



Fraser Munro  
Branch Head  
Public Sector Finance  
Office for National Statistics

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Dear Fraser

## Public sector finances and the accounting for Index Linked Bonds

I apologise for taking some time to reply to you: I have had Covid and that has distracted me. The methodology note you have published (for which I thank you), and the June public finances publication have also required careful consideration.

### 1. Introduction

I have read the methodology note<sup>2</sup> that you published on 18 July and the related note from the Debt Management Office (DMO)<sup>3</sup> that you linked on the calculation of interest due on index-linked bonds (ILBs). I have also downloaded your spreadsheets although as they are all mathematically dead, in the sense that all formulas have been removed from them, they do not, unfortunately, add anything to understanding.

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<sup>1</sup> Corporate Accountability Network Limited, 33 Kingsley Walk, Ely, Cambridgeshire, CB6 3BZ  
[www.corporateaccountabilitynet.work](http://www.corporateaccountabilitynet.work)

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<sup>2</sup>

<https://www.ons.gov.uk/economy/governmentpublicsectorandtaxes/publicsectorfinance/methodologies/thecalculatonofinterestpayableongovernmentgilts>

<sup>3</sup> <https://www.dmo.gov.uk/media/1953/igcalc.pdf>

I regret that having read this material I feel that the accounting for ILBs by the ONS is still misleading. My reason for saying so is that the data you are publishing is likely to do three things:

- a. Lead to incorrect impressions being formed as to the nature of current public expenditure;
- b. Lead to an incorrect impression being formed as to the current extent of public debt and the timing of it falling due;
- c. Lead to decisions being taken within government based on the assumption that there is a shortage of public funding for necessary expenditure at present when this is very definitely not the case.

To give some indication of the scale of the misleading impression that I think you are providing, I note that in June 2022 you suggest that the interest expense payable by the government might exceed £19 billion, making it the single largest expense incurred by the government during the course of that month. As explained later in this note, I very much doubt that the actual expense in the month in question exceeded £3 billion, which is a sum only a little in excess of the accrued cash charge.

Precisely why it would seem that you have so materially overstated the charge in question is hard to determine. However, as I note below, this is partly because your methodology note does not answer almost any of the reasonable questions that might be asked as to why or how you estimate the liabilities that you claim to be currently owing, and it does instead, if anything, give rise to more questions than it answers. However, the fundamental problems are that:

- a. You provide no indication as to how you estimate the redemption value of ILBs;
- b. You provide no indication of the scale of the issues arising with regard to premiums and discounts on the issue of ILBs, when it seems likely that they are material;
- c. There is no indication given as to how the time value of money is accounted for by you, but it would appear obvious that it should be, despite which discounting does not appear to feature in your calculations;
- d. The accrual for redemption of ILBs appears to be taken wholly, and inappropriately, in the period when there is a change in RPI when it should be accrued over the remaining life of a bond in issue given that these bonds were deliberately chosen to be long-life financial products, but no indication of this is given in your data;
- e. No indication of the timing of settlement of any of the liabilities arising from ILBs is provided by your methodology, resulting in the impression being given that these liabilities might be current when it appears that this is very far from the case.

The difficulty arising from this is that politicians are exploiting your data to imply that public services are unaffordable and are as a result under threat. This is very hard to justify when the liabilities that you note might be seriously overstated and when they do not, in the vast majority of cases, fall due for many years hence, with opportunity for reasonable accumulation of the sums due to be both made and to be accounted for in the meantime, as normal accounting conventions would suggest appropriate. It would seem that you should be correcting your presentation precisely because your data is being misused in this way, not least because the risk is that as a result of the abuse of your data real people might suffer actual adverse consequences deeply detrimental to their well-being. It is for this reason that I am returning to this issue with further questions on issues that really do require clarification if this matter is to be properly understood by any reasonably informed lay user of this data, into which category I would place almost all ministers and other elected politicians as well as most financial journalists.

## 2. Questions arising – conventional gilts

First, let me say that there are no questions arising with regard to the accounting for conventional gilts that are of any consequences unless these are issued at a premium or discount, when the matters noted below with regard to ILBs issued in that way apply equally in that case.

## 3. Questions arising – background data

Second, let me summarize the issues that inform my concern, partly because this note will be published.

According to the ONS publication on the public finances in June 2022 interest costs in the financial year to that date were as follows<sup>4</sup>:

**Table 7: Central government expenditure**

**Central government expenditure in financial year-to-June 2022 compared with the same period a year earlier, UK**

	Financial year-to-date (£ billion) <sup>9</sup>		Change on a year ago	
	2021/22	2022/23	£ billion	%
<b>Interest payments<sup>1</sup></b>	18.5	33.7	15.2	82.4

<sup>4</sup>

<https://www.ons.gov.uk/economy/governmentpublicsectorandtaxes/publicsectorfinance/bulletins/publicsectorfinances/june2022>

However, if I take the actual cash spending on interest noted in that same report it is as follows:

**Table 9: Central government net cash requirement on own account**  
**Central government cash receipts and outlays compared with the same month a year earlier, UK, June 2022**

	June (billion)		Change on a year ago	
	2021	2022	£ billion	%
<b>Interest Payments</b>	6.1	5.8	-0.4	-5.9

Unfortunately, a year to date cash requirement is not provided (which is, in itself, a deficiency in your reporting when consistency in the presentation of data is vital if users are to reach properly formed conclusions) and so I have prepared the following summary:

**Table 9: Central government net cash requirement on own account**  
**Central government cash receipts and outlays compared with the same month a year earlier**

	Month (billion)		Change on a year ago	
	2021	2022	£ billion	%
<b>Cash Outlays</b>				
<b>Interest Payments - April 2022</b>	1.5	1.6	0	0
<b>Interest Payments - May 2022</b>	0.2	0.1	-0.1	-35.4
<b>Interest Payments - June 2022</b>	6.1	5.8	-0.4	-5.9
	<b>7.8</b>	<b>7.5</b>	<b>-0.5</b>	

The rounding differences all come from your original publications.

What is now apparent is that the cash cost of interest compared to the cost of interest that you claim in the national accounts is wildly divergent, as this table shows:

Year to date	2021	2022	£billion	%
<b>Interest cost - accounting data</b>	<b>18.5</b>	<b>33.7</b>	<b>15.2</b>	<b>82.2%</b>
<b>Interest cost - cash flow data</b>	<b>7.8</b>	<b>7.5</b>	<b>-0.3</b>	<b>-3.8%</b>
	<b>10.7</b>	<b>26.2</b>	<b>15.5</b>	<b>144.9%</b>

As a matter of fact, actual interest costs have fallen in the current financial year. You have reported them as increasing by 82.2%. Such a discrepancy clearly requires explanation, and I am afraid that your methodology note does not help me explain how this difference might arise. Nor does the DMO paper provide much assistance in this regard. When, to extrapolate the above data, the difference in accounting bases this year might eventually amount to a sum of approximately £100 billion (a sum in excess of the £83 billion originally forecast<sup>5</sup>) this is clearly not acceptable.

#### 4. Questions needing to be addressed

The issues that require further explanation before the adequacy of your accounting methods can be appraised would appear to be as follows, although others might emerge based upon the answers that you provide:

1. Your accounting for premiums and discounts on issue;
2. Your accounting for the cost of ILB redemption;
3. The treatment of the time value of money within your calculations;
4. The presentation of your estimated liabilities within calculations of the national debt;
5. The ongoing presentation of this data so that those responsible for making decisions within government, and those who wish to hold them to account for the decisions that they make, might have the data that they need for these purposes.

I will tackle these issues in turn.

#### 5. Accounting for premiums and discounts in issue of ILBs (and other gilts, if appropriate)

Your methodology note says:

*Gilts are not necessarily purchased at their face value. They may have been sold at a discount (or premium), such that the value received is less than (or greater than) the face value. This can occur for a range of reasons, including investors' risk appetites. Consistent with international guidance, only the redemption value (face value for conventional gilts and RPI-uplifted face value in the case of index-linked gilts) of the gilt contributes to our estimates of net debt. This means that our measure of public sector net debt, for instance, captures the government's precise payment liability – irrespective of whether a gilt was sold at a premium or a discount.*

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<sup>5</sup> <https://obr.uk/download/economic-and-fiscal-outlook-march-2022/>

*In cash terms, these premiums and discounts affect the net cash requirement in the month they arise. This means that if the government issues gilts at a premium in a month, then the difference between the gilt value and the amount of money received contributes to government revenue – interest payments received – in that month.*

*However, on an accrued basis in the public sector finances, we spread these differences over the lifetime of the gilt. If a gilt is sold at a discount (sometimes described as below par), this discount is considered as additional interest payable and distributed evenly over the lifetime of the gilt until it is redeemed. Conversely, if a gilt is sold at a premium (or above par), then this premium is deducted from interest payable over the lifetime of the gilt.*

There is no way of reconciling these claims with the data you have published on the costs of interest on ILBs, meaning that this information takes us almost no further forward in understanding this issue.

Might you for the sake of clarity provide answers to these questions with regard to the accounting for these premiums and discounts:

- a. Can you please provide a precise reference to the accounting standards that you say you are required to follow within the methodology note on this and other issues?
- b. Who is responsible for estimating the premium / discount on issue?
- c. How is the time value of money taken into consideration when estimating the impact of this premium / discount for interest reporting purposes over the life of the ILB?
- d. How is the premium / discount actually allocated to accounting periods over the life of the ILB? Can you explain the precise methodology?

With regard to the data for June 2022 that you have published might you provide illustrative data indicating:

- a) The total premium / discount outstanding at the beginning of the month;
- b) The amount of interest charged to the national accounts during the month arising for this reason;
- c) Movements in the estimated value of the sum outstanding not charged to the national accounts during the month, e.g. because of new issues made;
- d) The amount outstanding at the end of the month?

Might you also please explain where these balances are reflected in national debt data and how these debt balances can be identified by a lay user?

## 6. The cost of ILB redemption

I have read the DMO note and it says:

### Redemption Payments

The redemption payment, per £100 nominal, is calculated in a similar manner:

$$\text{Redemption Payment} = 100 \times \text{Index Ratio}_{\text{Redemption Date}}$$

rounded to the nearest 6<sup>th</sup> decimal place

This makes sense, but there is a problem and that is that we do not, of course, know what the retail price index might be on the redemption date of ILBs that have not as yet reached their redemption date, and as such this calculation has to be estimated.

To give some indication of the period over which this sum needs to be estimated, the latest quarterly DMO report<sup>6</sup> suggests that the average redemption date of an ILB currently in issue is between 18 and 20 years, two methods of calculation being provided. An average of nineteen years is assumed in the remainder of this note. I suspect you will agree that forecasting RPI for the next 19 years is not a precise science.

This gives rise to some obvious questions as to how the uplift in the redemption cost of ILBs is estimated for inclusion in the national accounts, none of which are addressed by your methodology note as far as I can see. These are:

- 1) What is the assumed index ratio at redemption date used to estimate the redemption payment due with regard to ILBs, and most particularly, how is this figure estimated, and at what date?
- 2) How often is this estimate updated?
- 3) Given the very obviously erratic patterns within RPI, what methodology is used to smooth forecasts, and if none is, why not?
- 4) The redemption date for ILBs is, as noted above, on average some considerable time in the future and cash settlement of the redemption liability is only due at that time. How is the time value of money taken into consideration when discounting this

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<sup>6</sup> <https://www.dmo.gov.uk/media/5mnateex/jan-mar-2022.pdf>

potential redemption liability to a current value for inclusion in the national accounts, which is presumably what happens?

- 5) If the time value of money is not taken into consideration in this calculation, why is that not the case?
- 6) What is the difference between the nominal value of the sum due on redemption of current ILBs in issue and the equivalent sum included in the national accounts, having discounted that sum to take into consideration the time value of money in the intervening period?
- 7) How is this discount unwound? What basis of estimation for doing so is used?

Might you provide a worked example allowing for these factors assuming a nineteen year life span for a bond?

## **7. The time value of money**

See points noted in the previous sections.

## **8. The presentation of estimated liabilities within the calculation of the national debt**

I have noted in previous correspondence that the information that you supply each month is inconsistent, uses inconsistent language and is not a useful basis for decision making, not least because it remains unclear even after your latest methodology note as to how the sums claimed to be payable on the national debt in respect of ILBs might arise or I would not need to ask the questions raised in this note.

It would seem essential that if this matter is to be understood that much better accounting take place so that confusion need not arise on this issue. It would seem appropriate as a result to account on two bases for ILBs. This is not necessary for conventional bonds where timing differences on the settlement of liabilities appear to be immaterial, overall.

The first basis to be adopted is a cash basis, where clear and comparable data needs to be provided each month, which is not the case at present. I think the method for doing this is easy to understand and simply requires consistent presentation of the data I have already noted, above.

Second, given that an accruals basis is preferred by you, but without the basis for the accruals made being disclosed by you at present, leading to considerable scope for confusion on this issue, it would seem that inclusion of the following table in the announcement on public finances each month would be desirable:

	£'bn	£'bn
Nominal value of ILBs in issue at the start of the month		X
Plus, adjustment for premium on issue brought forward	X	
Less, adjustment for discount on issue brought forward	X	
	<hr/>	X
Plus, provision for additional redemption costs brought forward, gross	X	
Less, discount for the time value of money until contractual redemption date	X	
		<hr/>
<b>Value of ILBs in national debt, brought forward</b>		<b>X</b>
		<hr/>
<b>Movements in the period:</b>		
Premium on issue brought forward unwound	X	
Discount on issue brought forward unwound	X	
	<hr/>	X
Increase / decrease in provision for gross redemption costs	X	
Less, reduction to allow for the time value in money	X	
	<hr/>	X
Increase in provision for gross redemption costs due to unwinding of discount for the time value of money		<hr/>
		X
Total movement recognised in the period		<hr/>
		X
<b>Movements due to issues in the period</b>		
New issues at nominal value	X	
New premiums on issue recognised	X	
New discounts on issue recognised	X	
	<hr/>	X
Movements resulting from new issues		<hr/>
		X
Nominal value of ILBs in issue at the end of the month		X
Plus, adjustment for premium on issue carried forward	X	
Less, adjustment for discount on issue carried forward	X	
	<hr/>	X
Plus, provision for additional redemption costs brought forward, gross at end of month	X	
Less, discount for the time value of money until contractual redemption date at end of month	X	
	<hr/>	X
		<hr/>
		X

<b>Value of ILBs in national debt, carried forward</b>		<u>X</u>
<b>Redemption values falling due:</b>		
In less than one year		
Between 1 and 5 years	X	
Between 6 and 10 years	X	
Between 11 and 15 years	X	
Between 16 and 20 years	X	
Between 20 and 30 years	X	
In more than 30 years	X	
<b>Total value of ILBs in national debt (as above)</b>		<u>X</u>

Might you provide an example of what these figures might have been for June 2022? As a matter of fact you must have all this data readily available to you and I would hope you actually undertake such control checks as are implicit in this approach each month to ensure the credibility of the data you publish.

#### **Decision useful information**

The primary criteria for any form of accounting data – which is what you are producing – is that it be decision useful. In other words, it must deliver data that best informs the choices that those needing to make decisions must make. If it does not meet this criteria data is not decision useful.

I suggest that the information that you are producing with regard to ILBs is not decision useful because it implies that there are imminent liabilities that must be settled by government when in fact the liabilities in question do not arise on average for almost two decades and should, anyway, be subject to substantial discounting for the time value of money in the interim period, which it is not apparent that you are doing. As such your data would appear to be inappropriately encouraging the deferral of current spending by the government when those costs could in practice be very easily afforded, and might in fact contribute to economic wellbeing that could more than cover the cost of liabilities arising two decades hence as a result of the economic value of the contribution it might add to the economy in the meantime.

As illustration, if I summarise the data that I can secure from information published by you and the DMO for the years 2020/21 and 2021/22 I can create the following summary of available information:

## Interest costs

### 2020/21 and 2021/22

	2020/21	2021/22
	£'bn	£'bn
Cost for the year per ONS March 2022	39.4	69.9

### Cash flow costs per month per ONS reports in 2021/22

April to December	34.5	22.4
January	4.1	2.1
February	0.3	0.2
March	5.6	4.3
	<u>44.5</u>	<u>29.0</u>

Difference between stated and cash flow costs	<u>-5.1</u>	<u>40.9</u>
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Nominal value of ILBs in issue at start of year	455.2	460.0
Nominal value of ILBs in issue at end of the year	<u>460.0</u>	<u>510.1</u>
Increase in value	<u>4.9</u>	<u>50.1</u>

Market value of ILBs in issue at start of the year per the DMO	732.6	758.0
Market value of ILBs in issue at end of the year	<u>758.0</u>	<u>819.3</u>
Increase in value	<u>25.4</u>	<u>61.3</u>

RPI March 2020	292.6	
RPI March 2021	296.9	296.9
RPI March 2022		<u>323.5</u>
Increase in RPI in year	1.47%	8.96%

RPI increase on opening nominal value of ILBs	<u>6.7</u>	<u>41.2</u>
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Government average weighted cost of capital (DMO Data, conventional gilts, 10-year rate)	0.9%	1.5%
Discounted value of £1 in 19 years' time using this cost of capital	0.842	0.75
Increase in redemption value to be recognised over discount period using above cost of capital	1.06	10.30
Increase in redemption cost to be apportioned over remaining life of ILBs	5.63	30.91

The inference of these calculations – which can only be approximate because I do not know the assumptions that you have made - are threefold:

- a. It would seem that the increase in the value of the redemption cost for ILBs is seriously overstated in 2021/22 because the time value of money has not been taken into account in the valuation of that cost. Approximately 25% of that cost should be considered an interest charge accruing over intermediate years;
- b. The suggestion that approximately £31 billion of charge became payable in the last year when that expense does not in fact fall due on average for approximately 19 years hence is deeply misleading. Given that the ILBs on which this liability might (and I stress, might) fall due are deliberately designed as long-term funding instruments to imply, as you do, that they can have a current, short term, funding implication of the sort that your presentation makes is has to be misleading. In fact, it is untrue. If the redemption fund for these ILBs was accrued on a simple time apportionment basis (and an element of discount would also seem appropriate, making the following figures overly penal in practice) just £1.63 billion of cost would have needed to be accrued in the year to reflect the actual liability correctly attributable to 2021/22. Why is this method of provision not adopted? On my basis of estimation you overstated costs by more than £29 billion.
- c. Taking these two factors (interest costs and redemption costs) together it is likely that you have overstated the cost for interest due for 2021/22 by approximately £38 billion in 2021/22, with a bigger error looking to be likely in 2022/23.

On the basis of your miscalculation, you claim that interest costs in June 2022 were £19.4 billion<sup>7</sup>, which sum was 20.7% of total government spending in that month. However, in reality (as I have noted above) the cash costs in the entire year to date have been just £7.5 billion. These last costs are very unlikely, on the basis of my calculations above, to inflate by more than £1 billion on a proper accruals basis for the year to date using the basis of calculation that I note. On this appropriate accrual basis the likely interest cost in June 2022 was, therefore, likely to have been less than £3 billion. You might in that case have overstated the cost in the month by in excess of £16 billion. Over the year to come the impact of this could be quite exceptionally serious.

I have raised this concern out of concern for the well-being of the people of this country who are being told they cannot be provided with essential public services on which, in many cases, their lives will depend because of the interest cost that you have suggested is owing by the government this year. If, as seems apparent, those interest costs are drastically overstated the social cost of that overstatement will be real lives lost.

For that reason I look forward to receiving answers to my questions, and to discussing a more appropriate basis for calculation of these costs and liabilities that might properly inform government decision making, those who hold them to account, and the public for whom the consequences of your calculations are considerable.

Finally, I am aware that some of the tone in this note is quite direct but in my opinion the first duty of any government is to protect its citizens and in my opinion the data that you are producing and the form in which you are publishing it exposes millions of people in this country to significant risk of harm as a consequence of the austerity that it might encourage government decision makers to inappropriately adopt without any economic cause to do so.

Yours sincerely

Richard

Richard Murphy FAcSS FCA FAIA (Hon)  
Professor of Accounting Practice, University of Sheffield Management School  
Director, Corporate Accountability Network  
33 Kingsley Walk, Ely, Cambridgeshire, CB6 3BZ

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<https://www.ons.gov.uk/economy/governmentpublicsectorandtaxes/publicsectorfinance/bulletins/publicsectorfinances/june2022>

+44 (0) 777 552 1797  
richardmurphy1572 on skype  
richardjmurphy on twitter

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