

Article

# Looking ahead – developments in public sector finance statistics: 2019

Outlining what the Office for National Statistics sees as areas for future development in the public sector finances.

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# 1 . Introduction

In July 2018, we published an article that provided information on [methodology work we were planning to undertake](#). This publication updates the 2018 article and discusses progress in the areas we started to explore last year, also listing areas of expected future research.

The methodological developments discussed in this publication will ensure that the public sector finances reflect the latest international statistical guidance on methods and classifications as well as statistical best practice. However, we do not attempt to pre-empt new government policies, nor events in the wider UK economy.

In this release, we provide an update on the improvements we first mentioned in our 2018 publication, many of which will be implemented in September 2019. We then discuss areas that deserve examination in the longer-term. Within each section we set out the reason for reviewing the existing methods and discuss methodological considerations. We also offer an opportunity to provide feedback on our plans, including on areas which we may not have identified in this article, but which nonetheless merit investigation or a methodology review.

## 2 . Context

The monthly public sector finance (PSF) statistics are published jointly by the Office for National Statistics (ONS) and HM Treasury. They provide information about the current state of the UK government's fiscal position and are compiled in accordance with the international statistical guidance in the [European System of Accounts 2010: ESA 2010](#) and the [2016 edition of the Manual on Government Debt and Deficit: MGDD 2016](#). The coverage of the PSF statistics is the UK public sector, which is defined according to sector [classification decisions made by the ONS in compliance with ESA 2010 and MGDD 2016](#). The methods and data sources used in the compilation of the monthly PSF statistics are [described in a methodology guide](#).

Development of methodology is a continuous process, not only for the ONS but also for the international statistical community. Organisations such as the United Nations, Eurostat, the Organisation for Economic Co-operation and Development, and the International Monetary Fund all contribute to improving the framework for compiling national accounts and wider economic statistics. Although changes or clarifications to the international guidance relating to national accounts are prompted by the need for statistics to keep pace with the evolving nature of the economy and fiscal policy, they can cause discontinuities in data reporting or complicate the understanding of statistics at the point of implementation.

The purpose of this article is to increase transparency around the methodology work, including the impact of [classification reviews that we are undertaking or are intending to undertake](#). To this end, we discuss the areas of fiscal statistics that we aim to review and potentially improve. We also remain committed to publishing separate in-depth methodological papers on the topics of high significance, such as student loans, and to providing an indicative impact of all material changes in the PSF bulletins ahead of the implementation dates. Section 5 describes our transparency strategy in more detail.

At the time of publishing this article, we do not know what the future actions of government will be. This relates both to future policies and to implications of such policies on the ways we measure government performance. For example, should the government choose to set its future targets against a different fiscal aggregate or aggregates, we may have to adapt and extend our methods to support the measurement of government's performance against those targets.

Neither are we able to predict the impact of changes in law where the intent of government is known but the ultimate shape of the legislation, or the timing of financial flows that may arise from it, is not. The UK's withdrawal from the EU and the financial settlement associated with it is one such example. The conditions of the UK withdrawal may also influence [our relationship with Eurostat](#).

Normally, any material methodological issues that arise after publication will be discussed in the next annual update of this article. On exceptional occasions there may be a need to resolve a newly identified issue more quickly, preventing discussion in the next scheduled annual publication. Should such issues arise, we will decide on a case by case basis how best to communicate the methodological work to public sector finance users ahead of implementation.

### 3 . Opportunities for providing feedback

As part of our strategy (see Section 5), we are committed to review and annually update this publication to ensure our fiscal statistics accurately reflect the environment they are designed to measure. We recognise the value that users can provide in identifying further areas of development or improvement for public sector finance (PSF) statistics. Therefore, we would appreciate if users of public sector finance statistics could respond to the following questions:

1. Do you agree with the development areas identified in this publication?
2. Do you agree with the proposed timeline of investigation and implementation?
3. Should we look at other areas in relation to public sector finance statistics?

You can respond by answering the questions in this section or offering any further comments and emailing your response to [psa@ons.gov.uk](mailto:psa@ons.gov.uk). You can also post your responses to:

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We will review all responses. Any changes to our plans that result from your feedback will generally be reflected in the next annual update of this article.

## 4 . Developments in public sector finance statistics

### 4.1. Overview of planned developments

Many potential changes discussed in this article require extensive research and development programmes before they can be incorporated into official statistics. This may be the case even if some provisional estimates are available from non-statistical sources. New methods or data sources need to be assessed to ensure they meet the quality requirements and are generally compliant with the [Code of Practice for Statistics](#).

In addition, we would normally introduce any new data for the entire time period to which these data apply, to avoid discontinuities and artificial step changes in the data. Sourcing or modelling historic data can often take months. To provide an indication of when we plan to introduce changes to the official statistics, we have chosen to categorise developments into short-, medium- or long-term projects.

Short-term changes are those that we aim to implement in public sector finance (PSF) statistics within 18 months from the date of this publication. For many of these changes, this means implementation in the PSF bulletin that will be published in September 2019. One improvement, namely the presentation of data in accordance with the International Monetary Fund's Government Finance Statistics Manual, is not directly linked to the PSF publication timetable and has its own implementation timeline.

Finally, some items, such as the work to improve the estimate of public sector net financial liabilities, require a phased approach to implementation where the later phases may potentially stretch beyond the 18-month term. In total, we categorise the following improvements as short-term:

- treatment of student loans
- presentation of pension data on a gross basis
- International Monetary Fund's Government Finance Statistics framework
- treatment of depreciation
- continuous development of public sector net financial liabilities
- recording of leases

Medium-term developments are expected to be implemented within three years of the date of this publication. Generally, these are the areas we plan to focus on immediately after the implementation of the short-term projects.

Some of these improvements cannot be made without significant changes to data collection methods or processes, often across multiple organisations. For example, improving the quality and timeliness of the local government data may require all local authorities to produce and submit data that would supplement the present way of reporting revenue and expenditure.

In general, we expect to accomplish the following developments within the next three years:

- data on contingent liabilities and other potential obligations
- treatment of universal credit
- recording of inventories
- treatment of wider higher education funding
- development of local government statistics

Finally, longer-term developments are expected to be accomplished beyond the three-year time horizon. The following areas fall under this category:

- analysis of the utilities sector
- accruals of taxes, taxes paid by government and tax expenditures
- methodology associated with public financial corporations
- treatment of decommissioning costs and transfers of assets for the purpose of decommissioning
- rearranged transactions

There is a significant likelihood that the international statistical manuals may be updated during the period covered by this article. We expect that Eurostat will publish the ninth edition of the [Manual on Government Deficit and Debt](#) during 2019. It may contain new interpretations of the [European System of Accounts 2010 framework](#) and clarify its application. We will assess the changes to this and any other statistical manuals and may reprioritise our work programme accordingly.

## 4.2. Short-term developments

### Treatment of student loans

We have reviewed the treatment of student loans in the UK National Accounts and public sector finances and decided that the best way to reflect student loans within these statistics is to treat part as financial assets (loans), since some portion will be repaid, and part as government expenditure (capital transfers), since some will not.

The stock of student loans has grown rapidly in recent years and a significant proportion of the total value of the loan book is now expected to be cancelled at maturity. Our review of student loans, announced in April 2018, was driven by these concerns and in response to reports published by the [Treasury Select Committee](#) and [House of Lords Economic Affairs Committee](#). Both reports recommended that the Office for National Statistics (ONS) should re-examine the classification of student loans as financial assets for government. Since the commencement of the review, we have engaged with the international statistical community to ensure that the way these loans are treated reflects how the system works in practice.

A great deal of progress has been made. In July 2018, we discussed the [potential options for treating students loans](#) and the independent Office for Budget Responsibility (OBR) estimated how an [adoption of each of these options would affect the fiscal aggregates](#). In December 2018, we announced our [final decision to partition the loan outlay into lending and expenditure elements](#).

This decision means that the treatment of student loans within public sector net borrowing and the value of the loan asset recorded on the balance sheet will better reflect government's financial position. This is because government revenue will no longer include interest accrued that will never be paid; and government expenditure related to cancellation of student loans will be accounted for in the periods that loans are issued rather than at maturity.

In December 2018, we announced our intention to implement the new student loans treatment in September 2019. In the meantime, the independent OBR updated its assessment of the likely impact of the new student loans treatment.

In the Economic and fiscal outlook – March 2019, the OBR estimated that public sector net borrowing (PSNB) under the new treatment [would have been £10.5 billion higher in financial year ending March 2019](#), compared with the present treatment of student loans, also noting that this assessment is based on the provisional understanding of the ONS approach. Public sector net financial liabilities (PSNFL) are also expected to increase, reflecting the lower value of the loan asset held by government.

On the other hand, public sector net debt (PSND) is invariant to the student loan treatment, being affected only by the levels of cash extended to borrowers at inception and repaid by them in consequent time periods. We plan to publish a detailed methodology guide on this topic and our provisional fiscal estimates in June 2019.

## **Presentation of pension data on a gross basis**

In September 2019, we will be changing the way in which we present funded public employment-related pension schemes in the public sector finances (PSF) statistics. In addition to our current presentation, which recognises public sector's liability for the pension scheme deficit, we will extend to include pension schemes themselves (and all their assets and liabilities) and the Pension Protection Fund within the public sector boundary.

The treatment of public sector pensions is an important element of fiscal statistics, which constitutes a significant proportion of public sector liabilities. The treatment of those liabilities has changed in recent years with the adoption of a new international statistical framework in 2014 (European System of Accounts 2010: ESA 2010).

The recording of pensions in PSF statistics is complicated by the need to balance exhaustiveness and transparency against the risk of distorting the main fiscal aggregates such that the meaning of the statistics is not impaired. The main dilemma is whether pensions should be presented on a net basis (recognising only public sector's liability for any accumulated deficit), or a gross basis (where total assets and total liabilities of the pension schemes are recorded). The latter approach would be more exhaustive, however, it would greatly increase the volume of assets recorded on the public sector balance sheet, which could potentially complicate the assessment of non-pension assets held by public sector units.

Additionally, the statistical guidance explicitly states that liabilities for unfunded schemes should not be recognised in the national accounts. By design, such liabilities will be paid from future revenues as opposed to pools of assets that exist in the present, as is the case in funded schemes. At the same time, we judged that presenting the liability for unfunded schemes could enhance the transparency of fiscal statistics. Although, in adherence to the statistical guidance, we only proposed presenting unfunded pension liabilities in auxiliary statistical tables.

In February 2018, we referred the treatment of pensions in PSF to the [Public Sector Finances Technical Advisory Group](#), a group of experts that advises on issues that arise when defining how organisations, transactions and balance sheet levels should be recorded in the PSF statistics. In June 2018, [we explained the options and consulted on the presentation of pension externally](#).

In November 2018, we [responded to the consultation and announced our decision](#). Having carefully considered the responses to the consultation, we have decided to implement each of the three recommendations made by the Public Sector Finances Technical Advisory Group, namely:

- to include assets and liabilities of the funded public sector employment-related pension schemes in the fiscal aggregates
- to record the Pension Protection Fund in the public sector boundary
- to report obligations of the unfunded public sector pension schemes, both employment-related and those that cover the wider population, in a supplementary table published alongside the main public sector finances presentation, but not in the main fiscal aggregates

It should be noted that pensions differ from most elements of fiscal statistics in their heavy reliance on actuarial modelling. The size of the liability depends on the demographic factors, such as life expectancy, economic assumptions such as pre-retirement wage of the scheme members, and the discount rates used in valuing the future liability. There is a considerable time lag in the availability of these actuarial data, which can exceed three years for some pension schemes. This may lead to revisions to historic fiscal aggregates once the modelled estimates are replaced with the outturn data.

We expect the work on implementing these recommendations to be completed in time for their inclusion in the public sector finances bulletin published in September 2019. While many changes are of presentational nature, we expect that public sector net debt (PSND) should decrease as result of the consolidation of pension schemes' gilt holdings and liquid assets<sup>1</sup>.

Public sector net financial liabilities (PSNFL) will also change, albeit by smaller amounts, owing to the conventions followed in the valuation of government debt<sup>2</sup>. Finally, public sector net borrowing (PSNB) will be affected by a wider range of transactions related to pensions, including instances when pensions schemes enter the Pension Protection Fund. In September 2019, we plan to publish a detailed paper and transparency tables reconciling the old and the new ways of presenting the pensions data.

## **International Monetary Fund's Government Finance Statistics framework**

In June 2019, we will introduce new supplementary tables alongside the public sector finances bulletin that are compliant with the International Monetary Fund's (IMF) Government Finance Statistics framework. This is being done to provide users with a wider view of public sector assets and liabilities in accordance with the recommendation in the [IMF's Fiscal Transparency Evaluation for the UK](#).

The UK public sector finance (PSF) statistics are based on national accounts concepts and rules that are primarily derived from the European System of Accounts 2010: ESA 2010, which in turn is based on the United Nations' System of National Accounts 2008: SNA 2008. There is another framework for presenting fiscal statistics, which is based on the IMF's Government Finance Statistics Manual 2014: GFSM 2014.

GFSM 2014 is largely derived from SNA 2008, as is ESA 2010, so the two are generally consistent. However, some differences do exist, and work is required for supplementary UK government finance statistics to be presented in a way that is fully compliant with GFSM 2014. We first mentioned our plans to increase our compliance with this statistical framework in last year's publication, this commitment was again confirmed by the Chancellor in the Autumn Budget 2018 with reference to balance sheet reporting.

Our article last year described the main differences between the frameworks and the drivers for our desire to be fully GFSM 2014 compliant. We stated that we would publish the first set of tables by Spring 2019 and continue to make improvements beyond this. We can confirm that alongside the public sector finances bulletin that will be published in June 2019, we will publish the first set of GFSM 2014 compliant tables along with an article outlining methodology and future plans. Data will be for the whole public sector and will include:

- data on operations (revenue, expense, transactions in non-financial assets and financial assets and liabilities as well as GFSM balancing items)
- some information on other economic flows
- balance sheet (financial and non-financial balance sheet including debt at different valuations)
- reconciliation tables between ESA 2010 public sector finance fiscal aggregates and GFSM equivalents

These tables will be updated quarterly.

In September 2019, we aim to make further improvements to these tables by incorporating data related to employment-related pensions, both funded and unfunded. This is dependent on the wider work we are doing to bring funded public sector employment-related pension schemes into the public sector boundary.

Also in September 2019, to address differences between GFSM 2014 and ESA 2010 on the recording of public-private partnerships (PPPs), we plan to include those PPPs that are considered on the balance sheet under business accounting. This means private finance initiatives (PFIs), which are recorded on the balance sheet in the HM Treasury's Whole of Government Accounts, will be included in the GFSM 2014 statistics as on-balance sheet PPPs. This approach will capture more liabilities within the public sector finances as many of these projects are off balance sheet under ESA 2010.

Finally, in the medium-term, we aim to improve our coverage of contingent liabilities and other potential obligations. Once we have made these improvements, we will include data on contingent liabilities and potential obligations in the GFSM tables.

## **Treatment of depreciation**

New capital stocks and consumption of fixed data capital data will be incorporated into Blue Book 2019 and public sector finance (PSF) statistics in September 2019. This culminates from ongoing work to improve the Perpetual Inventory Method (PIM) from which consumption of fixed capital (CFC) data are derived.

In preparation for the [UK National Accounts Blue Book 2019](#), we undertook a review of the asset life lengths and the related flows used in the measurement of capital stock. This includes the re-establishment of estimation of the PIM at the industry, asset and institutional sector level. It also involves the introduction of calculations to provide full reconciliation between the opening and closing balance sheet – such as gross fixed capital formation, consumption of fixed capital, holding gains or losses, and other changes in volume.

For the public sector accounts, the ongoing development work is focused on improving capital stock estimates and as a result, through the PIM, the CFC estimates. These new data will be incorporated into Blue Book 2019 and the related quarterly national accounts in September 2019. At this point, GFSM tables will be updated to reflect these new data.

The improvements to the public sector capital stock estimates do not directly impact the monthly PSF statistics. However, the public sector CFC features within the calculation of receipts, current expenditure and net investment (or capital expenditure) aggregates of the PSF statistics. CFC estimates do not impact on public sector net borrowing (PSNB), thanks to netting, but they do affect the public sector current budget deficit (PSCB). These developments will not impact either public sector net debt (PSND) or public sector net financial liabilities (PSNFL).

## **Continuous development of public sector net financial liabilities**

We continue to strengthen our measurement of public sector net financial liabilities (PSNFL). This year, we will be improving the coverage of the public corporation sector's financial balance sheet. These improvements will increase the total values of public corporations' assets and liabilities.

PSNFL was unveiled in the 2016 Autumn statement, when the Chancellor announced a supplementary fiscal aggregate with a considerably wider coverage of financial instruments than public sector net debt (PSND) or the harmonised EU member states' measure, general government gross debt (Maastricht debt). This meant that robust data on financial instruments such as equity, derivatives or pension liabilities, which had not been used to derive the fiscal measures historically, were required to estimate the new PSNFL aggregate.

In response to the new demands, we launched a review into the wider areas of the public sector balance sheet. The most significant improvement has been to the estimates of government liabilities in relation to funded public sector pension schemes.

We are also making improvements in other areas. The most notable of these is our review of public corporations' balance sheet. Although there are [over 3,000 legal entities in the public sector that could be broadly described as companies](#), for statistical purposes, most entities in question are classified to the general government sector in reflection of their economic substance. Such units pose relatively few complications with regards to their treatment and data collection.

On the other hand, the data on companies deemed sufficiently removed from departmental control and satisfying the statistical definition of market producers was often collected on an individual basis, which sometimes resulted in delays in reflecting changes to sector composition. We have been working together with HM Treasury to use their existing administrative datasets, such as the Whole of Government Accounts, where these datasets have the potential to fill the gaps in statistical data collection.

This work is not without its challenges. We [explained in the article on the wider measures of government debt](#) that there are important differences in recognition of financial assets and liabilities under the European System of Accounts 2010: ESA 2010 and International Financial Reporting Standards: IFRS, which underpin the Whole of Government Accounts. Furthermore, even where both frameworks recognise an asset or a liability in principle, the IFRS financial instrument categories do not always align to the ESA 2010 categories, and the same is true for valuation methods.

Another complication is that in public sector finance statistics, cross-holdings of financial instruments are consolidated on a sub-sector level, but certain presentations require us to show, for example, lending by central government to public corporations. In the Whole of Government Accounts, the consolidation is ultimately applied at the entire public sector level.

Following the introduction of the strengthened pensions data in the August 2017 bulletin, we made the initial improvements to other assets and liabilities in the March 2018 PSF bulletin, and will be introducing further significant improvements to the public corporation sector's balance sheet in September 2019. We expect that as a result of the enhanced coverage, the total values of assets and liabilities reported on the public sector balance sheet should rise. This will strengthen our estimate of PSNFL and may also result in smaller improvements to the measurement of public sector net debt (PSND), for example, if we identify any additional loan liabilities that should be recorded in the public corporation sub-sector. Public sector net borrowing (PSNB) will not be affected by this change.

## **New International Financial Reporting Standards treatment of leases**

In 2016, the International Accounting Standards Board issued the [IFRS 16 standard](#), which replaced the earlier IAS 17 and prescribes a different treatment of leases in business accounting. Under IAS 17, financial statements categorise leases as either finance leases (reported on lessees' balance sheet) or operating leases (off balance sheet). Under IFRS 16, nearly all leases will be reported on balance sheet within lessees' financial statements, leading to increases in lessees' reported debt and non-current assets. However, the guidance under IFRS 16 is not necessarily symmetric between lessees and lessors meaning that the lease may or may not be recorded on the lessors' balance sheet.

The changes to the International Financial Reporting Standards (IFRS) are a potential issue for the public sector finance (PSF) statistics because most UK public sector organisations compile accounts in accordance with IFRS, adapted or interpreted for the public sector. Following the introduction of IFRS 16, the [Financial Reporting Advisory Board \(FRAB\)](#) mandated the use of IFRS 16 in public sector financial reports that relate to the financial year ending (FYE) 2021.

At present, the source of leasing data in the public sector finances is the business accounting data compiled in accordance with IAS 17. In effect this means that we are using IAS 17 data as a proxy for ESA 2010. This is necessary due to the very large number of leases (numbering in the tens of thousands) in place across the public sector and the impossibility of individually classifying under ESA 2010 each individual lease.

IFRS 16 is conceptually markedly different from both IAS 17 and ESA 2010. Therefore, it is likely that the data sources used for leases in PSF will report step changes between the FYE 2020 and FYE 2021. In addition, the lack of symmetry between lessee and lessor recording in IFRS 16 presents challenges for national accounts and public sector finances, which need to fully reconcile between sectors.

Therefore, we have to consider how to continue to compile ESA 2010 compliant leasing data once the underlying source is following the new IFRS 16 standard. We are working closely with HM Treasury to find a resolution to this challenge. As part of this work, we have reviewed a small representative sample of government leases to determine how they would be classified under ESA 2010. We have then compared this with the accounting under IFRS 16 and IAS 17 to investigate which would be a more suitable proxy for ESA 2010. Through this work, we found that all the public sector property leases reviewed had substantial risk transfer from the lessor to the lessee indicating that a recording as a financial lease would be most appropriate. This was unexpected, as under IAS 17 most property leases would be accounted for as operating leases.

Based on this analysis, we have concluded that:

- in the case of property leases, IFRS 16 is a good proxy for ESA 2010, so we will use IFRS 16 data
- in the case of non-property leases, we think IFRS 16 is not such a good proxy, so we will take IFRS 16 data, which have been adjusted to better align with the concepts applied in ESA 2010

Having come to this conclusion we now need to work with HM Treasury to source appropriate data not only for future public sector leasing, but also to revise the leasing data historically, so that the full time series is on a consistent methodological basis. We also will need to consider further some methodological issues, such as how best to adjust the IFRS 16-based accounting data for non-property leases and how to avoid any double counting of assets where the lessor and lessee are both public sector bodies.

The effect IFRS 16 will have on the UK's fiscal aggregates and other economic statistics is difficult to estimate at this stage, as is the effect it may have on the size and operation of leasing markets. These effects were summarised in [last year's Looking ahead article](#), and as soon as further analysis on the potential impact has been carried out, we will look to make the relevant estimates available.

### **4.3. Medium-term developments**

#### **Data on contingent liabilities and other potential obligations**

We aim to improve the coverage and presentation of data on contingent liabilities that are currently reported alongside our [Wider measures of public sector debt article](#) and which will be reported in Government Finance Statistics Manual (GFSM) tables.

Contingent liabilities are possible obligations that only arise when specific conditions prevail in the future. As such, there is uncertainty over whether a payment will be required or not, and its potential size.

Alongside our annual article titled [Wider measures of public sector debt](#) we publish statistics on government contingent liabilities and potential obligations, in accordance with Article 14 of the European Commission directive EC2011/85, which forms part of a wider set of legislation known as the "6-pack". We have also committed to publishing statistics compliant with the International Monetary Fund's (IMF) government finance statistics framework.

Contingent liabilities can be explicit or implicit; explicit contingent liabilities are defined as legal or contractual agreements that stipulate the conditions under which payment would be required. These include one-off guarantees, which may involve government guaranteeing existing debt of another body or providing contingent credit facilities, for example, extending a loan under specific circumstances. Explicit contingent liabilities other than one-off guarantees can include potential legal claims, indemnities or uncalled share capital.

Implicit contingent liabilities do not arise from a legal or contractual source but are recognised after a condition or event is realised. Possible future spending arising from unguaranteed obligations of other public sector units (if they fail to meet them); government ensuring solvency of the banking sector; or net obligations of future social security benefits, fall under this category.

National accounts manuals, IMF's [Government Finance Statistics Manual 2014: GFSM 2014](#) and business accounting are all broadly consistent in their definitions of contingent liabilities and their reporting of contingent liabilities as supplementary information rather than in the main accounts.

Where the national accounts manuals and GFSM 2014 differ to commercial accounting standards is in the case of provisions. A body may set aside funds to cover unexpected events or other potential future obligations, known as provisions. Unlike contingent liabilities, provisions have a probable likelihood of payment where uncertainty lies around timing and value of the final payment. Provisions affect statements of financial position and income or expenditure of a body in their commercial accounts. National accounts and GFSM frameworks do not treat provisions as liabilities<sup>3</sup> as the related event has yet to materialise.

While not conceptually different, the presentation and reporting of contingent liabilities and other potential obligations is different between the ESA 2010 and GFSM 2014. The GFSM presentation of contingent liabilities makes a greater distinction between explicit and implicit contingent liabilities and encourage reporting of potential legal claims and indemnities. Although the 6-pack tables do not make this distinction, information on other potential obligations or losses are presented – such as outstanding amounts on off-balance sheet public-private partnerships (PPPs), non-performing loans or equity in corporations.

We aim to improve our coverage of contingent liabilities and other potential obligations using HM Treasury's administrative datasets. Improvements will be reflected in both the 6-pack and GFSM tables, where GFSM tables may be further adapted. As these improvements relate to memo items to the accounts, they will have no impact on any of the fiscal aggregates.

## **Treatment of universal credit**

The design of universal credit requires us to review the ways in which we categorise benefits by function. We will also review the time of recording expenditure on benefits to ensure that it is consistent with the accrual basis of accounting.

Universal credit replaces six pre-existing benefits:

- child tax credit
- housing benefit
- income support
- income-based jobseeker's allowance
- income-related employment and support allowance
- working tax credit

The new benefit consists of the standard allowance and extra amounts payable to claimants depending on their circumstances, such as having children, or living with a disability.

The transition from the benefit system targeting specific social risks, such as unemployment, to that focused on providing the claimants with certain amounts of disposable income, requires us to reassess our methods of classifying government expenditure by function. Within the broad social protection function, we need to identify the amounts spent on individual social risks such as sickness, disability, old age, unemployment, family and children, and so on. Such a categorisation is to a lesser extent supported by the administrative structure of universal credit than had been the case under the older benefit structure.

Additionally, we need to review the time of recording of universal credit payments. In the national accounts, social assistance benefits should be recorded when the claims on the benefits are established, rather than when the money is transferred to the claimant's bank account. As a result, we may need to design ways of time-adjusting the administrative data to record expenditure when the claims are established.

## **Recording of inventories**

We have broadened the scope of work identified last year to improve inventories data related to military expenditure, by extending to inventories of the wider public sector. We will initially focus on general government data and then investigate public corporations.

Inventories are produced assets consisting of goods and services held for use in production, sale, or other use at a later date. The measurement of inventories can be difficult and can affect the different measures of gross domestic product (GDP).

In the UK national accounts, inventories are recorded by all sectors, including general government and public corporations. Inventories fall into five main categories:

- materials and supplies
- work-in-progress
- finished goods
- military inventories
- goods for resale

Materials and supplies consist of all goods held with the intention of using them as inputs in a production process. Work-in-progress are goods being processed or produced that are not yet in a position to be supplied to another user. Finished goods are the outputs of production that have not yet been supplied to another user. Military inventories consist of single use items such as ammunition, missiles, rockets and bombs delivered by weapons or weapon systems. Finally, goods for resale include other merchandise purchased for resale.

Of these categories, government is most likely to have inventories in materials and supplies, and military inventories. Small amounts may be expected to be recorded under goods for resale in their provision of social transfers in kind. Some departments may have inventories that fall into other categories if they are providing goods or services to other units, although these are likely to be small.

Our review in this area will focus initially on general government inventories and we will work with data suppliers, such as HM Treasury (HMT), Ministry of Defence (MoD) and Ministry of Housing, Communities and Local Government (MHCLG), to identify inventories and improve their reporting. This work could impact public sector net borrowing (PSNB) although we will not know to what extent before the review is complete.

## Treatment of wider higher education funding

We will review the public funding of higher education to ensure we are recording the various streams of financing consistently with their economic nature, for example, as subsidies, current transfers or as payments for services.

Most UK universities have been classified to the non-profit institutions serving households sector since the adoption of the European System of Accounts 1995: ESA 1995. A rise in tuition fees and the consequent changes to student loans system, the replacement of the Higher Education Funding Council for England with new bodies and other reforms have all altered the mechanisms of public sector funding for the higher education sector. The [Review of post-18 education and funding](#) has the potential to further reshape this relationship. In the wake of these changes, we have committed to reviewing all transactions between public sector and universities beyond student loans.

In 2016, we announced a classification review of universities<sup>4</sup>. An important part of the review is to assess whether or not the UK universities, which are simultaneously involved in the provision of education and research activities, should be considered market producers. Alongside the classification review, we want to examine the broader funding arrangements that the universities have, to ascertain that funding streams originating in the public sector are recorded consistently and correctly.

Some institutions are able to cover much of their costs through the tuition fees alone. Our review into the treatment of student loans deals with an element of implicit public sector expenditure related to cancellation of the student loans that will not be repaid by the graduates.

More research-intensive universities have, on the other hand, a higher proportion of income coming from other sources. For these institutions, it becomes important to examine the income generated through research activities. Where public sector organisations are the ultimate sources of research funding, we will make sure that such transactions are transparently recorded in the fiscal statistics. This element of university income includes amounts paid, for example, by the health authorities or government units, for specific research projects.

This assessment is particularly challenging because public research funding can reach universities through a variety of streams, which vary from one institution to another. We aim to review various types of public funding beyond the student loan system to ensure they are reflected in fiscal statistics appropriately, for example, as current transfers or as payments for services.

This analysis will be conducted in conjunction with the sector classification review of universities but without prejudicing the latter. However, there are clear linkages between the two dimensions of our analysis. For instance, if a specific university is found to be a market rather than a non-market producer from a classification point of view, certain grants may have to be recorded as subsidies instead of transfers, in accordance with the statistical rules. Similarly, if through the funding analysis we find that the conditions attached to a particular stream of public funding can significantly influence a university's corporate policy, that will be taken into account in our assessment of the statistical classification of universities in receipt of that stream of funding.

It is not anticipated that this review will have significant impacts on the headline fiscal aggregates, with the main impact likely to be on expenditure and revenue components.

## Development of local government statistics

Expenditure, revenue, assets and liabilities data for local authorities are collectively reported under the local government sector. Data are largely provided by the Ministry of Housing, Communities and Local Government and devolved administrations (the Scottish Government, the Welsh Government, and the Northern Ireland Executive), and are supplemented by other information, for example, HM Treasury data for transfers from central government.

Data for local government are subject to some of the same ongoing development programmes, for example, implementing routine classification decisions and ensuring the presentation of data is in line with internationally agreed standards. There are also some areas of development that are unique to the sector and come with their own challenges.

One of the main factors affecting the accuracy of the local government expenditure statistics is the timeliness of available source data. Local authority budgets relate to the forthcoming financial year and outturn statistics are produced after the year-end. While some updates are produced within the year, these do not cover the full range of income and expenditure categories. Consequently, there is a time lag of up to 18 months until the full range of local government data sources are available in their finalised state.

As part of ongoing development work, we intend to work closely with providers of local government data to reduce the time lag between the end of the financial year and the provision of outturn statistics relating to that year. We are also making the case for improved in-year data, for example, the quarterly data for revenue expenditure in England. We envisage progress is feasible in the medium-term.

Another area for medium-term improvement is the coverage of the local government sector. We need to ensure that we capture all the organisations that fall within the boundary of the sector and that we have appropriate sources for the full range of economic data. Recently, we have requested information about instances where local government bodies are working jointly with other organisations, perhaps engaging in joint ventures or public-private partnerships.

We are also aware that local government bodies are seeking new ways to raise revenue, for example, by investing in commercial assets. We are working with data providers to improve our understanding of these new practices and to ensure that such new revenue streams are being accurately reflected.

There are some data flows that are presently captured on a net rather than gross basis for local government. While not affecting some of our headline fiscal aggregates, this limits our understanding of the data flows within the sector and between local government and other organisations. We propose to explore with data providers the possibility of providing a fuller breakdown, allowing users to see the gross position as well as having the option to derive the net impact.

## **4.4. Long-term developments**

### **Analysis of utilities sector**

Government involvement in the utilities sector is principally through regulation; our analysis will examine the extent to which the actions of firms may be influenced by this involvement. We will also look to clarify the economic substance of regulatory or non-regulatory policies that may require rerouting of transactions through government.

Most aspects of utility industries in the UK, such as energy and water, have been privatised since the mid-1990s. As new markets were created, new frameworks and bodies were established to regulate them. Industries such as energy, water and communications require large amounts of capital investment and are therefore usually monopolistic in nature; regulation in these industries typically includes price controls and setting service standards. In addition to regulation, government may also use non-regulatory alternatives to achieve its policy objectives – such as information and education; or incentive or market-based structures.

The sector coverage of public sector finance (PSF) statistics is based on classification decisions made by the Office for National Statistics (ONS). The PSF statistics include bodies that are involved in the regulation of utility markets and some that are involved in the provision of utilities. For example, regulators such as the Office of Water Services (OFWAT) and the Office of Gas and Electricity Markets (OFGEM) are classified to the central government sector, while most utility suppliers are classified to the private sector with a notable exception being Scottish Water, which is classified to the public corporations' sector.

The purpose of our review into the utility industries incorporates two main aspects. Firstly, to ascertain to what extent the regulation imposed by government may influence the actions of firms in the utility industries. For example, if regulation is strong enough to prevent a utility company from exiting the market or diversifying its activities.

The second area is to ensure that the economic substance of the policies introduced by government, which may be regulatory or non-regulatory in nature, are fully captured in our statistics. Since the early 2000s, we have classified a number of energy schemes as imputed tax and subsidy schemes (Renewable Obligation Certificates, Contracts for Difference). However, some other initiatives, such as Warm Home Discounts and Energy Companies Obligation remain unclassified for statistical purposes.

Schemes already classified more clearly demonstrate government involvement as the related transactions flow through government. The imputed tax and subsidy schemes are considered to be a form of “rearranged transactions”, specifically a transaction that is “rerouted” through government.

Guidance in the area of rearranged transactions continues to evolve and elements that can be applied to energy schemes resembling tax and expenditure are still limited. We have engaged in discussions with international statistical bodies in this area and as part of this review will aim to conclude any outstanding classifications as well as any new or related policies.

## **Accruals of taxes, taxes paid by government and tax expenditures**

We will explore options for recording a wider range of taxes on a time-adjusted cash bases to align the time of their recording to the time of the underlying economic activities. In addition to this, we will improve our reporting of taxes paid by government bodies and further understand tax expenditures.

In the national accounts, taxes are to be recorded when the activities, transactions or other events occur that create the liabilities to pay taxes. As a result of the nature of tax collection, it is not always possible to establish exactly when liabilities arise.

The European System of Accounts 2010: ESA 2010 therefore suggests using one of two methods for estimating accrued tax revenue: using assessments and declarations; or using a time-adjusted cash method, which can involve lagging cash receipts.

Most taxes in the public sector finances and national accounts are recorded on a time-adjusted cash basis. Some taxes, such as self-assessed Income Tax, are recorded on a cash basis on account of the difficulty in identifying the period to which the activity relates. A recent example of where we have made such a methodological change is [Corporation Tax](#), where this improvement was made in collaboration with HM Revenue and Customs (HMRC). These improvements make our statistics more reflective of activity occurring in the economy. However, identification of suitable methods for time-adjustment can take time. We will work with colleagues in HMRC and HM Treasury to identify possible improvements.

Another area we are looking to improve is our reporting of taxes paid by government. Although government may be the sector setting and collecting taxes, it does not exclude individual government units from being liable for taxes. Currently, some taxes paid by government units are recorded on a gross basis and others on a net basis. This difference is largely driven by data availability, but we intend to work with our data suppliers so that all such intra-government tax movements can be recorded consistently on a gross basis.

Finally, tax reliefs have been identified by some users as an area for investigation. Tax reliefs, also known as tax expenditures, are designed to reduce taxpayers' liability, before it is calculated. In the long run, tax expenditures represent a cost to government in the form of forgone tax revenue. Under national accounts, tax expenditures are not reported as flows. However, reporting of tax expenditures can provide supplementary information for fiscal analysis.

## **Methodology associated with public financial corporations**

We plan to review statistical methods we use for recording the activities of public financial corporations. In addition, we will look at how exhaustively such corporations are covered by the public sector finances (PSF) statistics.

Public sector includes a small number of entities whose primary economic activity, for example, insurance, investment or specialised lending, requires tailored statistical techniques. This year, we are reviewing the way in which we record public pension funds, a form of financial corporation. In the following years, we will explore sources and methods associated with compiling data for other types of financial entities that exist in the public sector, to ensure that their activities are recorded correctly, transparently and exhaustively.

The international statistical guidance prescribes the use of specialised statistical models to value the output of financial corporations. For example, many financial products have no explicit fees, with the implicit fees built into the difference between the interest rates at which the companies can lend and borrow themselves. In statistics, the value of financial products without explicit fees should be measured using the so-called financial intermediation services indirectly measured (FISIM) approach.

Other types of financial corporations, such as insurance companies, may have rather volatile flows in the short-term. To avoid unnecessary volatility in the statistical aggregates, the recording of insurance flows should be adjusted to be representative of the longer-term performance.

Taking into account such methodological considerations, we will review the transactions associated with financial corporations in fiscal statistics. As part of this project, we will look at the exhaustiveness of our coverage of public financial corporations. In the past, the data for such corporations were often collected through surveys that were sent out to all financial corporations of a certain type, not allowing us to identify transactions and balances related to individual public financial corporations. In recent years, we have broadened our data collection and obtained data of sufficient granularity to permit a reassessment of the methods used for recording financial entities.

## **Treatment of decommissioning costs and transfers of assets for the purpose of decommissioning**

Determining the correct size and time of recording government expenditure arising from taking over infrastructure assets for the purpose of their decommissioning has long been considered a complex task for fiscal statistics. We expect that upcoming international guidance may clarify the statistical recording, which may prompt us to review the historic transactions and our approach to reflecting any future events.

An example of government takeover of assets for decommissioning is the transfer of the first generation of British nuclear power stations under the Energy Act 2004. The stations whose active life span was coming to an end generally remained in the ownership of the power generating companies until the Act established a new public body, the Nuclear Decommissioning Authority (NDA), to ensure that nuclear legacy for designated sites would be cleaned up.

The NDA commenced operations on 1 April 2005 when it acquired strategic responsibility for the decommissioning of the sites previously owned by British Nuclear Fuels plc (BNFL), the UK Atomic Energy Authority (UKAEA) and several Ministry of Defence (MoD) facilities.

As a consequence of the Act, BNFL, then a public corporation, undertook a restructuring exercise, which resulted in a transfer of most of its fixed assets (nuclear power stations and associated infrastructure) to the UK Government. Some of the power stations were still generating but the majority had been closed by the time of the transfer; the book value of these assets (without taking into account the costs of their decommissioning) was estimated at over £6 billion. BNFL also surrendered a fund worth about £4 billion worth of financial assets, which it had administered with the aim of building up reserves for decommissioning.

At the time these events were taking place, the statistical framework in existence did not contemplate the possibility of very large decommissioning costs; general guidance was only given on how to treat costs of ownership transfer on the disposal of assets. We attempted to reflect the economic reality by netting off the net book value of fixed assets (£6 billion) and decommissioning liabilities (£22 billion as estimated in 2006) to obtain the market value of the transferred assets (negative £16 billion). The deal was recorded by imputing a (negative) capital transfer from BNFL, a public corporation, to the NDA and other relevant government bodies in 2005. The NDA was assumed to have immediately used these funds to purchase assets worth negative £16 billion.

Additionally, the surrender of the financial assets was recorded as a positive capital transfer of £4 billion to government. All of the subsequent decommissioning activity undertaken by the NDA was recorded on the actual expenditure basis as capital formation within the government sector thereby increasing its net borrowing.

The methodology opened up some discussions owing to the negative market value, which did not fit comfortably for a produced asset. With the publication of the 2016 edition of the Manual on Government Deficit and Debt, we revisited the treatment of the transfer within public sector finances. The solution described earlier was replaced with a transfer of fixed assets with a positive net book value of £6 billion, which was then recorded as gross fixed capital formation in government and disposal of assets for BNFL. The surrender of financial assets was considered as a pre-payment for future decommissioning work. As long as decommissioning costs did not exceed the value of assets surrendered to government, no borrowing impact was recorded in government.

It is now clear that both ways of recording have disadvantages. The former imputes an early and potentially unreliable estimate of decommissioning costs and leads to a recording of fixed assets with a negative value. The latter avoids imputation but records government expenditure on decommissioning on an ongoing basis and only after any financial advances have been exhausted, which fails to reflect the economic reality of government taking on additional obligations when the transfer of assets takes place.

We continue to engage with international statistical bodies in developing a suitable and internationally agreed approach to dealing with transfers like the one described in this section. Should this culminate in revisions to the statistical guidance, we may have to reconsider both our recording of the past events and our approach to dealing with any future cases where government takes over decommissioning of the assets.

## Rearranged transactions

Further clarification of guidance in the [European System of Accounts 2010: ESA 2010 \(PDF, 6.4MB\)](#) on rearranged transactions is something under consideration for future editions of Eurostat's Manual on Government Deficit and Debt (MGDD). The current guidance on rearranged transactions does not cater to all common scenarios.

Most transactions recorded in the national accounts are interactions or exchanges between two or more units by mutual agreement. However, there may be a need to rearrange some transactions to bring out the underlying economic relationships more clearly. Rearranged transactions are described in [ESA 2010 \(PDF, 6.4MB\)](#).

ESA 2010 suggests that transactions can be rearranged in three ways: rerouting, partitioning and recognising the principal party to a transaction.

Rerouting applies in cases where a transaction appears to be taking place directly between two units, but it is taking place indirectly through another unit. Alternatively, a situation could exist where transaction involves two or more units, but no cash flows are recorded. In both instances, rerouting means recording transactions taking place through different units than represented by actual cash flows – this is known as imputation. In the public sector finance and national accounts statistics, an example of where such rerouting guidance has been applied is Renewable Obligation Certificates.

Partitioning involves scenarios where a transaction or cash flow that appears to be recorded in the accounts of a unit as a single transaction should be separated out as more than one transaction in the national accounts. Examples include unitary charges paid on off-balance sheet public-private partnerships, which are split between repayment of loan, interest charges and service charges.

Recognising the principal party to a transaction requires identifying the unit ultimately responsible for a transaction – for example, if a unit is carrying out a transaction on behalf of government.

Common scenarios where this guidance may apply include development banks (or bodies with similar functions and motives) or energy saving schemes. We will review and apply consistently the relevant guidance to policies, transactions or bodies that could be considered to fall under the categories of rearranged transactions.

## **Notes for: Developments in public sector finance statistics**

1. Many pension funds hold some government debt securities as part of their investment portfolios. These securities also represent a liability for government. When both the asset and the liability belong to units within the public sector boundary, consolidation is applied. This means that the government liability is reduced by the amount of debt securities held by public sector pension funds, but no asset is recorded.
2. When recognised as a government liability, debt securities are recorded on a face value basis, which represents the amount due to be repaid. However, in the pension fund's balance sheet, the recording of debt securities issued by government is done on a market value basis. As a result, the consolidation process is not completely neutral in its impact on public sector net financial liabilities.
3. Provisions recorded in the case of one-off guarantees require further examination if the provision represents a very certain likelihood that the guarantee will be called.
4. The term "university" is used to denote both universities and "loosely federated" colleges as long as they are de-facto independent institutions only limited in their ability to award own degrees, or retain the name "university college" purely by tradition. The term does not cover non-autonomous colleges of federal universities, such as Oxford and Cambridge, where central administration is the responsibility of the university as a whole.

## **5 . Other elements of our transparency strategy**

The article is one part of a wider strategy around the transparency, visibility and explanation of methodological changes in the public sector finance (PSF) statistics – not only at the point they are introduced, but also before and after implementation. Our strategy has three broad elements:

- publication of ongoing and planned PSF methodology and classification work to give users early sight of changes that might impact the fiscal aggregates
- packaging together PSF methodological changes so that they occur, where possible, at a single point in the year to provide increased predictability to users
- publishing more information on the impacts of major changes to allow users to identify movements in the fiscal aggregates that are solely a result of our methodology improvements

We published the first in the series of these annual publications, in July 2018, outlining important areas of methodological work that could impact our fiscal statistics. This year, our publication presents an updated picture of forthcoming and potential developments to public sector finance statistics, expanded to include the longer-term horizon.

The other elements of the strategy will be put into practice later this year, when we implement some significant changes into the public sector finance statistics, such as the new recording of student loans and pensions in the public sector finances.

We recognise that detailing the likely numerical impact of the ongoing or planned methodology improvements would be helpful for providing users with the means to assess the potential impact on the fiscal aggregates and possible future government policies. Where possible, we state how the fiscal aggregates are likely to be affected in this article, however, the exact impacts are typically unknown until an assessment of methodology has taken place. We therefore remain committed to publishing separate in-depth methodological articles on the topics of high significance, such as student loans, and to providing indicative impact of all material changes in the PSF bulletins ahead of the implementation dates.

## 6 . Next steps

The development of methodology is a continuous process, prompted by the need for statistics to keep pace with the evolving nature of the economy. When not explained, the changes of statistical methods can complicate the interpretation of statistics. To provide better visibility of our methodology work, this article discusses the areas of fiscal statistics that we aim to investigate or improve, both in the coming months and in the longer-term, as well as offering an opportunity to provide feedback on our plans.

Over the coming months, we will supplement this article with a series of detailed articles on the topics of most significance:

- in June 2019, we will publish a methodological article and provisional impact of the new treatment of student loans, ahead of the implementation in PSF statistics in September 2019
- also in June 2019, we will release the first set of tables compliant with the International Monetary Fund's Government Finance Statistics (GFSM) framework, accompanied by an explanatory note discussing the structure and methodology associated with those tables
- in September 2019, improvements will be made to the GFSM tables, notably the inclusion of data on employment-related pensions and public-private partnerships
- in September 2019, we plan to expand the presentation of public sector pension schemes within the public sector finances, which will be accompanied by a detailed article and transparency tables reconciling the old and the new ways of presenting the pensions data

Looking further ahead, in 2020, we expect to publish an updated version of this article, where we will incorporate any feedback on our plans received after this publication. On exceptional occasions there may be a need to respond to feedback, or to resolve a newly arisen issue more quickly. Should such issues arise, we will decide on a case by case basis how best to communicate the methodological work to public sector finances users.