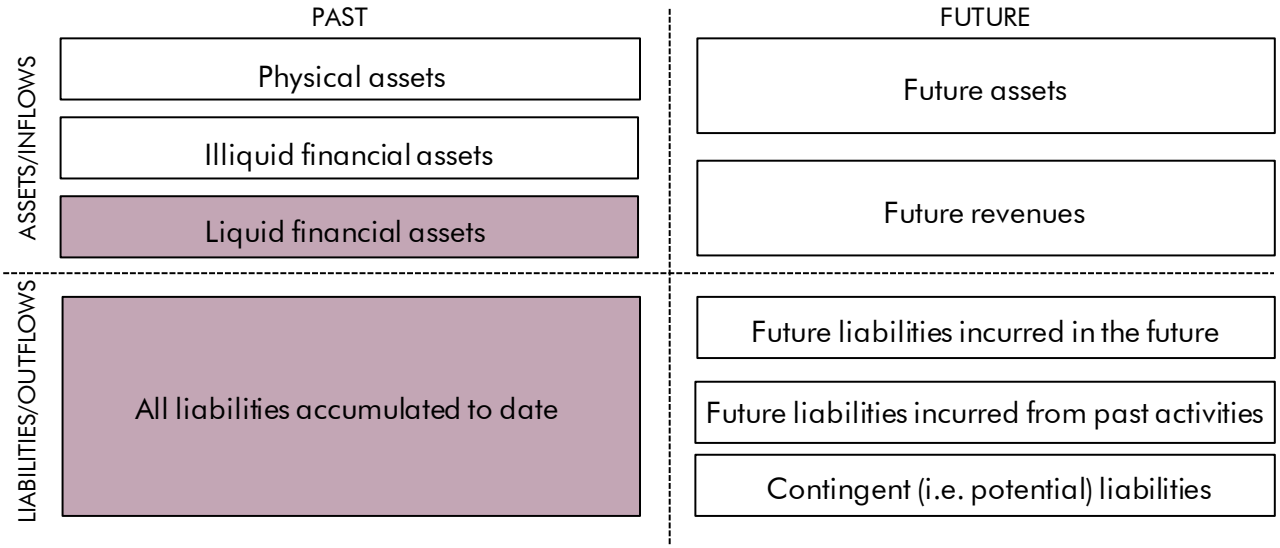
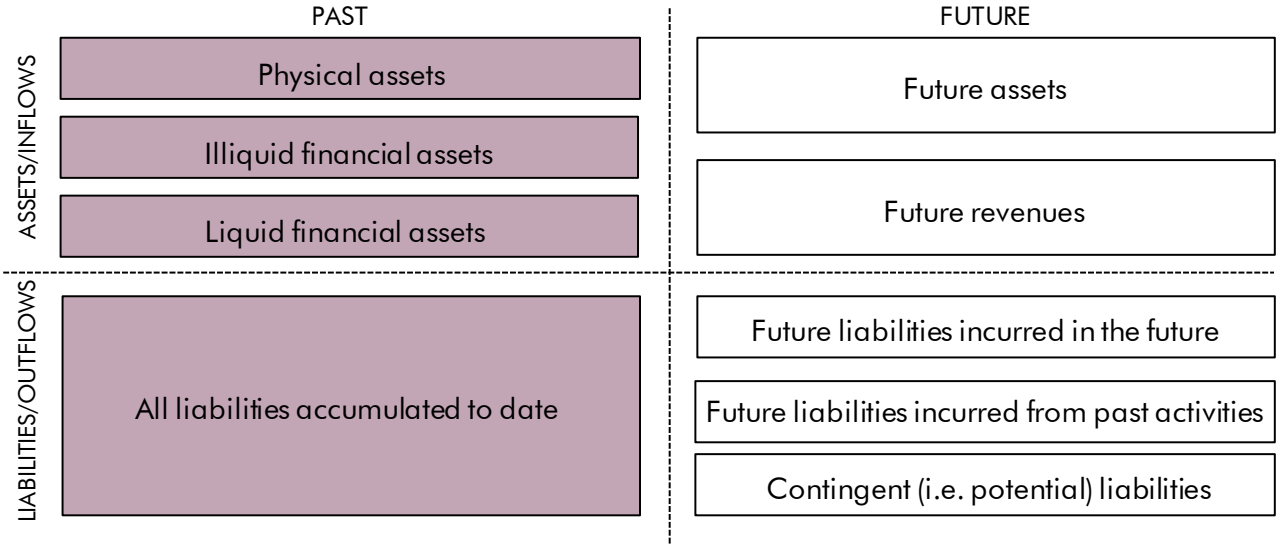


Figure 2.2: Coverage of public sector net worth



Public sector net debt

2.2 PSND is defined as the public sector's consolidated gross debt, less its 'liquid' assets – that is, those that could readily be sold.[1] Since 1997, successive governments have set debt targets that focus on PSND. The precise measure that the current Government uses for its supplementary target is PSND excluding those banks that are classified as part of the public sector. In effect, this includes the cost to government of purchasing equity stakes in the public sector banks, but not the liabilities associated with funding those banks' assets (e.g. mortgages and other loans).

2.3 The level of PSND changes each year by approximately the amount of public sector net borrowing (PSNB – the gap between spending and receipts), plus changes in public sector financial transactions (such as student loans and other government lending), less changes in liquid assets (such as foreign exchange reserves). PSND also includes an estimate of the additional debt that the government would have had to issue if it had purchased the buildings and other assets that the public sector uses through Private Finance Initiative (PFI) deals, but only for those assets that are classified as 'on balance sheet' in the National Accounts. The measurement of PFI deals within the various balance sheet measures is discussed later in the paper.

2.4 Prior to the late 2000s financial crisis and recession, PSND remained below 40 per cent of GDP, consistent with the then Government's 'sustainable investment rule'. PSND as a share of GDP has more than doubled since 2007-08. At the end of 2015-16, it stood at £1,598 billion, equivalent to 83.7 per cent of GDP or £59,195 per household.[2] Table 2.1 shows that the level of PSND in 2015-16 is higher than we expected at the time of last year's *FSR*. In large part that reflects the reclassification of housing associations from the private to the public sector, which added around £64 billion to the measured level of PSND in 2015-16.[3]

2.5 Our March 2016 forecast (and provisional ONS outturns) indicates that PSND increased slightly as a share of GDP in 2015-16, in contrast to the small fall expected at the time of our March 2015 forecast. As Table 2.1 shows, the difference is explained by the profile of nominal GDP growth – the denominator in the calculation – where revisions and new information between those forecasts reduced the debt-to-GDP ratio in 2014-15 by 0.7 per cent of GDP but pushed it up by 0.5 per cent of GDP in 2015-16. This was explained in more detail in Box 4.1 of our March 2016 *Economic and fiscal outlook (EFO)*.

[1] More details on how PSND is measured are available in O'Donoghue, Economic and Labour market Review Vol 3, No 7, July 2009, *The public sector balance sheet*.
[2] Based on 27.0 million UK households in 2015, from ONS, *Statistical Bulletin: Families and households 2015*.
[3] For more detail see ONS *Classification announcement: "Private registered providers" of social housing in England*, 30 October 2015.

Table 2.1: Changes in PSND between March 2015 *EFO* and March 2016 *EFO*

	Per cent of GDP	
	Outturn	Forecast
	2014-15	2015-16
PSND in March 2015 *EFO*	80.4	80.2
PSND in March 2016 *EFO*	83.3	83.7
Change	**2.9**	**3.5**
of which:		
Change in nominal GDP[1]	-0.7	0.5
Change in cash level of net debt	3.6	3.0
	£ billion	
Change in cash level of net debt	67	58
of which:		
Housing associations reclassification	59	64
Pre-measures borrowing	0	-5
Policy effects on borrowing	0	-3
Asset sales	0	-1
Asset purchase facility effects	0	2
Gilt premia	1	0
Other changes to net debt	7	1

[1] Non-seasonally adjusted GDP centred end-March. Outturn and forecast consistent with our March *EFO* forecast.

Public sector net worth

2.6 Public sector net worth (PSNW) is a wider balance sheet measure, comprising the public sector's financial liabilities net of all assets.[4] These include financial assets, such as shares and other equities, long-term loans, medium- and long-term bonds, and non-financial assets, such as the road network. The ONS has suspended its publication of PSNW because it has taken on new capital stocks data, but needs to undertake further quality assurance before being able to split the data to distinguish between public and private corporations. In the following discussion, we therefore consider general government net worth (GGNW), a narrower measure that excludes public corporations.

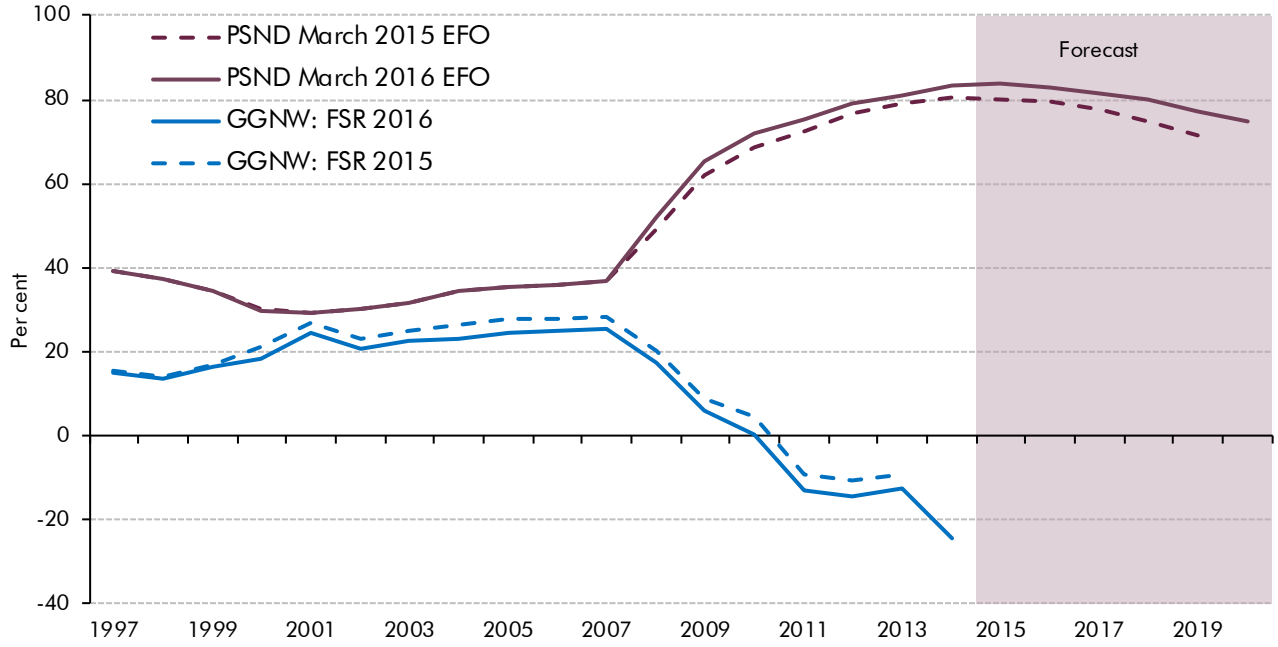
2.7 Chart 2.1 compares PSND with GGNW. Although there has been greater divergence in recent years, movements in net debt and net worth have broadly mirrored each other. This is because PSND is a measure of net liabilities whereas PSNW is a measure of net assets. Moreover, the value of the government's non-financial assets – the main difference between the two measures – tends to follow a relatively stable trend over time as it comprises large stocks of assets that depreciate slowly and are added to each year via government investment. Net worth has deteriorated since 2009 because most additional borrowing since then has been used to fund current rather than capital spending.

2.8 Recent outturns for GGNW have been revised down by around 4 per cent of GDP since our last *FSR*, largely reflecting classification changes. The latest numbers incorporate Network

[4] PSNW is derived from National Accounts estimates of general government and public corporations' assets and liabilities, which are published in the Blue Book each year. The composition of PSNW is set out in Hobbs D. (ONS, 2010), *Wider measures of public sector debt – A broader approach to the public sector balance sheet.*

Rail in central government (previously in the private sector), further changes related to the inclusion of Bradford & Bingley and Northern Rock Asset Management into central government and a change relating to multilateral development banks (some concessionary loans are now treated as capital transfers rather than equity injections, so that a financial asset is no longer scored on the balance sheet when a concessionary loan is made). These changes were already included in PSND. The reclassification of housing associations that has increased PSND has not yet been incorporated into the net worth data. It would not affect GGNW because housing associations have been reclassified as public corporations.

Chart 2.1: Recent levels and forecasts of PSND and GGNW



Source: OBR

2.9 PSND increased by just over 2 per cent of GDP in both 2013-14 and 2014-15, while in contrast GGNW improved from -14.5 per cent of GDP at end-2012 to -12.5 per cent at end-2013 but then deteriorated to -24.4 per cent by end-2014. The contrasting paths reflect a difference in how financial liabilities are measured – in PSND they are measured at nominal (redemption) value, whereas in GGNW they are measured at market value. This means that movements in bond prices change net worth. In 2014, bond yields fell (e.g. from 3.2 to 1.8 per cent for a 10-year gilt) and consequently bond prices rose. As a result, while financial liabilities rose by £110 billion as measured for net debt in 2014, they increased by £277 billion as measured for net worth. Given the fact that market and nominal bond prices will converge at the point of redemption, and that the Government will need to refinance its financial liabilities on redemption, in normal circumstances it should care more about the nominal values. In this narrow respect, PSND is a more relevant measure of the public sector financial liability than net worth.

2.10 One feature of our recent forecasts for PSND has been the role played by actual and planned financial asset sales. These reduce PSND, but would generally not affect net worth because asset sales will reduce both sides of the balance sheet.

2.11 Our analysis of the National Accounts measures of the public sector balance sheet has shown positive net debt and negative net worth. But when interpreting these figures, it is important to remember that they provide a snapshot of the fiscal consequences of the government's past activity at any point in time. As such, their usefulness as an indicator of long-term fiscal sustainability is limited by their backward-looking nature. They exclude the future cost of known expenditure commitments and, crucially, the present value of future revenues. The greatest financial asset of any government is its ability to levy future taxes.

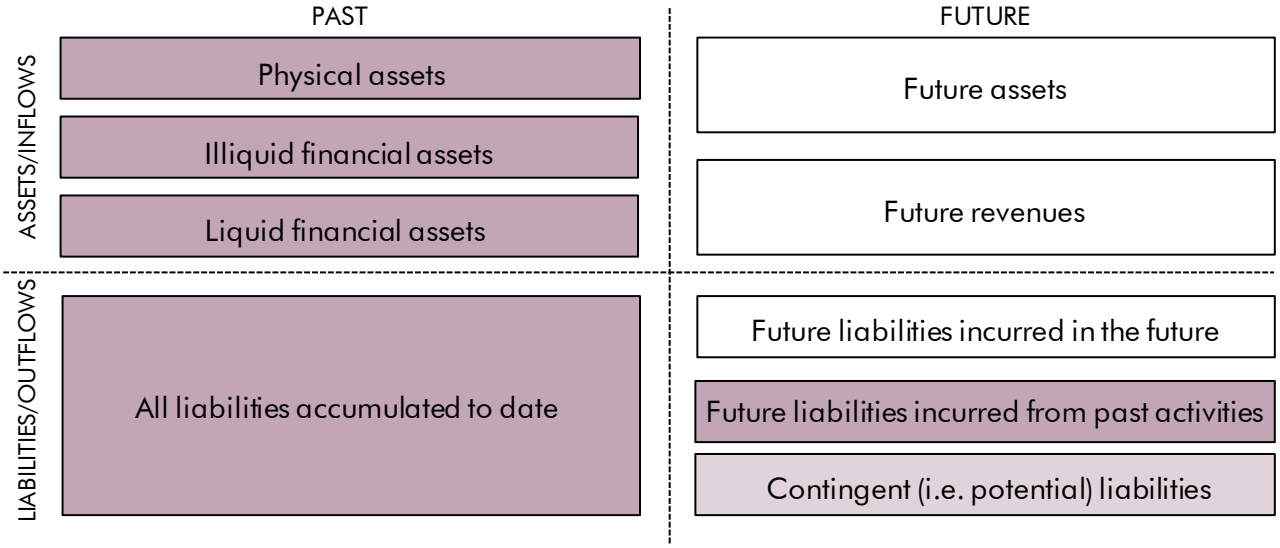
3 Balance sheet measures in WGA

3.1 The Whole of Government Accounts (WGA) are a set of financial statements for the whole of the public sector, produced by the Treasury under international commercial accounting standards, as adapted and interpreted for the public sector. The Treasury has now published WGA for the six years from 2009-10 to 2014-15. The construction of the WGA was described in detail in our 2011 *FSR*, and in the Treasury's WGA publications.[1]

3.2 This section discusses the key results from the 2014-15 WGA, looks at what has changed since last year's WGA and considers the main measurement differences between the WGA and the National Accounts.

3.3 The WGA paint a broader picture of the public sector balance sheet than the National Accounts (as shown in Figure 3.3). The WGA provide some additional information on future liabilities, for example on future public service pension payments and payments to PFI providers, but only where these future liabilities have been built up as a result of past activities. The WGA also include estimates of provisions and contingent liabilities, which are future costs that could be incurred as a result of past activities, but where there is uncertainty whether the costs will happen or not. Provisions cover future costs that are probable, while contingent liabilities reflect those that are possible but not probable. They both provide useful information on potential sources of risk to the public finances and will be factored into our new *Fiscal risks report*, which will be published for the first time next year. A discussion paper later this year will set out our initial plans for that report.

Figure 3.1: Coverage of the WGA measure of net liabilities



[1] HM Treasury (2016), *Whole of Government Accounts, year ended 31 March 2015*.

Changes to the basis of the 2014-15 WGA

3.4 Each year the basis of the WGA changes to reflect revisions to accounting policies and reclassifications that move bodies inside or outside the WGA public sector boundary. Where these changes are significant, the WGA balance sheet figures for the previous year are restated so that the two sets of results can be compared on a like-for-like accounting basis. But prior years are not normally restated, which means that the six years of WGA now available do not provide a consistent time series.

3.5 The main changes to the basis of the 2014-15 WGA are that:

- the **public sector boundary has been expanded** to include Network Rail as part of central government, plus a number of public corporations, including the Pension Protection Fund (PPF – the effects of which are described in Box 3.1) and smaller organisations like the Navy, Army and Air Force Institutes (NAAFI);

- the **accounting treatment for previous Governments' sales of the 3G and 4G mobile phone licences has been changed** to treat the proceeds as rental income, with annual receipts spread over the life of the lease. (Previously all the proceeds were treated as income in the year that the licences were sold, which increased WGA income by £2.4 billion in 2012-13 for the 4G sale. The much larger proceeds from the 3G sale were received in 2000-01, before WGA were first prepared, but the changed treatment means that the 3G rental income now also affects the 2014-15 WGA.) This has increased liabilities in the restated 2013-14 WGA by £8.8 billion, reflecting the remaining rental income that is now recorded as due to be received in future years. (The full cash proceeds from the sale were received when the licences were sold, so any rental income yet to be recorded is treated as a form of borrowing – as though the Government had received an advance on that income); and

- the **assets of maintained schools have now been included**, where these were previously not recorded. This reflects improvements to the underlying local authorities' accounts, which have now been reflected in the WGA.

3.6 The WGA aims to use the National Accounts definition of the public sector boundary. The changes described above have brought the WGA more in line with the public sector boundary as defined in the National Accounts.[2] However, that boundary is a moving target, since the ONS has an ongoing programme to decide how bodies should be classified in the National Accounts, in accordance with international standards and guidance.[3] For example, in October 2015 the ONS reclassified most English housing associations from private to public corporations, and therefore within the public sector. That means that the WGA would

[2] The ONS announced in 2005 that the PPF was classified as part of the public sector, but has not yet included the PPF as part of the public sector in the Public Sector Finances statistical bulletin. The ONS announced in its December 2015 forward work plan for sector classification work that it would review the classification of the PPF again, in the light of the requirements under ESA10. Its June 2016 update to the work plan explains that Eurostat input is required before work can be completed.

[3] ONS classifications may change, for example, as a result of changes in international statistical guidance or changes to the operating environment of the entity. The ONS announces any changes each month in its *Public Sector Classification Guide*.

need to expand again to come in line with the latest ONS definitions. The new treatment of the 3G and 4G sale proceeds also matches the treatment in the National Accounts.

3.7 The WGA results for 2013-14 have been restated to include these plus some other smaller changes. The effect of these changes to the balance sheet and the WGA net deficit are summarised in Table 3.1. Typically, each WGA only restates the balance sheet for the previous year, but exceptionally in this year's WGA revenue and expenditure flows for 2013-14 have also been partially restated for Network Rail, the PPF and 3G and 4G.

3.8 The effect on the 2013-14 balance sheet of the expanded public sector boundary has been to increase total assets by £78 billion and total liabilities by £66 billion, thereby reducing net liabilities by £11 billion. Within this:

- the largest changes come from including **Network Rail**, which had £54 billion of assets at end-March 2014, largely offset by £40 billion of liabilities.[4] Network Rail's assets mainly consist of the property, plant and equipment that form the railway network. Its main liabilities are past borrowing under its bond issuance programme; and

- including **the PPF** reduced WGA net liabilities by £2.4 billion at end-March 2014 as the value of the PPF's assets exceeded its liabilities. As described in Box 3.1, the PPF's assets include investments accumulated from a levy imposed on eligible schemes, and returns on invested assets. Its liabilities mainly reflect existing commitments to fund future compensation payments to members of the pension schemes of employers that have failed. At end-March 2015, the PPF accounts showed that assets exceeded liabilities by £3.6 billion, up £1.2 billion on a year earlier.

Table 3.1: Changes to main aggregates in restated 2013-14 accounts

	£ billion						
	2013-14 in 2013-14 WGA	PPF	Network Rail	3G and 4G	Maintained schools' assets	Other restatement	2013-14 restated in 2014-15 WGA
Balance sheet levels at end March 2014[1]							
Liabilities	-3,189	-21	-43	-9		6	-3,256
Assets	1,337	23	54		3	-3	1,415
Net liabilities	**-1,852**	**2**	**11**	**-9**	**3**	**4**	**-1,841**
Flows during financial year							
Revenue	**-649**	**-1**	**-3**	**-1**	**-**	**-**	**-653**
Operating expenditure	**718**	**0**	**1**	**-**	**-**	**-**	**718**
Net financing cost and other gains and losses[2]	**79**	**-**	**1**	**-**	**-**	**-**	**80**
Net expenditure	**149**	**-1**	**-1**	**-1**	**-**	**-**	**146**

[1] Details of these restatements for 2013-14 are contained in Note 38 of the 2014-15 WGA.

[2] Other gains and losses includes the revaluation of financial assets and liabilities and net loss on disposal of assets.

[4] This figure for Network Rail liabilities is post-consolidation, that is, after removing liabilities that are contained within the public sector.

Box 3.1: The Pension Protection Fund

The Pension Protection Fund (PPF) was established under the Pensions Act 2004 to pay compensation to members of eligible defined benefit pension schemes when there is a qualifying insolvency event in relation to the employer and where there are insufficient assets in the pension scheme to cover PPF levels of compensation to the scheme's members. It imposes a largely risk-based levy on eligible schemes with the objective of having sufficient funds to pay compensation to members of schemes that have transferred to the PPF.

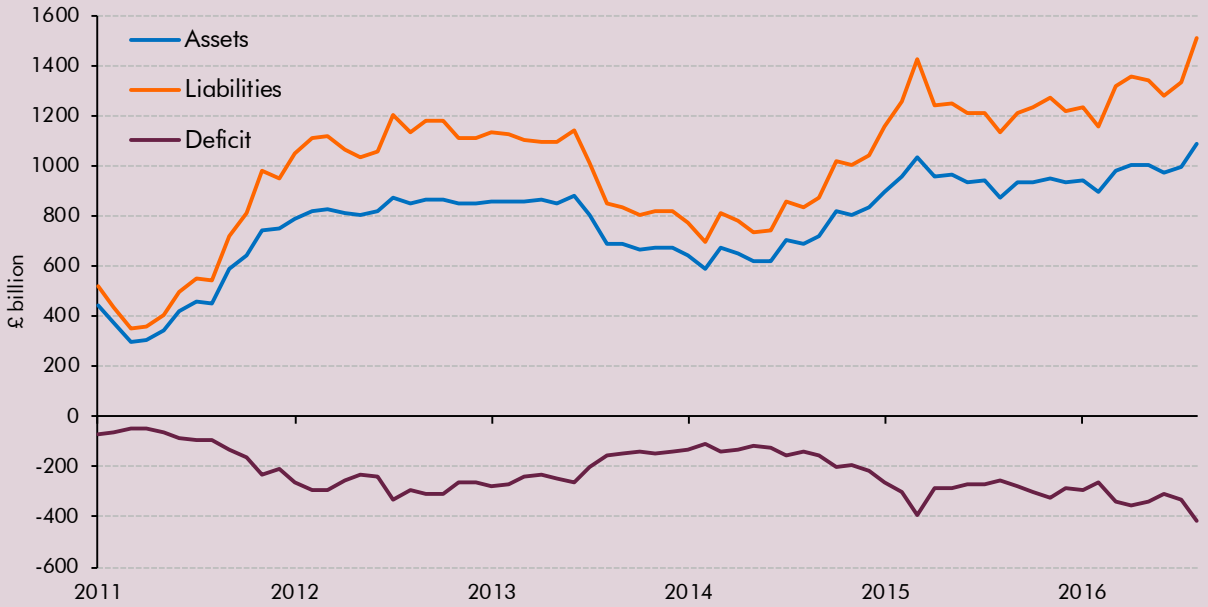
The ONS classifies the PPF as a public sector insurance provider in the National Accounts, although it has yet to implement that decision in the public finances data. This year, the PPF has for the first time been consolidated into the WGA. As of end-March 2015, the PPF had:

- £35.3 billion of **assets** on its balance sheet, of which £12.1 billion were UK government securities, which once consolidated into the WGA balance sheet reduce overall liabilities rather than adding to overall assets;
- £31.6 billion of **liabilities** on its balance sheet, of which £17.8 billion reflects the actuarial value of future compensation to members of schemes for which the PPF has already taken responsibility and £1.3 billion reflects total provisions for schemes that have already experienced an insolvency event and where eventual entry into the PPF is judged to be probable.[a] The remaining £12.5 billion of liabilities are mainly derivative financial instruments that are held as part of the PPF's management of its balance sheet; and
- £1.2 billion of **quantified contingent liabilities**, which the PPF's annual report splits into four categories. The largest – accounting for 86 per cent of the total – are in respect of eligible schemes that are in deficit and where an external assessment of insolvency risk places them in the highest risk band for the PPF levy. These contingent liabilities relate to around 200 firms out of the roughly 6,000 eligible schemes.

International accounting standards do not require contingent liabilities to be disclosed if they are 'remote'. Consistent with that, the PPF does not report any remote contingent liabilities relating to firms that do not meet its criteria for quantifying contingent liabilities. But it does publish monthly data on the funding positions of eligible schemes. As of end June 2016, it showed 4,995 schemes (84 per cent of the total) were in deficit. As Chart A shows, the total deficit of those schemes in deficit then was £416 billion, the highest on record. In large part that reflects lower interest rates increasing the discounted value of future pension liabilities.

In a broad economic sense, that aggregate deficit could be considered the maximum value of the public sector's contingent liability associated with having set up the PPF. Of course, the probability of all – or even a significant proportion of – such firms failing is extremely small. And more importantly from a fiscal sustainability perspective, the type of recession that would be necessary to prompt such widespread corporate failures would have much bigger consequences for the public finances than just crystallising a PPF liability for future compensation payments.

Chart A: Estimated funding position of defined benefit pension schemes in deficit



Note: includes periods covered by different actuarial assumptions.
Source: Pension Protection Fund, data underlying the July 2016 PPF 7800 update.

[a] The provisions for the PPF shown in the 2014-15 WGA include both the PPF's £17.8 billion actuarial liabilities for future pension and compensation payments and the PPF's £1.3 billion provisions.

Latest results from the 2014-15 WGA

3.9 Table 3.2 shows the latest aggregate results from the 2014-15 WGA, and how these compare with the restated results for 2013-14. Reconciliations between WGA and National Accounts measures are set out later in the chapter. Total net liabilities are estimated to be £2,103 billion at end-March 2015, an increase of £263 billion on the previous year (and much bigger than the £88 billion rise in PSND over the same period). The rise is more than explained by the £303 billion increase in gross liabilities.

3.10 The stocks of assets and liabilities in 2014-15 have been estimated using the latest WGA assumptions about market prices, discount rates and other estimates. The previous year's results are not restated for the changes in these assumptions. This makes it difficult to compare the balance sheet levels between each year's WGA results, particularly where the net present value of future liabilities is revised due to changes in discount rates, as happens most notably with the net public service pension liability.

3.11 Table 3.2 shows that the WGA measure of the net deficit – described as 'net expenditure' in the accounts – was £152 billion in 2014-15, an increase of £6 billion relative to 2013-14. This increase contrasts with the measure of the current deficit in the National Accounts, which fell by [£14 billion] over the same period.

3.12 In the WGA, some of the changes in balance sheet valuations are reflected in the revenue and expenditure account, so that the revaluations affect the WGA measure of the net deficit.

In previous years' WGA, the analyses have included a table that separated out the main effects of the impairments and revaluation costs within expenditure, with the remaining expenditure termed 'direct expenditure'. That analysis has not been presented this year.

Changes in WGA gross liabilities

3.13 Total WGA gross liabilities increased by £303 billion in 2014-15, reaching £3,558 billion at end-March 2015. Table 3.2 shows that three factors explain the majority of the rise:

- a £190 billion rise in the estimated **net public service pension liability**. This mainly reflects downward revisions to the discount rate and changes in other assumptions used to calculate the net present value of the future pension payments;

- a £78 billion increase in **government borrowing and financing**. This comprises net issuance of debt by central government, net of changes in the value of gilts held within the public sector, for example by the Bank of England Asset Purchase Facility Fund (BEAPFF) and the PPF. By far the largest public sector holder is the BEAPFF, which holds gilts purchased from the market by the Bank as part of its past quantitative easing (QE) of monetary policy.[5] The value of the BEAPFF's gilt holdings increased by £28.6 billion in 2014-15, reflecting movements in market prices; and

- a £21 billion increase in **provisions**, mainly relating to nuclear decommissioning, clinical negligence, the PPF and tax repayments associated with North Sea decommissioning.

Changes in WGA gross assets

3.14 Total assets on the WGA balance sheet increased by £40 billion during 2014-15, to £1,455 billion at end-March 2015. Table 3.2 shows that some of the bigger effects included:

- a £34 billion rise in **fixed assets**, including some additional academy schools coming inside the WGA public sector boundary;

- a £10 billion rise in the value of **student loan assets**, largely reflecting the value of new loans issued during the year; and

- a £9 billion fall in the value of **UKAR mortgage loans**, reflecting both the rundown of existing mortgages as they are repaid by borrowers and the sale of some loans to other institutions.

[5] See Box 2.1 of our 2013 *FSR* for a full explanation of how quantitative easing and APF transactions are treated in the WGA.

Table 3.2: Changes in the WGA public sector summary aggregates

	£ billion		
	2013-14 Restated	2014-15	Difference
Balance sheet levels at end of year			
Liabilities	**-3,255**	**-3,558**	**-303**
of which:			
Net public service pension liability	-1,303	-1,493	-190
Government borrowing and financing[1]	-1,096	-1,174	-78
Deposits by banks and other financial institutions in the Bank of England[2]	-319	-319	0
Provisions	-155	-175	-21
PFI liabilities (capital commitments)	-38	-39	-1
Trade and other payable obligations	-135	-134	1
UKAR debt securities	-26	-21	5
Other financial liabilities[3]	-184	-203	-19
Assets	**1,415**	**1,455**	**40**
of which:			
Tangible and intangible fixed assets[4]	819	853	34
Equity investment in the public sector banks[5]	43	44	1
Student loans	39	49	10
PFI assets	39	42	3
Working capital (creditors)	150	146	-4
UKAR mortgage loans	61	53	-9
Other loans and deposits[6]	30	28	-2
Other financial assets[7]	186	192	6
Other assets[8]	48	49	1
Net liabilities	**-1,841**	**-2,103**	**-263**
Flows during financial year			
Revenue	-653	-659	-6
Expenditure	718	734	16
Net financing cost and other gains and losses[9]	80	77	-3
Net expenditure	**146**	**152**	**6**

[1] These liabilities are net of government borrowing and financing held as assets within the public sector. The amounts netted off include the gilts which are held by the Bank of England Asset Purchase Facility Fund (BEAPFF) as part of the Bank's quantitative easing programme (QE). This borrowing also includes liabilities issued by the Bank of England under the Funding for Lending Scheme. But since the FLS is an asset swap scheme, this borrowing was offset elsewhere on the balance sheet.

[2] Includes the reserves created by the Bank to finance the BEAPFF's purchase of gilts.

[3] Includes banknotes in circulation, the IMF Special Drawing Rights allocation, deposits by financial institutions under repo arrangements with the Debt Management Office (DMO) and the Exchange Equalisation Account (EEA), borrowings by other entities across central and local government, financial guarantees, and foreign currency bonds issued by the Bank of England.

[4] Net of depreciation and impairment of assets. Excluding assets financed by PFI, which are shown separately.

[5] Includes the value of the government's investments in the Royal Bank of Scotland and Lloyds Banking Group.

[6] Includes deposits made by local government to commercial institutions, plus the government's bilateral loan to Ireland, plus loans and advance from HM Treasury to financial institutions.

[7] Includes funds advanced to bank and central clearing counterparties as part of DMO and EEA operations, EEA holdings of foreign government debt securities, the UK's quota subscription to the IMF, IMF special drawing rights, equity investments in the European Investment Bank, other investments in international financial institutions and the Bank of England's holdings of foreign government securities, currencies and equity investments.

[8] Includes holdings of gold, cash and cash equivalents, inventories and assets for sale.

[9] Other gains and losses includes the revaluation of financial assets and liabilities and net loss on disposal of assets.

Differences between WGA and National Accounts aggregates

3.15 Tables 3.3 and 3.4 show the reconciliation set out in the 2014-15 WGA between the WGA and National Accounts aggregates on the latest definitions. These tables start with the fiscal aggregates from the National Accounts, and then adjust for various differences.

3.16 Table 3.3 shows that the differences between the WGA and the National Accounts measures of net debt are mainly due to two particularly large items pushing in opposite directions:

- the treatment of liabilities arising from **public service pensions**. PSND only includes liabilities arising from past cash payments. The WGA debt measure includes an estimate of the net present value of future cash payments arising from past employment. The 2014-15 WGA estimate of these additional liabilities is £1,493 billion (up from £1,303 billion in 2013-14). The large increase in the pension liability recorded in the 2014-15 WGA means that the WGA measure of net liability increased significantly more than PSND during 2014-15; and

- the inclusion of the public sector **tangible and intangible fixed assets** that are not netted off PSND offsets a large part of these additional liabilities.

3.17 The reconciliation also adjusts for other items that are included in PSND but not in the WGA measure of net liabilities – currently only the net debt of housing associations. It also covers items in the WGA net liabilities, but not in PSND. These include future liabilities incurred to date for provisions, equity assets, and amounts owed to creditors and owing from debtors.

3.18 The other main items where net liabilities are measured differently in the WGA and the National Accounts include the capital liabilities from more PFI deals, covered in more detail below. There are also differences in how gilts are valued. The WGA revalue the net gilt liability each year to reflect the latest market prices, whereas PSND reflects the nominal value of gilts issued.

Table 3.3: Reconciliation of public sector net debt

	£ billion		
	Balance sheet levels at end March		
	2013-14 Restated	2014-15	Difference
Public sector net debt (National Accounts)	**1,459**	**1,547**	**88**
Remove items included in National Accounts but not in WGA			
Housing Associations	-56	-60	-4
Add net liabilities included in WGA but not in PSND			
Net public service pensions liability	1,303	1,493	190
Provisions	155	175	21
Working capital (creditors and debtors)	-43	-27	16
Add assets netted off in WGA net liabilities but not in PSND			
Tangible and intangible fixed assets	-858	-895	-37
Equity (including equity in public sector banks)	-71	-74	-3
Adjust for items measured differently			
Differences in the measurement of net debt for UKAR	-74	-74	0
Capital liabilities for PFI contracts	33	33	1
Gilts held by the Asset Purchase Facility	-46	-45	1
Gilts issued	29	35	6
Other	11	-5	-16
WGA net liabilities	**1,841**	**2,103**	**263**

3.19 Table 3.4 shows that the differences between the National Accounts current budget deficit and the WGA net deficit are mainly due to:

- the inclusion in the WGA net deficit of **net financing costs associated with the public sector pension liability.** This is largely an imputed flow, representing the net interest costs of a future liability where the spending has not happened yet;
- the WGA net deficit includes additional **impairments** (write-downs) and **revaluations** of assets;
- the classification of **capital grants** and spending on **research and development**, which are treated as capital expenditure in the National Accounts but as current expenditure in WGA; and
- the inclusion of **provisions** in the WGA as liabilities for the present value of future spending where the spending obligation was incurred as a result of past activity, as distinct from a liability for spending to date as in the National Accounts.

3.20 Depreciation is measured on a different basis too.[6] Depreciation used to be higher in the WGA than in the National Accounts, but after the National Accounts were revised in 2014 to reflect the definitions required under 2010 European System of Accounts, the measure of depreciation is now higher in the National Accounts than in the WGA.

[6] As explained in the section on depreciation and impairment on page 40-41 of our 2011 *FSR*.

Table 3.4: Reconciliation of public sector current deficit

	£ billion		
	2013-14 Restated	2014-15	Difference
Current deficit (National Accounts)	**72**	**57**	**-15**
Remove items included in National Accounts but not in WGA			
Housing Associations	**-2**	**-2**	**0**
Plus additional items included in WGA net deficit			
Net financing costs of public service pension schemes	49	57	8
Impairment and revaluations of assets	26	11	-15
Capital grants	11	8	-3
Net changes in provisions	10	20	10
Net gains/losses on sale of assets	-4	-2	3
Research and development	3	3	-1
Adjust for items measured differently			
Depreciation	-10	-9	0
Other	-10	10	20
Net deficit for the year (WGA)	**146**	**152**	**6**

Additional information on future liabilities

3.21 The following sections review 2014-15 WGA information on future liabilities incurred from past activities. Before taking each set of liabilities in turn, we look at student loans. These are assets rather than liabilities, but some loans will be written off over time and the WGA contains information on expected levels of future write-offs.

3.22 We also look at recent policy announcements affecting future contingent liabilities and guarantees. These are not currently included in our central forecasts for PSNB and PSND as they are future risks that could materialise but are not expected to in a central scenario. If any did crystallise, the fiscal consequences might be offset by displacing other spending within departmental limits or could add to PSNB and PSND. It is useful to keep track of these announcements to ensure that we consider any risks to our assessment of fiscal sustainability from these potential liabilities crystallising. We will look at these issues in more detail next year when we publish our first *Fiscal risks report*.

Student loans

3.23 Government loans to students are recorded as assets in the WGA, while the borrowing to finance them adds to liabilities. Student loans incur a cost to the public finances when the interest payments are subsidised (i.e. when the interest charged to students on the loans does not cover the government's borrowing costs) or when loans cannot be repaid and are written off. So the issuing of student loans tends to increase net liabilities.

3.24 Expected future costs of student loans are included in the WGA as balance sheet impairments when each loan is issued, where the impairment covers the total estimated cost of write-offs and interest-rate subsidies over the life of each loan. In the National Accounts, the interest subsidies and write-offs are not charged to the deficit and net debt until they arise. As with pensions and provisions, the differences between the two frameworks reflect

timing: the WGA include the expected future spending when the liability for that spending is first incurred; the National Accounts include the spending when it happens.

3.25 The Department for Business, Innovation and Skills (BIS) estimates impairments on loans issued to date by using a stochastic earnings path model that projects likely future cash flows for both future student loan issuance and repayments. This is the same model that we use for the long-term projections presented in our *FSRs*. It uses ONS population projections and our long-term assumptions, including for inflation and earnings growth. The estimates of impairments on previous loans issued are often subject to significant revision. The WGA note that the National Audit Office (NAO) highlighted the uncertainty inherent in the valuation of student loans. That reflected the long-term nature – and the number and volatility of the assumptions underpinning – those valuations.

3.26 Table 3.5 sets out how student loan assets have increased over time. It draws on detail in the BIS accounts in relation to England-only student loans, which are the biggest source of student loan assets reported in the WGA. The BIS accounts are also available for 2015-16. The table shows that the annual increase in BIS student loan assets jumped from just over £2½ billion in 2012-13 and 2013-14 to £8.8 billion in 2014-15 and again to £14.7 billion in 2015-16.

3.27 In 2014-15, the bigger year-on-year increase in assets reflected:

- a £2.0 billion **increase in loans issued and estimated interest on the total stock of loans**. That reflects lending to an additional cohort of students subject to tuition fees of up to £9,000 per year. (The last full cohort of undergraduates subject to the pre-2012 fees cap of £3,000 was reflected in the 2013-14 accounts.) Post-2012 loans also charge a higher rate of interest than pre-2012 loans, adding to estimated interest; and

- a £4.3 billion **reduction in the amount netted off for impairments (future write-offs) and amortisation (future costs from interest-rate subsidy)**. This reflects both future costs in respect of new loans issued in the latest year (known as the 'RAB charge') and revisions to those estimates in respect of all previous loans (described as the 'stock charge'). The revisions can vary considerably each year. In the 2013-14 accounts, the amounts netted off increased to £6.2 billion, with about £2 billion due to revisions in respect of previous loans. In 2014-15, the amount netted off fell to £1.9 billion, in part reflecting the downward revision to our estimate of the long-term wedge between RPI and CPI inflation (explained in Box 3.3 of our March 2015 *EFO*). That also meant a smaller gap between RPI inflation and earnings growth, which reduced the estimate of future write-offs in the BIS model.

3.28 The further increase in the year-on-year rise in assets in 2015-16 was almost entirely driven by a positive impairment adjustment. The RAB charge – which is expressed as the percentage of total outlays not covered by the discounted flow of projected future repayments – was estimated at 45 per cent in the 2014-15 accounts. It was revised down to 20 to 25 per cent in the 2015-16 accounts. The associated revaluation of loan assets

contributed £5.5 billion to the £5.9 billion increase in the year-on-year change in value of the student loans reported in the BIS accounts.

3.29 BIS takes a number of factors into account when estimating the RAB charge and these are often subject to significant uncertainty. In broad terms, around three-quarters of the revision reflects the discount rate being revised down from RPI+2.2 per cent to RPI+0.7 per cent while around a quarter reflects higher repayments associated with freezing the repayment threshold for post-2012 loans at £21,000 for five year from 2016-17 announced in Budget 2016. The effects of other technical and real-world factors were small and offsetting. This revision illustrates again the sensitivity of WGA-style balance sheet measures to changes in discount rates. It also shows the importance of definitions – if the RAB change was calculated as the discounted value of projected future write-offs as a percentage of total outlays, a lower discount rate would push it up rather than down.

Table 3.5: Changes to England-only student loan assets

	£ billion			
	2012-13	2013-14	2014-15	2015-16
Student loan assets at 1 April	28.1	30.7	33.4	42.2
Student loan assets at 31 March	30.7	33.4	42.2	56.9
Total change in value of student loan assets during the year	**2.6**	**2.7**	**8.8**	**14.7**
of which:				
New loans issued	7.1	9.1	10.8	11.9
Effective interest	0.3	0.3	0.2	-0.5
Capitalised interest	0.7	1.0	1.4	1.6
Subtotal of new loans issued and interest on assets	*8.1*	*10.4*	*12.5*	*13.0*
Repayments	-1.6	-1.5	-1.7	-1.8
Disposals	0.0	-0.1	0.0	0.0
Amortisation and impairments on new and existing loans	-3.9	-6.2	-1.9	3.6

Net liabilities of public service pensions

3.30 The biggest liability on the WGA balance sheet relates to future payment of pensions for public service pension schemes, where the liability was incurred from past employment. In the 2014-15 WGA, that means the future liability to pay public service pensions in respect of employment up to March 2015. The estimated liability can be difficult to interpret because it only gives a partial view of the sustainability of the public service pensions system; year-on-year changes in the estimated liability are also very sensitive to changes in the discount rate used to convert the flow of future payments into a single net present value.

3.31 Table 3.6 reports WGA estimates of the net pension liability (covering both funded and unfunded schemes) since 2009-10. It shows that the liability increased by £190 billion in 2014-15, the third successive year that it has increased by more than £100 billion. Since 2010-11, the estimated liability has increased by more than 50 per cent. But this does not mean that public service pensions have become a much bigger source of risk to the future health of the public finances. As explained below, there are a number of technical factors that have pushed up the estimated liability. Moreover, our more comprehensive long-term

projections for net public service pensions spending – most recently set out in Chapter 3 of last year's *FSR* – have been relatively stable over that period.

3.32 Before turning to the factors that have pushed up the estimated liability in recent years, it is worth considering why it is so large to begin with. The levels of pension contributions (for both funded and unfunded schemes) are set so that, over the long term, total contributions (past and future) are estimated to cover total payments (past and future).[7] Only some of these contributions and payments are reflected in the WGA:

- for both **funded and unfunded schemes**, the liability side of the balance sheet reflects *future* payments incurred due to *past* employment, but not the expectation of pension rights that will accrue through future employment. Similarly, the asset side of the balance sheet does not reflect future contributions from future employment. Future pension payments accrued in respect of the latest period of employment are treated as expenditure, increasing the net deficit. These future accrued payments are then added to the pension liability in the balance sheet, which is gradually reduced as actual pension payments are made;

- for the **funded schemes**, pension contributions are invested in assets to fund future pension payments. The net pension liability is measured net of those assets;

- for the **unfunded 'pay-as-you-go' schemes**, the pension contributions have no impact on the pension liability. Instead they reduce net expenditure, and therefore net borrowing. In effect, today's payments are funded out of today's pension contributions, with the shortfall reflected in the gilts that are issued when payments exceed contributions (as has typically been the case); and

- **total WGA net liabilities** include both the stock of net government borrowing and the estimated net pension liability.

3.33 It is clear from this that the net pension liability estimate is one-sided, in the sense that it factors in a significant amount of future payments but no future contributions. And for the unfunded schemes in particular, it covers only **gross** liabilities associated with past employment. While that helps explain why the estimated liability is large, it does not explain why it has risen by more than £500 billion over the past four years. As the table and the following discussion sets out, the biggest contributions to year-on-year changes have tended to be assumption driven – often related to the discount rate assumption.

[7] The pension contributions are set for each pension on the basis of detailed valuations that are held at regular intervals. These assess any net surplus or deficit in the scheme over the long term, based on a variety of assumptions, and adjust contributions as required to bring the scheme back into balance.

Table 3.6: Changes to net liabilities of public service pensions

	£ billion					
	2009-10 restated	2010-11 restated	2011-12 restated	2012-13 restated	2013-14 restated	2014-15
Net pension liability at 1 April[1]	802	1,135	961	1,006	1,172	1,303
Net pension liability at 31 March[1]	1,135	961	1,006	1,172	1,303	1,493
Change	**333**	**-174**	**45**	**166**	**131**	**190**
of which:						
Future pension costs for staff employed in current year[2]	28	40	35	35	41	44
Pensions paid[3]	-27	-29	-31	-35	-36	-38
Contribution by scheme participants	-8	-8	-9	-7	-8	-9
Net financing costs	50	48	51	48	49	57
Change in past service costs[4]	1	-126	1	0	-1	1
Transfers in/out[5]	-	0	2	27	2	1
Changes in assumptions underlying the value of future liabilities, including the change in the real discount rate	258	-69	10	57	23	151
Corrections to previous estimates of pension liabilities to reflect events and assumptions in latest accounting period	29	-31	-12	40	61	-16
Settlements or curtailments and restatements	3	1	-2	0	1	-1

[1] Includes gross liabilities of funded and unfunded public service pension schemes, net of assets for the funded pension schemes.

[2] The movement in these costs each year reflects an adjustment to correct the previous year's costs for the previous year's change in discount rate. So these costs rise and fall in line with the change in liabilities from the change in discount rate, but with a 1 year lag.

[3] From 2012-13 onwards, this additionally includes pensions paid for the new Royal Mail Statutory Pension.

[4] The -£126 billion fall in past service costs in 2010-11 was the reduction in future liabilities from the June 2010 policy decision to change the indexation for public service pensions from the RPI to the CPI, from April 2011.

[5] In 2012-13, this includes the transfers from the Royal Mail Pension Plan (RMPP), which was a funded pension scheme, to the new Royal Mail Statutory Pension Scheme, which is an unfunded pension scheme. Since the measure of net pension liabilities is only net of assets held by the funded pension schemes, this transfer increased net pension liabilities by the value of the RMPP assets (£28 billion).

3.34 Chart 3.1 decomposes the yearly changes in the net pension liability over the past six years. The sources of change that it depicts can be grouped into:

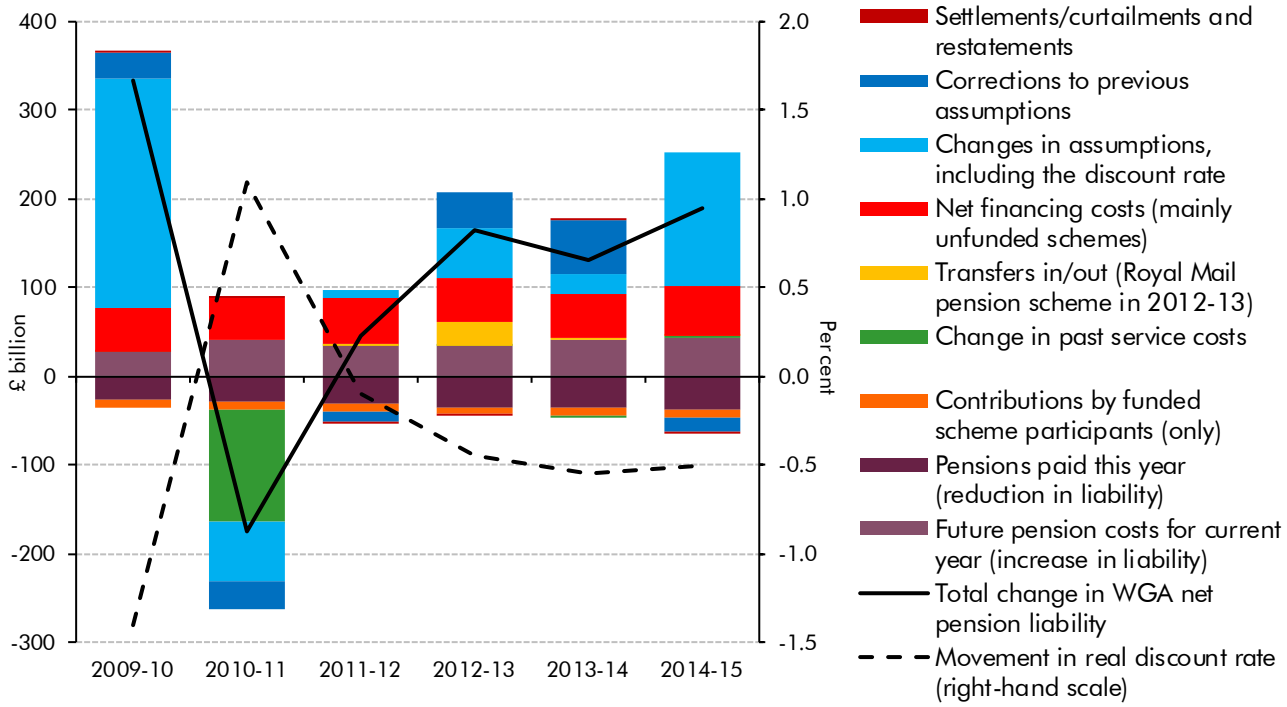
- those **factors that routinely affect the liability each year**. These include the additional future costs accruing from staff employed each year, which are largely offset by reductions in the existing liability for pensions paid out and by employee contributions for the funded schemes. Changes from future pensions that accrue each year fluctuate, partly reflecting changes in the number of staff employed, but also changes in discount rates.[8] This means that the reduction in the discount rate used in this year's WGA will increase the future pension costs that will be included in next year's WGA in respect of staff employed in 2015-16. The notional net financing cost associated with the net liability also routinely adds to the liability each year;

[8] These adjustments are included because the estimates of future pension costs for the current year's employment are calculated each year based on the discount rate used at the beginning of the year, i.e. the discount rate from the previous year.

- those **factors that are driven by assumptions**. These often generate big changes – up or down – to the net pension liability in any given year. Unfortunately, the WGA only report a single figure for 'Changes in assumptions underlying the value of liabilities', without further decomposition. It is likely that the most important assumption is the real discount rate (set out in Table 3.7). As the lines in the chart show, the year-on-year change in the pension liability is inversely related to the change in the real discount rate. But the relationship between changes in the discount rate and the 'Changes in assumptions' line of the WGA is far from stable. In each of the past three years, the real discount rate fell by about 0.5 percentage points, but the WGA showed an increase in the net pension liability because of changes in assumptions ranging from £23 billion (in 2013-14) to £151 billion (in 2014-15).[9] As we noted last year, it would be helpful for fiscal transparency if the Treasury could explain more fully how changes in assumptions have moved the estimated liability; and

- **policy changes or other one-off factors** such as large transfers of staff in or out of public service schemes. Examples of these include the £126 billion fall in the liability in 2010-11 that resulted from the June 2010 policy decision to change the indexation of public service pensions from the RPI measure of inflation to the CPI measure, which is typically lower, and the transfer of the Royal Mail pension scheme into the public sector, which was reflected in the 2012-13 accounts. Ongoing changes to future pension costs associated with the Hutton reforms will affect estimates of net pension liabilities and employer contribution income in future WGA publications. [10]

Chart 3.1: Year-on-year movements in the WGA net pension liability



[9] The lower effect in 2013-14 may be related to the larger £61 billion adjustment that was made in 2013-14 to correct for 'experience gains and losses arising on liabilities', which reflect the extent to which events over the reporting period have not coincided with the actuarial assumptions made for the last assessment.

[10] Independent Public Service Pensions Commission (2011), *Independent Public Service Pensions Commission, Final Report*.

3.35 Different discount rates are used for public service pension schemes in different contexts. For instance, for the unfunded public service pension schemes:

- the **discount rate used in each year's WGA** and the underlying accounts is set each year based on real yields of high quality corporate bonds. This follows the requirements of the Government Financial Reporting Manual (FReM), based on international accounting standards. The discount rates used are shown in Table 3.7 – the definition of 'real' was changed in 2011-12 from the RPI measure of inflation to the CPI; whereas

- the **discount rate used to set employer contribution rates** is based on the Treasury's interpretation of our long-term GDP growth projection. That discount rate was set at 3 per cent in 2011 and was reduced to 2.8 per cent in the March 2016 Budget. The effect of that policy change will increase employer contributions from 2019-20, as described in our March 2016 *EFO*.

Table 3.7: Discount rates used for assessing pension liabilities for central government pension schemes accounts

	Per cent							
	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Discount rate, nominal	6.0	4.6	5.6	4.9	4.1	4.4	3.6	3.6
Discount rate, real (RPI)	3.2	1.8	2.2					
Discount rate, real (CPI)			2.9	2.8	2.4	1.8	1.3	1.4
Discount rate, real, as used to uprate public service pensions	**3.2**	**1.8**	**2.9**	**2.8**	**2.4**	**1.8**	**1.3**	**1.4**

The Private Finance Initiative

3.36 Most public sector capital investment involves the public sector funding and completing capital projects itself. Under the Private Finance Initiative (PFI), a private sector firm will create and/or maintain the asset at its own cost, which the public sector counterparty agrees to pay for over time.

3.37 Based on ESA10 guidelines, the capital costs of some PFI deals are recognised as liabilities on the National Accounts public sector balance sheet, but many are not. As well as lacking transparency, this generates a perception that PFI has been used as a way to hold down official estimates of public sector indebtedness for a given amount of overall capital spending, rather than to achieve value for money.

3.38 The ONS includes an asset and any associated liability on the National Accounts public sector balance sheet if it believes that the public sector bears most of the *financial risk*. In contrast, WGA puts the asset and associated liability for capital costs on the public sector balance sheet if it is judged to have *effective control* of it.

3.39 As at March 2016, PSND included liabilities of £5.2 billion (0.3 per cent of GDP) in respect of the capital costs of PFI deals on balance sheet in the National Accounts. The ONS has revised this estimate up by £0.1 billion since last year's *FSR*, based on the latest data reported by central government departments. The ONS is continuing its programme of work to further improve its estimates of public private partnership data, including working with the Treasury to improve the data on departments' PFI deals.[11] The ONS has also announced that it is considering the classification of the priority schools building programme, which was an initial contract signed under Private Finance Two (PF2).[12]

3.40 Based on the classification approach used for the WGA, Table 3.8 shows the latest figures recorded on the WGA balance sheet for PFI assets and capital liabilities. It shows that the future liability estimated for capital amounts payable at end-March 2015 was £38.5 billion, up £0.7 billion from end-March 2014. The liability will rise as new deals are signed, but will otherwise fall as capital repayments are made. The value of assets acquired through PFI projects was estimated at £42.0 billion at end-March 2015, up £3.4 billion from end-March 2014. Existing PFI assets will increase as new deals are signed, but will also change with revaluation and depreciation each year.

3.41 As well as this liability that is recorded on the balance sheet for future capital PFI payments, the WGA also contain separate details of the present value of obligations for future PFI payments. These cover service and interest payments as well as capital costs. (Together the costs of these three elements are known as the 'unitary charge'.) The latest value of these future obligations is shown in Table 3.8, showing the breakdown between capital, interest and service charge payments. The obligations for future capital payments are higher than the future liabilities recorded on the balance sheet because the obligations cover some associated costs that are likely to materialise, but which are not sufficiently certain to be included on the balance sheet. The latest results show that the net present value of the combined unitary charge as recorded in the WGA fell by £12.5 billion at end-March 2015, compared with a year earlier. This reflected increases associated with new PFI contracts being more than offset by decreases as previous PFI contracts ended.[13]

3.42 The interest and service costs associated with PFI projects would also have been incurred over future periods if the assets had been acquired through traditional capital purchases. However, the difference with assets purchased under PFI deals is that these costs become relatively firm long-term obligations, and they therefore have the potential to reduce the flexibility for other spending in the future.

3.43 The Treasury also publishes the results of a separate data collection exercise each year, which currently covers all PFI projects sponsored by central government. This shows which

[11] The ONS now routinely publishes statistics on off-balance sheet public private partnerships (PPP) each year, showing the capital value of outstanding liabilities. But these data are designated 'experimental statistics' and may be revised in future as improvements are made to data collection arrangements.
[12] The ONS states in its June 2016 National Accounts classification forward work plan that it is waiting on Eurostat inputs before completing this classification case.
[13] The unitary charges recorded in the 2013-14 WGA had also fallen at end-March 2014, compared to the previous year. That fall is no longer shown in the restated 2013-14 figures, which have been revised up by £10 billion. That is likely to reflect the net present value of these payments for the additional entities now included within WGA, most notably Network Rail.

projects would be on or off the balance sheet based on the accounting standards used in the WGA. The data are not audited and the results are not necessarily consistent with the figures in the latest WGA. The latest Treasury data published in March 2016 cover PFI deals signed up to end-March 2015.[14] These show that, if no further deals were signed, annual unitary charge payments on these PFI projects would have peaked at 0.6 per cent of GDP in 2015-16. In aggregate, these annual payments are a relatively small proportion of total spending. But such payments are not distributed evenly across the public sector and so the potential constraint may be more binding in some areas. These costs will be included in departmental expenditure limits, and the budgets of individual NHS trusts, local authorities and public corporations.

3.44 These separate Treasury data suggest that future PFI liabilities recorded as on balance sheet in the WGA may relate to around 98 per cent of all PFI assets, by capital value. This suggests the total potential capital liability of on and off balance sheet PFI contracts could be slightly higher than reported, at £39.4 billion or 2.1 per cent of GDP. It implies that, if all capital spending under PFI were to have been carried out through conventional debt financing, PSND would have been 1.8 per cent of GDP higher at end-March 2015. This difference is little changed from last year. The separate ONS estimate of the capital liability of PFI deals that are off-balance sheet in the National Accounts produces a similar figure, suggesting that, if all capital spending under PFI was done through conventional debt financing, PSND would have been 1.7 per cent of GDP higher at end-March 2015.

Table 3.8: WGA PFI data

	£ billion					
	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
WGA data for PFI deals on balance sheet[1]						
Figures from the Statement of Financial Position (balance sheet)						
Net book value of PFI assets	30.9	34.9	38.7	37.0	38.6	42.0
Liability for future capital payments	28.1	32.0	36.1	36.6	37.8	38.5
Present value of obligations for future payments	**164.9**	**183.6**	**191.7**	**198.8**	**202.8**	**190.3**
of which:						
Capital payments[2]	34.1	35.1	38.0	39.3	40.0	41.1
Interest payments	33.4	39.0	42.3	42.2	42.4	40.4
Service charges	97.4	109.5	111.4	117.3	120.4	108.8
HM Treasury data for percentage of PFI deals on balance sheet (IFRS basis) (per cent)[3]	-	89	97	97	97	98
OBR calculations of WGA liability for future capital amounts payable, grossed up to total PFI deals, on and off balance sheet (per cent of GDP)	-	2.2	2.2	2.2	2.2	2.1

[1] On balance sheet on IFRS basis at end of financial year. Figures for 2009-10 to 2012-13 are as restated in following year's WGA.

[2] The obligations for future capital payments include additional costs such as contingent rents and lifecycle replacement costs.

[3] Calculations based on data that cover all PFI deals sponsored by central government. This includes many local government PFI projects, but it will exclude any local government or public corporations PFI schemes that are funded by their own sources of finance. The calculations also exclude any data that does not specify whether the PFI deal is on or off balance sheet.

[14] HM Treasury (March 2016), *Private Finance Initiative and Private Finance 2 projects: 2015 summary data*. These data include PFI and PF2 deals signed up to end-March 2015.

3.45 The WGA also contain details of the time periods over which the future capital and interest obligations are expected to arise, and how these obligations are split by sector (Table 3.9).

Table 3.9: Future PFI payments, split by time period and sector

	£ billion				
	2010-11	2011-12	2012-13	2013-14	2014-15
WGA data for the present value of capital and interest and service charge obligations for future periods, for PFI deals on the WGA balance sheet [1,2]	183.6	191.7	198.8	202.8	190.3
of which, obligations arising:					
Within one year	9.0	9.3	10.5	10.3	11.2
Later than one year, but within next five years	34.1	36.1	37.4	38.9	40.0
Later than five years	140.6	146.2	150.8	153.7	139.1
and of which, obligations by sector:					
Central government (including NHS)	110.2	114.7	121.9	124.5	114.3
Local authorities	69.6	72.9	72.8	74.3	72.1
Public corporations	3.9	4.2	4.1	4.0	3.9

[1] The obligations for future capital payments include additional costs such as contingent rents and lifecycle replacement costs.

[2] In 2009-10 the total of the WGA data for these future obligations is £164.9 billion. However no breakdown is available for the future service charge obligations by time period, or sector.

Treasury control total for PFI spending

3.46 The Coalition Government announced in Autumn Statement 2012 that it would introduce a control total for the commitments arising from off balance sheet PF2 contracts. It subsequently announced further details of how the new control total would work. It would include all existing PFI and PF2 contracts sponsored by central government, whether on or off the WGA balance sheet. It would apply from 2015-16 onwards. The control would be a limit of £70 billion in nominal terms, which would apply over the five-year period from 2015-16 to 2019-20. It would cover all payments in respect of these PFI contracts, including capital, interest and service costs. The Government said that performance against this control total would be assessed at each Budget.

3.47 The Treasury data published in March 2016 showed total cumulative spending from 2015-16 to 2019-20 subject to this control total of £51.7 billion, covering PFI deals signed by end-March 2015. This update included seven additional projects that were signed during 2014-15, which increased total spending by £0.2 billion. This update implies substantial headroom below the £70 billion control total remains, although that will also need to cover future deals signed over the remaining period up until the end of 2019-20.

Other financial commitments

3.48 WGA net liabilities include other finance leases that are not PFI-related. As with the bulk of the PFI deals, the capital commitments are included on the balance sheet in WGA, but off the balance sheet in the National Accounts. These non-PFI finance leases carried a further capital commitment of £5.1 billion at end-March 2015, little changed from a year earlier.

3.49 The WGA also include details of various other financial commitments that are not included on the WGA balance sheet. These are expected to be incurred, but are not reported as future liabilities in the WGA until the associated capital asset or service is realised.

3.50 These further financial commitments include interest payments on finance leases, all payments on operating leases, and payments on capital and other contracts. The present values of future payments are shown in Table 3.10. The time span of these financial commitments varies, depending on the length of the lease or contracts, and these WGA figures show the present cost of the known current and immediate future commitments. As such, if contracts are extended, the costs recorded in the WGA will rise.

3.51 The value of other non-cancellable contracts for 2013-14 shown in Table 3.10 has been restated. It is £23 billion lower than the figures we reported in last year's *FSR,* because it no longer shows the contracts with Network Rail. Now that the public sector boundary has been expanded to include Network Rail, these commitments cover payments that take place within the public sector, so are therefore consolidated out of the WGA figures.

Table 3.10: Future payments for other financial commitments

	£ billion	
	2013-14 restated	2014-15
On balance sheet in WGA - included in net liabilities		
Finance leases: capital payments	**5.0**	**5.1**
Off balance sheet in WGA - *not* included in net liabilities		
Finance leases: interest payments	**19.0**	**18.9**
Operating leases	**17.8**	**19.2**
Contracted capital commitments	**34.6**	**42.5**
of which:		
MOD commitments for property, plant and equipment, and for intangible fixed assets	14.5	19.9
DfE commitments in relation to school projects	1.2	4.0
TfL contracts for transport and infrastructure projects	2.4	3.7
NHS and DH capital and IT contracts	2.3	1.4
Other capital contracts[1]	14.2	13.5
Other non-cancellable contracts	**35.3**	**37.1**
of which:		
NHS and DH IT services, purchase of vaccines and R&D	5.3	4.6
BBC outsourcing, programme acquisitions and sports rights	3.4	3.4
MOJ contracted out services, including management of prisons	1.3	4.3
Payments to train operating companies[2]	1.1	2.3
Other[1]	24.2	22.5

[1] Other contracts, mostly of around £1 billion, or less. For the 2014-15 WGA this also includes higher education grants, and grants by the Engineering and Physical Sciences Research Council, which were more sizable, but which were not itemised separately.

[2] Payments by Department for Transport and Scottish Government.

Provisions and contingent liabilities

3.52 Provisions are recorded in the WGA when public sector bodies undertake activities that are expected to result in future costs. They record the net present value of the future liabilities arising from past activities, and are estimated using the relevant discount rate. They cover the future costs for events that are likely to happen, where the likelihood can range from certain to probable, i.e. a greater than 50 per cent probability.

3.53 New provisions increase the total of net liabilities recorded on the WGA balance sheet. They are then reduced when the actual spending occurs. All the expected future spending is charged to the WGA expenditure and income account (increasing the WGA net deficit) when the future liability is initially recognised and the new provision is made. In contrast, the liabilities only appear on the National Accounts public sector balance sheet when the spending occurs. Assuming the expected future cost materialises, this creates a timing difference between the two sets of accounts.

3.54 The notes to the WGA also record various contingent liabilities, where the chances of the costs arising are judged to be less than 50 per cent. So it is possible, but not probable, that these future costs will occur. The contingent liabilities are classified as 'off balance sheet' and they are therefore not included in the WGA main financial statements or the summary aggregates. They are sub-divided into quantifiable and unquantifiable contingent liabilities, with a separate category of 'remote' for those where the chances of the costs arising are judged to be near zero.

3.55 In principle, we would expect our forecasts to include the future fiscal costs of liabilities treated as provisions, depending on their timing. But we would not expect our forecasts to include the cost of contingent liabilities, as they have a less than a 50/50 chance of crystallising, so they would not appear in a central forecast. However, contingent liabilities are still fiscal risks, and we therefore need to consider them (and the circumstances that could cause them to crystallise) when assessing fiscal sustainability.

Provisions and quantifiable contingent liabilities

3.56 Table 3.11 summarises the main provisions and quantifiable contingent liabilities recorded in the 2014-15 WGA.

Table 3.11: Provisions and quantifiable contingent liabilities in the WGA

	£ billion		
	2013-14 restated	2014-15	Difference
Future liabilities covered by provisions (on balance sheet)			
Nuclear decommissioning	77.4	82.9	5.5
Clinical negligence	26.6	29.3	2.7
Pension Protection Fund (PPF)	14.0	19.1	5.1
Taxes subject to legal challenge	5.4	7.2	1.8
Oil and gas field decommissioning	3.1	7.5	4.4
Financial Assistance Scheme	4.2	4.7	0.5
Department of Health (NHS)	3.8	3.7	-0.2
DECC (reprocessing contracts and Coal Authority)	3.0	3.2	0.2
Equitable Life payments scheme	0.8	1.4	0.6
Other provisions	16.3	16.4	0.1
Total provisions[1]	**154.6**	**175.3**	**20.7**
Future levels of quantifiable contingent liabilities (off balance sheet)			
Export guarantees and insurance policies	12.1	13.4	1.3
Clinical negligence	11.9	14.0	2.1
Taxes subject to challenge	29.2	35.6	6.4
Supporting international organisations	0.5	0.5	0.0
Financial stability interventions	0.3	0.4	0.1
Transport infrastructure projects	5.4	6.4	1.0
Military contracts	1.3	1.7	0.4
Pension Protection Fund	0.8	1.2	0.4
Other	2.3	3.2	0.9
Total quantifiable contingent liabilities	**63.8**	**76.4**	**12.6**

3.57 Provisions increased by a net £21 billion in 2014-15, taking the present value of existing provisions to £175 billion at end-March 2015. The changes included an increase of £36 billion for re-estimated and new provisions, offset by a reduction of £8 billion for provisions that were used during the year. £8 billion of previous provisions were also removed because they were no longer judged as being likely to happen. The amount of provisions used in 2014-15 was much lower than the £13 billion predicted in last year's WGA. However, this comparison and the level of previous provision removed are both likely to have been affected by the amounts that HMRC has removed from provisions for oil and gas field decommissioning, as explained further below.

3.58 Clearly, the increase in provisions indicates that more of the public sector budget is likely to need to be allocated to accommodate this spending or lack of tax income in the future. And given the associated uncertainties, both the provisions and the contingent liabilities need to be assessed as fiscal risks. But in order to analyse the pressures from the increases in provisions, we need to understand what drives them. The increases can either come from:

- **actual pressures emerging**, e.g. from new cases or higher-than-expected costs in existing cases, where policy or operational changes may be considered to help mitigate risks; or

- **changes in the measurement of provisions**, where already-known future commitments are reassessed, or measured in a different way, increasing the estimated cost without altering the underlying exposure.

3.59 We estimate that around three quarters of the increase in provisions in 2014-15 relates to provisions whose measurement has changed.

3.60 Instances where we consider that the increases indicate actual pressures emerging include:

- the provision for **clinical negligence,** which increased by £2.7 billion to £29.3 billion at end-March 2015. This is slightly less than the £3.0 billion increase reported the previous year. Within the overall change, new provisions added £7 billion, and the reductions from provisions no longer required (where the NHS Litigation Authority (NHSLA) won the case) exceeded the reductions from provisions used (where the NHSLA lost the case). The overall provision increased because the level of new provisions for new cases exceeded the amounts of provisions for previous cases that were resolved. The WGA also reports that 2014-15 is the first year since 2006-07 that the level of new clinical claims reported to the NHSLA has fallen; and

- the provision for **taxes subject to legal challenge**, which increased from £5.4 billion to £7.2 billion in the 2014-15 HMRC trust statement. This was the third consecutive annual increase. HMRC also increased its quantifiable contingent liability for taxes subject to legal challenge from £29.2 billion to £35.6 billion, which continues the pattern observed since 2012-13. Trends in HMRC's provisions and contingent liabilities for tax litigation, including the 2015-16 figures, are set out below.

3.61 Increases arising from significant changes in the measurement of provisions include:

- the provision for **nuclear decommissioning,** which increased by £5.5 billion to £82.9 billion at end-March 2015. Most of this provision is accounted for by the Nuclear Decommissioning Authority (NDA). In particular, decommissioning Sellafield accounts for about 65 per cent of the overall provision and for £5 billion of the increase in 2014-15. The latest WGA reported that this increase for Sellafield was primarily driven by the conclusion of a new lifetime plan for dealing with existing decommissioning required for Sellafield, but also that the plan will continue to develop in future years and will therefore be subject to further possible change. The NAO has emphasised the particular uncertainty around these estimates;

- the liabilities termed provisions in the WGA for the **pension protection fund** (PPF), which largely consist of actuarial liabilities for future pensions or compensation payments (see Box 3.1 above). In some ways these resemble the current liability reported in respect of public service pensions, although on a much smaller scale. PPF accounts show that around 60 per cent of the increase in the actuarial liabilities during 2014-15 was accounted for by changes in assumptions and revaluations;

- the HMRC provisions for **oil and gas field decommissioning**. These have been subject to several measurement changes over successive years, as summarised in Table 3.12. In the latest 2014-15 accounts, the provisions have been extended to cover expected repayments of taxes out to 2041-42, where in last year's accounts they only covered estimates for the next five years. The measurement has also been changed so that the provision only covers petroleum revenue tax, where future costs are expected to take the form of repayments, but no longer covers corporation tax, where future costs are expected to take the form of lower receipts. The £12.9 billion increase from extending the provision has been partly offset by the £8.5 billion decrease from removing the element relating to foregone corporation tax receipts.

Table 3.12: Future tax losses from oil and gas field decommissioning in WGA

	£ billion				
	2010-11	2011-12	2012-13	2013-14	2014-15
Potential future liabilities in HMRC accounts and WGA					
Provisions[1]	-	-	3.8	3.1	7.5
Quantitative contingent liability	5.0	20.0	-	-	-
Unquantifiable contingent liability	-	-	Yes	Yes	-
Coverage of amount quantified in accounts					
Tax covered	PRT only	PRT and CT	PRT and CT	PRT and CT	PRT only
Time period covered	Out to 2040-41	Out to 2040-41	Next 5 years	Next 5 years	Out to 2041-42
Underlying estimates					
Oil companies decommissioning costs out to 2040-41[2]	29	33	37	37	41
of which: costs to the Exchequer[2,3,4]	14	20	22	17	16

[1] Cumulative real costs calculated using OBR forecasts of GDP deflator, current year prices.
[2] Cumulative real costs calculated using Oil companies forecast data consistent with Oil and gas annual activity survey UK, and OBR forecasts of GDP deflator, current year prices.
[3] Tax losses from PRT and CT, tax receipts foregone plus repayments.
[4] Exchequer costs are constrained by the amounts of tax paid.

3.62 Table 3.13 presents the 2014-15 WGA data showing the time period over which the provisions are expected to be spent, compared with the estimates from last year. To facilitate comparisons, it presents the latest results including and excluding the PPF, the inclusion of which has increased the results compared to last year (particularly over the longer term). Chart 3.2 shows how the expected spending from provisions has evolved over the past five years. In last year's *FSR* we noted the striking divergence between the trends in spending expected from provisions one year-ahead, which has been relatively stable in successive WGA publications, and spending expected from provisions over the medium and longer term, which has risen steadily. The 2014-15 WGA continue this trend, with provisions that are expected to be used over the medium and longer term increasing by £32 billion. The inclusion of PPF provisions accounts for £18 billion of that increase, but nuclear decommissioning and clinical negligence provisions have risen again, accounting for a further £7 billion of the increase. Spending associated with both these provisions will add to

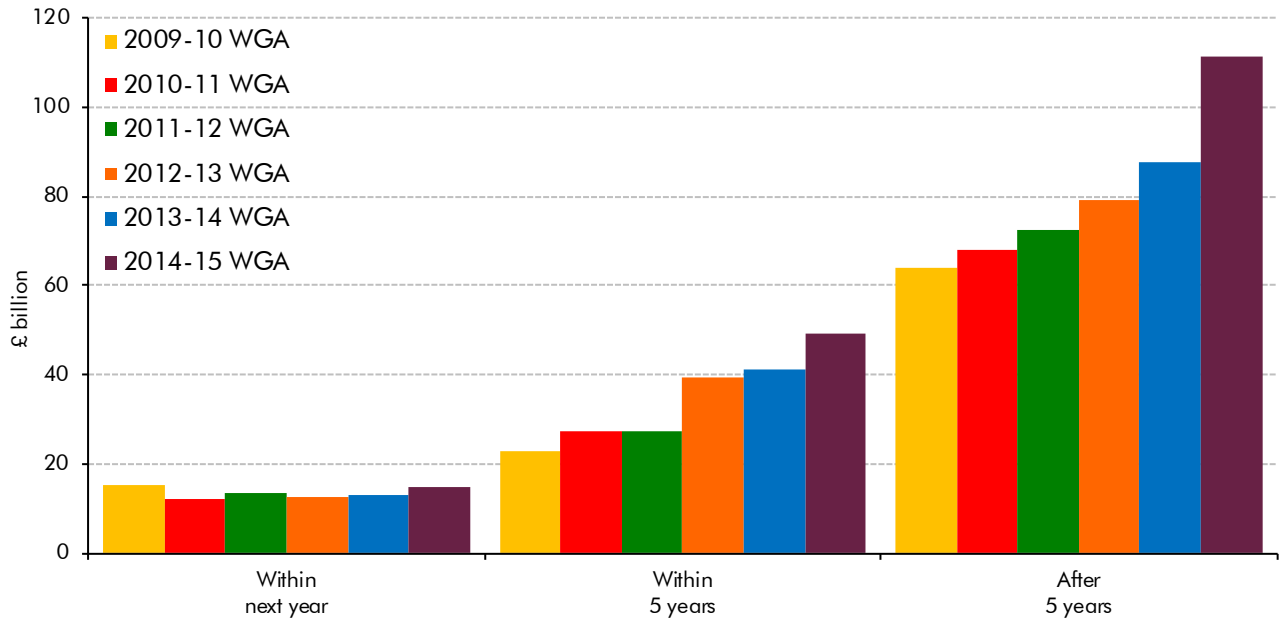
pressures on departmental budgets that the latest Spending Review plans imply will already be subject to a significant squeeze over the coming years.

Table 3.13: Timing of use of WGA provisions

	£ billion				
	Provisions used in financial year	Provisions at end March			
		Future period when provisions expected to be used			Total level of provisions
		Within next year	Within 5 years	After 5 years	
2013-14 (not restated)	9.7	13.0	41.3	87.5	141.8
2014-15 excluding PPF[1]	7.0	14.0	47.1	95.1	156.2
2014-15 including PPF	7.9	14.9	49.2	111.2	175.3

[1] Provisions in the 2014-15 WGA additionally include £19.1 billion of provisions for the Pension Protection Fund (PPF). The 2014-15 results are also shown in the table above excluding PPF, so that the data is on a comparable basis to 2013-14.

Chart 3.2: WGA provisions by expected time period of use



Note: 2014-15 additionally includes provisions for the Pension Protection Fund.
Source: HM Treasury

3.63 Table 3.11 shows that contingent liabilities increased by £13 billion in the 2014-15 WGA, with the largest increase (£6.4 billion) coming from HMRC taxes subject to challenge. The contingent liabilities for clinical negligence also increased by £2.1 billion.

3.64 The WGA contains information on the latest levels of the main quantifiable contingent liabilities, but does not explain the change in those levels over the year. So we only know the net changes, but not the underlying additions or reductions[15]. Information about reductions would be especially useful for our future work on fiscal risks, where we need to know amounts of contingent liabilities that actually crystallise, in order to assess probabilities of

[15] Somewhat perversely, this information is provided in the WGA for the changes in the remote quantifiable contingent liabilities, but not for the main quantifiable contingent liabilities

risks occurring. This information is not shown in the WGA because departments are not required to account for changes to their contingent liabilities in this way. It would be helpful if the Treasury were to ask departments to provide this information.

HMRC tax litigation risks

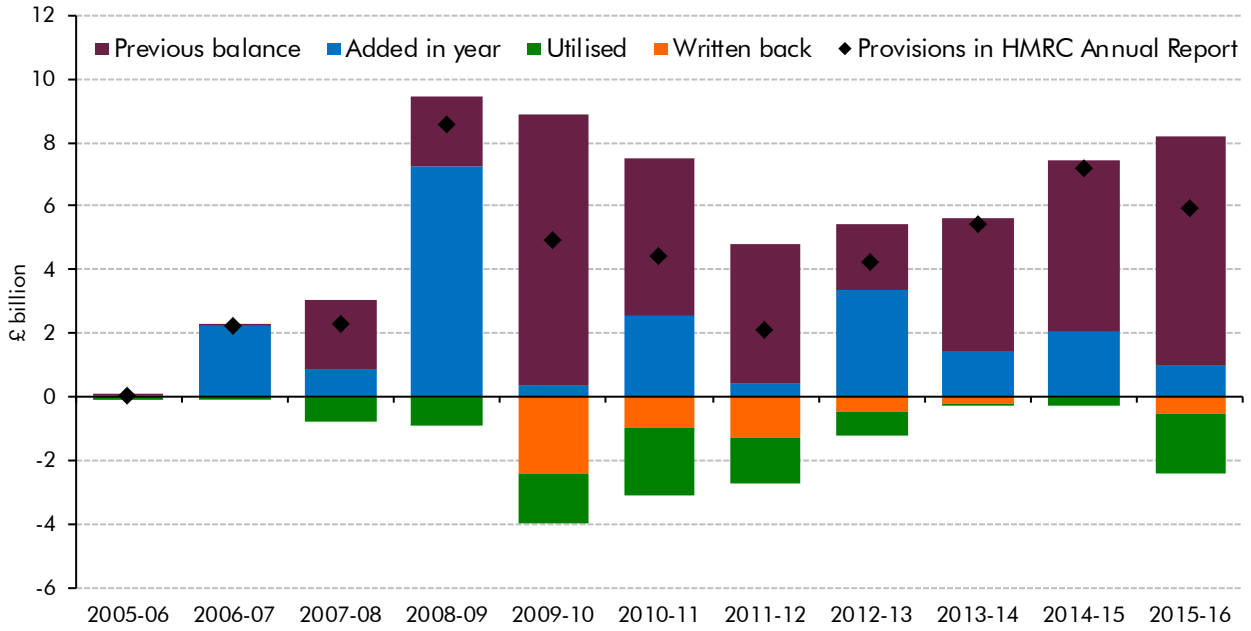
3.65 HMRC includes provisions and contingent liabilities in its accounts to cover risks from litigation where the tax at risk is over £100 million. The provisions cover cases where HMRC believes a settlement payment will probably be required, but where the lengthy nature of this type of litigation implies a significant degree of uncertainty over when the settlement will be made. Contingent liabilities cover cases where HMRC believes it is possible, but not probable, that a settlement payment will be required. Cases at an earlier stage of the litigation process might initially be included as a contingent liability before being reclassified as a provision at a later stage. Another distinction between the two categories might be the treatment of 'lead' cases and 'follower' cases. In a number of HMRC litigation cases a successful legal challenge from a lead plaintiff would also benefit a number of follower plaintiffs who are awaiting the outcome of the lead case. There is less information on these follower cases, so they are more likely to be included as contingent liabilities.

3.66 In our *EFO* forecasts, we assess the latest information available from HMRC on all large court cases and their associated risks, and include our central assumption of the amount and timing of payments over the forecast period. We take the view that the total amount paid out over the forecast period is equal to the current level of provisions and that, due to the lengthy nature of litigation cases, this is weighted toward the later years.[16]

3.67 Chart 3.3 shows the level of legal provisions and the amounts actually utilised in the past eleven HMRC trust statements. When provisions increased from 2005-06 to 2008-09, there were increases in the amounts utilised in the following years. The legal provision in 2008-09 was £8.5 billion and £5.8 billion was utilised from 2009-10 to 2012-13, which broadly supports our view that provisions will tend to be utilised with a lag, though clearly there is also movement in the amounts written back (not required) and the amounts added. Legal provisions increased from £2.1 billion in 2011-12 to £7.2 billion in 2014-15 as the amount of new provisions added exceeded those utilised or written back. Over the forecast period, we expect the relationship between changes in provisions and amounts utilised in subsequent years to continue. In 2015-16, £1.9 billion was utilised, helping lower the current level of provisions to £5.9 billion. The level of contingent liabilities increased from £14.5 billion in 2012-13 to £49.1 billion in 2015-16.

[16] Payments in litigation cases were previously treated in our forecast as negative taxes but, in line with the ESA10 statistical accounting guidance, they are now recorded as expenditure. The same guidance also means any interim payments are not recorded as expenditure until a final court settlement is reached.

Chart 3.3: HMRC legal provisions 2005-06 to 2015-16



Source: HMRC, OBR

Non-quantifiable contingent liabilities

3.68 Table 3.14 lists the main significant non-quantifiable contingent liabilities. These are judged unquantifiable either because the estimates of possible costs are too uncertain, or because quantification would jeopardise the outcome of a case. The WGA information summarised below shows the main non-quantifiable contingent liabilities listed in departments' accounts.

Table 3.14: Non-quantifiable contingent liabilities in the 2014-15 WGA

Details of the most significant non-quantifiable contingent liabilities in the 2014-15 WGA
• Legal claims, compensation claims and tribunal cases against various WGA entities.
• Commitments made by several WGA entities to fund any deficits of individual pension schemes.
• HM Treasury's contingent liability for risks associated with reinsurance arising from acts of terrorism. This is the contingent liability for the risk that the losses incurred by Pool Re or Pool Re (Nuclear) exceed their available resources.
• Various civil nuclear contingent liabilities in BIS resource accounts.
• Future increases in liabilities of the Financial Assistance Scheme beyond those recognised in the provision.
• Contingent liability in relation to the Channel Tunnel (to return the land to a suitable condition if the tunnel ceases to operate).
• Access to life insurance for Ministry of Defence personnel.

Remote contingent liabilities

3.69 The WGA also include details of remote contingent liabilities, where the chances of the liability actually arising are close to zero. These remote contingent liabilities are similarly divided into quantifiable and unquantifiable.

3.70 The 2014-15 WGA report that the quantifiable remote contingent liabilities decreased by £3.9 billion during the year, and stood at £65.5 billion at end-March 2014. The fall was

mainly due to a £3.7 billion reduction in the largest quantified remote contingent liability, which covers the UK share of the European Investment Bank's exposure. The quantifiable remote contingent liabilities were also restated at the beginning of 2014-15 to reflect the expansion of the 2014-15 WGA to include Network Rail. This meant that the Government's financial indemnity to Network Rail in support of Network Rail's debt issuance became completely contained inside the public sector boundary, and was therefore consolidated out of the WGA results.

Changes to discount rates and other factors that will affect provisions in the 2015-16 accounts

3.71 Departments' provisions for 2015-16 will include increases due to a reduction in the long-term discount rate used to measure the present value of provisions that are expected to be used after 10 years. Table 3.15 shows the evolution of the discount rates used when converting provisions into upfront amounts to record on the balance sheet. The Treasury introduced new discount rates for estimating provisions in all government accounts from 2012-13 onwards, but for longer-term discount rates these were only scheduled to come into effect as part of the 2015 Spending Review. The revised discount rates are based on the real yield on UK index-linked gilts, which is currently negative. When the discount rates for the short and medium-term provisions were reduced in 2012-13, that increased the value of reported provisions by £5 billion in the 2012-13 WGA. We can therefore expect the lower longer-term discount rate to produce another upward shift in the value of provisions reported in next year's WGA.

3.72 Departments were in the process of publishing the 2015-16 accounts that will underpin next year's WGA as we finalised this paper. These provide some indications of the possible effect of this discount rate change on next year's WGA. In particular, the Department for Energy and Climate Change's accounts for 2015-16 show that the provision for nuclear decommissioning increased by £91 billion in 2015-16, of which £89 billion is explained by the lower long-term discount rate. This provision is particularly sensitive to changes in the long-term discount rate because the programme of work on decommissioning extends over 100 years.

Table 3.15: Discount rates for central government provisions

	Real discount rate					
	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Short-term provisions (within the next year)	2.2	2.2	-1.8	-1.9	-1.5	-1.6
Medium-term provisions (within 2-5 years)	2.2	2.2	-1.0	-0.7	-1.1	-1.0
Long-term provisions (after 5 years)	2.2	2.2	2.2	2.2	2.2	-0.8

3.73 Finally, when thinking ahead to the 2015-16 accounts, it is worth noting that the pension schemes in assessment for the PPF at the end of March 2016 included the BHS schemes.[17] We would therefore expect the provisions included in the PPF accounts for 2015-16 to include the potential costs of paying compensation over the lifetime of these pension

[17] The pension schemes currently in assessment are listed on the PPF website. The BHS pension scheme and the BHS senior management pension scheme entered assessment in March 2016. As of June 2016, there were 80 schemes in assessment for the previous two years.

schemes. That would reflect the PPF's standard treatment and would not prejudge the outcome. If the final outcome from assessment was that these pension schemes were viable, then this provision would no longer be needed.

New contingent liabilities and guarantees from recent policy announcements

3.74 This section brings together the Government's main recent policy announcements that are expected to generate additional contingent liabilities and guarantees. The National Accounts fiscal aggregates that we forecast do not include these, because the probability of them materialising is judged to be less than 50 per cent. We would expect them to be included in the WGA when they begin to generate a potential future liability, with the liability expected to appear as some form of contingent liability, off the balance sheet. We keep track of these announcements to ensure that we cover any risks from these potential liabilities materialising and adding to PSNB and PSND in the future.

3.75 Table 3.16 provides an update on the main Government schemes that have been announced recently, but which have not yet materialised as significant future liabilities in the WGA. The largest is the UK Guarantees Scheme, which provides guarantees for private financing of UK infrastructure. Other schemes in this area include the Green Investment Bank (GIB) and the Pensions Infrastructure Platform. In preparing this analysis, we have sought and received assurances from the Treasury that there are no guarantees or contingent liabilities related to the other funding avenues listed in the National Infrastructure Programme that are significant in the context of Table 3.16.

3.76 In addition to the schemes shown in the table, we noted in our July 2015 *EFO* that the Government's signing of an agreement to join the Asia Infrastructure Investment Bank (AIIB) could give rise to additional future liabilities. The UK will make a capital contribution of about £2 billion in total to the AIIB, which will consist of about £0.4 billion of 'paid-in capital' and £1.6 billion 'callable capital', which unless or until it is called will become a contingent liability in due course. The 2014-15 WGA states that the callable capital will be treated as a remote contingent liability, as it would only be called for if there was a crisis affecting the AIIB's assets or loans, and no such instance has occurred in any major multilateral development bank in the past.

3.77 While the precise accounting treatment of some of the future liabilities discussed here may not be known until future years' WGA are published, it is useful to monitor the broad implications for fiscal sustainability. Most importantly, while the probabilities of each of the contingent liabilities happening on their own could well be considered as remote, the probabilities of the liabilities crystallising would most likely be positively correlated. In particular, the probability that the various parties to which the Government is exposed will default would increase in the event of an economic downturn, particularly if it was focused on the housing and financial sectors. The more serious the downturn, the greater the likelihood of a larger proportion of contingent liabilities crystallising to the detriment of fiscal sustainability. This risk assessment is consistent with the results of a recent cross-country study of contingent liability events published by the IMF. It noted that "*contingent liability realizations are correlated among each other and tend to occur during periods of growth*

reversals and crises, accentuating pressure on the budget during already difficult times."[18] This is an issue we plan to explore in greater detail in our forthcoming *Fiscal risks report*.

Table 3.16: Schemes with future liabilities announced after March 2014

Scheme	Limit (cap)	Date scheme announced	Period scheme operates	Extent scheme operating	In 2014-15 or 2015-16 accounts?	Resource accounts
Housing Guarantee Scheme[1]	£10 billion	Sept 2012, extended to Dec 2017 in Budget 2016	June 2013 to December 2017	At the end of March 2016 DCLG had approved borrowing of over £2.4 billion of which £1.4 billion had been drawn down and covered by guarantee[1.]	In 2014-15 and 2015-16 accounts	DCLG
Help to Buy: mortgage guarantee	£12 billion	Budget 2013	October 2013 to December 2016	Currently operating. Contingent liability to March 2016: £1.1 billion.	In 2014-15 and 2015-16 accounts	HMT
Help to Buy: equity loan	£12.3 billion	March 2013. Cap and length of scheme extended in 2015 SR	April 2013 to March 2021	Currently operating. Loans issued to March 2016: £3.6 billion.	In 2014-15 and 2015-16 accounts	DCLG
Help to Buy: ISA	£3,000 per first-time buyer	March 2015	December 2015 to November 2019[2]	Currently operating. Treasury accounts show a provision of £60 million for future bonus payments accrued to end March 2016.	In 2015-16 accounts	HMT
Export Refinancing Facility	£5 billion[3]	July 2012	Permanent	Open for business, but no loans issued yet.	Not included until UKEF makes a loan	UKEF
Business Bank Wholesale Guarantees	£2 billion	Launched at Budget 2014	2014 onwards	The first guarantee was committed in 2014-15. This will support £125 million of lending, some of which was issued through Clydesdale Bank in 2015-16.	Mentioned in 2014-15 and 2015-16 accounts	BIS
Business Bank Help to Grow	£165 million a year, with associated contingent liability of £50 million a year	February 2015, with further details at Budget 2016	Initial pilot from April 2016 to March 2018	The first £30 million transaction was signed with Lloyds Bank in May 2016	Not included in main account yet	BIS

[18] IMF (January 2016), *The Fiscal Costs of Contingent Liabilities: A New Dataset*, IMF Working Paper WP/16/04.

Scheme	Limit (cap)	Date scheme announced	Period scheme operates	Extent scheme operating	In 2014-15 or 2015-16 accounts?	Resource accounts
UK Guarantees Scheme	£40 billion of contingent liabilities	Initially announced in July 2012. Length of scheme extended in November 2015.	October 2012 to March 2021.	9 guarantees signed so far, covering £1.8 billion of scheduled repayments for specific UK infrastructure projects. Around 11 further projects are pre-qualified and active. In September 2015 the Chancellor announced an initial £2 billion government guarantee for a new nuclear power station planned for Hinkley Point C. Any contingent liability associated with this announcement will only occur once the deal has been signed and guaranteed debt has been issued. That has not taken place yet.	Signed guarantees included in HMT 2014-15 and 2015-16 accounts as contingent liabilities	HMT
Potential wider liabilities from Hinkley Point C	-	Departmental Minute presented to Parliament in October 2015	When (after) the Secretary of State Investor Agreement signed (not yet finalised)	Will not operate until Secretary of State Investor Agreement (SOSIA) signed, and Hinkley Point C built and operating. Potential contingent liabilities include a contract for difference on the price of the electricity generated, and several potential liabilities on the contracts concerning the waste disposal.	No - not applicable until SOSIA signed. Background explained in the 2015-16 accounts, in the interests of transparency	DECC
Flood Re	-	October 2015	25 years from April 2016 onwards	26 insurance providers had signed up with Flood Re by 15 June 2016. Flood Re will purchase its own reinsurance and hold reserves and capital so that it can fully cover all claims in at least 99.5% of years. Stop-loss insurance further limits residual exposure.	Mentioned in 2014-15 and 2015-16 accounts, but not operational until 2016-17	DEFRA

[1] This scheme includes Private Rented Sector and Affordable Housing guarantees. The information on the extent that the scheme is operating relates to the Affordable Housing Debt Guarantee Scheme, which closed in March 2016. Private Rented Sector guarantees have not been utilised yet, but the scheme has been extended to December 2017.

[2] Accounts can be opened up to 30 November 2019.

[3] This cap for UKEF's Export Refinancing Facility is separate from the £50 billion upper limit on UKEF's provisions and capital liabilities for its guarantees and insurance policies.

4 Conclusion

4.1 The analysis of public sector balance sheet measures presented in this paper has highlighted the importance of understanding how individual measures are constructed in order to interpret them – both the snapshot they provide at a given point in time and how they change from one year to the next.

4.2 In terms of the National Accounts measures:

- our estimate of **public sector net debt** in 2015-16 has been revised up by 3.5 per cent of GDP since last year, but that is almost entirely explained by an ONS classification decision that means that the net debt of housing associations now counts towards PSND rather than being part of the private sector's balance sheet. Debt is also expected to rise as a share of GDP in 2015-16, where it had been expected to fall, with that change largely down to movements in the denominator – nominal GDP – rather than the cash value of net debt;

- the broader measure of **general government net worth** deteriorated much more in 2014 than would have been expected given the small increase in PSND. That stems largely from GGNW valuing outstanding gilts at market value – which increased during the year as bond yields fell – whereas PSND uses their nominal values. In this instance, it is the narrower measure of PSND that is likely to provide the better indication of how the health of the public finances has changed over the year; and

- the **financial asset sales** that have been a feature of our recent forecasts will affect net debt and net worth in different ways. These asset sales in effect convert an illiquid asset into either a liquid asset (cash proceeds of the sale) or reduced liabilities (gilts that no longer have to be issued), so they reduce PSND, which only nets off liquid assets. But converting one form of asset into another – or reducing both assets and liabilities in equal measure – would not affect net worth.

4.3 In terms of the WGA, this year's WGA and the 2015-16 departmental accounts that will form the basis of next year's WGA provide many examples of how changes in discount rates and other measurement issues can have big effects:

- the **net public service pension liability** has increased by £190 billion, with £151 billion explained by the WGA line that includes the effects of a lower discount rate. Unfortunately, the WGA do not split out the effect of the discount rate from other measurement changes, so this is not just a big effect but an opaque one too;

- the value of England-only **student loan assets** on the BIS balance sheet was pushed up by £5.5 billion in 2015-16 as the discount rate used to calculate the present value of

future repayments was lowered significantly. That discount rate change explained about three-quarters of the reduction in the 'RAB charge' – a measure of the extent to which discounted future payments fall short of total outlays on student loans – from 45 per cent in the 2014-15 accounts to 20 to 25 per cent in the latest accounts;

- the **provision for nuclear decommissioning** has increased by £5.5 billion in 2014-15 – the latest in a series of rises – with new information on the cost of the existing liability explaining much of the change. In the Department for Energy and Climate Change's 2015-16 accounts, the value of the provision has increased by a further £91 billion, mostly because a much lower discount rate was applied to the provisions for 10 years ahead and beyond; and

- HMRC's **provisions and contingent liabilities for oil and gas decommissioning** have been subject to repeated and significant measurement changes. Over time, these costs have been treated as provisions, quantified contingent liabilities and unquantified contingent liabilities. They have covered both petroleum revenue tax and corporation tax or just the former. And they have referred to different time periods, ranging from five years up to more than 25 years.

4.4 In this year's analysis of the WGA provisions and contingent liabilities we have shown how some of the recent increases in provisions reflect actual emerging pressures, but most are explained by changes in measurement. Understanding the reasons for changes in provisions and contingent liabilities is important for our future work on fiscal risks – should a rise be interpreted as greater risk to the public sector balance sheet or just better understanding of the risks that already existed? This particularly applies to contingent liabilities, where the sources of changes are not explained systematically. For example, assessing the probabilities of fiscal risks occurring would require information on the amounts of contingent liabilities that have crystallised as actual events.

4.5 In this paper we have once again highlighted the risk that the probabilities of some contingent liabilities crystallising are most likely to be positively correlated, particularly in the event of an economic downturn that was focused on the housing and financial sectors. The more serious the downturn, the greater the likelihood of a larger proportion of contingent liabilities crystallising to the detriment of fiscal sustainability. This is an issue we plan to explore in greater detail in our forthcoming *Fiscal risks report*.

4.6 The measures of the public sector balance sheet explored in this paper provide a useful snapshot of the fiscal impact of past government activity. But they are of limited use in assessing fiscal sustainability, because neither measure includes the expected impact of future government activity, notably future spending and future tax raising. We will continue to assess the effects of those long-term flows on the future path of PSND in our *Fiscal sustainability reports*.