



THE RADICAL OPTION IN UK PENSIONS

The case for transitioning unfunded public sector occupational pension schemes to a funded model - and how to do it

by Toby Nangle

February 2024

> This paper analyses the potential political, fiscal, and economic benefits of shifting the huge unfunded public sector pensions schemes in the UK from a pay-as-you-go model to a funded model. Such a move would enable them to be global investment powerhouses, driving long-term sustainable outcomes for public servants, cheaper finance for the Treasury, better outcomes for taxpayers, higher levels of investment, deeper capital markets, and a more stable international investment position.

The radical option in UK pensions reform

The active debate on the future of pensions in the UK is vitally important for the long-term prosperity of the UK and its citizens: what should the pension system look like if it is to deliver better retirement outcomes for millions of people across the country and - simultaneously - drive more long-term investment in every corner of the UK?

Most of the debate over the past few years on the reform of pensions has focused on the funded part of the system: private sector defined benefit pensions, defined contribution pensions, and the Local Government Pension Scheme. All of these pensions are funded in the sense that the pension contributions paid by employers and employees are invested in a range of assets to generate returns (how and where they are invested has been one of the key topics of debate) and these assets are used to pay the future pensions of members.

But it has largely ignored the elephant in the room: the giant unfunded public sector pension schemes for around nine million current and former NHS workers, teachers, civil servants, and other public sector workers. These schemes are unfunded in the sense that the (generous) pension contributions paid by employers and employees each year are not invested but instead used to pay the pensions of retired members of the schemes (known as a 'pay-as-you-go' model).

These schemes are huge - the future pension liabilities sit off the government's balance sheet but are bigger than the national debt - poorly understood, and complex. They have been criticised for being too generous compared to private sector pensions, too expensive, and unsustainable in their current form. But there has been a strong sense running through the policy debate on pensions that they could be part of the solution. That is why we commissioned Toby Nangle, a former senior asset manager and financial expert, to explore the case for transitioning these schemes to a funded model more in line with the rest of the pensions system.

This paper makes a strong political, fiscal, and macroeconomic case for reform. Shifting to a funded model would enable these schemes to become global investment powerhouses - the NHS scheme would be the third largest pension scheme in the world. They would become more politically sustainable, driving better long-term outcomes for public servants and setting an example for the rest of the UK pension system to follow. The cost of funding these schemes would be lower for the government, providing a better deal for taxpayers. And for good measure, transitioning these schemes would lead to higher levels of investment, deeper capital markets, and a more stable international investment position for the UK.

While the potential benefits are clear, such a move would face significant opposition and would require bold political leadership. The best time to have started this transition would have been decades ago. We think the second best time is now.

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Executive summary

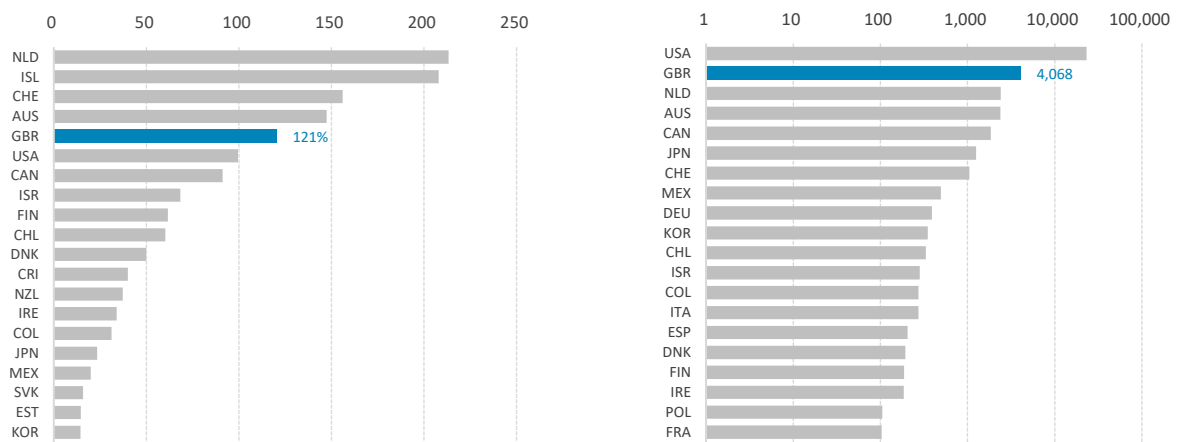
Here is a 10-point summary of this report:

- 1) **The elephant in the room:** the UK is a world leader in private pensions with the second largest pool of pensions assets after the US. Private defined benefit schemes are well-funded, and auto-enrolment defined contribution pensions have increased the proportion of UK citizens with a private pension. But the largest pensions schemes in the UK are unfunded public sector schemes. They are poorly understood sleeping giants and have been largely absent from the debate.
- 2) **A question of scale:** these unfunded schemes for public sector workers in the NHS, teachers, civil servants, and other sectors are roughly the same size as all private sector defined benefit pensions combined, with notional assets of around £1.3 trillion. The five largest schemes are comfortably in the 20 largest pension schemes globally.
- 3) **A different model:** unlike private sector pensions, these schemes operate on a pay-as-you-go-basis, with payments to retired members of the schemes paid each year out of employer and employee contributions with a top up from central government, instead of through investments.
- 4) **The current system is not broken:** despite alarmist calls to the contrary, reforms delivered since 2013 have left the system fiscally sustainable. But moving schemes towards becoming fully funded would deliver a step-change in their political sustainability and address key macroeconomic vulnerabilities in the UK economy, and they could save taxpayers hundreds of billions of pounds.
- 5) **The political case for change:** from the perspective of the recipient, an inflation-linked defined benefit government guaranteed pension cannot be improved upon. But in the growing absence of private sector defined benefit pensions, public ones are increasingly portrayed as unfair and unaffordable. Public service pensions have become a political football, and funding them would both put them on a level playing field with remaining defined benefit schemes and link them to substantial fiscal and macroeconomic benefits. This would improve their political sustainability, increasing the security of millions of scheme members.
- 6) **The fiscal case for change:** public service pensions are an integral, large, but unscrutinised form of public sector financing. Financing them on today's market terms (through the gilt market instead of the current system) would save HM Treasury over the next two decades around £70 billion; channelling new employer and employee contributions into investments could save taxpayers over £600 billion.
- 7) **The macroeconomic case for change:** funded pensions would increase the stock of savings, deepening pools of capital that can be drawn on to enhance the capital stock and help finance the transition to net zero. Higher national savings rates would help address the UK's chronic serial current account deficits and deteriorating net international investment position, so improving macroeconomic resilience.
- 8) **A model to follow:** Canadian provincial public service pensions began to transition from unfunded schemes at the end of the 1980s. They offer lessons as to how to integrate independent governance, professional in-house investment management, substantial scale, and comprehensive geographic and asset-class diversification. Other markets such as Sweden also provide a potential example to follow.
- 9) **The likely pushback:** on-balance sheet government debt is already high; choosing to bring off-balance sheet liabilities on-balance sheet, even if this results in fiscal savings, increases balance sheet risk for the government, and potentially reduces consumption. Shifting to a funded model would increase the 'financialisation' of public sector pensions (generating huge fees for greedy bankers and asset managers) and the 'politicisation' of pensions, with bad investment decisions made for political ends. We address all these critiques and argue that on balance the potential benefits offset the risks.
- 10) **Seizing the opportunity:** the huge unfunded public sector pensions have been largely absent from the recent active political debate on the structure and future of pensions in the UK. At a time when the UK economy and UK citizens need all the help they can get, we think there is an opportunity to be seized in reforming these sleeping giants.

The international context

Fig.1 UK pensions in a global context

Funded pension assets as % of GDP and in \$bn (log scale) for OECD members, 2021



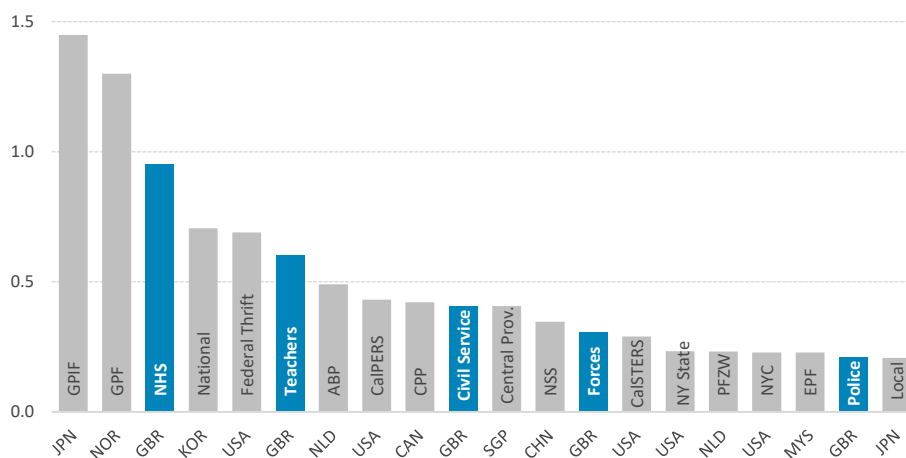
Source: OECD

Given the debate over the past few years about pensions in the UK, you could be forgiven not noticing that the UK is in the premier league of workplace pensions systems around the world. It boasts a highly developed occupational private sector ecosystem, backed by with the second largest pool of funded pensions assets in the OECD by market value and fifth largest as a proportion of GDP. In the annual Mercer CFA Institute survey of pension systems, the UK is rated a respectable 'B'².

But the country's largest pension schemes are missing from this picture. These are the unfunded public sector occupational pension schemes, backed by explicit - but off-balance sheet - government guarantees. These schemes for the NHS, teachers, civil servants, and other public sector workers have over nine million members and combined pension liabilities of £1.3 trillion. The largest five of these schemes easily feature in the top twenty pension schemes in the world by asset value, even if their assets are not tradable. Their collective size eclipsed the on-balance sheet national debt in the last audit of Whole of Government Accounts in 2020/21, and they are almost as large as the entire £1.4 trillion private sector defined benefit pension system in the UK.

Fig.2 Unfunded public sector pensions in a global context

Value of 20 largest pensions schemes in the world \$bn

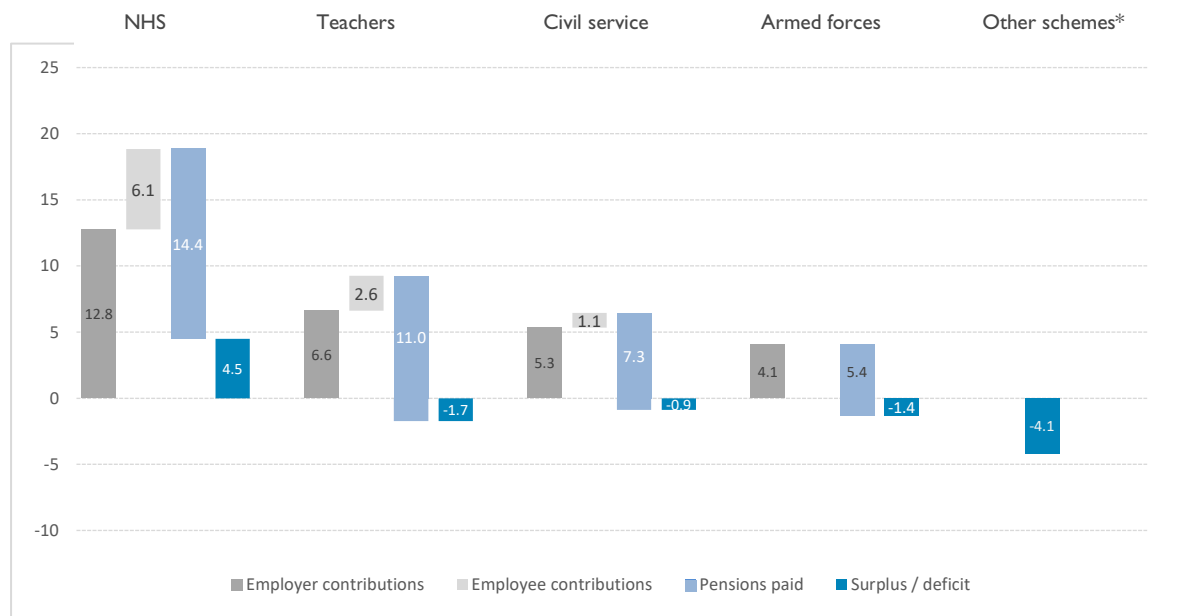


Source: UK government accounts, P&I Online, Thinking Ahead Institute 2023

How the unfunded public sector pension schemes work

Fig.3 The mechanics of unfunded public sector pensions

Contributions and pensions paid in unfunded public service pension schemes 2022-23 £bn



* Other schemes include: NHS and teachers schemes in Scotland, Northern Ireland Executive schemes, judicial pension schemes, police force and firefighters' schemes.

Source: OBR, November 2023³

The unfunded pay-as-you-go public sector pension schemes work very differently from the funded defined benefit and defined contribution pension schemes that have been the focus of the current debate on reforming pensions in the UK. Employers and employees make contributions to the schemes (as in funded schemes) but instead of being invested these contributions are used each year to pay the pensions of retired members of each scheme. The government (also known as taxpayers) tops up the schemes each year if the pensions paid exceeds the value of contributions received.

Fig.3 shows the economics of the four biggest unfunded public sector schemes (NHS, teachers, civil service, and armed forces) and the other smaller schemes (covering Northern Ireland, Scotland, the judiciary, police and firefighters) for 2022 to 2023. It does not include around two million local government workers who contribute to the Local Government Pension Scheme, a separate funded scheme with around £370bn in assets.

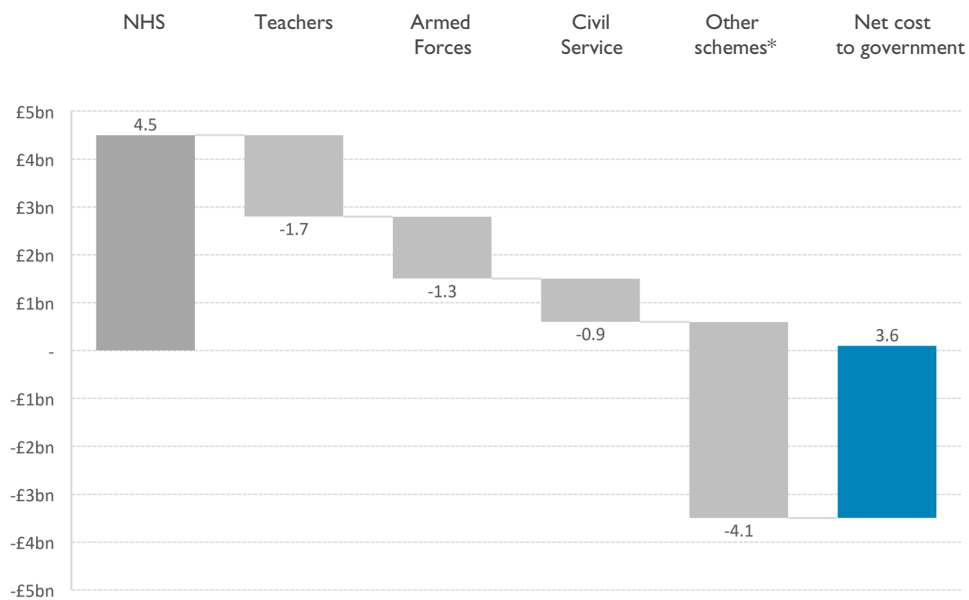
In the NHS scheme on the left as an example, employers such as hospitals and local trusts paid generous contributions of £12.8bn (equivalent to more than 20% of staff salaries), and employees paid contributions of an additional £6.1bn (nearly 10% of their salary), giving total contributions of £18.9bn. The scheme paid out £14.4bn in pensions, leaving a cashflow surplus of £4.5bn. The NHS scheme is the only big unfunded public sector scheme that is cashflow positive - in the other schemes the value of pensions paid each year exceeds the value of the contributions received. This surplus is used to help offset the cashflow deficits in the other schemes, with the balance topped up by the government (see Fig.4 on the next page).

The total contributions across the schemes added up to an estimated £46.6bn, and total pensions paid came to £48.2bn. Including the cashflow surplus from the NHS scheme, the government topped up the schemes with an additional £1.6bn to balance contributions received with pensions paid. To put the scale of these schemes into perspective, the £47bn that the OBR estimates was paid into these schemes in the year 2022 to 2023 is more than half as big as the total £80bn in contributions paid into private sector defined benefit schemes, private sector defined contribution schemes, LGPS, and personal pensions combined.

The sustainability of unfunded schemes in their current form

Fig.4 The economics of unfunded public sector pensions

The surpluses, deficits, and net costs of unfunded public service pension schemes 2022-23 £bn



Source: OBR, November 2023

Despite their size and contrary to much of what you might read in the media, the Office for Budget Responsibility (OBR) projects public service pension schemes to be sustainable in the long-term⁴. Fig.4 above shows the total net cost of these pension schemes in 2022 to 2023. The starting point on the left is the cashflow surplus of £4.5bn in the main NHS scheme. All of the other schemes were cashflow negative and in aggregate these unfunded public sector pensions required a top up grant from the government of a net £3.6bn.

The longer-term sustainability of the schemes is partly due to the substantial series of reforms recommended by the Independent Public Service Pensions Commission, chaired by Lord Hutton.⁵ Following the 2011 Hutton Review, trade unions and government settled on an arrangement that reduced the growth in future pensions liabilities and capped the future costs of the schemes. This culminated in the Public Service Pensions Act 2013 that switched indexation (the rate at which pension payments increase each year) from the Retail Price Index to the Consumer Price Index, increased member contribution rates, and moved from a final salary model to career average model.

It also rebalanced contributions between members and taxpayers and introduced the so-called 'employer cost cap mechanism', designed to "backstop protection to the taxpayer".⁶ The Pension Policy Institute estimates that these reforms collectively reduced the value of pensions by 15%⁷ and HM Treasury estimates that the reforms will save taxpayers around £400bn over fifty years.⁸

Projections of their fiscal sustainability are also due to the way that it is measured. A reasonable assumption is made that the pension schemes will run in perpetuity. These schemes are unfunded and run on a pay-as-you-go (PAYG) basis, using employer and employee pensions contributions from active members of the schemes to pay pensions to retired members of the schemes. So long as workers and employers continue to pay into the schemes, the schemes will continue to receive substantial receipts with which to pay their pension obligations.⁹

The case for change

Despite the apparent long-term fiscal sustainability of supporting public service pensions there a strong case to move them towards a fully funded model. This case has three dimensions: political, fiscal, and macroeconomic.

The political case:

- The political sustainability of these schemes is based on consent, but understanding the costs of unfunded public sector pension schemes is difficult. Their accounting is opaque and parliamentary scrutiny is lacking. Their existence and apparent generosity are frequently attacked in the press as evidence of government waste and public sector inefficiency.
- The legitimacy of providing a benefit to public sector workers that is deemed unaffordable in the private sector is under attack. It is reasonable to ask at what point this sense of unfairness might tip over into political unsustainability.
- Good public service pensions should be understood as benchmarks to which the private sector should seek to level up towards (instead of levelling down public sector pensions provision to private sector levels). Moving to a funded model would reduce political risk, enhance the schemes' sustainability, and directly benefit millions of public sector workers.

The fiscal case:

- Unfunded public service pensions are an integral, large but unscrutinised form of public sector financing. As a source of finance, they have been - and continue to be - significantly more expensive than market forms of government finance.
- Financing these schemes on today's market terms rather than the special discount rate used by the government would save HM Treasury around £70 billion over the next twenty years.
- In almost every scenario of future funding rates and investment returns, it is reasonable to project substantial fiscal gains from shifting these schemes to a fully funded model. Strong real investment returns could be captured for the public purse.
- The move could deliver fiscal savings over the next twenty years of around £600 billion (if only new contributions are diverted to invest in assets), or up to £1.5 trillion if the existing balance of these schemes were diversified into market assets.

The macroeconomic case:

- Moving unfunded public sector pensions to a funded pensions model would increase the stock of savings, deepen pools of capital that can be drawn on to enhance the capital stock, boost economic growth, and help finance the transition to net zero.
- Higher national savings rates would help address the UK's serial and chronic current account deficit and deteriorating net international investment position. This would improve the UK's macroeconomic resilience.
- The proposal may seem unaffordable, but other countries have shown how it can be done successfully and sustainably. Canadian provinces began their transition public service pension plans from unfunded to fully-funded in the 1980s, providing a roadmap for a shift to asset-backing for the Canadian Pension Plan, the country's national contributory scheme - their version of the UK's State Pension. Sweden began the move to asset-back its retirement system only in 2000.¹⁰

The political case for change

The political case for change revolves around three key themes:

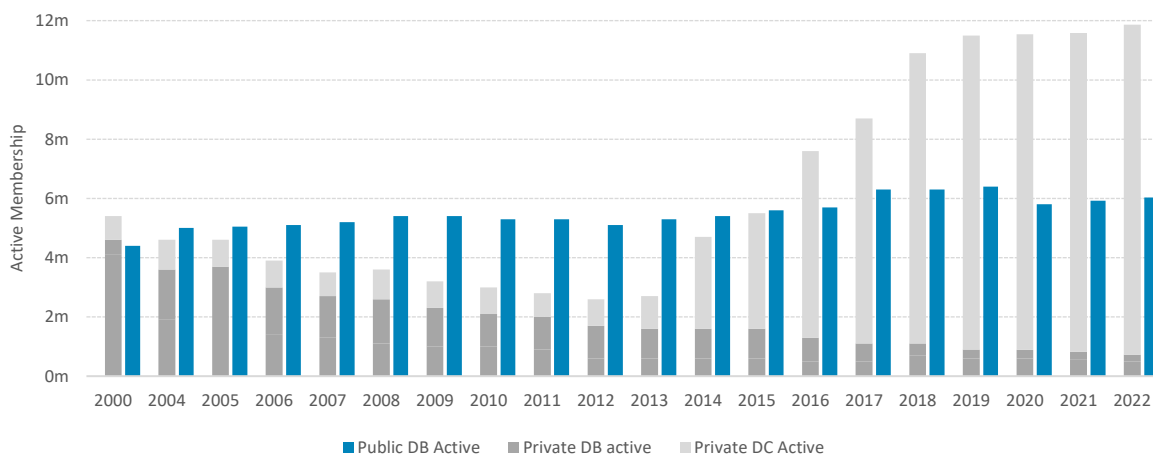
- As private sector defined benefit schemes have largely disappeared from the workplace, the political sustainability of public service schemes has come under threat.
- The lack of transparency in the accounting and valuation of public service schemes has helped undermine their legitimacy; sunlight would be the best disinfectant.
- Switching to a funded model could reduce political risks to the future of public sector pensions and enhance their sustainability for millions of public sector workers.

There are over six million active members of public service pension schemes in Britain today, more than three and a half million of whom are active members of unfunded schemes. The schemes provide their members with an inflation-linked and government-guaranteed defined benefit pension that can hardly be improved upon. But without reform the political sustainability of these benefits is in question.

Until the turn of the millennium active membership of private sector pension schemes eclipsed that of public schemes. But following the widescale replacement of private defined benefit schemes with cheaper and less secure defined contribution schemes, the defined benefit nature of public pensions has become increasingly exceptional. The existence of such exceptional schemes is regularly attacked in *The Sun*, *The Daily Mail*, *The Express*, and *The Daily Telegraph*.¹¹ The focus of these attacks is two-fold: the opacity with which they are accounted, and their cost.

Fig.5 The shift in UK pensions provision

Active membership of UK pension schemes by type and sector, 2000-2022



Source: ONS, 2023¹²

* Note: 'public sector DB active' includes LGPS

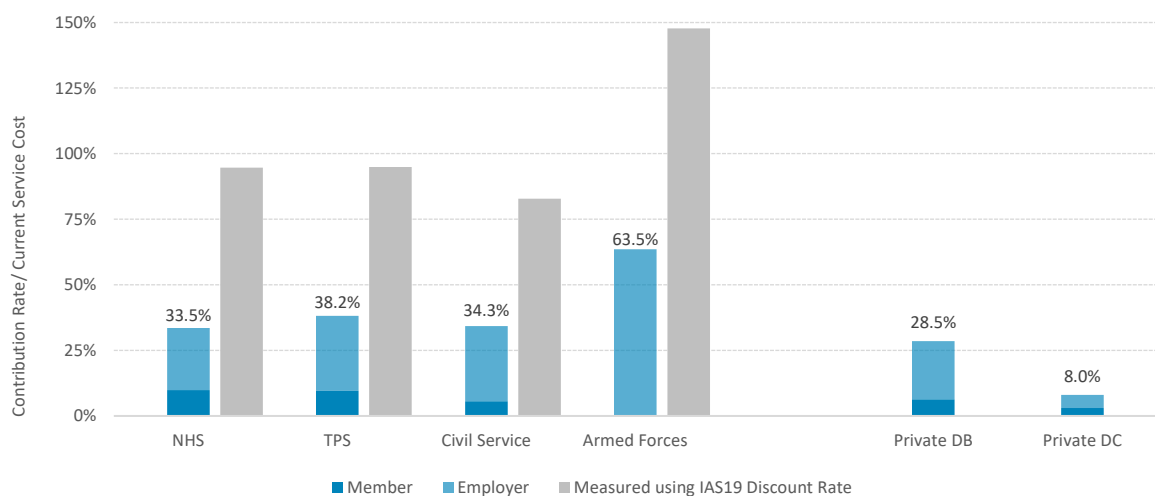
Critics are right to point to a lack of transparency. Unfunded public sector pension scheme accounting is opaque. Wildly differing valuations of public service pension liabilities are issued by different branches of government, or sometimes even from the same branch.¹³ Furthermore, the costs of public service schemes are not itemised in budgets that are presented before Parliament. And they are reported in Total Managed Expenditure only on a cashflow, rather than accruals, basis.¹⁴ There is no reason to suggest that the accounting is deliberately opaque. But given that public service pension promises are bigger than the national debt as the government's largest monetary liability, this opacity does not serve their political legitimacy or sustainability.

As to their cost, public service schemes look affordable in the long-term as a result of the Hutton reforms (as discussed on page 5). But once we cut through accounting opacity, they also look expensive. As the OECD notes, 'one of the policy challenges faced by public sector pension schemes is that they tend to offer relatively generous defined benefit pension promises, when compared to private sector arrangements'¹⁵. Other critics have pointed to the high contribution rates (with a combined rate by employers and employees of more than 30% of salary). However, if these rates were to be reduced, it would increase the annual cashflow deficit in each scheme which would then need to be topped up by government to meet existing pensions liabilities.

Comparisons with private sector contribution rates are complicated by the multiple discount rates used by public service schemes. Individual unfunded schemes report both a) employee and employer contributions (the money subtracted from individuals' pay checks and their employers' budgets to purchase pension promises from the Treasury) and b) total current service costs (the present value of the pension benefits being purchased according to international accounting standards used in the private sector). As Fig.6 illustrates, the current service costs are more than double the sum of member and employer contributions in the four largest schemes.

Fig.6 A disconnect in pension contributions

Average employee and employer contribution rates, and economic value of combined contributions, as a % of salary 2021



Source: ONS¹⁶

Away from the university and rail sectors (USS and Railpen), open private defined benefit schemes are vanishingly scarce. Over the past 20 years they have been largely replaced by defined contribution schemes, typically with much lower contribution rates from both employers and employees. Pension contributions for the median private sector worker of around 8% are less than a quarter of the public sector schemes when compared on a like-for-like basis.

Alongside these unfunded schemes, local government workers in the Local Government Pension Scheme (LGPS) provide a real-life case study of an alternative funded model for public sector pensions. This scheme is fully funded with assets of around £370bn (and more than £400bn when you include its equivalents in Scotland and Northern Ireland) and has over two million active members. Its assets, benefits, and contributions are valued in line with practices applied to schemes across the private sector. While the scheme's governance and management arrangements are Byzantine, it is over-funded from an actuarial perspective.¹⁷ Moving central government pension schemes towards being fully funded could enhance their political sustainability.

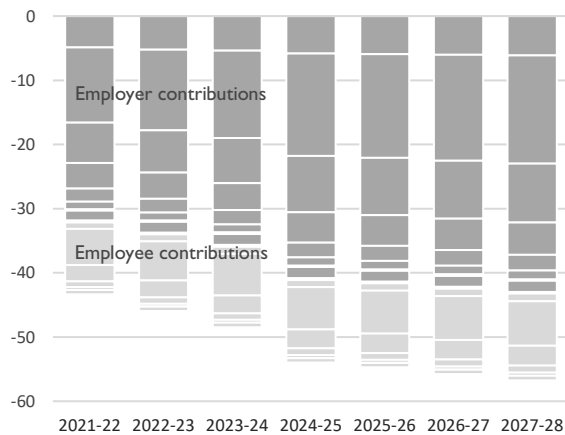
Government pension benefits are a model to which private sector employers should aspire. This sort of levelling up is possible only if such a strong pensions model persists.

The fiscal case for change

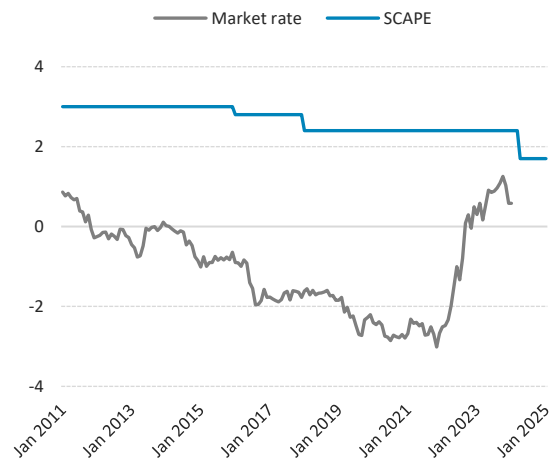
Unfunded public service pensions are a large, integral, and almost entirely unscrutinised form of public sector financing.

Fig.7 A large and expensive form of government financing

i) Contributions paid into public sector pension schemes £bn



ii) Discount rate for public sector pensions vs market rate % ¹⁸



Source: OBR, Bank of England, IFS

The Office of Budget Responsibility (OBR) reports that employer and employee contributions to the largest seven public service pension schemes totalled £44bn in fiscal year 2021-22, and are set to rise to over £59bn by fiscal year 2027-28. These contributions are a form of government borrowing: active members of the schemes are lending money today to the government to pay the pensions of retired members in the schemes and are effectively repaid by the government when they retire.¹⁹

The borrowing rate used by the government is known as the SCAPE discount rate. As the Treasury explains:

*'In unfunded public service pension schemes employer contribution rates are determined using a process called 'Superannuation Contributions Adjusted for Past Experience' (SCAPE). As part of SCAPE, a discount rate is applied to each scheme's expected future pension payments, which extend decades into the future, so that the cost of pension promises being built up can be expressed as a present-day cost. This discount rate is called the SCAPE discount rate and is set by HM Treasury using a prescribed methodology.'*²⁰

As such, the SCAPE discount rate - in the context of an unfunded scheme - is the promised rate of return to members on contributions made by them and their employers. The lower the rate, the lower the effective cost of borrowing to the Treasury (that sits behind public service pensions as guarantor). And given that SCAPE is used to establish employer contributions, the lower the rate, the higher the employer contribution.²¹

The SCAPE discount rate has been far higher than market rates of interest. As such, the Treasury has been borrowing from public service workers on very expensive terms, although the premium has been declining in the context of the global bond rout of 2022-23. Since 2011 the SCAPE rate has averaged 3.7 percentage points more than market forms of finance (the gilts market).²² These off-market borrowing costs are recognised only slowly as a non-cash item in departmental resource accounts.²³

Each percentage point saved on financing new gross borrowings from public sector workers from here will save £125 billion over the next twenty years.

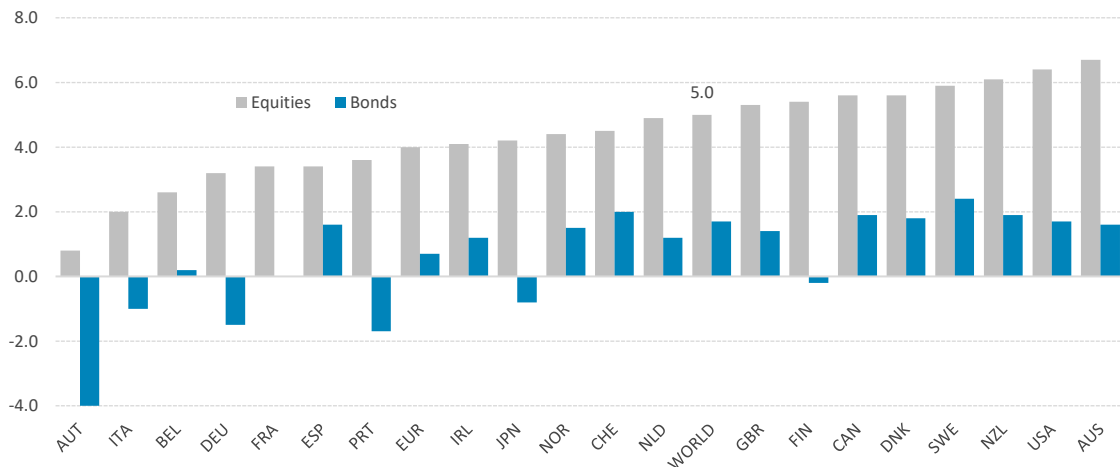
Seeking a better return

In almost every scenario, it is reasonable to project substantial long-run fiscal gains from a move to fully funded schemes. According to the OBR, HM Treasury is on track to borrow £366 billion from public service pension schemes between 2021-2028, with liabilities compounding at the SCAPE rate of inflation + 1.7%. If recent markets are a good guide, this money could be borrowed around 0.8 percentage points more cheaply from bond markets. Even holding contributions flat in real terms, a switch in financing could save the Exchequer a cumulative £145bn over a twenty-year horizon.²⁵ But a move to bond market financing does not alter the ultimate Treasury liabilities to the schemes.

For fiscal savings to be made, HM Treasury would have to a) switch its financing source from public service pension schemes to bond markets, and b) divert the proceeds of this financing into new investments that are able to generate returns in excess with the SCAPE discount rate of inflation + 1.7%. In other words, pension contributions would need to be ringfenced and would need to deliver higher long-term returns than gilts for fiscal savings to be achieved. This seems eminently achievable: compound long-run returns of UK equities have exceeded the cost of government debt by almost 4 percentage points in the UK over the past century. Comparable excess returns have been common around the globe.²⁶ Returns from infrastructure investment and private equity appear to have been similar.²⁷

Fig.8 A tough act to follow?

Real annualised returns on equities and bonds in different markets 1900 to 2022



Source: Elroy Dimson, Paul Marsh, and Mike Staunton, DMS database 2023, Morningstar

With the opportunity for higher returns comes investment risk - the risk that short-run returns will be poor or negative. The government balance sheet is well-positioned to be able to absorb such short-run risks. We outline a variety of scenarios in Fig.9. Projected cumulative fiscal savings depend upon both the cost of market finance (horizontal) and the real rate of return achieved on pension contributions (vertical). If HM Treasury can borrow only at real market rates of 1.7%, and investments yield a real return of 1.7% per annum, there would be no fiscal gain. But ringfencing pension contributions and financing in the market at a real funding rate of 0.9%, would deliver fiscal gains - potentially very sizeable ones - if assets deliver stronger returns than gilts.

Fig.9 Scenarios for risk and return

Cumulative fiscal profit / loss achieved by 2041 for various real rates of return on market assets £bn

Real return of:	Real market funding rate of:		
	1.70%	0.90%	0.50%
1.0%	-127	17	84
1.7%	0	145	212
4.0%	505	650	717

The macroeconomic case

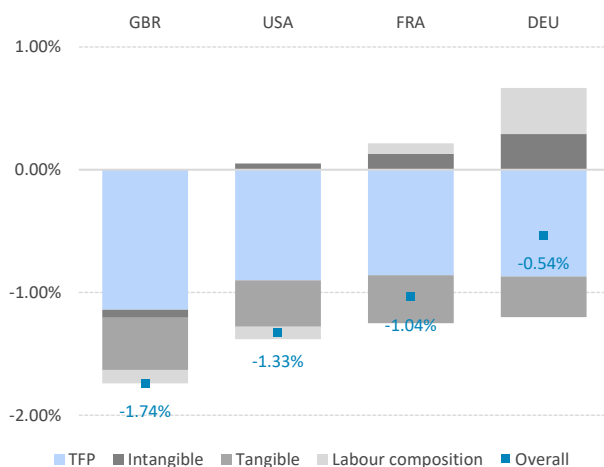
Beyond any fiscal and political case, there is a strong macroeconomic case for shifting public service pensions towards being fully funded. Doing so could help boost economic productivity and address balance of payments fragilities.

Productivity:

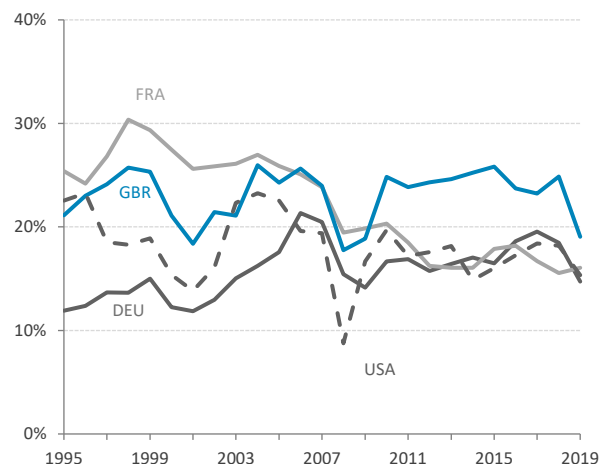
The UK has a productivity growth problem, and this appears to stem in part from a lack of private investment. All major developed economies have seen a large fall in total factor productivity (TFP) growth following the financial crisis, though the UK's fall has been the largest. The contribution from capital investment - across both tangible and intangible assets - has been particularly large in the UK. Investment is both cause and effect of improvements in TFP: the new processes and ideas that TFP embodies are often implemented with new capital, which is in turn purchased and installed to make these processes possible.²⁹ It is not that investment has shrunk; rather, since the global financial crisis its growth has sagged from around 3% a year to around 1%. Furthermore, gross fixed capital formation of the corporate sector as a percentage of value added has lagged comparable markets.

Fig.10 UK productivity growth and investment in context

i) Change in average GVA per hour 1996-2007 to 2009-2019



ii) Aggregate return on private investment 1995 to 2019



Source: Resolution Foundation analysis of EUKLEMS data, 2023.

There are a host of possible reasons for weak investment in the UK. The political and policy environment has not exactly been stable. But when firms have invested for growth, this has - in aggregate - been rewarded. Shifting public service pensions to an asset-backed framework would increase resources available for private investment, which could in turn enhance the capital stock and finance the transition to net zero.

Balance of payments:

Often conflated with a simple trade balance, a current account balance is the sum of:

- the trade balance - the difference between the value of total exports and total imports;
- transfers - typically in the form of international development aid, military aid, and net transfers to EU institutions³⁰, and;
- the primary income balance - the net flow of profits, interest, and dividends from investments in other countries minus those remitted abroad.

As the ONS explains:

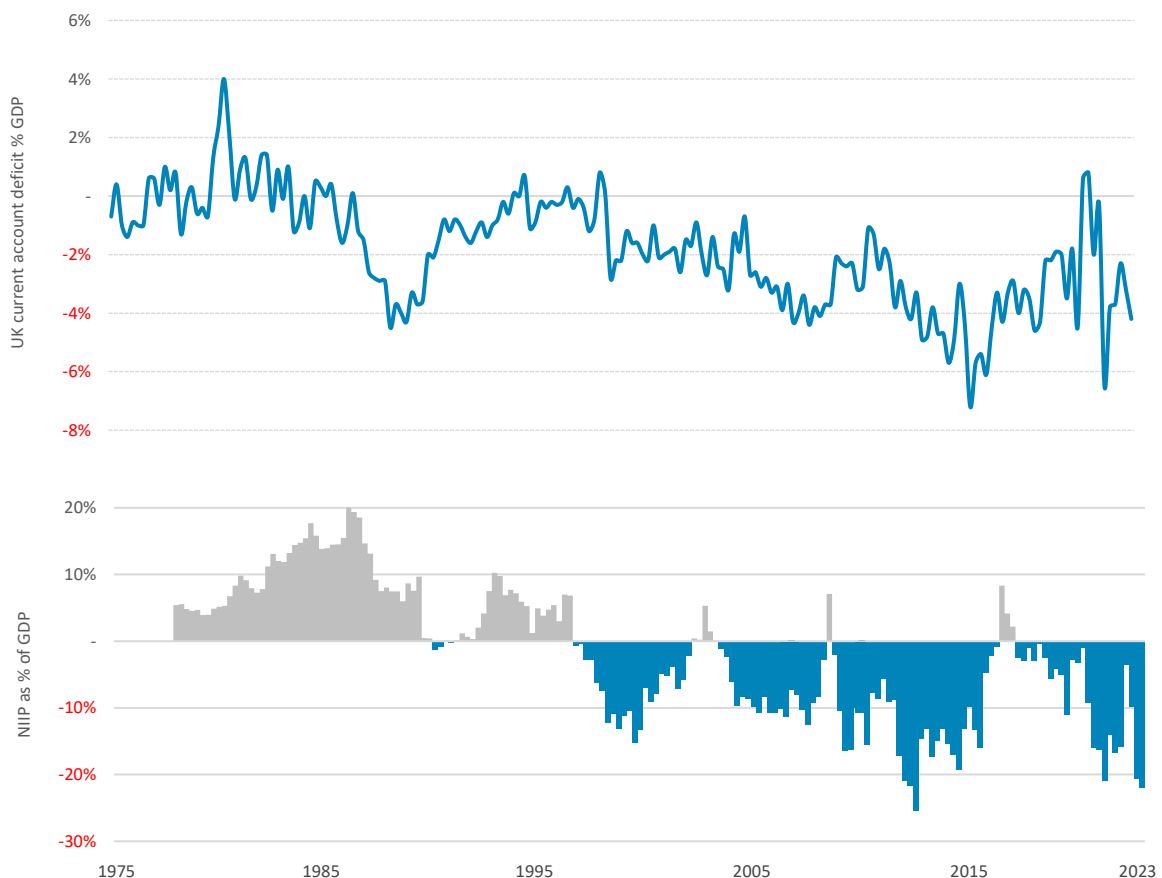
*'A current account deficit places the UK as a net borrower with the rest of the world, so the UK must attract net financial inflows to finance its current (and capital) account deficit. This can be achieved through either disposing of overseas assets to overseas investors or accruing liabilities with the rest of the world. The UK has run an annual current account deficit since 1984.'*³¹

Current account deficits in themselves are not necessarily bad; they can arise for good or bad reasons.³² But regardless of causation, they are understood as one of the most trenchant early warning signs of financial instability.³³ Since 2009 the current account deficit has averaged 3.4% of GDP, around 0.9 percentage points larger than the decade before the global financial crisis. More than all the increase in the deficit was accounted for by the primary income balance swinging from positive to negative. In other words, the UK swung from being a state that derived net income from its overseas investments, to one that needs to either borrow or sell assets on a net basis in order to service investments by overseas investors in the UK.

The overall net international investment position is analogous to the bottom line of the nation's balance sheet of external assets and liabilities. If it is in positive territory this means that the sum of claims on other economies is greater than the sum of foreign claims on the UK. The net position will bob around based on market values as well as active accumulation or sales of claims that are counterparts to the current account balance. As of Q2 2023, the UK's negative net international investment position is over seven hundred billion pounds, more than 20% of GDP. As such the UK boasts one of the largest net international investment deficits in the world.

Fig. 11 A deteriorating position

i) UK current account balance and ii) net international investment position as % of annualised quarterly GDP, 1975-2023



Source: ONS November 2023

Claims on future income must be sold to non-residents in order to finance any deficit, whilst surpluses must be spent buying claims.³⁵ Before the 2008-2009 global financial crisis, the UK covered its current account deficit by accumulating more liabilities to non-residents instead of selling existing foreign assets. However, since then the UK has been actively selling foreign assets.³⁶

If UK households behave in accordance with developed market peers, transitioning from unfunded to asset-backed public service pensions will have the effect of raising national savings.³⁷ At a macroeconomic level this will have the effect of reducing the current account deficit and improving the net international investment position in the short and intermediate term, and also seeding structural improvements in the primary balance in the long-term.

Case study: Denmark

In the 1980s Denmark found itself running chronic current account deficits, a deteriorating net international investment position, and uncomfortably high levels of inflation.

In its tripartite Fælleserklæringen (Joint Declaration) of 1987 the government brought together unions and employers to introduce occupational pension schemes throughout the labour market.³⁸ Pensions became a policy initiative to address Denmark's macroeconomic ills.

The Declaration contained the explicit goal of altering Denmark's international balance of payments, raising savings, impeding consumption, and reducing the current account deficit.³⁹ Unions traded wage demands for pensions and for promises of more employment.⁴⁰

Since the reforms Denmark's current account has recorded a permanent surplus, and its large foreign debt has turned into a positive net international investment position of 45% to 50% of GDP by 2016.⁴¹ The Danish central bank points the pension reforms as the primary cause of this swing.⁴² And the European Commission notes that income from investment abroad, flowing from the positive net international investment position, has come to contribute as much to the surplus as the trade in goods.⁴³

Macroeconomic costs

Funding public service pensions is not a costless exercise. As outlined in 'the fiscal case' section above, these costs are not directly fiscal in nature. But while saving more means increasing the resources from which to draw upon tomorrow, it also means consuming less today. That Canada, Denmark, and Australia introduced radical reforms to their pension systems that involved a step-change in the level of national savings during inflationary times is no coincidence. Making the transition to a world of higher savings would run counter to policy goals in an environment threatened by deflation. By contrast, with central bank policy rates far from the effective lower bound and the policy focus having shifted to squeezing out persistent inflation, the cost of transition can be offset by monetary policy action, if necessary.

A path to change: the Canadian model

The UK's 'book-reserved' unfunded public service pensions schemes are unique in the OECD, making international comparisons hard.⁴⁴ However, in 1989 the Ontarian Teachers' Pension Plan was, like the UK's public service schemes today, backed by non-tradable government guarantees of payment.⁴⁵ Today it is a globally renowned investor in infrastructure and real assets with a portfolio worth a quarter of a trillion Canadian dollars (£150bn).

The evolution of the Canadian pension system at both the provincial and national level offers lessons for UK public service schemes in the transition to becoming fully funded. Canadian provincial public service pensions began to transition from unfunded to fully funded at the end of the 1980s. They have evolved into a distinctive 'Canadian model' that integrates independent governance, professional in-house investment management, substantial scale, and comprehensive geographic and asset-class diversification.

The shift was preceded by three expert reports, commissioned by the Ontarian government: the Rowan Report on provincial public sector pensions, the Coward Report on financing teacher and civil servant pensions, and the Slater report which synthesised the two previous reports and produced recommendations for a path forward. These reports collectively set out a clear path for a multi-phase reform process across a number of workstreams. This is outlined by the World Bank in Fig.12 below.

Fig.12 The mechanics of transition

A four-phase framework for the evolution of Canadian pension organisations⁴⁶

	1) Pre-reform entity	2) A solid foundation	3) Independent, professional entity with strong governance	4) Mature, sophisticated entity
Governance	<ul style="list-style-type: none"> Part of government - no real independence or arm's length oversight 	<ul style="list-style-type: none"> Reform strategy in place Stakeholder buy-in to reform Earning trust of government & private sector 	<ul style="list-style-type: none"> Independent governance 	<ul style="list-style-type: none"> Mature independent governance model
People & organisation	<ul style="list-style-type: none"> Low expertise or experience in external best practice Limited procurement skills 	<ul style="list-style-type: none"> Developing in-house staff External hires to fill gaps Developing skills for external outsourcing 	<ul style="list-style-type: none"> Ability to attract qualified professionals Strong programme to develop internal talent 	<ul style="list-style-type: none"> Ability to attract global top talent Ability to develop top quality internal expertise
Investment	<ul style="list-style-type: none"> Little diversification - sometimes 100% in non-marketable government debentures & 100% domestic 	<ul style="list-style-type: none"> Begin to diversify investment Begin to build investment expertise 	<ul style="list-style-type: none"> Diversified investments Increasingly competent in-house investment capabilities 	<ul style="list-style-type: none"> Highly-diversified investments Sophisticated in-house investment teams
Administration	<ul style="list-style-type: none"> Inefficient & ineffective plan administration Significant errors Poor member service 	<ul style="list-style-type: none"> Major administrative errors corrected Investment in systems to reduce costs and improve service 	<ul style="list-style-type: none"> Competent plan administration 	<ul style="list-style-type: none"> Professional plan administration Modern technology Strong client service
Plan design & funding	<ul style="list-style-type: none"> Pay-as-you-go or limited funding Little clarity on liabilities 	<ul style="list-style-type: none"> Realistic understanding of liabilities Active dialogue on plan sustainability 	<ul style="list-style-type: none"> Improved funding Realistic understanding of assets and liabilities Sustainable funding target 	<ul style="list-style-type: none"> Assets & liabilities well-balanced Funding is sustainable
Regulation & public policy	<ul style="list-style-type: none"> Outdated or legacy legislation Strict investment limits Little political will for reform 	<ul style="list-style-type: none"> Updated legislation Some investment freedom 	<ul style="list-style-type: none"> Modern legislative framework Limited investment restrictions 	<ul style="list-style-type: none"> Proactive improvements in legislation & regulation No investment limits

Individual Canadian public plans took slightly different routes to diversifying away from domestic fixed income. Restructuring at the Ontario Teachers' Pension Plan (OTPP) began in 1990. Until legislation was changed at the end of 1989, all money not required to pay benefits each year had to be invested in non-marketable Province of Ontario debentures and deposits. For the pension plan this meant its assets consisted entirely of non-tradable government IOUs. For the Ontarian government this meant a loss of control over its borrowings: the government was forced to borrow on more expensive terms and at tenures not of its choosing.⁴⁷ The analogy to British public service schemes today is compelling.

In the 1989 Ontarian Budget, the state set a return target of inflation plus three and a half percentage points per annum for OTTP, and decreed that from January 1990, the funds would be free to invest their net cash flow - contributions, interest, maturing debentures, and special payments in respect of the past deficits, less benefits paid and administrative costs - in market investments.⁴⁸

OTTP initially built-up equity exposure using derivatives. From 1991 it began private equity and infrastructure investments, in 2000 it acquired a real estate subsidiary and from 2007 began opening international investment offices.⁴⁹ As of June 2023 it had net assets of C\$250 billion and had achieved an annualised return of 9.4% since 1990.⁵⁰

By contrast, Healthcare of Ontario Pension Plan (HOOPP) used derivatives to obtain exposure to foreign markets without triggering caps on foreign investment rules.⁵¹ As the equity market soared during the dotcom boom, the plan also used derivatives to hedge exposure to its Canadian equity portfolio. And in the aftermath of the dotcom crash, it started to hedge moves in interest rates and inflation in synthetic markets and as part of its liability-driven investment strategy.

At the national level the Canadian Pension Plan (CPP) was set up as a largely pay-as-you-go (PAYG) plan in 1966. But following the transformation of public service pensions and an alarming report from its actuary in 1993 that it would soon cease to be fit for purpose, it began in 1997 its own transition towards becoming a fully-funded entity.⁵² Mandatory contributions increased from 3.6% to around 10% of salary, split between employees and employers, and it provides an earnings-based pension to Canadians, targeting a replacement rate of around 33% up to C\$55,000 (rising to C\$83,000 in 2025).

While UK public service pensions differ in important ways, the Canadian experience offers useful lessons as to how to build consensus for systemic change, sequence reform, and execute transformation from unfunded plans into best-in-class fully funded institutions.

Sleeping giants - in conclusion

Some UK public service schemes are unfunded while others are asset-backed. The Local Government Pension Scheme (LGPS) is a substantial asset-backed public service scheme. Despite complex governance and management arrangements, its asset-backing has served it well.

Shifting other UK public service pensions to become asset-backed would enable them to be global investment powerhouses, driving long-term sustainable outcomes for public servants, cheaper finance for the Treasury, better outcomes for taxpayers, higher levels of investment, deeper capital markets, and a more stable international investment position.

The five largest schemes rank among the largest pension pools in the world. Canada's experience shows a path by which their asset bases can evolve from non-tradable entries on a government ledger into fully funded investment bodies with professional in-house management, investing globally.

The first Canadian provincial public service plans to make the transition were cash-flow positive. This is not generally the case for UK schemes - which, apart from the NHS Pension Scheme - are cashflow negative. However, their negative cash flow situation is predicated on pricing the cost of future pension obligations with the off-market SCAPE discount rate, keeping employer contributions low. Reducing SCAPE to a level in keeping with one permitted in the private sector may swing all schemes into a cash-flow positive situation, although an actuarial assessment would be required to make this judgement.

A big bang approach - committing all new pension contributions to a fresh investment programme, and potentially also allowing schemes to swap their non-marketable guarantees for tradeable government securities, which they could diversify across geographies and asset classes, would be bold.

A more cautious government could test the waters by proceeding first by transitioning only NHSPS from being an unfunded entity towards being asset-backed investor. Over the next four years healthcare workers will contribute over £31 billion into the scheme, with hospitals and other healthcare employers contributing a further £76 billion. As such, this single scheme is on track to receive contributions that would make it the single largest UK pension scheme by 2028 were the contributions invested rather than lent to HM Treasury at a rate of inflation plus 1.7%.

If this ambition is still too grand, NHS pension benefits are projected to total around £87 billion over the same period, so deducting pension benefits from the contributions of current workers and employers would leave a net cash surplus of around £21 billion. This would leave an asset-backed NHSPS with around two-thirds the assets under management of NEST or the Pension Protection Fund, and on track to become a substantial new source of capital for investments and of returns to pensioners and the Treasury.

Leaving public service pension schemes unfunded is an opportunity missed. They could play a significant role delivering fiscal savings to the taxpayer, invest at home and abroad, deepen capital markets, and improve the long-term sustainability of public service pensions.

The opportunity should be seized.

The likely pushback

While we think there are strong reasons to start the shift to fully funding public service pensions, any moves to do so will likely generate significant pushback. While we are unlikely to have covered all of them, we see five main strands of resistance:

- The impact on government debt;
- The increase in risk for the government balance sheet;
- The headwind this would generate for domestic consumption;
- The financialisation of public sector pensions;
- The politicisation of public sector pensions.

>>> The impact on government debt

At the time of the last Whole of Government Accounts report in 2020/21, public service pension liabilities stood at around 105% of GDP. They exceeded on-balance sheet public sector net debt, excluding public sector banks, which stood at around 85%.⁵³

Latest figures show public sector net debt figures, excluding public sector banks, has grown to around 98% of GDP. But looking at the reports and accounts of the largest public service schemes, we estimate that the rise in bond yields has reduced public service pension liabilities from 105% of GDP in 2020/21 to just over 50% of GDP in 2022/23.⁵⁴ Still, politicians may fear that a move to divert employer and employee contributions to invest in market assets and productive capital will move public service schemes on-balance sheet, and to do so will increase issuance costs.

It is hard to calibrate the impact on borrowing costs of any shift by HM Treasury to borrow more from the bond markets. Alarmists can always assert that an additional penny of bond issuance will destroy Britain's credit. But there is little evidence that implementing a plan that would deliver sizeable fiscal savings, provide the opportunity to boost investment and growth, and reduce international macroeconomic fragilities would be ceased upon as evidence of recklessness by bond markets. This was certainly not the case for when either Canada, Sweden, or Denmark made moves to shift their pension systems to a funded model.

>>> Increase in risk for the government balance sheet

Over the long-run private assets tend to deliver stronger returns for investors than government bonds, but over shorter periods this is certainly not the case. In sourcing HM Treasury finance increasingly from the market and allowing employer and employee contributions to public service schemes to be invested into market assets, it is true that government would be assuming new market risk.

But government has market risk today in the form of the £400bn of assets that back the LGPS scheme. This is not seen as a source of risk: assets may fall in value, but they are seen as better than no assets at all. And many governments around the world are not only comfortable with such risk but embracing it and building sovereign wealth funds.

>>> The impact on domestic consumption

There are a number of routes by which unfunded schemes can move to the status of funded schemes. Some of these routes involve a higher national savings rate. Rising savings rates can mean more investment, and a higher potential economic growth rate. But more jam tomorrow can mean less jam today.

Implementing a policy that had a good chance of raising the national savings rate would be bold in an environment of widespread disinflation or deflation, and with monetary policy rates close to their lower bound. But with inflation still elevated and central bank policy rates far from the effective lower bound, any unwelcome costs of transition could be offset by monetary policy action, if necessary.

>>> The financialisation of public sector pensions

Over twenty years ago Lord Eatwell wrote a brilliant short paper arguing that from a macroeconomic perspective, the choice as to whether to run a pensions system on an unfunded pay-as-you-go basis or an asset-backed basis fundamentally did not matter.⁵⁵

In PAYG systems, the state would mediate inter-generational transfers from workers to retirees through the tax system. In asset-backed systems, financial markets would mediate intergenerational transfers through the extraction of rents and profits from workers to retiree-owners. The main difference between the two systems, Eatwell contended, was that asset-backed system would generate hefty fees that would sustain the already bloated financial sector.

The argument should be taken seriously. External management can be extremely costly. But Canadian public plans have demonstrated that world-class management across private and public markets can be implemented by professional and low-cost state entities. For example, the annual cost of running the £350bn CPPIB scheme is around 27 basis points - this is less than half the annual cost of the similarly-sized LGPS scheme in the UK (58 basis points). In the UK the Pension Protection Fund, NEST, and the British Patient Capital Fund operate with strong reputations, albeit on a smaller scale. There is no reason why such experiences cannot be leveraged.

Costs aside, we can see that while there are good academic arguments to be made for PAYG's equivalence to asset-backing, the fiscal, political, and macroeconomic arguments in favour of asset-backing support this path of reform.

>>> The politicisation of public sector pensions

The risk of politicisation of public sector pensions - particularly that poor investment decisions would be made for political ends - is serious, and one that sovereign wealth and public pension institutions around the world grapple with. Many institutions have been formally provided with codes of governance that establish operational independence from policymakers. Such operational independence was central to the 'Canadian Model'.

Despite fears to the contrary, the UK has experience of successfully managing public institutions with large public investment portfolios free of such conflicts, such as the Pension Protection Fund.

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² Mercer (2022) 'Mercer CFA Institute Global Pension Index Report'.

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⁵ Independent Public Service Pensions Commission (2011) 'Independent Public Service Pensions Commission: Final Report', 10 March.

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¹² ONS Occupational Pension Scheme Survey (2019).

¹³ Compare, for example, the valuation presented in the Whole of Government Accounts to valuations using SCAPE, and also to valuations found in departmental scheme report and accounts.

¹⁴ Budget documents do split out a line for Public Service Pensions, but this records only an element of the cost of maintaining public service pensions. National Accounts record the Total Managed Expense on a cashflow basis.

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¹⁷ As of March 2022 the LGPS was 107% funded. See the Local Government Pension Scheme Advisory Board - England and Wales 'Scheme Annual Report 2022' (2023).

¹⁸ Office for Budget Responsibility, (2023) 'Economic and fiscal outlook - November 2023, supplementary fiscal tables: expenditure'.

¹⁹ Following the introduction of 'Pension Freedoms', it became harder - though not impossible - for public service pension scheme members to crystallise their pension rights with a demand for a transfer value, effectively demanding immediate repayment of their loan to the government.

²⁰ HM Treasury (2023) 'Public Service Pensions: Consultation on the discount rate methodology Government response'.

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²² The true number will be c0.9% higher as real yields on inflation-linked bonds compensate take inflation as RPI index, which has grown by around 0.9% per annum faster than the CPI index to which SCAPE is referenced.

²³ See Appendices C-D of HM Treasury (2023) 'Public Expenditure Statistical Analyses 2023', July, for details as to how public service pensions are accounted for in departmental budgets.

²⁵ The cumulative compound liability of borrowing the OBR's projected employer plus employee public service pension contributions out to 2027-28 and then holding steady the nominal value of these contributions in real terms thereafter, compounds a liability of £1.89 trillion by 2041 assuming a stable SCAPE rate of 1.7% and inflation of 2% per annum. Borrowing these funds in the market at a real market funding rate of 0.9% would compound a liability of c£1.75 trillion. The difference between these numbers is £145 billion.

²⁶ BarCap Equity Gilt Study 2023 shows the annualised real return of UK gilts to have been 0.9% and the annualised real return of UK equities to have been 4.8%. Chart from 'Credit Suisse Global Investment Returns Yearbook 2023'.

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²⁹ Paul Brandily, Mimosa Distefano, Krishan Shah, Gregory Thwaites & Anna Valero (2023), 'Beyond Boosterism: Realigning the policy ecosystem to unleash private investment for sustainable growth'. Resolution Foundation, June.

³⁰ United Kingdom 'Balance of Payments - The Pink Book: 2015; Secondary Income'.

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³⁵ These claims can be debt claims (bonds, loans, currency), equity claims (direct or listed stakes in firms) or real assets (physical property, infrastructure, etc). Of course, the ownership of claims has a messy distribution across the economy. For example, insurance firms, in the course of investing premia received from UK households (intra-economy domestic claims) may own American bonds and stocks (claims on non-residents), contract office space in a building owned by a middle eastern sovereign wealth fund (claims by non-residents), and be in the process of financing an expansion of their business via private equity (claims by non-residents). Unpicking this is hard but also unnecessary for our purposes.

³⁶ UK Balance of Payments, The Pink Book: 2023

³⁷ Certainty is not possible. It is possible, for instance, that the growth of retirement savings coincides with substantial fresh borrowing to fuel continued consumption growth.

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⁴⁰ Søren Kaj Andersen, Jon Erik Dølvik and Christian Lyhne Ibsen (2014) 'Nordic labour market models in open markets'. European Trade Union Institute Report 132.

⁴¹ Andersen, J. G. (2016). 'The Danish Pension System. Policy network'.

⁴² Autrup, Søren Lejsgaard, Paul Lassenius Kramp, Erik Haller Pedersen and Morten Spange (2015) 'Balance of Payments, Net Foreign Assets and Foreign Exchange Reserve'. Danish National Bank Monetary Review, 4th Quarter. pp41-54.

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⁴⁶ Figure x is taken from The World Bank (2018), 'The evolution of the Canadian Model'.

⁴⁷ Robert F. Nixon (1989), 'Ontario Budget. Budget Paper F: Public Sector Pensions - An Action Plan for Reform' pp101-129.

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⁵² Lipshitz, Clive and Ingo Walter (2020), 'Public Pension Reform and the 49th Parallel: Lessons from Canada for the U.S.'

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⁵⁴ We base this estimate on the asset and liability valuations contained in the published annual reports and accounts of the four largest public service pension schemes for the year ending March 31 2023. We have assumed that other smaller schemes assets and liabilities move in line with the largest schemes, although it could be some years before they are reported in the Whole of Government Accounts for 2022-23.

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