Office for National Statistics

Article

# Effects of the economy on public sector net debt, UK : April 2024

Examines the economic reasons behind the large increase in public sector net debt as a percentage of GDP over the last two decades.

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# 1 . Main points

- Public sector net debt excluding the public sector banks (PSND ex), often referred to as the "national debt", was 98.3% of GDP at the end of the financial year 2023 to 2024; this marks a notable increase of more than 60 percentage points over the last two decades.

- The increase in PSND ex almost entirely reflects the accumulation of primary deficits, which reflects the gap between the receipts of the public sector (mainly from taxes), and what it spends on goods and services and investment.

- The main driver of primary deficits is the current budget balance, which reflects the borrowing required to fund the day-to-day activities of government; over the last two decades there has been a succession of greater than normal deficits in the current budget balance because of a series of negative economic shocks (the global financial crisis (2007 to 2008), the coronavirus (COVID-19) pandemic (2020 to 2021) and the energy price crisis (2022 to 2023)).

# 2 . Overview of public sector net debt

## What is public sector net debt?

The UK public sector consists of general government and public corporations.

The general government sector includes:

- central government, which includes the departments of the state and bodies whose competence extends over the whole country, or large parts of the country – such as those, dealing with taxation, defence, and health

- local government, which comprises administrative bodies whose competence extends only to localities within the UK; these tend to be responsible for social care, many schools, housing, waste collection, and the police and fire services

Public corporations are publicly controlled enterprises producing goods and services for markets. This category includes both non-financial and financial corporations. Historically the non-financial public corporations sector had a substantial impact on the UK public finances but has declined markedly following the privatisations of the 1980s and early 1990s. Examples of current non-financial public corporations include the Post Office, Scottish Water and several of the train operating companies.

The financial public corporations sector includes:

- public sector funded pension schemes, which are the pensions of public sector employees held in ring-fenced funds rather than paid directly from government revenues

- The Bank of England, which as the central bank for the UK, has the responsibilities of issuing notes and coins and importantly oversees monetary policy and financial stability

- public sector banks, consisting of the commercial banks and building societies taken under control by the UK government during the global financial crisis of 2007 to 2008 (over the last decade, the UK government has gradually reduced its shareholdings in these banks and as of April 2024, NatWest Group (rebranded from RBS group in July 2020) is the sole remaining bank within the public corporations subsector))

Public sector net debt (PSND) represents the amount of money owed to private sector organisations including overseas institutions at a given point in time. The headline measure – defined as public sector net debt excluding the public sector banks (PSND ex) – excludes the balance sheets of the public sector banks. This measure provides a more accurate reflection of the underlying position of the public finances because including public sector banks can have a substantial impact and distort the data. Also, the government's stated intention to return the public sector banks to private ownership implies their expected temporary impact on the public sector finances.

Debt is often presented as a percentage of gross domestic product (GDP), which makes comparisons over time and with different countries more meaningful. Many commentators refer to the level of PSND ex as "the national debt".

## Components of public sector net debt

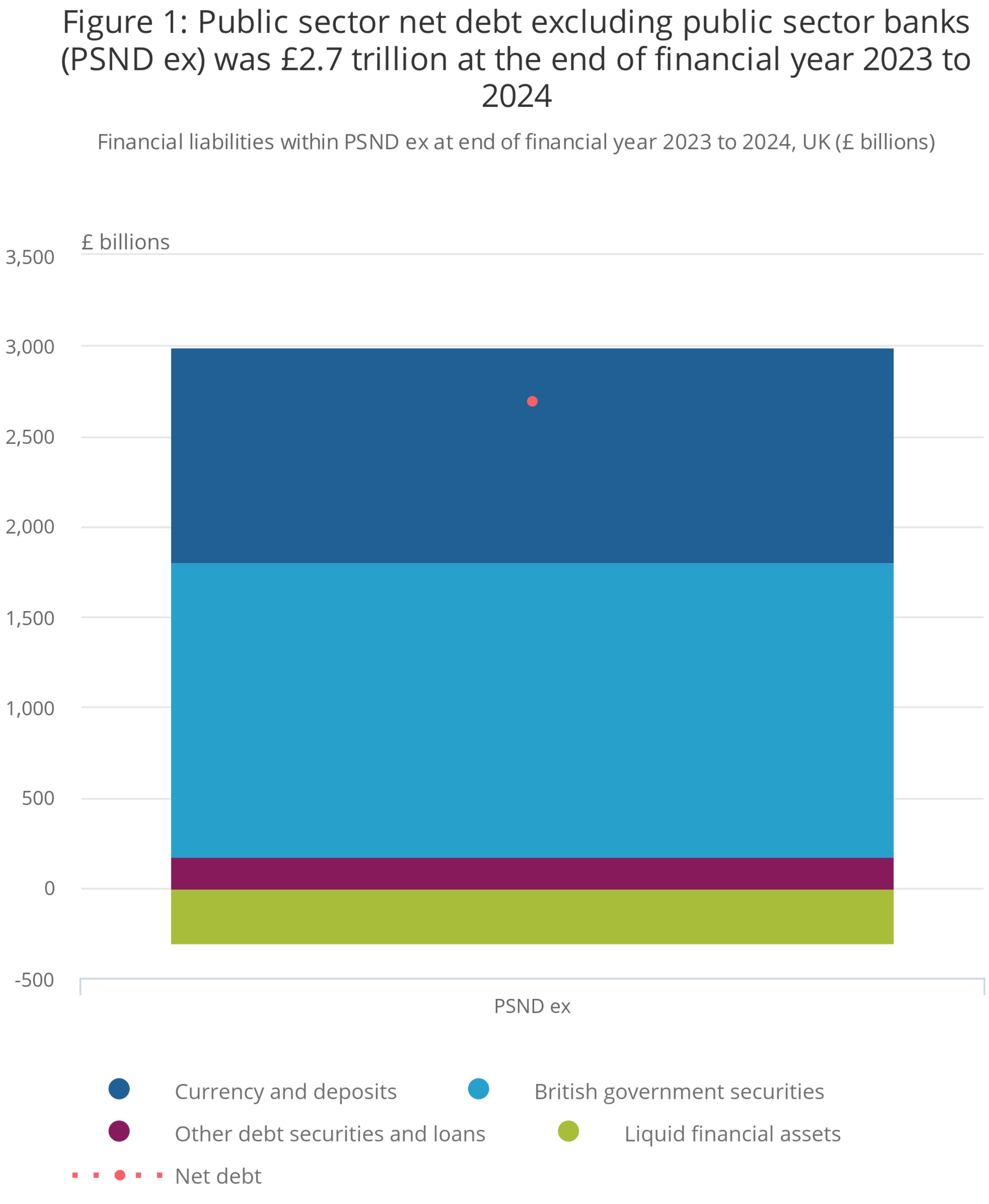
Public sector net debt (PSND ex) is equal to the total financial liabilities of the public sector minus its holdings of liquid financial assets.

The main components of financial liabilities within PSND ex are the outstanding gilts and treasury bills issued by the government, National Savings, and more recently in currency and deposits, the reserves created by the Bank of England to fund quantitative easing (QE) and its other interventions in the UK economy. The sum of these liabilities equals gross debt of the public sector, which at the end of financial year (FY) 2023 to 2024 stood at £3 trillion (Figure 1).

The public sector also holds liquid financial assets of £300 billion, which could be used immediately and without cost to offset its liabilities. These include bank deposits and foreign currency reserves. Figure 1 shows that PSND ex at the end of FY 2023 to 2024 was £2.7 trillion (98.3% of GDP).

**Figure 1: Public sector net debt excluding public sector banks (PSND ex) was £2.7 trillion at the end of financial year 2023 to 2024**

**Financial liabilities within PSND ex at end of financial year 2023 to 2024, UK (£ billions)**




**Source: Public sector finances from the Office for National Statistics**

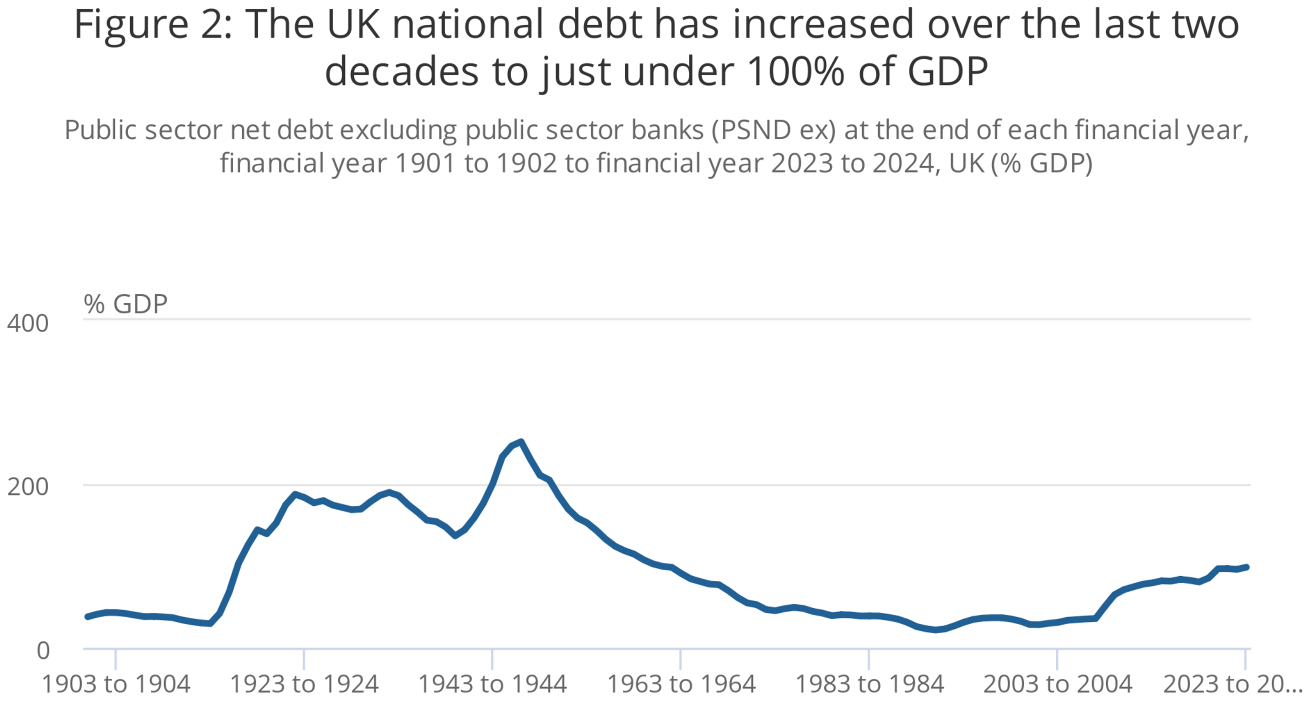
## Public sector net debt over the long term

Figure 2 plots the history of UK PSND ex as a percentage of GDP. Having peaked at over 250% at the end of the Second World War, the national debt declined relative to the size of the economy over the following decades primarily because of the growth of nominal GDP. With the receipts from privatisations, PSND ex reached a low of just over 20% of GDP at end of FY 1990 to 1991.

Over the last two decades the national debt has increased to nearly 100% of GDP. At the end of FY 2023 to 2024, PSND ex stood at 98.3% of GDP, an increase of 64.9 percentage points from the end of FY 2004 to 2005 when it stood at 33.5% of GDP.

**Figure 2: The UK national debt has increased over the last two decades to just under 100% of GDP**

**Public sector net debt excluding public sector banks (PSND ex) at the end of each financial year, financial year 1901 to 1902 to financial year 2023 to 2024, UK (% GDP)**




**Source: Public sector finances from the Office for National Statistics**

# 3 . Economic factors contributing to the rise in public sector net debt

## Changes in public sector net debt over time

While public sector net debt excluding the public sector banks (PSND ex) records the total amount owed at a particular point in time, public sector net borrowing (PSNB ex), which is often referred to by commentators as "the deficit", represents the difference between total spending and receipts over a period of time.

The fundamental difference between "the debt" (PSND ex) and "the deficit" (PSNB ex) is based in stock flow. Flows relate to economic activities and associated transactions contributing to the amount of borrowing within a limited period such as during a financial year. However, stocks record the total net value of liabilities that have been accumulated up to a given point in time, such as at the end of a given financial year.

When the government borrows (that is, runs a deficit), this normally adds to the debt total. However, reducing the deficit is not necessarily the same as reducing the debt because the latter can also be affected by other factors unrelated to the deficit.

There are three factors that account for the change in PSND ex as a percentage of GDP from the end of one financial year to the next:

- the growth-adjusted interest rate, which is the difference between the nominal interest rate paid on outstanding debt and the nominal growth rate of GDP

- the primary deficit, which is the gap between public sector receipts and expenditures on both current and capital items; this excludes interest payments and receipts which are picked up in the effects of the growth-adjusted interest rate

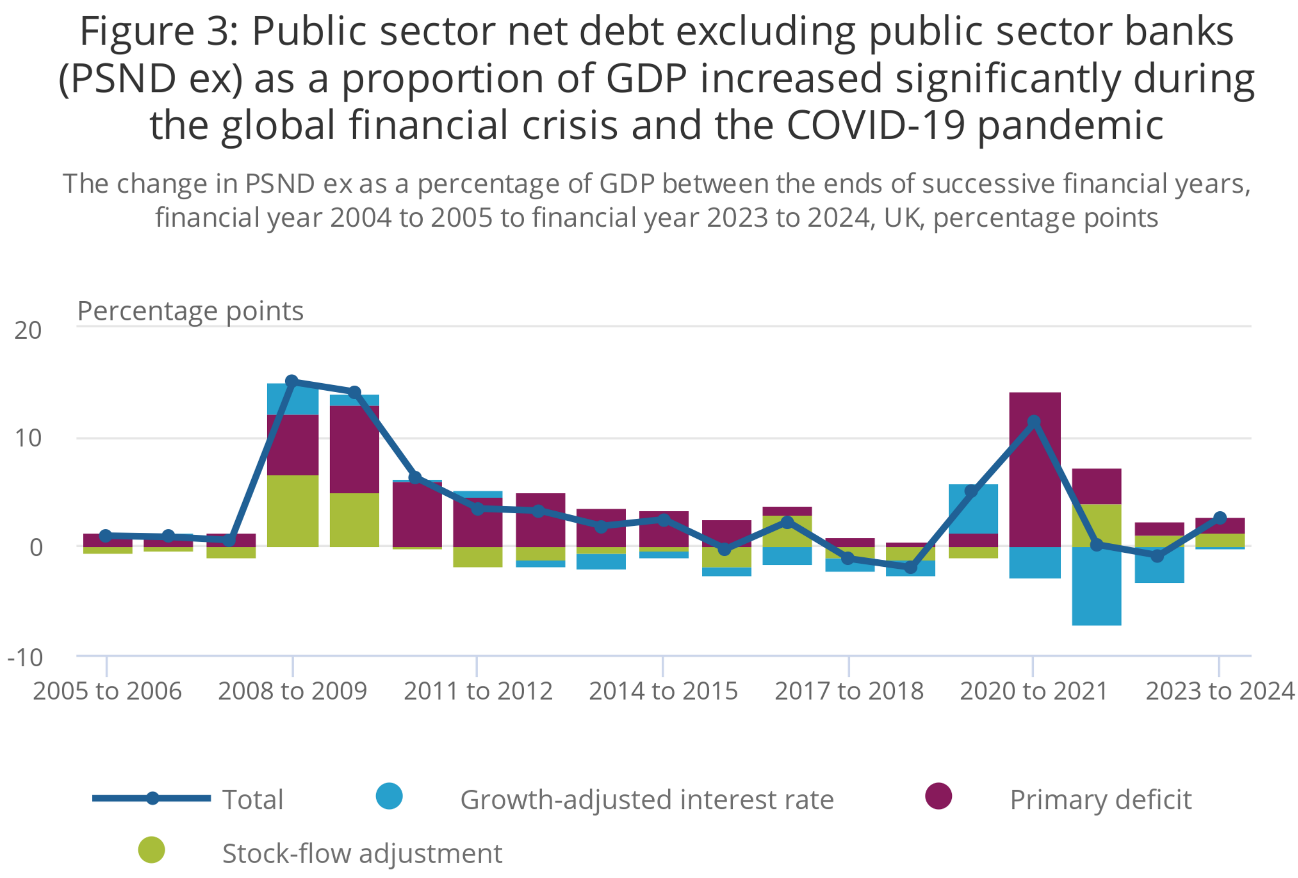
- a stock-flow adjustment, which captures all the other effects on PSND ex; these include revaluations of existing assets and liabilities on the balance sheet, reclassifications of organisations and activities into and out of the public sector, and purchases and sales of illiquid financial assets

Figure 3 shows the changes in PSND ex as a percentage of GDP between the ends of successive financial years (FY) from FY 2004 to 2005 to FY 2023 to 2024. A particularly large increase was recorded during the recession that followed the global financial crisis. During the beginning and end of FY 2008 to 2009, PSND ex relative to GDP increased by 15 percentage points, and by a further 14 percentage points over the course of the following financial year (FY 2009 to 2010). There was also a large increase during the coronavirus (COVID-19) pandemic period, when the ratio of PSND ex to GDP increased by 11 percentage points.

Figure 3 also shows the contributions made by each of the three main influences on change to PSND ex as a proportion of GDP, which will be further explained in later subsections.

**Figure 3: Public sector net debt excluding public sector banks (PSND ex) as a proportion of GDP increased significantly during the global financial crisis and the COVID-19 pandemic**

**The change in PSND ex as a percentage of GDP between the ends of successive financial years, financial year 2004 to 2005 to financial year 2023 to 2024, UK, percentage points**



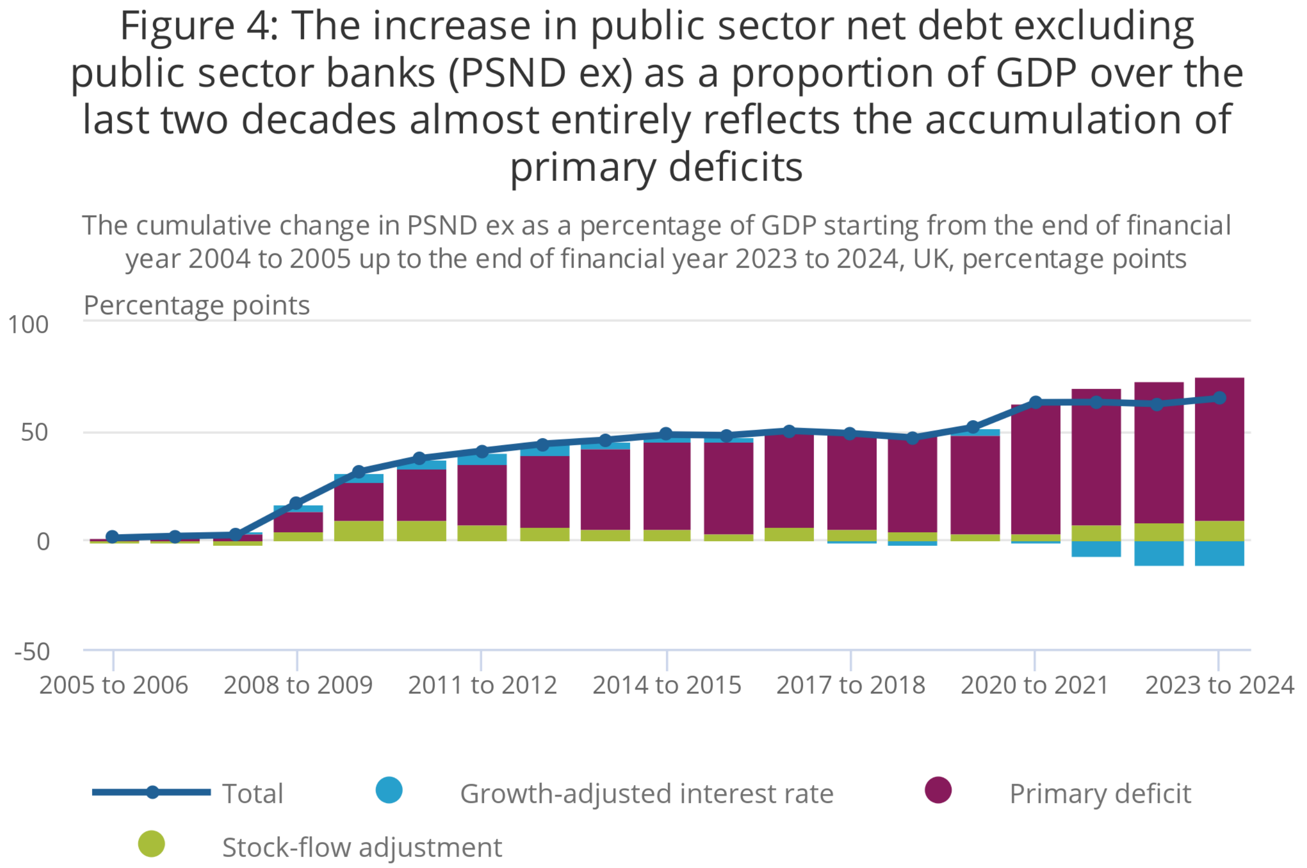

**Source: Public sector finances from the Office for National Statistics**

Figure 4 shows the contributions to the cumulative change to PSND ex over this same period (end of FY 2004 to 2005 to the end of FY 2022 to 2023). The ratio of PSND-ex to GDP increased by a total of 64.9 percentage points, of which:

- the cumulative total of primary deficits accounted for 65.6 percentage points of the overall increase
- the effects of the growth-adjusted interest rate was to lower PSND ex as a percentage of GDP by 10.5 percentage points over the entire period
- the total contribution of stock-flow adjustments was to increase the ratio of PSND ex to GDP by 9.6 percentage points

**Figure 4: The increase in public sector net debt excluding public sector banks (PSND ex) as a proportion of GDP over the last two decades almost entirely reflects the accumulation of primary deficits**

**The cumulative change in PSND ex as a percentage of GDP starting from the end of financial year 2004 to 2005 up to the end of financial year 2023 to 2024, UK, percentage points**




**Source: Public sector finances from the Office for National Statistics**

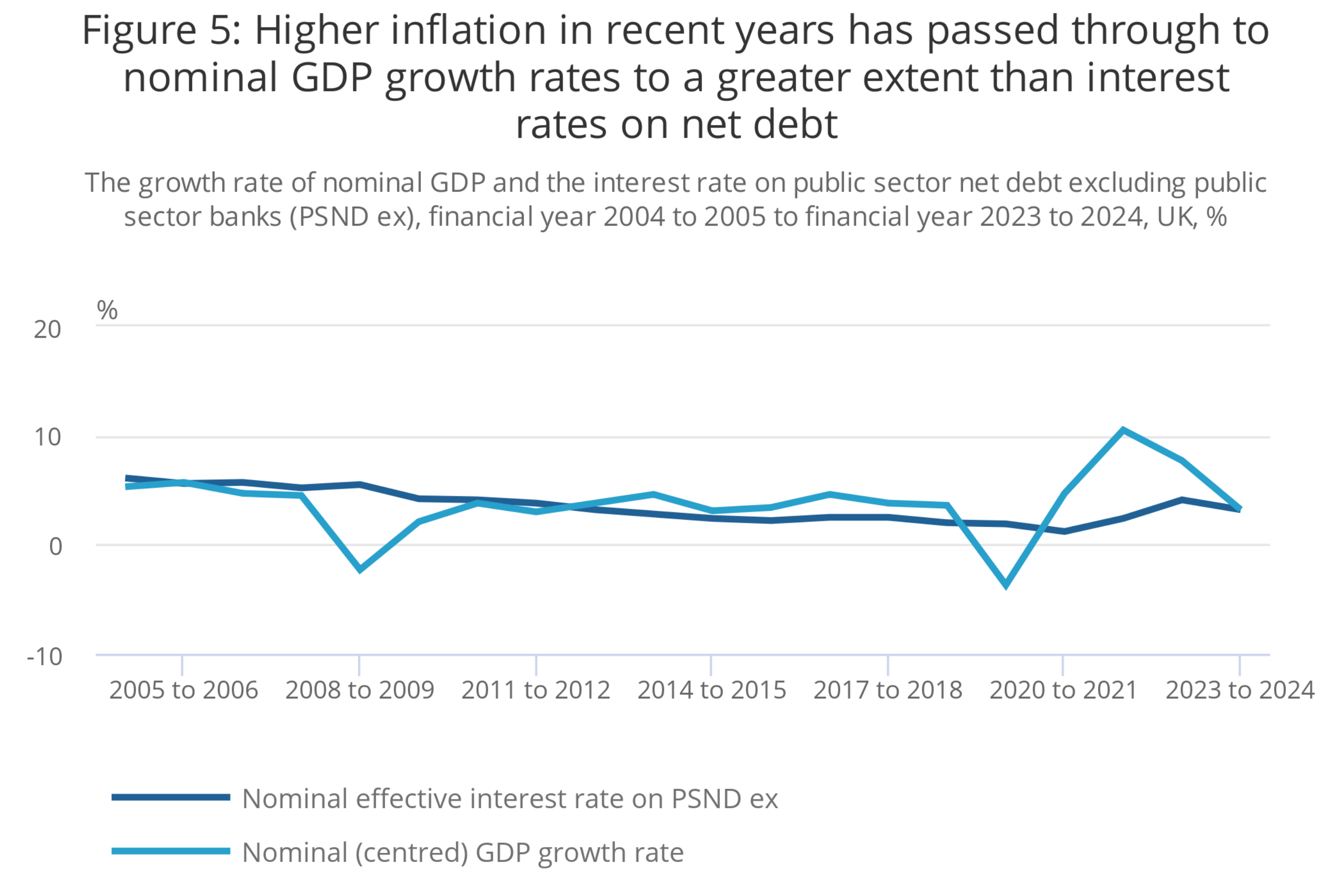
## The growth-adjusted interest rate

The growth-adjusted interest rate is the difference between the nominal effective interest rate paid by the public sector on its net debt (PSND ex) and the growth rate of nominal GDP, which are both shown in Figure 5. This determines what would happen to the ratio of PSND ex to GDP if all other factors were held constant. For instance, a higher rate of interest on the outstanding net debt would result in PSND ex (the numerator) growing at a faster rate while a higher growth rate of nominal GDP would result in a faster offsetting change in the denominator.

It is important to consider the level of nominal GDP used in the presentation of public sector net debt ratios is centred around the end of the financial year (as explained in our methodology, The use of Gross domestic product (GDP) in public sector fiscal ratio statistics) -- that is calculated over a period ranging six months before and after. This makes sense because debt is a stock variable recorded at a specific point in time while GDP is a flow variable recorded over a period of time. The growth rate of centred GDP might therefore differ in its alignment to the headline measure of economic growth, shown in our Gross Domestic Product at market prices: Current price time series, presented in the national accounts.

**Figure 5: Higher inflation in recent years has passed through to nominal GDP growth rates to a greater extent than interest rates on net debt**

**The growth rate of nominal GDP and the interest rate on public sector net debt excluding public sector banks (PSND ex), financial year 2004 to 2005 to financial year 2023 to 2024, UK, %**




**Source: Public sector finances from the Office for National Statistics**

**Notes:**

1. The effective interest rate on the outstanding stock of PSND ex in a given financial year is calculated as: net interest payments paid and received by the public sector excluding the public sector banks in a financial year divided by the stock of PSND ex at the end of the previous financial year.

2. The centred level of nominal GDP is calculated over the period ranging six months before the end of each financial year and six months after. The nominal (centred) GDP growth rate reflects the annual change of this specific measure.

The recessions associated with the global financial crisis and the coronavirus (COVID-19) pandemic resulted in sharp falls in the growth rate of nominal (centred) GDP to below the interest rate on net debt, such that the growth-adjusted interest rate contributed positively to the increase in PSND ex as a percentage of GDP in both those financial years (see Figure 3).

In the financial years 2020 to 2021, 2021 to 2022 and 2022 to 2023, the opposite occurred, with the effect of the growth-adjusted interest rate offsetting the overall increase in PSND ex. The effective interest rate paid by the public sector on its outstanding net debt increased, reflecting an increase in the Bank Rate set by the Bank of England along with other factors on higher interest rates on newly issued debt. Because around one-quarter of the debt stock is index-linked to inflation, the interest rate paid increases in line with the rate of Retail Price Index (RPI) inflation. However, much of the outstanding debt stock had been issued in the past at interest rates lower than present rates and not index-linked to inflation. This largely explains the relatively slower pass-through from higher inflation to debt interest rates than nominal GDP growth rates.

## The primary deficit

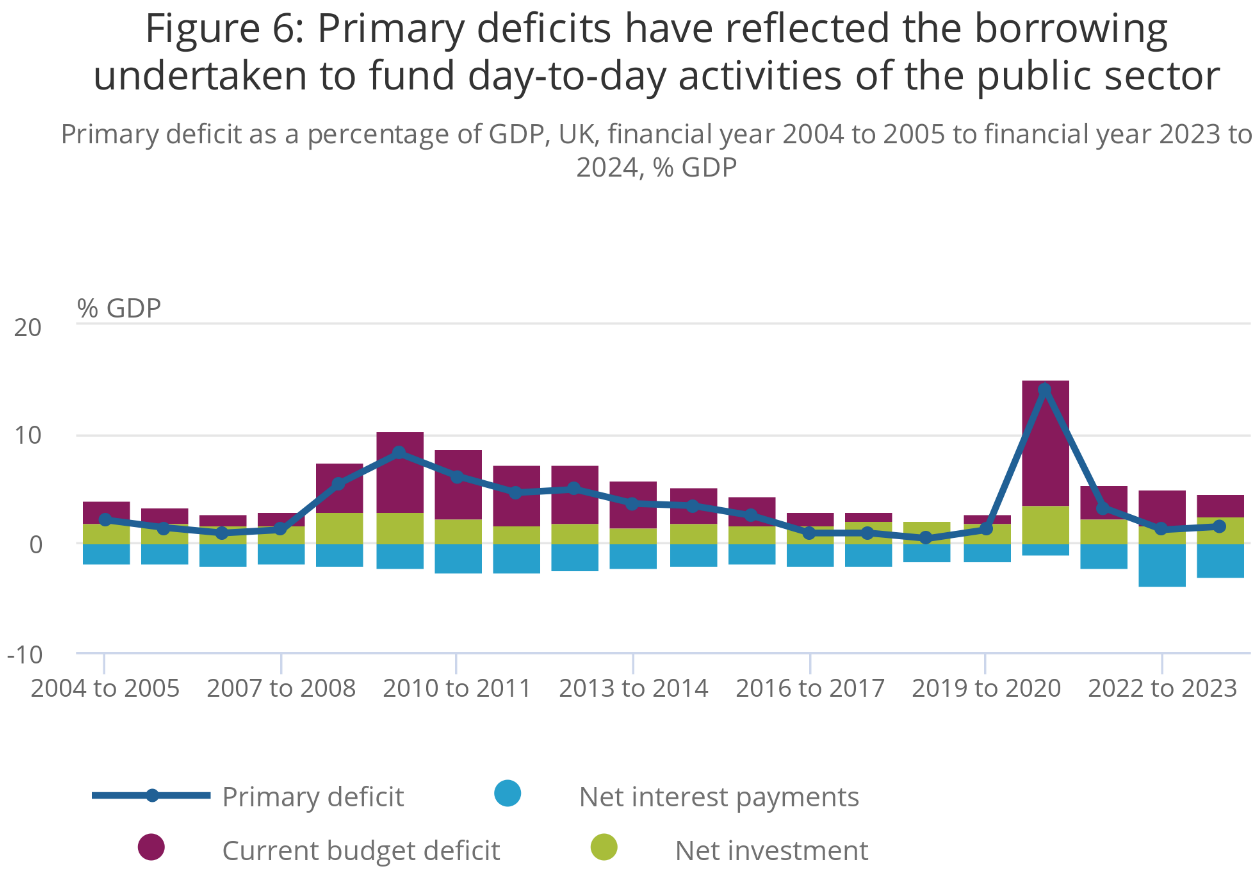
The primary deficit in each financial year is the amount of public sector net borrowing (PSNB ex) excluding receipts and payments of interest, which are picked up in the growth-adjusted interest rate effect. The primary deficit, by excluding debt service costs, is generally viewed as a measure of structural imbalance between the amount of money the public sector brings in each financial year (FY), mostly through taxes, and how much it costs to provide public goods and services and investment.

The size of the primary deficit relative to GDP is shown in Figure 6. It comprises:

- the current budget deficit, which is the balance of current spending and receipts
- net investment, consisting of the net acquisition and disposal of capital goods
- net interest payments, which are included in the current budget deficit but excluded from the primary deficit

**Figure 6: Primary deficits have reflected the borrowing undertaken to fund day-to-day activities of the public sector**

**Primary deficit as a percentage of GDP, UK, financial year 2004 to 2005 to financial year 2023 to 2024, % GDP**



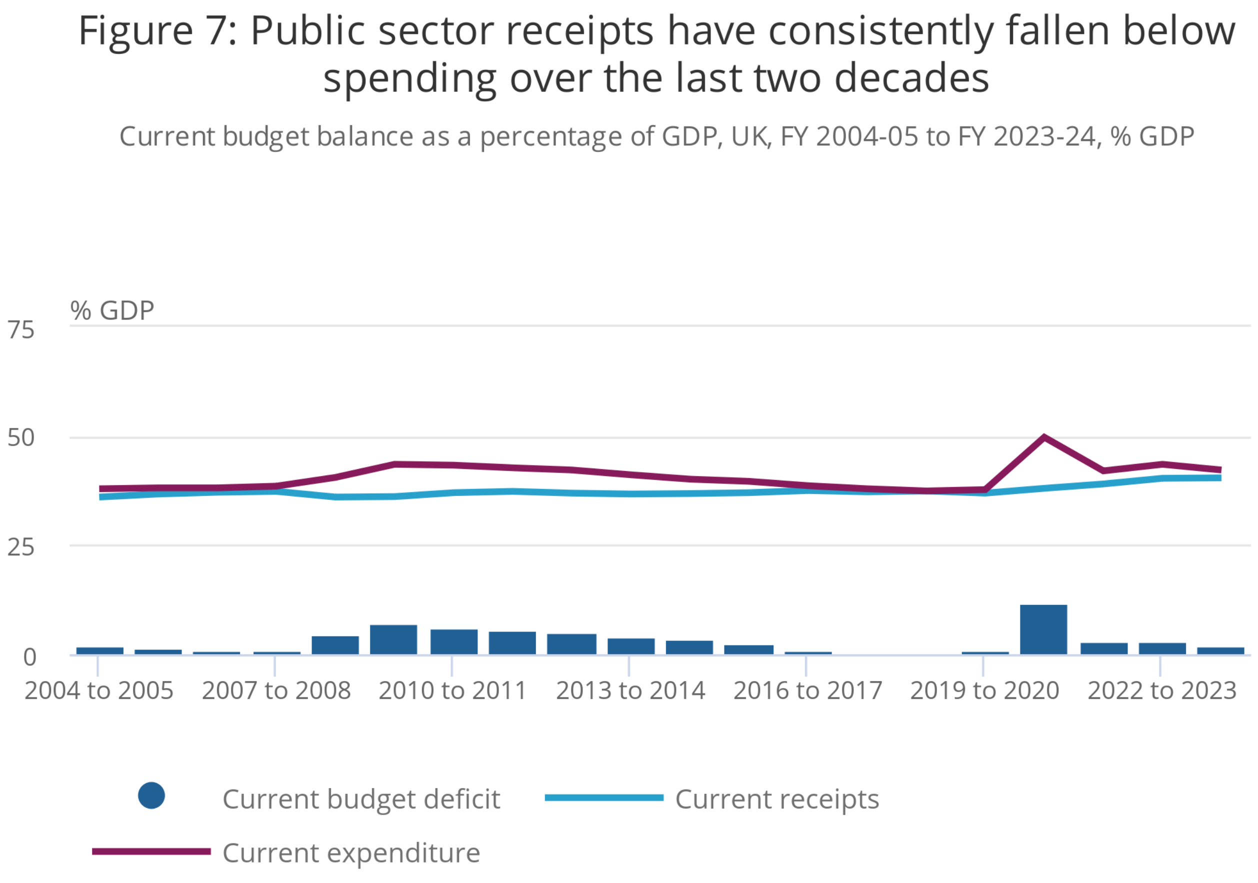

**Source: Public sector finances from the Office for National Statistics**

The largest factor in accounting for the size of the primary deficit in each FY is the public sector current budget deficit (PSCB ex). In simple terms, this is the borrowing required to fund the day-to-day activities of the public sector.

Figure 7 shows how the current budget balance relates to the current receipts and current spending relative to GDP. This highlights a succession of relatively large deficits resulting from the slowdown in the economy in the aftermath of the global financial crisis between FY 2008 to 2009 and FY 2015 to 2016, where receipts consisting largely of taxes on income and production fell below current spending. The current budget deficit was brought back towards balance mainly by government policy holding down the growth of spending relative to GDP, a period referred to by many commentators as “austerity”.

**Figure 7: Public sector receipts have consistently fallen below spending over the last two decades**

**Current budget balance as a percentage of GDP, UK, FY 2004-05 to FY 2023-24, % GDP**




**Source: Public sector finances**

A large deficit was also recorded in FY 2020 to 2021 reflecting the impact of the coronavirus (COVID-19) pandemic. This resulted in a significant fall in GDP and was accompanied by a substantial increase in public spending. In total, more than 50 schemes were announced by the UK government and devolved administrations to support individuals and businesses during the pandemic. The largest of these related to the two main job support schemes (explained on GOV.UK), the Coronavirus Job Retention Scheme (CJRS) and the Self Employment Income Support Scheme (SEISS), with an estimated combined cost of around £100 billion, as explained in the House of Commons' COVID employment support schemes report (PDF, 300KB).

The sharp rise in energy prices following the Russian invasion of Ukraine in February 2022 prompted further increases in government spending during the FY 2022 to 2023, primarily through the costs of three energy support schemes (explained on GOV.UK): the Energy Price Guarantee, the Energy Bills Support Scheme and the Energy Bill Relief Scheme. The UK government has provided cash estimates of cumulative cost of each of the energy support schemes up to the end of September 2023 totaling just under £44 billion, as explained in the Department for Energy Security and Net Zero's statement on the Energy Prices Act 2022 and Expenditure on Energy Schemes, Quarter 2 and Quarter 3, 2023.

The combined effects of the global financial crisis, the COVID-19 pandemic and the energy price crisis has resulted in a succession of large current budget deficits by historical standards. Over the last two decades, these have almost entirely explained the sustained rise in PSND ex as a percentage of GDP.

### Stock-flow adjustments

Stock-flow adjustments consist of factors that lead to a change in public sector net debt (PSND ex) between two points in time other than through the flow of public sector net borrowing (PSNB ex) within that period.

One of the most important types of stock-flow adjustments relates to financial transactions where cash is used to purchase an illiquid financial asset of equal value or received from the sale of one. For example, the rescue package to recapitalise Royal Bank of Scotland and the Lloyds Banking Group during the global financial crisis resulted in the UK government purchasing £45.5 billion worth of shares in RBS and £20.3 billion in Lloyds between November 2008 and December 2009, as shown in our [Large impacts on public sector fiscal measures excluding banking groups dataset].

These financial transactions showed up in the public sector net cash requirement (PSNCR ex), which measures the public sector's need to raise cash by, for example, issuing gilts or running down liquid assets. The purchase of bank equities in exchange for cash will result in an increase in PSNCR ex but not PSNB ex. There will also be an increase in PSND ex because of the depletion of cash reserves that were used to purchase an illiquid financial asset.

In Figure 4, the relatively large positive stock-flow adjustments recorded in financial years 2008 to 2009 and 2009 to 2010 partly reflects these, and other financial transactions related to the government's interventions in the financial sector in response to the global financial crisis. However, when the government subsequently sold shareholdings in the public sector banks, the opposite was the case. The PSNCR ex and PSND ex will both fall even though PSNB ex remains unchanged.

Another important factor that can have an impact on the stock-flow adjustment involves the reclassification of institutional units into and out of the public sector. This typically changes PSND ex without necessarily involving any movements in cash, so there is no impact on PSNCR ex. For example, the reclassification of English Housing Associations to the public sector raised PSND ex by £41 billion starting in December 2008. However, when they were subsequently reclassified back to the private sector in November 2017, PSND ex was then reduced by £65.5 billion.

## 4 . Public sector finances data

[Public sector finances tables 1 to 10: Appendix A]
Dataset | Released 21 March 2024
The data underlying the public sector finances statistical bulletin are presented in the tables PSA 1 to 10

[Large impacts on public sector fiscal measures excluding banking groups: Appendix B]
Dataset | Released 21 March 2024
Large events that affect current public sector net borrowing excluding public sector banks (PSNB ex), and public sector net debt excluding public sector banks (PSND ex) from the period May 2000 onwards. Impacts are shown for the components of public sector net borrowing, net cash requirement and net debt.

[Public sector balances sheet tables: Appendix N]
Dataset | Released 21 March 2024
A reconciliation of the latest public sector balance sheet measures.

[Public sector finances borrowing by sub-sector]
Dataset | Released 21 March 2024
Public sector finances analytical tables (PSAT) showing transactions related to borrowing by sub-sector. Total Managed Expenditure (TME) is also provided.

## 5 . Glossary

### Public sector

In the UK, the public sector consists of six subsectors: central government, local government, public non-financial corporations, public sector funded pensions, the Bank of England, public financial corporations (or public sector banks). The headline figures presented in the Public Sector Finances statistical bulletin exclude the public sector banks and are denoted as "ex" measures.

### Public sector current budget deficit

Public sector current budget deficit (PSCB) is the gap between current expenditure and current receipts, having taken account of depreciation. The current budget is in surplus when receipts are greater than expenditure and is indicated with a negative sign.

### Public sector net borrowing

Public sector net borrowing (PSNB) is the gap between total expenditure and current receipts. If receipts exceed expenditure, this is referred to as a surplus and is indicated with a negative sign. Borrowing is often referred to by commentators as "the deficit".

### Public sector net cash requirement

The public sector net cash requirement (PSNCR) represents the cash needed to be raised from the financial markets over a period to finance its activities. The amount of cash required will be affected by changes in the timing of payments to and from the public sector, rather than when these liabilities were incurred.

### Public sector net debt

The total or gross debt of the public sector represents the amount of money owed to organisations in the UK private sector and overseas (in the form of loans, debt securities, deposit holdings and currency). However, the public sector also holds liquid financial assets, such as foreign reserves and bank deposits, which can be used to offset its gross debt. Therefore, public sector net debt reflects gross debt net of liquid financial assets held. Public sector net debt is often referred to by commentators as "the national debt".

### Public sector primary deficit

The difference between the receipts and spending of the public sector, excluding interest payments. By excluding debt service, the primary deficit highlights the underlying structural imbalance between the amount of money that the public sector brings in each year (mostly through taxes) and how much it costs to provide public goods and services.

## 6 . Data sources and quality

For information about data sources and quality, please see our methodology article, [Monthly statistics on the public sector finances: a methodological guide].

# 7 . Related links

Monthly statistics on the public sector finances: a methodological guide
Methodology | Released 04 October 2023
This methodological guide provides comprehensive contextual and methodological information on the monthly Public sector finances (PSF) statistical bulletin, which is jointly produced by the Office for National Statistics (ONS) and HM Treasury (HMT).

The calculation of interest payable on government gilts
Methodology | Released 18 July 2022
Explains the recording of interest payable to holders of UK government gilts in the UK public sector finances.

Public sector finances QMI
Methodology | Released 04 October 2023
Quality and Methodology Information for the UK public sector finances and government deficit and debt under the Maastricht Treaty, detailing the strengths and limitations of the data, methods used, and data uses and users.

The use of Gross domestic product (GDP) in public sector fiscal ratio statistics
Methodology | Released 21 September 2016
Aims to explain the methodology used for the presentation of GDP ratios in the UK PSF publication and in particular for the public sector net debt where a centred approach (requiring forecasts) is used.

Wider measures of the public sector balance sheet: public sector net worth
Article | Released 22 June 2021
This article outlines plans to introduce an additional statistical aggregate to the public sector finance statistics and explains how it will differ from existing measures.

# 8 . Cite this article

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