



UK Research  
and Innovation

# Financial Support for Students

Data pack for  
ExCo Wednesday Morning Meeting  
7 December 2022



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and Innovation

# Agenda

- Introduction
- Summary
- Questions
- Value of the stipend
  - Over time
  - Domestic comparisons
  - International comparisons
- Number of students
  - Over time
  - International comparisons
  - Graduate outcomes

# Introduction

This data pack has been prepared to support a discussion by ExCo on financial support for UKRI students.

The aim is for ExCo to come to an 'in principle' position on the extent to which we should seek to maintain the value of the stipend and the scope to reduce the number of students we support.

This will enable us to model the impacts and bring a paper to ExCo in January on affordability and the trade-offs or compromises required. This paper will include consideration of student fees informed by ExCo's decision on grant indexation.

ExCo will then be asked to make a decision in March on the stipend for 2023/24.

# Summary

- The stipend has declined in real-terms over the last two decades despite the 10% additional increase to the minimum stipend announced on 2 September 2022 (slide 6).
- The UK's offer provides slightly less financial support for research students than most other major research nations (slide 7) and the stipend is currently equivalent in value to HEI spine point 9 (slide 8).
- The UK produces more doctoral graduates per million people than any comparator nation other than Switzerland (slide 9), and the number studying in the UK has grown slightly (>1%) in recent years (slide 10).
- UKRI itself supports more PGR students than people at any other level within academic research (slide 11).
- We have limited long-term data on graduate outcomes. However, the HESA Graduate Outcomes Survey data suggests that 15 months after graduation many doctoral graduates are in research-related occupations (70%). The percentage of those working in the education sector has a range of 34% to 60% across Research Councils (slides 12-14).
- The UK economic outlook remains uncertain, with inflation as measured by Consumer Prices Index projected to be 7.9% in Q3 2023, meaning the value of the stipend in real terms is likely to decline further (slide 15).

# Questions

1. Should we seek to find ways to continue to maintain the present value of the stipend in 2023/24?
2. To what extent do ExCo consider there to be scope to reduce the number of students that UKRI funds, in order to provide a more supportive and competitive offer to those we do fund?
3. To what extent do you want to protect the value of stipend and number students supported relative to other parts of the system?

# The value of the UKRI minimum stipend has steadily fallen in real terms since 2004

The UKRI minimum stipend has increased year on year, almost every year.

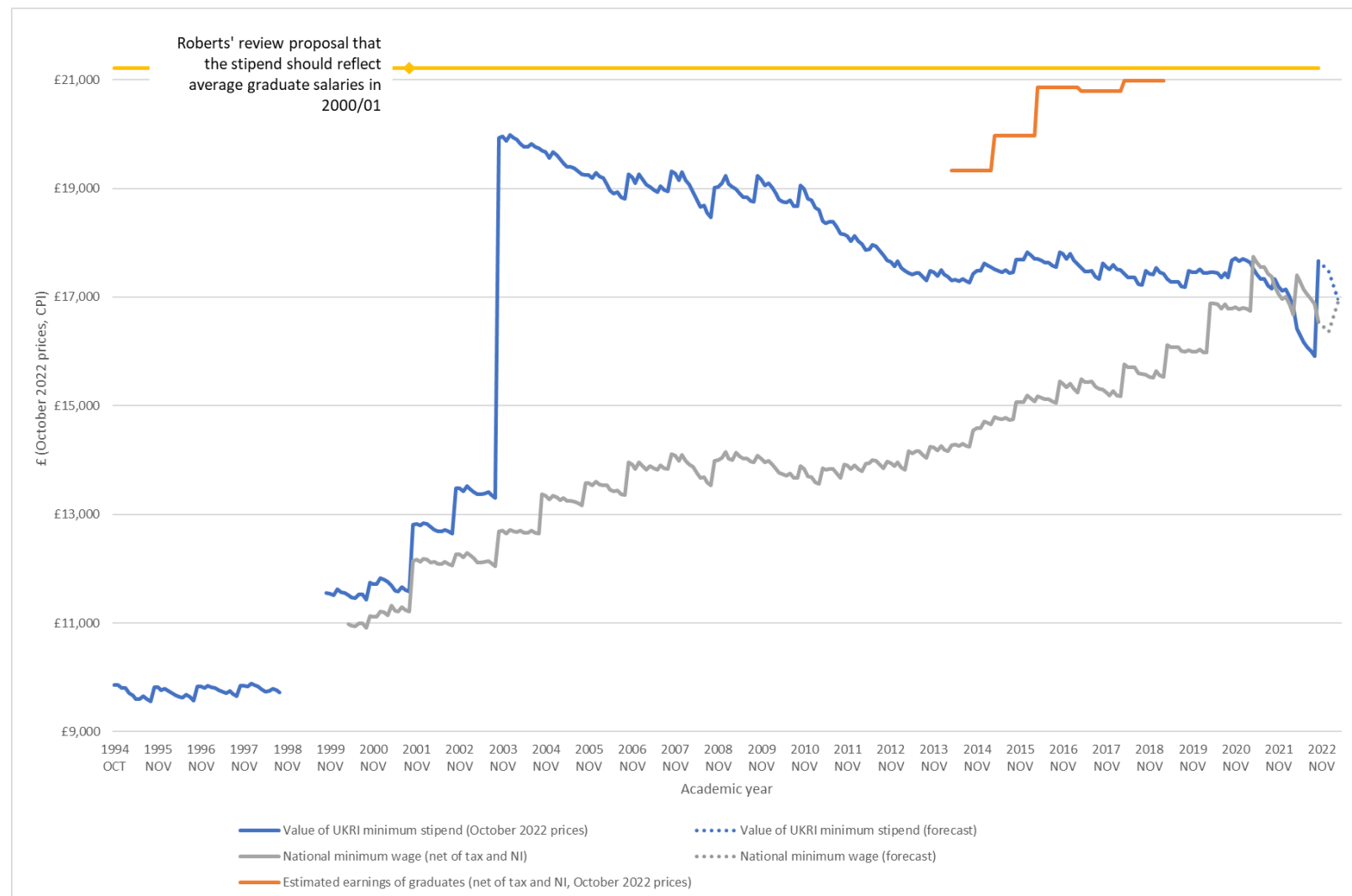
2003/04 saw a significant increase following the Roberts' Review. In cash-terms, this increase nearly met Roberts' recommendation to increase the stipend to the tax-free equivalent of average graduate starting salaries (a delay between the recommendation and implementation meant the recommendation was not delivered in real-terms).

Stipends were frozen from 2010 to 2012 in response to the government's austerity measures.

The minimum stipend in October 2022 was 89% of its real-terms value immediately after Roberts was implemented in 2003/04.

Department for Education analysis of HESA graduate outcomes data indicates that graduate salaries 1 year after graduation also fluctuated; the stipend was 86% of the value of the starting salary in 2018/19, when comparable figures were last available.

On 17 November the government announced that from 1 April 2023 the National Living Wage (NLW) will be £10.42 per hour, approximately the same as the 2022/23 stipend. The NLW will increase again in April 2024 (not shown).



# Until October, the stipend had declined against HEI national salary spine points

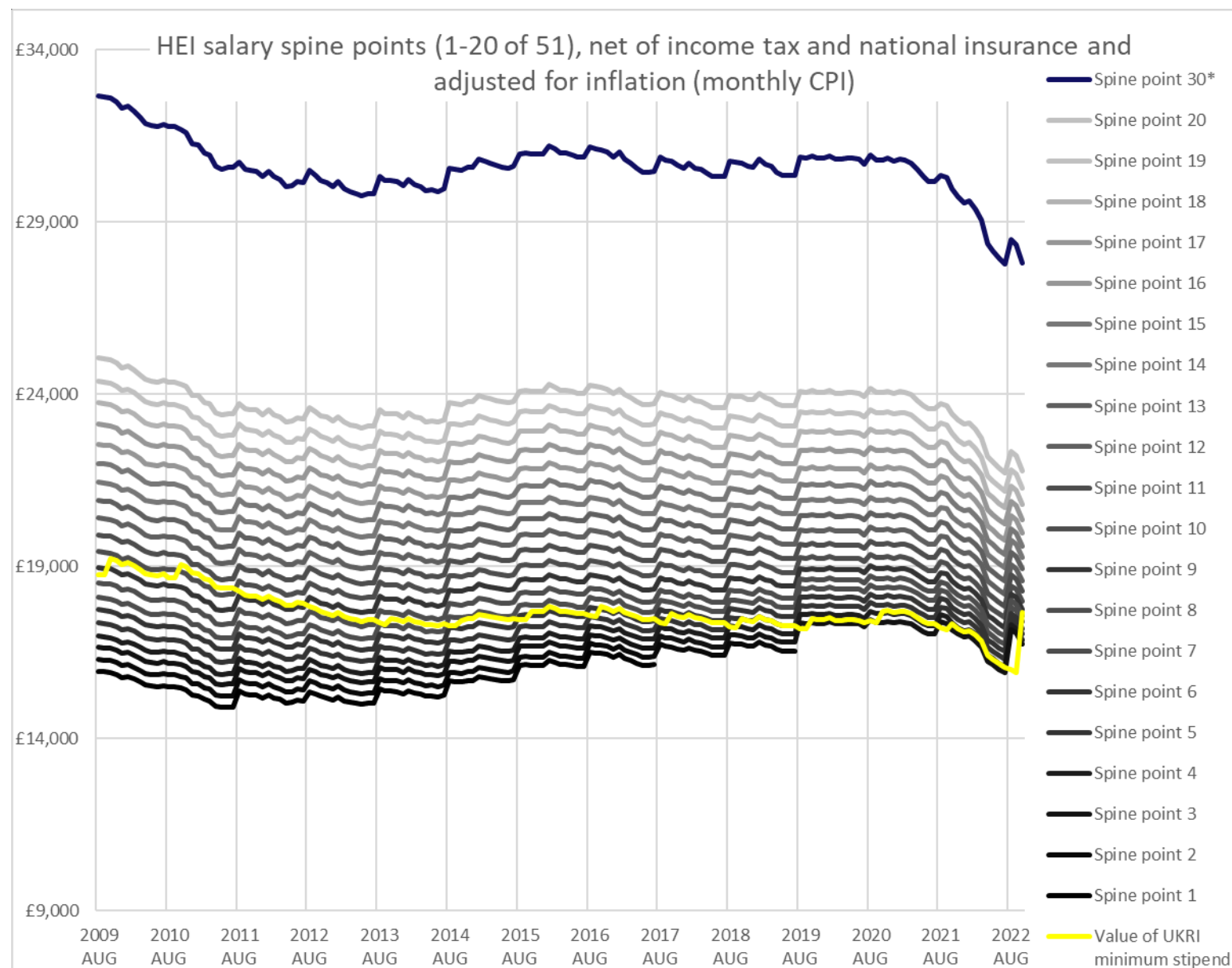
Spine points are nationally agreed salary levels that HEIs then apply to their own salary bands. Postdocs tend to be on spine points 30-36.

The very lowest paid HEI staff have seen their incomes protected in real terms – the two lowest spine points have been discontinued and point 3 is worth the same today as it was in August 2009.

Higher spine points have lost value, meaning that there is now less difference between spine points.

The minimum stipend lost value relative to all spine points over most of the period. In October 2009, the stipend was equivalent to the net income from spine points 9 or 10. By October 2021 it was equivalent to only spine point 3, by then the lowest spine point.

The 10% stipend increase we announced on 2 September has temporarily brought the stipend back into line with point 9.

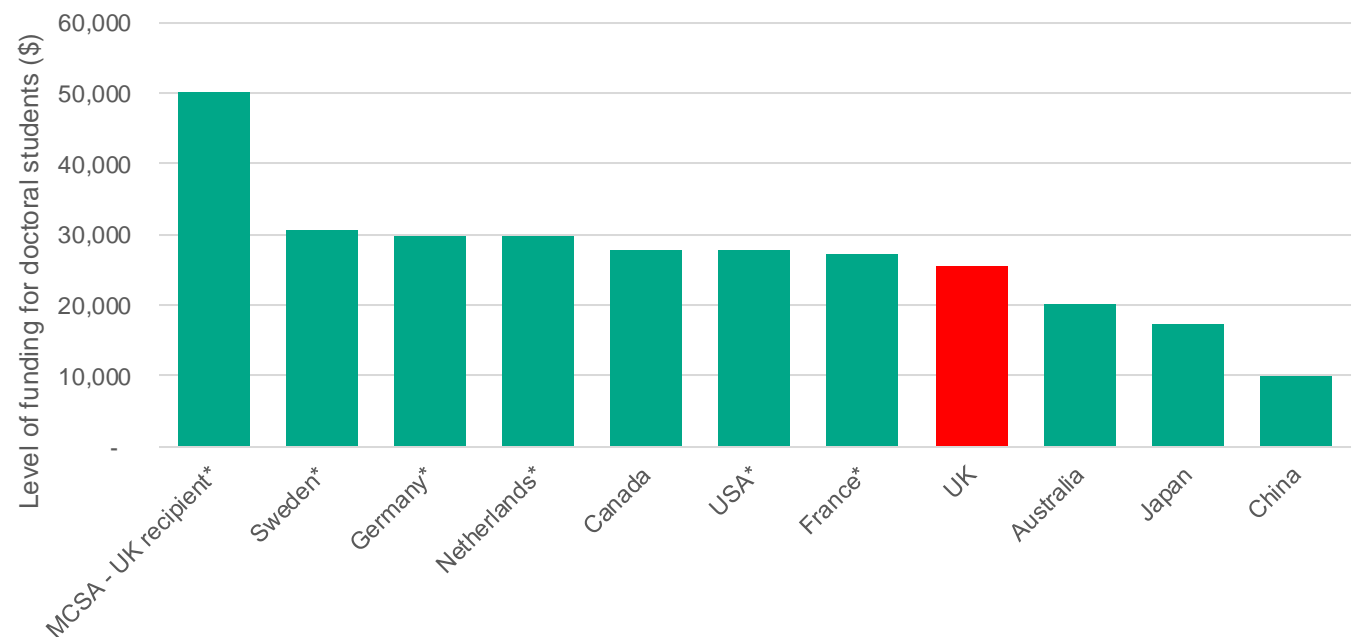


Notes: \*The graph shows spine point 30, the modal lower spine point used by the Russell Group for postdocs. The modal upper spine point is 36. The lowest spine point applied to post docs by any HEI is 20; the highest 41.

Workers on low pay may be eligible for benefits not available to students, e.g. elements of universal credit.

# The UK offers relatively low levels of financial support to doctoral students compared to other major research nations

Level of funding provided to doctoral students internationally



- NOTES:
1. Funding is net of tax and statutory payments where applicable (countries indicated by \*).
  2. Funding levels adjusted for cost of living by using OECD Purchasing Power Parities to USD value in 2021.
  3. Based on analysis conducted on known levels of doctoral support in April 2022. Currency conversions are accurate at rates in April 2022.

The UKRI minimum stipend sits towards the lower end of comparator countries.

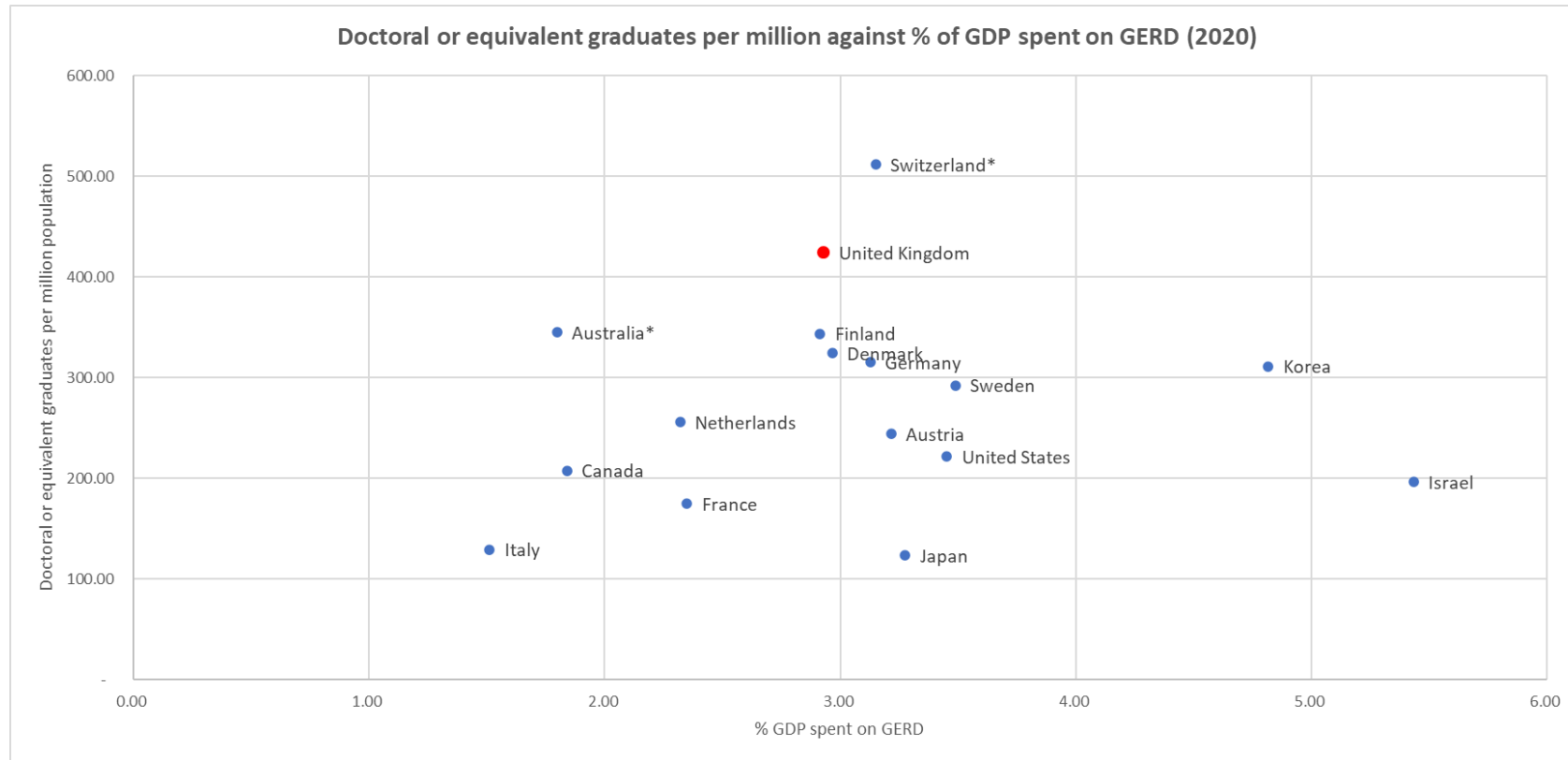
However, most of the comparator countries set their stipend via different methods and many pay salaries to doctoral students. This could make direct comparisons misleading.

Of these countries, Australia is the nearest comparator in terms of the nature of financial support provided and setting the level of support against inflation annually. Canada, the USA, Japan and China also offer financial grants rather than salaries but there is no systematic mechanism which sets the level of support.

The remainder of comparator countries support doctoral students via salaries, which are typically agreed by collective bargaining.



# The evidence suggests there is no clear or direct relationship between the number of doctoral graduates and spending on R&D



There does not appear to be any clear relationship between the number of doctoral graduates or the size of the doctoral population and spend on R&D across the whole economy (GERD) or spend on R&D by governments (GOVERD).

The United Kingdom appears to produce more doctoral graduates relative to its GERD spend than the majority of comparator nations. A similar trend appears when looking at GOVERD.

The UK has a large population of international doctoral students, and it is not clear whether this has a disproportionate effect on the number of doctoral graduates. In 2020/21 home students accounted for around 60% of all postgraduate research students in the UK (based on published HESA data).

## NOTES:

1. UK GERD figure is a provisional estimate based on BEIS analysis in November 2022 using the updated ONS methodology. This figure may vary under OECD methodologies.
2. OECD data for 2019, based on earlier ONS methodologies, for GERD provided a figure of 1.7% of GDP compared to 2.6% in BEIS' provisional estimate using the updated methodology.
3. Australia and Switzerland (marked with \*) GERD figures are based on 2019, the most recent data available.
4. 2020 figures are likely to reflect reductions in GDP due to COVID, and therefore increasing the relative GDP spend on R&D. Data are largely comparable with 2019, however.

Source: OECD.Stat, education and training dataset; BEIS internal analysis

# The number of doctoral students and graduates has risen slightly in recent years

Year	Doctoral research graduates	Doctoral research population	UKRI funded studentships	Indicative proportion of doctoral research population receiving some UKRI funding
2016/17	23,650	100,085		
2017/18	24,870	100,520		
2018/19	24,925	101,995	27,414	27%
2019/20	24,140	101,350	28,056	28%
2020/21	21,000	104,965	29,301	28%
2021/22			28,979	

The number of doctoral graduates and students was largely stable until 2020/21, which saw a large reduction in graduations, probably due to COVID-19.

The number of individuals funded by UKRI has risen since 2018, though these figures may again be influenced by COVID, as well as additional investments e.g. in artificial intelligence.

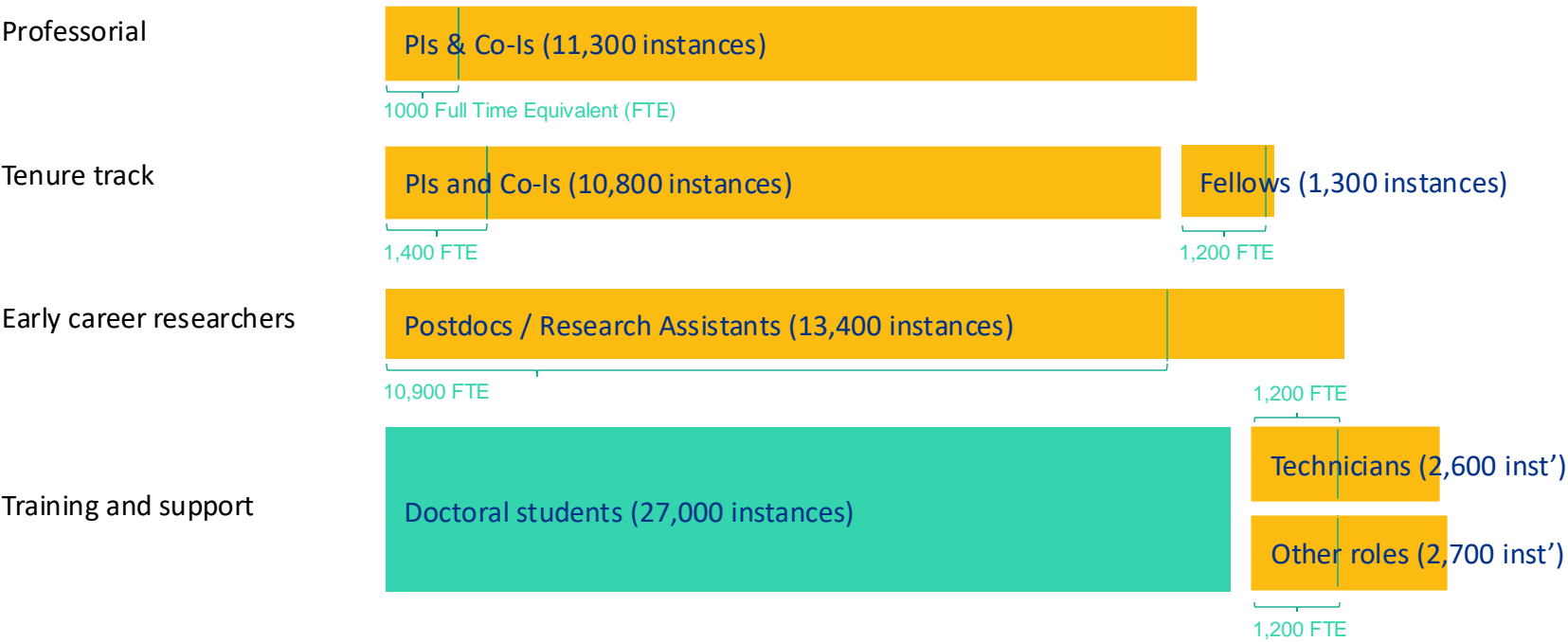
Across this period the UK population aged between 20 and 29 has fallen by 2%, and ONS estimates suggest that is likely to continue throughout the decade.

The impact of UKRI reducing support for doctoral students on the overall number of doctoral researchers is unknown. We believe there may be a knock-on effect but it is not possible to quantify that.

- NOTES:
1. HESA and UKRI annual report counting methodologies differ. This means that UKRI studentships are likely to be over-represented as a proportion of the whole doctoral research population.

# We fund a high number of PGR students relative to the number of HEI research staff we support overall

Individuals funded by a UKRI grant at 1 November 2022



In 2020/21 UK HEIs employed around 150,000 staff in roles that involved some research, and supported 105,000 doctoral students, meaning for every 100 members of research staff in HEIs there are 64 research students.

Around 42,100 staff in HEIs receive some funding from UKRI, while UKRI funds (or co-funds) around 27,000 students. On this measure, UKRI funds a slightly higher proportion of students – for every 100 members of research staff in receipt of UKRI funding, we fund around 70 students.

Both staff and many students are only partly funded by UKRI. Looking at Full Time Equivalent (FTE), UKRI supports around 16,900 FTE equivalent staff in HEIs. We do not have a robust equivalent figure for doctoral students.

In 2020/21 UKRI's research councils funded around 27% of doctoral students in the UK (25% of all UK research students).

# A significant majority of doctoral graduates remain in research occupations 15 months after their studies

	In research occupation	In other occupation	Unknown occupation	Percentage in research occupations
UKRI funded students	4,535	1,265	770	78%
Not UKRI funded	12,915	5,765	3,649	69%

- NOTES:
1. Based only on valid responses to the Graduate Outcomes Survey.
  2. Research occupations are those defined by BEIS using ONS SOC codes.

Source: UKRI analysis of Graduate Outcomes Survey 2018/19 & 2019/20

Based on responses to the most recent Graduate Outcomes Surveys, a significant majority of doctoral graduates were working in research occupations (as defined by BEIS) around 15 months after graduation.

Although there is an apparent difference between those supported by UKRI and not, the precision of the BEIS groupings and the derived variables in the survey mean this should be treated with caution. We might also suggest that these differences could reflect the concentration of UKRI funding in specific fields.

# The education sector is by far the largest destination for doctoral graduates

Sector	Number of doctoral graduates	Proportion of all doctoral graduates with known destination
Education (including higher)	13,070	54%
Professional, scientific and technical activities	3,070	13%
Human health and social work activities	2,460	10%
Manufacturing	1,360	6%
Public administration and defence; compulsory social security	1,250	5%
Information and communication	1,065	4%

Based on responses to the most recent Graduate Outcomes Surveys, a majority of doctoral graduates were working within the education sector around 15 months after graduation.

Of these, around 85% are broadly identified as scientists, researchers or higher education teaching professionals.

However, it is important to recognise there are large differences in this breakdown between disciplines and councils. The percentage of those working in the education sector has a range of 34% to 60% across Research Councils.

The figures for other sectors might suggest that it would be more difficult to assess the actual impact of doctoral graduates where they make up a smaller proportion of the workforce. We may need to think about subtle measures to evaluate the impacts of spillover and leveraging doctoral skills in addition to thinking only about numbers.

#### NOTES:

1. Based only on valid responses to the Graduate Outcomes Survey.
2. Only sectors accounting for more than 2% of all responding doctoral graduates shown.

# Doctoral graduates follow a wide variety of occupations, but large proportions enter teaching, science and research

Occupation	Number of doctoral graduates employed	Percentage of doctoral graduates with known occupations
Higher education teaching professionals	5,385	22%
Other researchers, unspecified discipline	3,550	15%
Natural and social science professionals	1,335	5%
Biochemists and biomedical scientists	875	4%
Biological scientists	825	3%
Specialist medical practitioners	725	3%
Social and humanities scientists	705	3%
Clinical psychologists	585	2%
Programmers and software development professionals	575	2%
Actuaries, economists and statisticians	545	2%
Engineering professionals	540	2%
Physical scientists	505	2%
Business and related research professionals	430	2%
Chemical scientists	420	2%

Based on responses to the most recent Graduate Outcomes Surveys, the largest cohorts enter occupations that are directly related to research, science and higher education.

However, the diversity of occupations cited in the survey was also notable, with over 200 occupations accounting for five or more entrants.

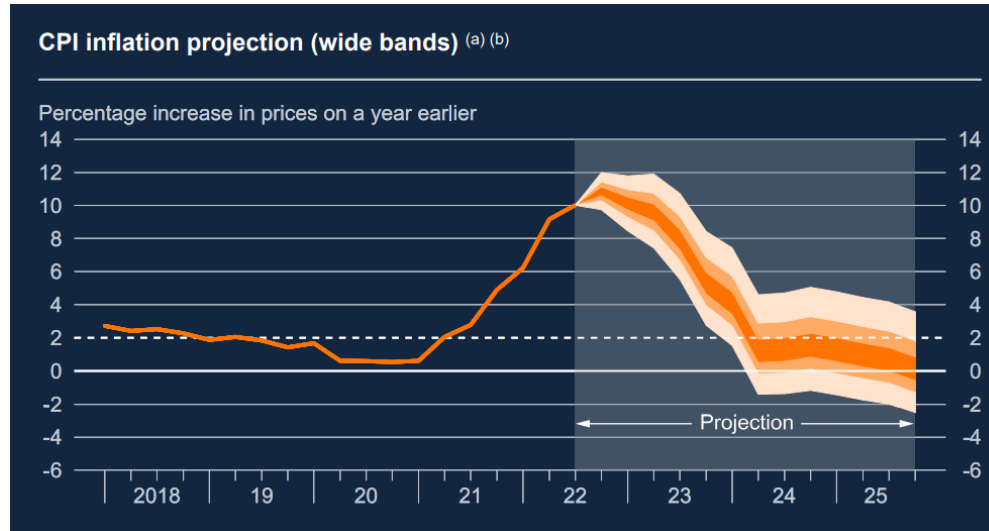
This again indicates the difficulty of assessing the impact of doctoral graduates across the wider economy.

## NOTES:

1. Based only on valid responses to the Graduate Outcomes Survey.
2. Includes only occupations which account for 2% or more of doctoral graduates responding to the survey.

# Inflationary pressures are uncertain but seem likely to remain volatile and above 2% until 2024

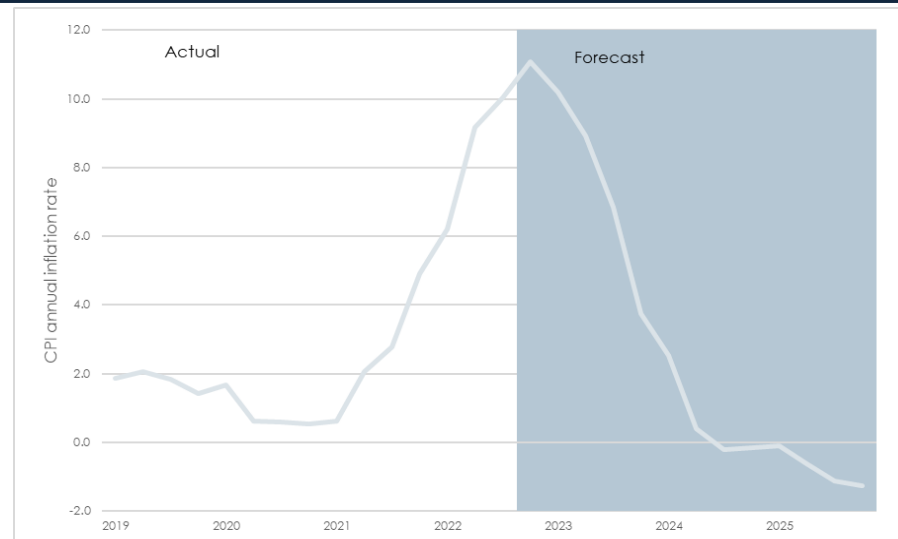
Bank of England  
inflation forecast,  
November 2022



Source: Bank of England Monetary Policy Report, November 2022

Both the Office for Budget Responsibility (OBR) and the Bank of England (BoE) believe that inflationary pressures will peak in late 2022 or early 2023. However, both forecast that inflation will remain above the 2% target until at least 2024.

Office for Budget  
Responsibility inflation  
forecast, November  
2022



Source: Office for Budget Responsibility Economic and fiscal outlook, November 2022

Under current central forecasts the UKRI minimum stipend would need to rise to between £18,885 (OBR) and £19,060 (BoE) to maintain its current value in October 2023. The BoE in particular note there is considerable uncertainty about their central forecast and the actual rate of inflation may be considerably lower or higher.