

# The National Minimum Wage in 2022

Uprating Report April 2022  
Low Pay Commission



# Introduction

## Introduction

New rates of the National Living Wage (NLW) and National Minimum Wage (NMW) come into force on 1 April 2022, based on recommendations made by the Low Pay Commission (LPC) in October 2021. This report looks at what the new rates will mean and the LPC's work for 2022 and the path up to 2024.

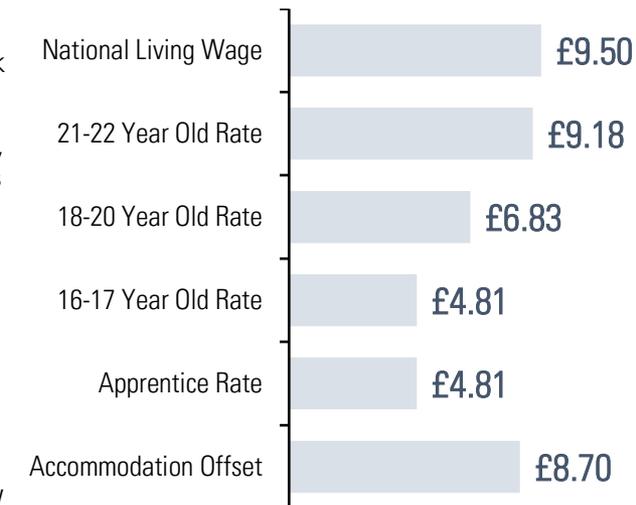
The economic situation improved in 2021. When we made our recommendations in October, GDP was approaching its pre-crisis level. It has now surpassed that level, although it remains below its pre-pandemic trend. The labour market was also recovering, with payroll employment above its pre-crisis level and vacancies hitting record levels, suggesting further improvement, although total employment remained below its pre-crisis level. In October, we also noted some risks to the economy relating to global supply chains, the end of the furlough scheme, rising input costs and staff availability. While the labour market outlook has not changed considerably since October, further risks to the economy have developed since then. Russia's invasion of Ukraine has led to increased oil and gas prices, rises in inflation and further risks to supply chains.

The improvement in the economic and labour market situation led us to recommend an NLW increase (6.6 per cent) that was expected to get the NLW back on track to the 2024 target, following the relatively low increase (2.2 per cent) in 2021. We plan to align the 21-22 Year Old Rate with the NLW by 2024, so we judged it sensible to reduce the gap between the 21-22 Year Old Rate and the NLW next year and recommended an increase of 9.8 per cent to £9.18. For the other youth rates we recommended an increase of 4.1 per cent because their labour market position was not as strong. We recommended going ahead with our previous proposal to align the Apprentice Rate with the 16-17 Year Old Rate with a 11.9 per cent increase. Our [letter](#) to the Minister and our full [report](#) provide more detail on our recommendations.

## The Low Pay Commission

The LPC is an independent public body that advises the Government each year on the NMW and NLW. The LPC is a social partnership body, made up of nine Commissioners: three from employer backgrounds, three from worker representative backgrounds, and three independent Commissioners, including the Chair. Every year since its first report in 1998, Commissioners have unanimously agreed the LPC's recommendations to the Government.

## National Minimum Wage rates effective from 1 April 2022



## Contact us

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# History of the National Living Wage

## The minimum wage before the National Living Wage

The National Minimum Wage (NMW) was introduced in April 1999. At this time, the main rate applied to workers aged 22 and over and there was a separate rate for those aged 18-21. A 16-17 Year Old Rate was introduced in 2004, and in 2010 the Apprentice Rate was introduced and 21 year olds became eligible for the adult rate of the NMW.

## History of the National Living Wage

The National Living Wage (NLW) was announced in the July 2015 Budget, as a new statutory minimum wage for workers aged 25 and over, set at £7.20 per hour from April 2016. The Government asked the LPC to recommend increases in the NLW to reach a target of 60 per cent of median earnings by 2020.

Increases towards this target were subject to the condition of sustained economic growth, but there was a tolerance for some job loss. We used the Government's fiscal rule definition for normal economic conditions – GDP growth of above 1 per cent – as the criterion for sustained economic growth.

Over the 2015-2019 period, employment reached record levels, and we have seen no strong evidence of job losses resulting from the NLW. We were therefore able to follow the path to the target, and in our October 2019 recommendations to the Government, we recommended that the NLW increase to £8.72 from April 2020 in order to reach the 60 per cent target.

## An ambition of ending low pay

In 2020, the Government set a new target for the NLW, to reach two-thirds of median earnings for 2024. In addition, the age threshold should be lowered to 21 years by 2024, starting with a reduction to 23 years in 2021. This followed recommendations we made in our review of the NMW youth rates.

In setting our remit, the Government made clear that we should take economic conditions into account and, if the evidence supported it, could recommend that the Government reviewed its target or time-frame. This mechanism was referred to as an 'emergency brake'.

For the other rates, we were asked to recommend rates as high as possible without damaging the employment prospects of each group.

## A challenging labour market context

The pandemic has had an extraordinary impact on the UK economy and the labour market. The ambition for the NLW to reach two-thirds of median earnings was set before the onset of Covid-19 and the resulting economic shock.

The subsequent uncertainty was a large factor in the rates we recommended for 2021. The pandemic and the policy interventions made in response to it also affected our ability to evaluate the impact of recent increases in the rates. All of these things continue to have a major impact on the outlook for low-paid workers going forwards.

# Millions of workers benefit from increases to the NLW and NMW rates

Since its introduction, the number of people paid the NLW has remained broadly flat

At the outset of the NLW we anticipated that the number of workers covered (earning up to 5 pence above the rate) would rise with the level of the NLW. In fact, coverage remained stable at around 1.6 million (6.5 per cent of workers aged 25 years or over) between 2016 and 2019,.

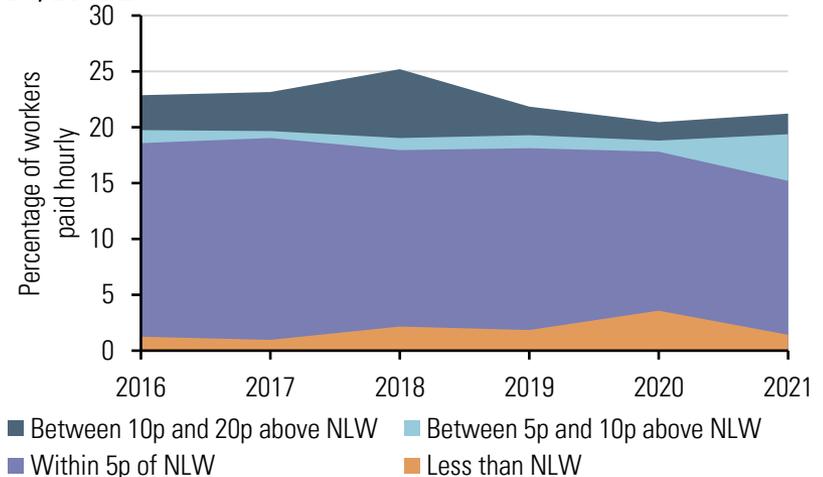
However, many more workers benefit from the NLW than just those paid it directly. Firms have sought to maintain pay differentials with the NMW/NLW, for example, for staff with more skills, experience or seniority. We estimate that between 2015 and 2019 up to 35 per cent of all workers aged 25 and over have received larger pay increases than they might otherwise have been expected to.

Measuring coverage and these differential effects during the pandemic has been more challenging. The uncertainty is due to the limitations of the Annual Survey of Hours and Earnings (ASHE) survey in estimating the hourly pay of furloughed workers (explained in more detail in our report). We have more confidence in measures of coverage for workers who are paid hourly. Between 2016 and 2019, 18 per cent of workers paid hourly were paid the minimum wage, in 2021 this fell slightly to 15 per cent.

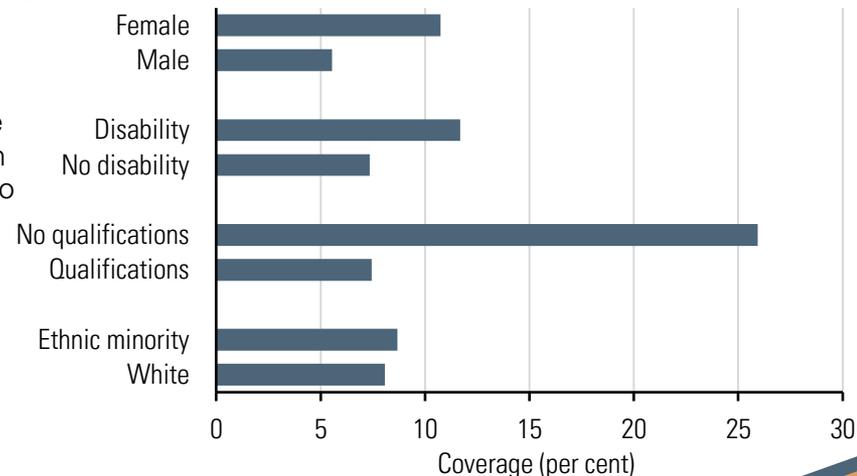
In April 2021, the NLW age threshold changed from 25 to 23. We estimate NLW coverage in April 2021 for workers aged 23 and over was 1.42 million workers (5.4 per cent), within a range of 1.26 to 1.77 million (4.8 per cent to 6.7 per cent of employees). We estimate NMW coverage for all other age groups to be 275,000 (13.6 per cent), within a range of 246,000 and 358,000 (12.2 per cent to 17.7 per cent).

Coverage varies by worker characteristics. Some groups including female workers, workers with a disability, and those without qualifications are more likely to work in minimum wage jobs. In the UK and internationally, minimum wages have helped to close pay gaps, reducing earnings inequality between the lowest paid workers and better paid groups.

Proportion of workers with stated hourly pay within 20p of the NLW, UK, 2016-21



Coverage of NLW by worker characteristics, 25+, UK, 2020 Q2 - 2021 Q1



# Rationale for the rates: a strong jobs recovery

The labour market recovered strongly through 2021. Job growth began to pick up in April as the economy reopened and continued through into August/September – the latest data available when we made our recommendations (denoted as a dotted line on the charts). At the same time unemployment was falling back towards pre-pandemic levels, though inactivity remained higher. The number of payroll jobs continued to rebound strongly up to September and is now well above pre-crisis levels.

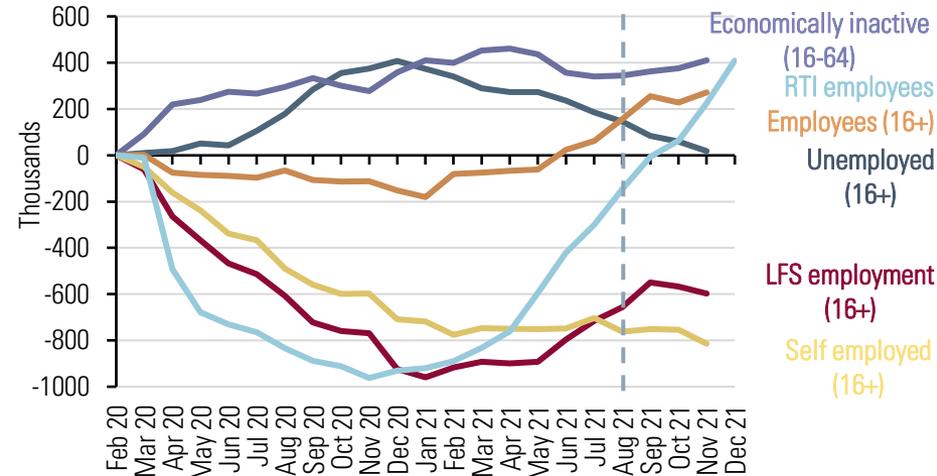
Inactivity rose, driven initially by student numbers and then by those with a long-term health condition or disability, and older workers. Yet these total increases in inactivity were at lower levels than seen in previous recessions. The latest data shows that inactivity remains above its pre-pandemic levels.

The strong improvement in the number of payroll jobs throughout the recovery was driven by high levels of demand for workers. Vacancies reached a record high of 1.2 million in September and continue to remain at record levels. In addition, the numbers of people moving into work (especially for some low-paying sectors) and between jobs have both improved.

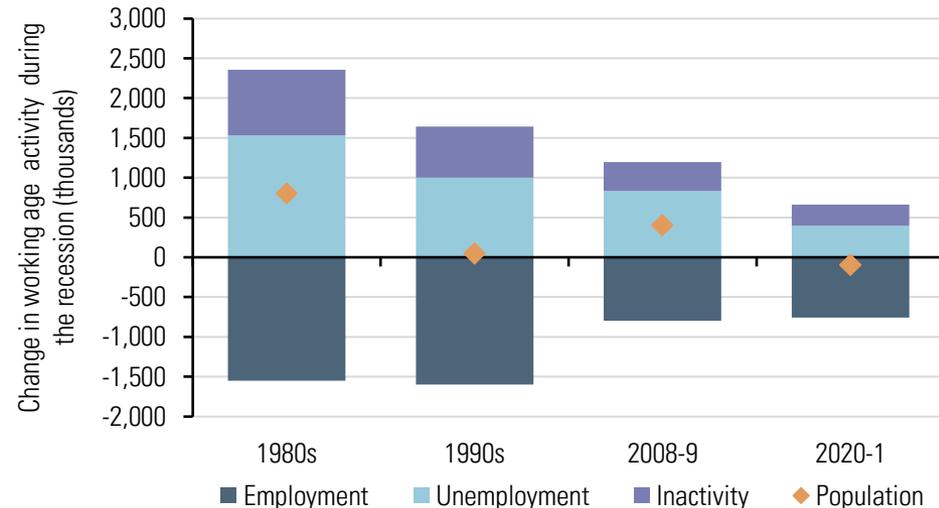
Payroll numbers are also driven by the shift from self-employment to employee status. Across 2020 around 1 million people moved from self-employed status to employee, greater than the 630-640k who did so in 2018 or 2019. The IR35 tax changes explain some of the change. This shift away from self employment means that overall employment remains about 600,000 below pre-pandemic levels.

The Coronavirus Job Retention Scheme (CJRS) minimised job loss across the pandemic, and there was little evidence at the time (or since) to suggest employers were planning redundancies once the scheme closed in September 2021.

Change in labour market metrics, UK, February 2020-December 2021



Change in activity during recessions, UK, 1980-2021



# Rationale for the rates: robust pay growth

Alongside the recovery in jobs and recruitment, pay growth also returned. Real Time Information (RTI) measures of pay show that pay growth reached a peak of 10 per cent in 2021, though it had fallen back to 5.6 per cent by the time of our recommendations in October, and stayed at a similar level for the rest of the year.

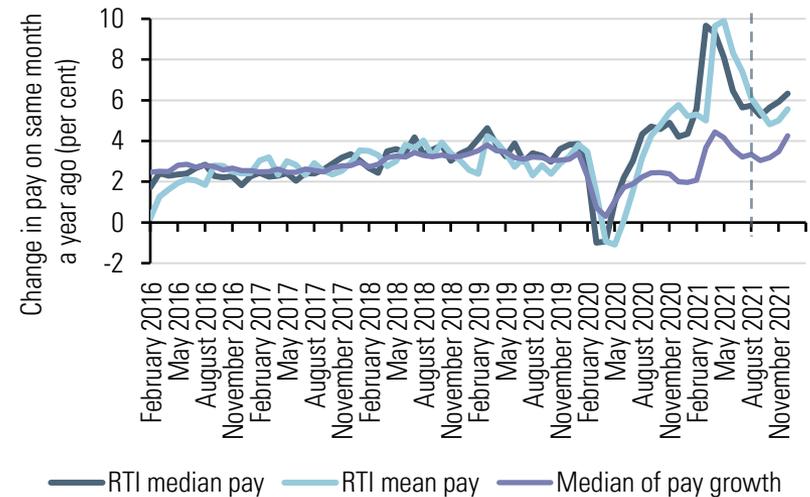
High pay growth rates are partly driven by base and compositional effects. Base effects meant that pay growth appeared elevated as comparisons were with a period at the height of the pandemic, when many workers were furloughed. Compositional effects are driven by changes in the distribution of jobs. As the economy has locked down and re-opened, the number of low-paying jobs contracted and then rebounded causing the average level of pay to rise and then fall.

It is thus challenging to measure underlying pay growth. One approach is to use the RTI median of pay growth, which reduces the effects of changes to the composition of the workforce by tracking the pay of the same workers over time. This measure has been more muted (peaking at 4.3 per cent and levelling at 3.1 per cent by the time of our recommendations), but still represented a return to pre-pandemic levels of growth.

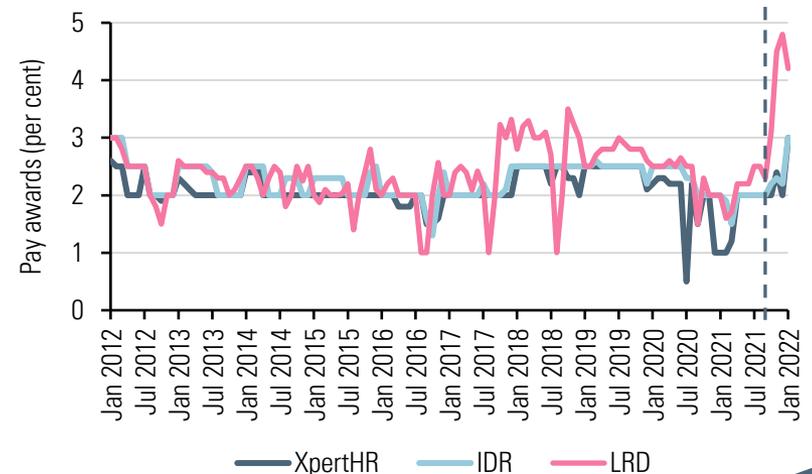
Another way of estimating trends in individuals' pay growth is by looking at pay awards. At the time of our recommendations, these were relatively subdued at around 2 per cent, but there has since been some evidence of much stronger deals in the first part of 2022.

Forecasters predicted strong wage growth in 2022 because of a tighter labour market, with employers facing recruitment difficulties while unemployment is low; an increase in pay awards, influenced by inflation; an increase in job-to-job moves and higher starting salaries; as well as an expectation that bonuses will be higher than during the pandemic. Since October, predicted pay growth has strengthened further, we discuss the implications for the NLW path on page 12.

Various measures of annual pay growth, UK, 2017-2021



Pay awards, UK, 2012-2022



# Pay recovery had implications for the NLW

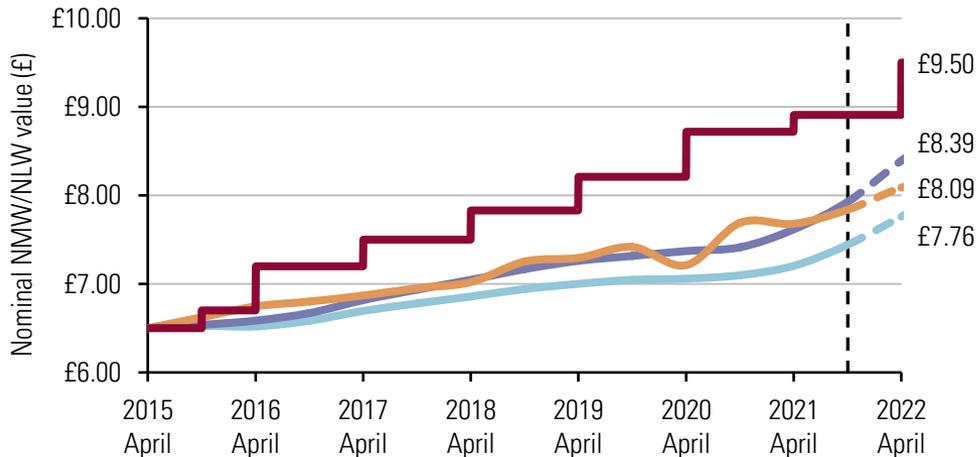
Our central projections at the time of our recommendations in October 2021 suggested the NLW would need to be £9.58 in 2022 and £10.70 in 2024 to reach the target of two-thirds of median wages.

We recommended a marginally lower rate (£9.50) than our central path estimate (£9.58) for April 2022. This was for several reasons. Wage growth measures between 2021 and 2022 likely overstated underlying wage growth due to the composition and base effects discussed on page 6. Alternative estimates of wage growth, which were available at the time and accounted for these effects put us on a lower path. This is shown in the table on the bottom right.

Additionally, our central estimates created a very front-loaded path, with a larger increase required in 2022 than in 2023 or 2024. We wanted to avoid having the largest increase in April 2022, at a time when issues in global supply chains, rising input costs and staff availability presented some risks to firms.

We discuss our projections for the future path of the National Living Wage on page 12.

NLW in comparison to other measures, 2015-2022



Projections for 2022 NLW uprating (at time of recommendations)

Path recommendations and alternative estimates	2022 NLW	Increase on 2021 NLW (per cent)
LPC rates recommendation	£9.50	6.6
LPC Central Path Estimate	£9.58	7.5
RTI growth in median pay (3%)	£9.48	6.4
Bank of England underlying pay growth (4%)	£9.54	7.1

— 2015 NMW uprated with CPI      — 2015 NMW uprated with RPI  
 — 2015 NMW uprated with Average Earnings      — Nominal NMW/NLW rates

# Cost of living and the NLW

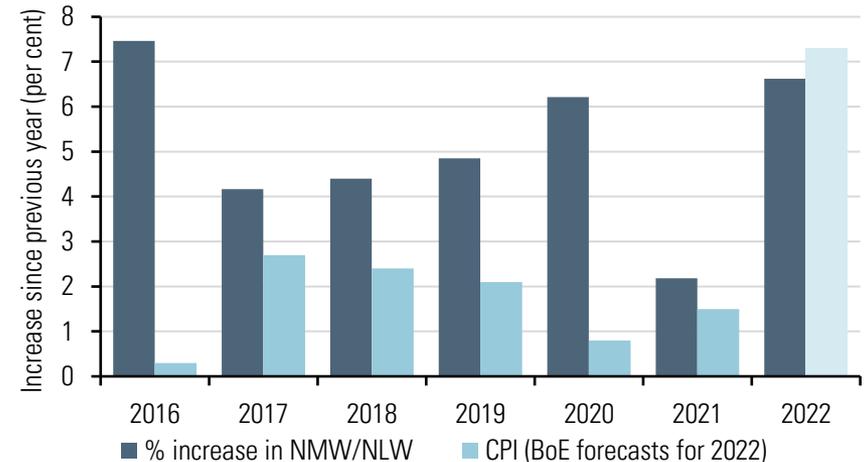
Despite a strong recovery in pay and employment, the UK is entering a period of squeezed living standards – the extent of which we could not have predicted at the time that we made our recommendations. This squeeze is driven by substantial increases in energy prices, which in turn have an impact on other goods, including food prices.

The National Living Wage is recommended in order to reach the target of two-thirds of median earnings by 2024. In working towards this target, the LPC has always taken inflation into account and, where possible, recommended real terms increases. Since the introduction of the NLW, all increases have been greater than CPI inflation. At the time of the LPC's recommendations last year, the median of HM Treasury's panel of forecasters suggested that inflation would be 3.7 per cent in 2021 and 2.3 per cent in 2022, implying a substantial real pay increase for NLW workers.

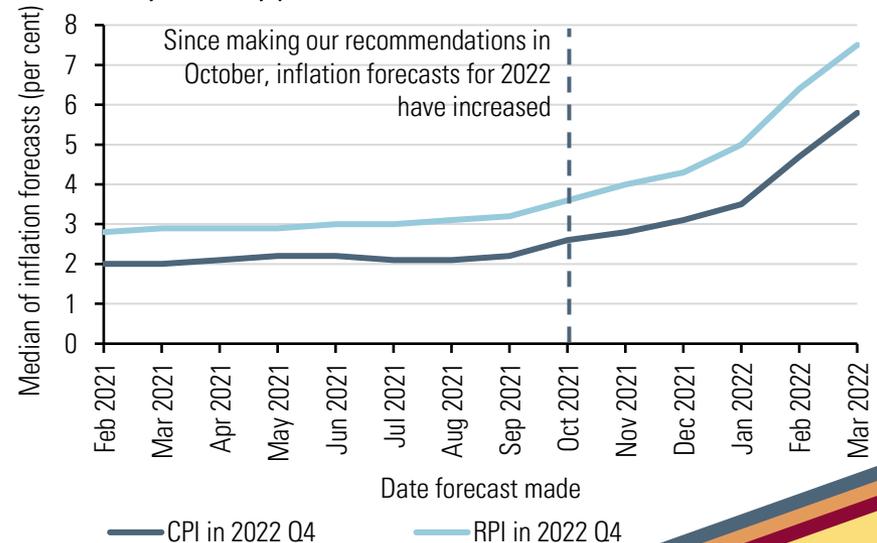
However, the cost of living has increased more substantially than expected, with the Bank of England now anticipating that annual inflation will be 7.3 per cent in April. In this scenario, the 6.6 per cent increase in the NLW would represent a real terms cut. The chart in the bottom right shows how forecasts for inflation in 2022 Q4 have increased since we made our recommendations. Nevertheless, the increase in the NLW is still likely to be well above most pay rises, ensuring that we continue to reduce earnings inequality and make progress on the path to ending low hourly pay.

More generally, increases in the minimum wage floor alone are not sufficient to improve the living standards of households. This is because the number of hours worked are also an important determinant of total income, as well as other income sources in the household, and the impact of tax and benefits. This is discussed in more detail in our review of the first phase of the NLW.

Increases in National Living Wage compared to increases in the cost of living, 2016-2022

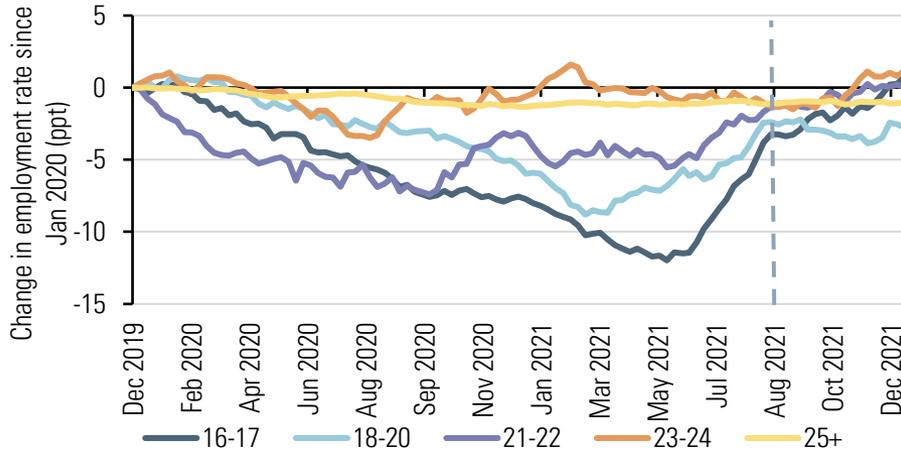


HM Treasury monthly panel inflation forecasts for 2022 Q4

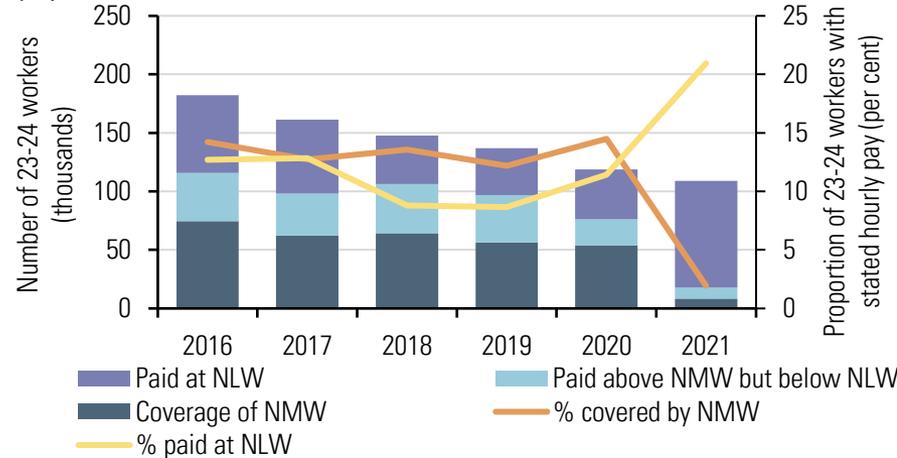


# We recommended smaller increases for younger workers, except for 21-22 year olds

Change in employment rates of young people by age since January 2020, weekly data, UK, 2020-2021



Coverage of NMW and NLW for 23-24 year olds using stated hourly pay, UK, 2016-2021



The reason for lower minimum wage rate increases for younger workers was to protect their employment prospects. Evidence shows that younger workers are more likely to experience a scarring effect if they spend time out of work, with lower wages (and poorer employment prospects) that can last several decades.

Young people were hit hardest by lockdown measures. They overwhelmingly worked in the sectors affected by lockdowns, were more likely to have been furloughed and lost pay as a result. Though there had been substantial recovery by the time of our recommendations, there was still ground to make up, which led us to recommend a more modest increase of 4.1 per cent for the 16-17 and 18-20 Year Old Rates.

Last year, the age of entitlement to the NLW came down from 25 to 23 years. This threshold is set to be reduced further to 21 years by 2024. This follows recommendations made in [our review of the youth rates](#).

So far, the change in age threshold seems to have gone smoothly. We estimate that an additional 50,000 workers aged 23-24 are paid the NLW, where previously they would have been paid the 21-24 Year Old Rate. We have not seen a spike in underpayment or unemployment among this group. A full evaluation of this change will be possible later in the year.

The intention is to move 21-22 year olds onto the NLW by 2024 and the majority of stakeholders continue to tell us that this is the right move. To avoid a large step change in the year they become eligible, we judged it sensible to reduce the gap between the 21-22 Year Old Rate and the NLW. We therefore recommended a substantial 9.8 per cent pay rise in April 2022 for 21-22 year olds.

# We recommended alignment of the Apprenticeship Rate with the 16-17 Year Old Rate

In our 2020 Report, we concluded a review of the Apprenticeship Rate by proposing to align the rate with the 16-17 Year Old Rate over two years. In 2021 we assessed whether such an increase was appropriate, given the state of the labour market for apprentices.

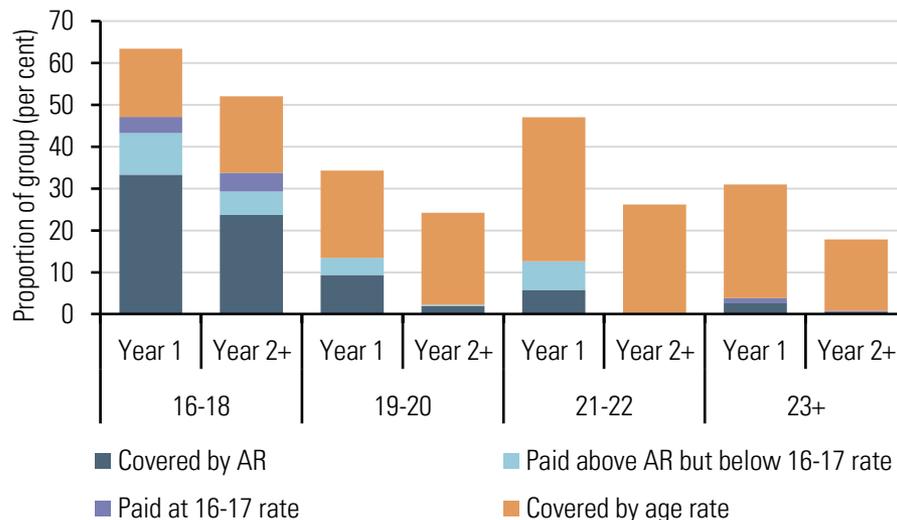
We have two sources of data on apprentice pay: the usual ASHE and the new Apprenticeship Evaluation Survey (AEvS). There are caveats over both sources: we believe ASHE undercounts apprentices, while the AEvS is not primarily a pay survey and relies on apprentices reporting their own pay levels.

Nevertheless, the picture of minimum wage coverage among apprentices is a familiar one, with just under 30 per cent of 16-18 year old apprentices paid the Apprenticeship Rate, and a slightly higher proportion paid less than the 16-17 Year Old Rate. This is the age group who will be primarily affected by alignment of the rates; far fewer older apprentices are affected.

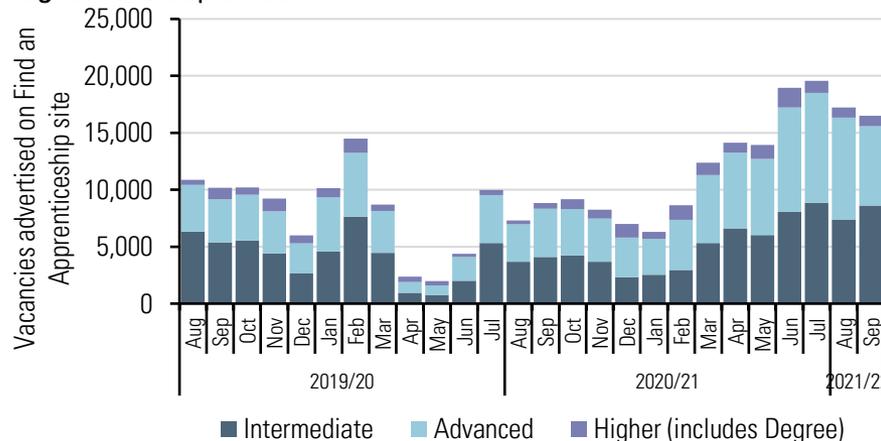
Apprenticeship starts have continued to be subdued over the past year – particularly for the under-19 age group – with the key autumn 2020 period overshadowed by the pandemic. Vacancies, however, have picked up in recent months. The great majority of stakeholder evidence continued to tell us that the proposed alignment of the rates was the right thing to do and would be manageable for businesses.

As of 1 April 2022, the Apprenticeship Rate will therefore be aligned with the 16-17 Year Old Rate, which represents an increase of 11.9 per cent.

Proportion of apprentices covered by NMW rates, by age, UK, 2021



Vacancies advertised on Find an Apprenticeship service, England, August 2019-September 2021



# The Government's remit to the LPC in 2022

## The National Living Wage

On 22 March, the Government published the LPC's remit for 2022, which you can find [here](#). This asks us to monitor and evaluate the National Living Wage and recommend the rate which should apply from April 2023 in order to reach two-thirds of median earnings by 2024, taking economic conditions into account. In line with recommendations we made to the Government, the NLW will apply to workers aged 21 and over by 2024.

## An 'emergency brake'

Our remit asks us to closely monitor developments in the labour market and if appropriate, advise the Government to review the 2024 target or its timeframe. This emergency brake means that the LPC has the ability to recommend reconsidering the target if the evidence suggests it would be damaging for the employment prospects of the lowest-paid workers.

## Other National Minimum Wage rates

We have also been asked to monitor and evaluate the levels of each of the National Minimum Wage rates and make recommendations to maximise the rates without damaging employment prospects.

## Understanding low-paid workers

The Government has asked us to gather further evidence on groups of low paid workers with protected characteristics. Groups more likely to be affected by changes to the minimum wage rates include BAME, younger, older, disabled and female workers.

Additionally, to support the government's levelling up agenda we have been asked to gather evidence on the differing impact of increases to the minimum wage rates across the United Kingdom, to inform how the minimum wage contributes to the mission to improve pay, employment, and productivity in all areas of the UK.

## Accommodation offset

This year, we have also been asked to gather evidence on the application of the Accommodation Offset of the National Minimum Wage in order to inform our recommendations on increasing this rate. We will seek to understand how the offset is used and its impact on the labour market.

# The path of the NLW to 2024

The course of economic recovery over 2022 and beyond is challenging to predict. So while we have produced an indicative NLW path here, it is subject to more uncertainty than usual and is likely to change.

Nevertheless, our model currently estimates the on-course rate for the NLW to be £10.32 in 2023, an 8.6 per cent increase. If the NLW age threshold were to lower to 21 from 23 in 2023, that would mean an on-course rate of £10.25, an increase of 7.9 per cent. The shaded area around the main trajectory shows how the path would be affected if annual pay growth differed by 1 percentage point from the current forecasts. We have chosen to show a wider range in our estimates than in previous years to reflect the higher than usual degree of uncertainty.

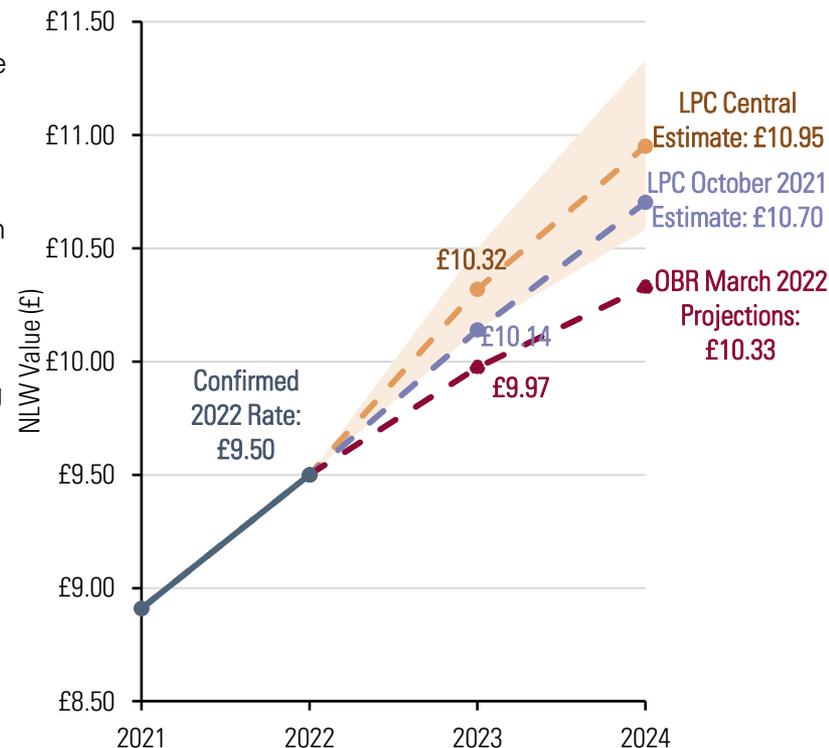
This projected path has increased substantially since our recommendations in October 2021. The change is driven by higher than forecast wage growth in 2021 (from 5.3 per cent to 5.9 per cent) and by pay forecasts themselves strengthening (from 2.9 per cent per year on average from 2022 to 2024 to 3.5 per cent per year on average from 2022 to 2024), influenced by higher inflation and a tighter labour market. Higher inflation means that although the path is higher in cash terms, current projections are actually lower in real terms than they were in October 2021.

If the compositional effects (page 6) are temporary, and underlying pay growth is closer to where we expected it would be in October, then we would expect this path to reduce markedly – back towards £10.70 in 2024. Conversely, if wage growth continues to strengthen, we could see the target rates increase further.

The Office for Budget Responsibility (OBR) also published a path for the NLW in March. It falls considerably below our central estimate. This reflects the higher than usual uncertainty, but also issues with official hours data. We think our projected range is a better guide to the future on-course rate. We explain how we project our path and how it differs from the OBR's in the technical appendix.

Because the path is subject to change, we will publish an update over the summer. In October we will provide advice on next year's rates, taking into account the path estimates and economic evidence we have at the time.

Indicative NLW path forecasts



Note: The scenarios modelled in this graph assume the NLW applies to workers aged 21 and over from 2024.

Indicative NLW path forecasts

Age	2019	2020	2021	2022	2023	2024
25+	£8.21	£8.72				
23+			£8.91	£9.50	£10.32	
21+					£10.25	£10.95

# Our evidence base

## Data sources

The last two years have presented serious challenges in understanding the impact of the minimum wage. Lack of data on the hourly pay of furloughed workers led to uncertainty in estimating the median of hourly pay. With the end of the furlough scheme, we are more confident that the data in 2022 will no longer be distorted by measures to control the pandemic. However, the issues with those measures in 2020 and 2021 will likely cause a break in our time series analysis.

There are also likely to be continued challenges in estimating underlying pay growth. Base effects and compositional effects are likely to take some time to wash out, making it difficult to assess what has happened to individuals' pay.

## Econometric evidence

Because of challenges with the data in 2020-21, it will be difficult to perform robust econometric analysis of the impact of the minimum wage. However, we will commission policy evaluations from leading researchers to help us understand the context of minimum wage workers and firms. We will also continue to expand our own use of standardised evaluation tools, using new methods and evidence sources to assess the policy's impacts, in line with the recommendations of Professor Arin Dube's review of international evidence. We will publish our next round of papers using econometric methods later this year.



## Stakeholders

We speak to employers, employees and their representatives, through visits and evidence sessions



## Internal analysis

We undertake our own analysis of primary data sources, including econometric analysis



## External research

We make use of research produced by others including the IFS, Resolution Foundation and others



## Consultation

We invite written evidence submissions through an open, public consultation



## Commissioned research

Each spring we commission research from academics and other experts, who report their findings in the autumn



## International comparisons

We make use of international data and research and convene events with our equivalents in other countries

# We need evidence from workers and firms

## Stakeholder engagement

This year it is particularly important that we hear from minimum wage workers and businesses. We want to build our understanding of how they have been affected by the pandemic, as well as the increases in the minimum wage rates. We would like to hear about the impact on the household incomes of minimum wage workers, and how easy it is for people to find jobs and move between sectors. For businesses, it will be just as important for us to understand if they have taken on large amounts of debt, improved their productivity or changed their pay structures in response to Covid-19, and to what extent minimum wage rates play a role in their decision-making.

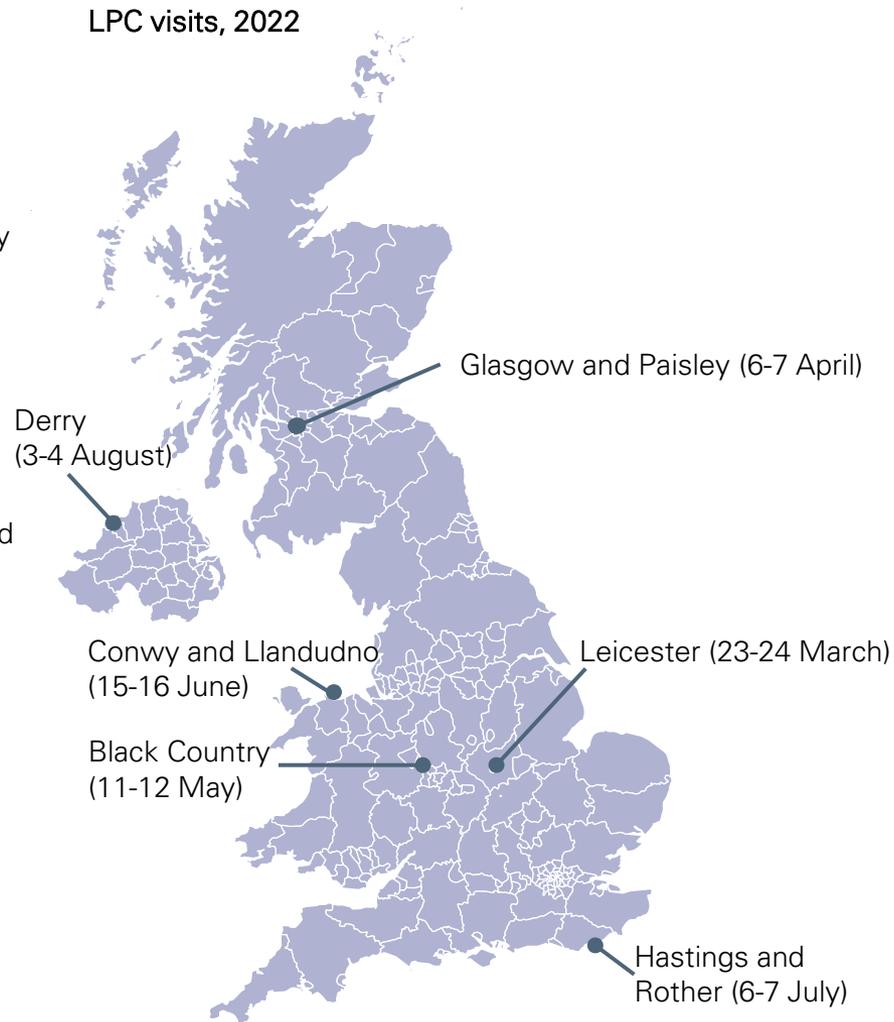
Every year, we conduct a programme of regional visits in which we seek evidence from workers and businesses around the country. This year, we hope again to be able to carry out these visits in person, having moved to virtual visits over the last two years.

Wherever you are in the UK, please contact us at [lpc@lowpay.gov.uk](mailto:lpc@lowpay.gov.uk) if you wish to take part in this year's engagement.

## Written consultation

An important part of our conversation with workers and firms is through our written consultation (currently open and available [here](#)). We would like to hear from you!

## LPC visits, 2022



# Forthcoming LPC publications

## Future LPC publications and consultations

- We will shortly publish a review of the first stage of the National Living Wage.
- We will publish a report on non-compliance and enforcement.
- We will publish detailed reports on our internal econometric analysis, including our analysis of the productivity effects of the NLW.
- Our consultation on the 2023 NLW and NMW rates is currently open and can be found [on our website](#).
- Our programme of regional visits around the country will take place via a mixture of virtual and in-person meetings.
- We will publish an updated path for the NLW in the summer.
- In the autumn we will make our recommendations to the Government on the 2023 minimum wage rates.

## Contact us

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 [LPC blog](#)

The data for the charts in this report are published [on our website](#).

**Page 4a:** LPC analysis of ASHE, low pay weights including furloughed workers, NLW eligible employees (aged 25 and over before 2021 or 23 and over in 2021), UK, 2016-2021. Note: Includes only workers with stated hourly pay data, so total coverage rate differs than for whole population.

**Page 4b:** LPC estimates using LFS microdata, income weights, quarterly, imputed wages, not seasonally adjusted, UK, Q2 2020-Q1 2021.

**Page 5a:** LPC estimates using ONS data: 16+ employment (MGRZ), 16+ unemployment (MGSC), 16-64 inactivity (LF2M), 16+ employees (MGRN), 16+ self-employment (MGRQ), RTI payrolled employees, seasonally adjusted, monthly, UK, Feb 2020-Nov 2021 (Dec 2021 for RTI).

**Page 5b:** LPC estimates using ONS data: 16+ employment (MGRZ), 16+ unemployment (MGSC), 16-64 inactivity (LF2M), seasonally adjusted, monthly, UK.

**Page 6a:** LPC estimates based on HMRC data. Earnings and employment from Pay As You Earn Real Time Information, seasonally adjusted: RTI median pay growth derived from Table 2 (Median pay from PAYE RTI); RTI mean pay growth derived from Table 3 (Mean pay from PAYE RTI); and Median of pay growth derived from Table 27 (Median of pay growth from PAYE RTI).

**Page 6b:** Pay settlements using data from Incomes Data Research (IDR), Labour Research Department (LRD) and XpertHR.

**Page 8a:** LPC and ONS data (D7G7). April 2016 NLW increase refers to October 2015 NMW. 2022 CPI figure is Bank of England forecast.

**Page 8b:** LPC estimates of the median of CPI and RPI inflation forecasts for 2022 Q4 from the monthly HM Treasury Panel of Independent Forecasts (Tables 2 and 5), monthly, February 2021-March 2022. Pay settlements using data from Incomes Data Research (IDR), Labour Research Department (LRD) and XpertHR, January 2021-January 2022. Data not disclosed.

**Page 9a:** LPC analysis using LFS microdata, UK, 2019-2021, quarterly weights. Figures show average employment rate in 13 weeks up to and including week commencing in date minus average employment rate in 13 weeks up to and including week commencing 30/12/2019.

**Page 9b:** LPC estimates using ASHE, standard weights, includes furloughed workers, excludes salaried workers, UK, 2016-2021.

**Page 10a:** LPC estimates using ASHE, low pay weights, including furloughed apprentices, UK, 2021. Pay for furloughed apprentices with loss of pay is adjusted using additional questions about their pay, as described as the 'central estimate' in LPC 2021 Report Chapter 3.

**Page 10b:** DfE 'Find an apprenticeship adverts and vacancies' for Intermediate, Advanced, and Higher (includes Degree) levels in England between Aug 2019/20 and Sep 2021/22.

**Page 12:** LPC analysis using ASHE 2021, standard weights, workers aged over 23, UK, with adjustments detailed in LPC report 2021; AWE total pay (KAB9), seasonally adjusted, GB; and wage growth forecasts from HM Treasury Forecasts for the UK economy (March 2022), Bank of England Monetary Policy Report (February 2022) and OBR Economic & Fiscal Outlook (March 2022). All projections assume eligibility is expanded to include 21-22 year olds, unless otherwise specified.

**Page 16:** LPC estimates using: ASHE, April 2001-19, standard weights, UK (for outturn figures); HMT panel of independent forecasts, October 2001-19; OBR average earnings forecasts 2011-19; and Bank of England average weekly earnings projections, 2015-19. All figures rounded to 1 decimal place.

**Page 17:** LPC analysis using ASHE 2021, standard weights, workers aged over 22, UK, with adjustments detailed in LPC report 2021; AWE total pay (KAB9), seasonally adjusted, GB; and wage growth forecasts from HM Treasury Forecasts for the UK economy (March 2022), Bank of England Monetary Policy Report (February 2022) and OBR Economic & Fiscal Outlook (March 2022).

# OGL

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# Technical Appendix: How we project the on-course rate

The Government has a set a target for the National Living Wage to reach two-thirds of median hourly earnings by 2024. We project a path for the NLW in three steps to meet this target.

## Step 1: Estimate baseline median hourly pay

The first step is to create an up-to-date estimate of median hourly earnings. For this we use the Annual Survey of Hours and Earnings (ASHE) which is a survey of 1 per cent of employees based on employer records, and therefore provides the best available estimate of hourly pay.

The latest ASHE data we have is for April 2021. We estimate that median pay for workers aged 21 and over was £14.24 using these data. However, the Coronavirus Job Retention Scheme (CJRS) made it harder to interpret the ASHE data relating to 2021, albeit to a lesser extent than 2020. We discuss this more in our 2021 Report. As a sensitivity test we have also estimated the path using data from ASHE 2019.

## Step 2: Estimate pay growth from baseline median hourly pay

Next, we estimate pay growth from the baseline. To do this we use two data sources. We project growth in line with Average Weekly Earnings data (12-month-on-12-month growth), where this is available (currently up until January 2022.) We then use forecast growth in average earnings to project growth further out into the future. We use the median of forecasts by HMT's independent panel of forecasters, adding the OBR and Bank of England).

## Step 3: Project the NLW forward in equal steps (measured in terms of the 'bite' of the NLW) towards the target.

Finally, we project the rate of the NLW forward. We do this so it takes equal steps in terms of the ratio of the NLW to median hourly earnings ('bite'.) Currently, we project that the NLW will have a bite of 60.9 per cent in October 2022. The on-course path shows the rates needed to increase this bite in two even steps to meet the Government target: 63.8 per cent in October 2023 and 66.7 per cent in October 2024.

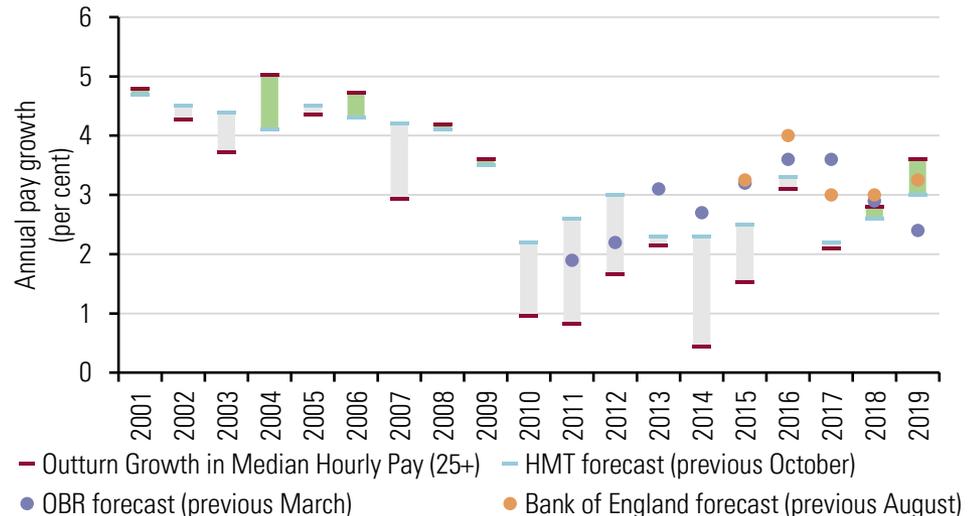
If we move to include all workers aged 21 and over in the National Living Wage, this reduces our target rate as median hourly earnings are lower for all workers aged 21 and over than they are for all workers aged 23 and over.

Our projected path for the NLW is uncertain, as is any forecast of the future. We reflect this uncertainty in a range around our central estimate. We create this range by adding/subtracting 1 percentage point from forecasts of annual pay growth in our central estimate. This means the range gets wider the further into the future we go.

This is not a formal confidence interval but reflects our judgement of a range that the projected path could fall into. Previously, we have used the same approach, but only added/subtracted 0.5 percentage points from annual pay growth. We judge this year that there is greater uncertainty, caused by high inflation, the economy's uncertain recovery from Covid-19 and the ongoing issues with official data sources due to Covid-19.

In the last twenty years, wage forecasts have been more likely to overestimate wage growth than underestimate it (as shown by the chart below). This suggests there may be more downside risk than upside risk to our projection. However, Covid-19 and high inflation mean that historic trends may not continue to hold.

Historic forecasts of pay growth and outturn pay growth



# Technical Appendix: Why our projected path differs from the OBR's projections

- The OBR has taken a similar three-step approach to forecasting the NLW as we did. Step 1 is the same, they also use the ASHE 2021 median hourly rate as their baseline.
- The OBR uses a different measure of pay growth for step 2. It uses its projected index of average hourly earnings, which reflects the ratio of average earnings to average hours. The AHE is a mechanical calculation based on the OBR's forecasts of average hours and average earnings.
- In contrast, the LPC use the latest available Average Weekly Earnings (AWE) and forecasts of AWE to project median hourly pay forward from April 2021 (orange line on chart, more details in previous slide.) This method projects faster growth for earnings than the OBR's AHE index from April 2021.
- We think that methods based on Average Weekly Earnings (AWE) growth rather than the OBR Average Hourly Earnings (AHE) Index are currently more appropriate for forecasting median hourly pay from a 2021 baseline. There are three key considerations that lead us to this view:
  - The Coronavirus Job Retention Scheme has distorted the AHE index. The AHE index reflects average earnings divided by actual hours worked. When workers were furloughed, they saw their hours cut by up to 100 per cent but earnings reduced by less than 20 per cent. This led to a spike in the AHE index in mid-2020 and then a fall in 2021 (see navy line on chart). The OBR applies its AHE index to the baseline of ASHE 2021 (light blue line). The ASHE 2021 baseline is not distorted by furlough in the same way as the AHE index. Using the AHE index to project from an ASHE 2021 baseline captures some of the AHE index's furlough related fall but not the furlough related rise in 2020. This biases downwards estimates of the NLW on-course rates.
  - The measure of hours in the AHE index includes self-employed workers. This group saw the largest fall and then rise in hours during the pandemic. Hours for self-employed workers have increased strongly since April 2021, which will lead the AHE to underestimate pay growth for employees (the relevant population for the NLW target). Self-employed workers are not included in AWE, so projections based on the AWE are unaffected by this.
  - Projections using AWE could be biased up by employees working more hours. If employees are forecast to increase their hours during the projection period, this would lead forecasts of AWE to increase, while AHE would be unaffected as it accounts for hours increases. As we are ultimately forecasting a measure of hourly pay, this would lead to AWE based forecasts to be biased up.
- The difference between OBR projections and our projections shows the higher than usual uncertainty over the path, caused by the pandemic. Currently, we judge that the bias from (1) and (2) are likely to be larger in magnitude than the bias from (3). We think that our estimated range based on the 2021 ASHE with AWE growth is a better guide to the future on-course rate than OBR projections using its AHE index on the ASHE 2021 base.
- If the AHE index is applied to a baseline of 2019 ASHE (navy line on chart), it produces an estimate of £10.91 for the 2024 rate, which is much closer to the LPC estimate (£10.95). It captures both the rise and fall to the AHE index caused by the pandemic.

Projected median hourly earnings for workers over 21

