



An Roinn Caiteachais  
Phoiblí agus Athchóirithe  
Department of Public  
Expenditure and Reform

# Budget 2022

## Forecasting Jobseeker Numbers and Expenditure, 2022

Niall Hickey

This paper has been prepared by IGEES staff in the Department of Public Expenditure & Reform. The views presented in this paper do not represent the official views of the Department or the Minister for Public Expenditure and Reform.

Prepared by the Department of  
Public Expenditure and Reform  
[gov.ie/budget](https://www.gov.ie/budget) | #Budget2022

# IGEES

Irish Government Economic and Evaluation Service

## Executive Summary

### Data and Context

Prior to the COVID-19 pandemic and the associated restrictions, the labour market was assumed to be around full employment, with a Live Register (LR) low of 177,554 in November 2019. However, as a result of the pandemic, the Pandemic Unemployment Payment (PUP) and Temporary Wage Subsidy Scheme (TWSS), which subsequently became the Employment Wage Subsidy Scheme (EWSS), were introduced to support wages and incomes.

The number of incomes supported has varied across the timeline of public health restrictions. In early October 2021, around 264,000 incomes were being supported through the LR (163,000) and the PUP (101,000).

Despite the marked recovery in the labour market, there is some evidence of scarring, as indicated by the proportionately higher number of long term recipients remaining on the LR and PUP.

### Forecasting Methodologies

**Recipient Estimates** – Two methods are used to estimate jobseeker recipient numbers to the end of 2022: the *Adjusted Conversion Rate*, which is a “top down” method that estimates total jobseekers based on the Department of Finance’s unemployment projections, and the *Adjusted Trend Drift Method*, which is a “bottom up” method that uses assumptions based on three scenarios to estimate PUP and LR recipients to the end of 2022.

**Cost Estimates** – PUP costs are based on the projected number of PUP recipients to fall into each payment band. LR costs are based on a compositional analysis of the proportion of LR recipients projected to be in receipt to Jobseeker’s Allowance and Jobseeker’s Benefit payments.

### Results

**2021 Projections** – The average projected number of jobseekers for 2021 is 434,054, comprised of 176,913 LR recipients and 257,141 PUP recipients. These have an associated cost of €6,046m (€1,928m for the LR and €4,118m for the PUP).

**2022 Recipient Number Projections** – For 2022, Jobseeker (joint PUP and LR) estimates range from an upper estimate of 231,328 recipients down to 207,337 recipients, with an average point estimate of 223,917 recipients. This point estimate is comprised of 217,491 average LR recipients per week across 2022, many of whom are projected to have transitioned from the PUP, and a residual PUP estimate, which when averaged across 2022 is 6,426.

**2022 Cost Projections** – For 2022, total estimated jobseeker costs range from €2,492m to €2,183m, with a point estimate of €2,355m. The average estimate for the PUP is €75m in 2022. The point estimate for LR costs are projected to be €2,280m, with a projected cost of €10.51m per 1,000 LR recipients, per year.

### EWSS

For the EWSS, to date (7 October), payments of over €5 billion and PRSI credit of almost €800 million have been granted to 51,500 employers in respect of over 668,400 workers. The Department of Finance have estimated that an average of 220,000 employees will continue to be supported by EWSS until it ceases. It is estimated that the cost of extending the EWSS to 30 April 2022, will be in the region of €1.26 billion.

Estimating the LR implications of the closure of the EWSS is uncertain. If 50% of EWSS employees were to transition to the LR at the end of April 2022, and receive LR support for the remainder of 2022, it could have an additional LR cost of c.€770m.

## Contents

Executive Summary.....	2
Contents.....	3
Glossary.....	4
1 Introduction .....	5
2 Data and Context .....	6
2.1 The Live Register .....	6
2.2 The Pandemic Unemployment Payment, Data and Context .....	8
2.3 Timeline for the closure of the Pandemic Unemployment Payment .....	10
2.4 Long Term Live Register and PUP Recipients.....	12
2.5 The Employee Wage Subsidy Scheme .....	13
3 Forecasting Methodology .....	14
3.1 Summary of Jobseeker Recipient Projection Methods.....	15
3.2 Macro Level Approaches.....	16
3.3 Micro Level Approaches.....	18
3.4 Cost Estimate Methods.....	21
4 Estimation Results 2021 – 2022 .....	22
4.1 Method 1: Adjusted Conversion Rate Method .....	22
4.2 Method 2: The Adjusted Trend Drift Approach .....	23
4.3 Estimation Results Summary .....	24
4.4 The EWSS: 2022 Costs and Possible Live Register Implications.....	26
5 Conclusion.....	27

## Glossary

<i>JA</i>	Jobseekers Allowance
<i>JB</i>	Jobseekers Benefit
<i>JA + JB</i>	Jobseeker Expenditure
<i>PUP</i>	Pandemic Unemployment Payment
<i>TWSS</i>	Temporary Wage Subsidy Scheme
<i>EWSS</i>	Employment Wage Subsidy Scheme
<i>LTU</i>	Long-Term Unemployed (> 1 year)
<i>STU</i>	Short – Term Unemployed (< 1 year)
<i>LR</i>	Live Register
<i>YtD</i>	Year-to-Date
<i>YOY</i>	Year on Year
<i>UE</i>	Unemployment
<i>DSP</i>	Department of Social Protection
<i>CSO</i>	Central Statistics Office
<i>DoF</i>	Department of Finance
<i>CBI</i>	Central Bank of Ireland
<i>ESRI</i>	Economic and Social Research Institute
<i>LFS</i>	Labour Force Survey
<i>SIF</i>	Social Insurance Fund
<i>pa</i>	Per Annum

## 1 Introduction

The Live Register (LR) is a monthly series dating back to 1967 which provides an important record of the number of people registering for Jobseeker's Benefit (JB), Jobseeker's Benefit for the Self-Employed (JBSE), Jobseeker's Allowance (JA), and for various other statutory entitlements with the Department of Social Protection (DSP). It is a widely used metric and is an important indicator for the general labour market. Estimating the level of support required each year through the LR in terms of the number of people requiring support and the associated expenditure of this support is an important part of estimating the budgetary allocation for DSP each year.

This year, the analysis is significantly more complicated than the years preceding 2020. Since the onset of COVID-19 in March 2020, the cost of labour market supports has expanded rapidly and substantially with the introduction of the temporary Pandemic Unemployment Payment (PUP) which was made available to those who lost their jobs as a result of COVID-19. The Employment Wage Subsidy Scheme (EWSS)<sup>1</sup> is the other main support that helped sustain employment during the pandemic by providing a per employee subsidy payment to eligible employers who observed significant reductions in their turnover due to COVID-19, and is also closely linked to the functioning of the labour market. While not directly a part of the forecasting exercise of this paper, the future plans for the EWSS may have a knock on impact on the number of individuals seeking jobseeker supports as the EWSS is phased out.

The key objectives of this paper are to:

- Present the latest data on trends in labour market activity to set out the evidence base for the forecast methods;
- Present an overview of the forecast methods used to estimate jobseeker numbers (LR and PUP) for the remainder of 2021 and for 2022;
- Estimate jobseeker numbers and costs under a range of forecast methods for 2021 and 2022;
- Present a sensitivity analysis to illustrate the impact of different assumptions on jobseeker forecasts.

The estimates set out in this paper, which are subject to rounding, may not reflect actual increases in budgetary allocations as there are a variety of other factors influencing the actual level of expenditure across DSP programme areas. However, the estimates provided in this paper inform the Budget process and future labour market developments.

---

<sup>1</sup> The EWSS succeeded the Temporary Wage Subsidy Scheme from September 1<sup>st</sup> 2020.

## 2 Data and Context

This section sets out some of the key trends and data which underlie the rationale and assumptions behind the forecasting methods employed. This section also summarises the relevant planned policy changes affecting the PUP and the EWSS.

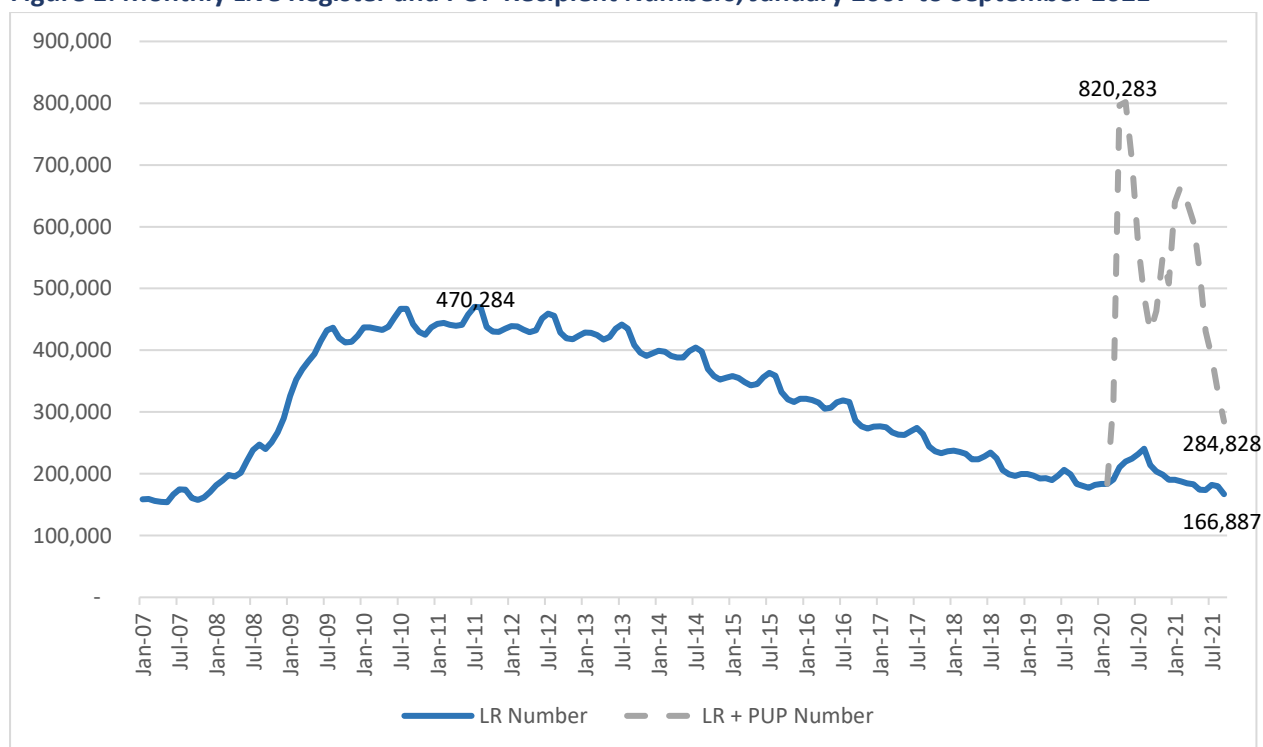
Please note: this paper endeavours to use the most up to date data available. However, owing to publication timelines, no data after October 5<sup>th</sup> 2021 is included. Additionally, PUP data is counted a week in arrears (from the payment date, rather than the claim date).

### 2.1 The Live Register

During the financial crisis, the LR reached its peak of 470,284 in July 2011. Since the financial crisis, the LR has achieved a recovery, reaching a pre-COVID-19 low of 177,554 in November 2019. This is an average annual decrease of 8.7%, from 2011 to 2019.

Following the restrictions on economic activity, which limited much of the working population's ability to engage with the labour market, the LR has continued to fall. This is because many jobseeker recipients were able to avail of support through the Pandemic Unemployment Payment, rather than through the Live Register, as it was more accessible and often had higher payment rates than the LR.

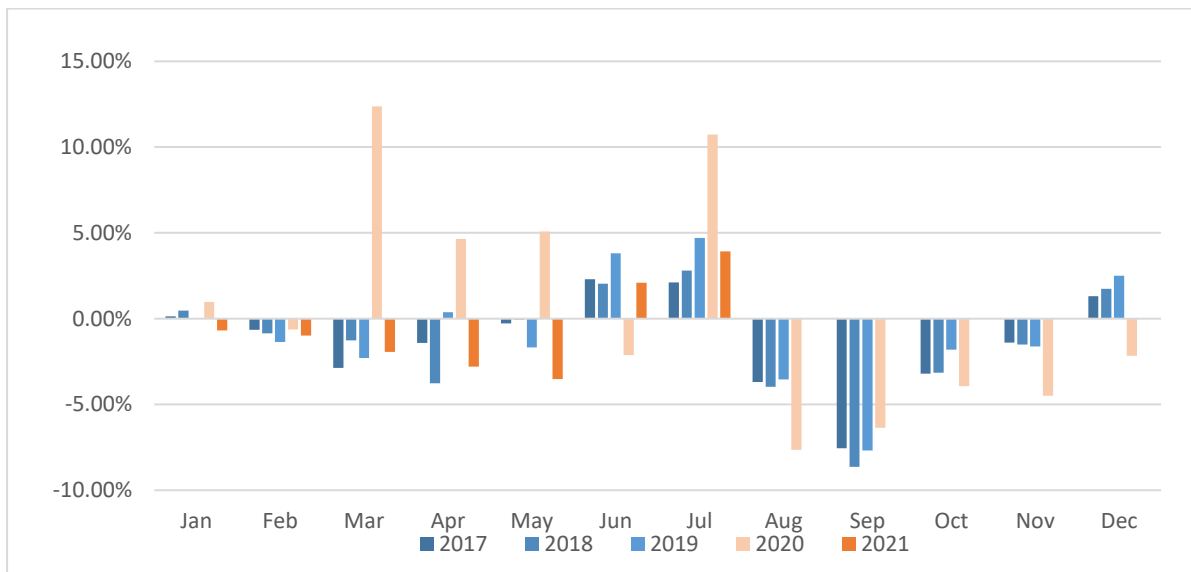
**Figure 1: Monthly Live Register and PUP Recipient Numbers, January 2007 to September 2021**



Source: DSP Administrative Data, CSO Live Register Data.

As illustrated in Figure 1 the overall trend of the Live Register, and the labour market more broadly, from the financial crisis to the COVID-19 pandemic, can be characterised as one of recovery. However, within a given year, there may be a fair amount of volatility, part of which is a consequence of week to week churn, but most of which is explained by the seasonal increases that affect the LR in the summer months. This summer increase and autumnal fall is a feature in the annual cycle of the LR. This is primarily driven by the education sector, for example temporary teachers/workers not on permanent contracts and participants on the Back to Education Allowance scheme. The seasonal variation can be observed in Figure 2 below, from the years 2017-2019. The distortionary effects of COVID-19, as indicated by the break in the trend, can be observed in 2020-2021. It is important to account for these seasonal trends in any projection of the LR where historic trends are used to inform the forecasting methodology.

**Figure 2: Month to month percentage change in the LR, Jan 2017 to September 2021**



Source: DSP Administrative Data, CSO Live Register Data.

## 2.2 The Pandemic Unemployment Payment, Data and Context

COVID-19 and the associated health restrictions resulted in the development of a number of new labour market measures, including the EWSS and PUP. The PUP provided, through its various iterations, income support to those who were unable to work as a result of the health restrictions.

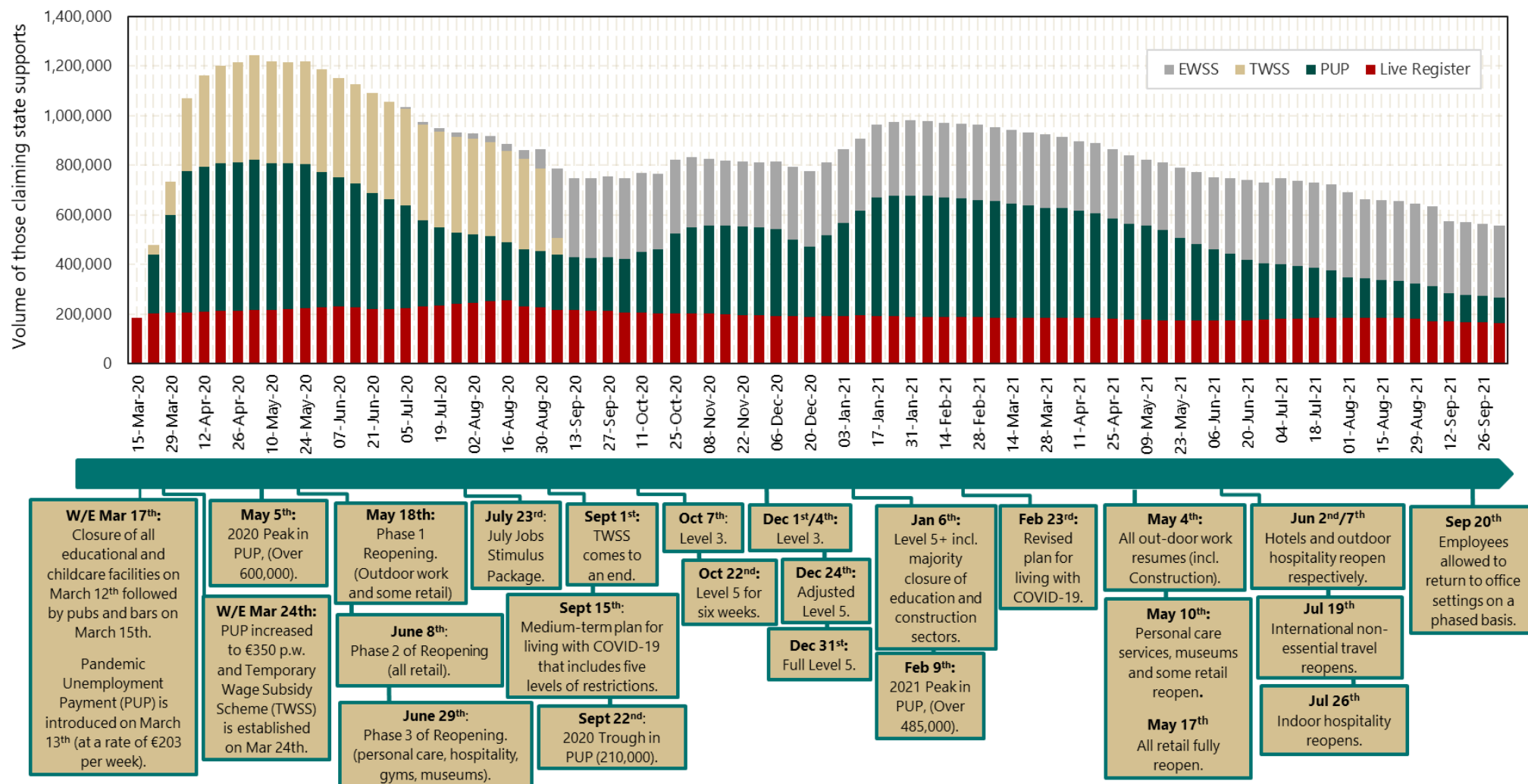
The number of PUP recipients is largely determined by the stringency of COVID-19 economic restrictions. Recipient numbers have varied widely, from a peak of 598,000, to its current level of 101,470.

As can be seen, in Figure 3, since COVID-19 sectoral restrictions have been introduced, there have been three main re-openings, the July 2020 reopening, the Christmas reopening and the current reopening. While the fastest rate of exit was in the Christmas period at 7.4%, the reopening was only sustained for a limited amount of time, and saw exits which were more concentrated among the retail and hospitality sectors. In 2021, the PUP has seen sustained exits since the number of weekly PUP recipients peaked at 486,359 in mid-February, with an average rate of 4.3% exits per week from February 8<sup>th</sup> to October 4<sup>th</sup> 2021.

Figure 3 provides an overview of numbers supported through the LR, PUP and wage subsidy schemes, as well as outlines a number of the key changes to restriction levels.



**Figure 3: Timeline of State Supports since the onset of the pandemic in March 2020 of PUP and LR Recipients**



Source: CSO, Revenue and DSP Administrative Data (figures are provisional and subject to revision).

To note: i) The EWSS replaced TWSS from Sept 1<sup>st</sup> 2020;

ii) EWSS figures up to the beginning of July 2021 are weekly figures published by the CSO. EWSS since then are aggregate monthly figures published by Revenue; and,

iii) the above EWSS figures for September 2021, which show the number of employees supported so far in September are based on the latest data release from Revenue (Sept. 30<sup>th</sup>). This will be revised as part of the next release (Oct. 7<sup>th</sup>).

## 2.3 Timeline for the closure of the Pandemic Unemployment Payment

The PUP, which originally provided a flat rate of €350 per week for all recipients, now provides funding, between €203 and €300, to recipients based on their pre-Covid-19 income.<sup>2</sup>

The proportion of PUP recipients that have, and are projected to, fall into each payment band, as well as the weighted average payment per week is shown in Table 1. Notably, the largest group of recipients (46% pre Sept. 7<sup>th</sup>) falls into the highest payment bracket.

Most recently, however, PUP rates changed on September 7<sup>th</sup>, such that:

- Those who earned less than €200 per week (17% of recipients) and were on the €203 rate of payment up to September 7<sup>th</sup> were due to start being transitioned to the LR. However, these recipients will continue to receive €203, as this has now been deferred until all sectors have started to re-open;
- Recipients with a pre-Covid-19 income of between €200 and €299.99 per week (17% of recipients) will receive a PUP payment rate of €203 per week;
- Recipients with a pre-Covid-19 income of between €300 and €399.99 per week (17% of recipients) will receive a PUP payment rate of €250 per week; and,
- Recipients who earned €400 or more per week (49% of recipients) will receive a PUP payment rate of €300 per week.

Notably, following each change to the rates, the recipients who were, the week prior, in the lowest payment band will begin to be transitioned off of the PUP.

---

<sup>2</sup> For a complete list of changes to payment rates see: “COVID-19 Pandemic Unemployment Payment Rates” here: <https://www.gov.ie/en/publication/0b0fc-COVID-19-pandemic-unemployment-payment-rates/?referrer=http://www.gov.ie/en/publication/0b0fc-COVID-19-pandemic-unemployment-payment-rates-from-17-september-2020/>

**Table 1: Average weekly PUP payment based on scheduled rate decreases<sup>3</sup>**

	August 31 <sup>st</sup>	From Sept 7 <sup>th</sup>	From Nov 16 <sup>th</sup>	From Feb 8 <sup>th</sup>
Recipients Transitioned away from the PUP	-	-	34%	100%
€203	19%	34%	17%	
€250	17%	17%	49%	
€300	17%	49%		
€450	46%			
Weighted average PUP payment*	€296	€259	€238	-

\*Weighted average payment is in regards to the numbers of people in payment, and excludes those who have transitioned to the LR.

The projected proportion of recipients per payment band in Table 1 is based on the distribution of recipients in the week commencing September 27<sup>th</sup> 2021. There is no apparent trend over the preceding weeks to indicate that the distribution of recipients across PUP payment rates is changing. However, as recipients are moved down in the payment bands, the opportunity costs of not working increases, which may lead to higher income earners exiting at faster rates.

---

<sup>3</sup> This assumes the weekly distribution of payment rates as of the week commencing October 4<sup>th</sup> 2021.

## 2.4 Long Term Live Register and PUP Recipients

The protracted nature of the COVID-19 pandemic has had a number of effects on atypical groups receiving payments, such as students (who are not normally entitled to jobseekers supports), and on the proportion of social welfare recipients that are in receipt of long term support.

One such impact is that the LR has fallen to historic lows, while relatedly, the proportion of LR recipients in receipt of long term support has increased. This is because the PUP, which was initially envisioned as a temporary support to provide emergency support to those unable to work owing to the pandemic, has been both more accessible in terms of application, and more generous in terms of average payment than the LR. Consequently, there has been a preference among jobseekers to avail of supports through the PUP, rather than the LR. Many of the long term LR recipients have pre-dated the Covid-19 pandemic, and may require additional targeted activation support, to support their transition to employment.

The PUP, which has been in operation since March 13<sup>th</sup> 2020 (with first payments being made on March 24<sup>th</sup>), also has a substantial proportion of long term recipients that would be significantly at risk of permanently losing their jobs post-COVID-19. As at September 28<sup>th</sup>, approximately 81,600 or 76% had received payment for 52 weeks or more (out of a maximum possible 80 weeks) and would be classified as LTU if they were on LR. Of these 81,600 LTPUP recipients, it is estimated that almost 50,300 have been in receipt of the payment for more than 76 weeks, or over 95% of the total weeks that the PUP has been in operation. This demonstrates that a significant proportion of PUP recipients have had little movement from the PUP, implying that they were unaffected even by the previous changes in sectoral restrictions and have moved further from the labour market. This may indicate that many of these recipients will likely require significant support through targeted activation measures once they are transitioned off the PUP. However, the PUP may have acted as a significant disincentive to work, owing to the high rates paid, as evidenced by the high level recipients on the scheme in sectors which have been reopened for an extended duration such as construction.

## 2.5 The Employee Wage Subsidy Scheme

The EWSS represents a substantial and key part of the Government's response to the current crisis. The EWSS has played a central role in supporting businesses, encouraging employment and helping to maintain the link between employers and employees.

To date (7 October), payments of over €5 billion and PRSI credit of almost €800 million have been granted to 51,500 employers in respect of over 668,400 workers.

The Minister for Finance confirmed that there will be no cliff-edge to the EWSS and confirmed that the scheme will continue until 30 April 2022. At the same time, it is necessary to unwind and phase out this temporary measure.

The following sets out the broad parameters for the gradual unwinding of the scheme:

- The current arrangements for EWSS are to remain in place until 30 November 2021.
- For December 2021 to February 2022, the original two-rate subsidy per employee per week (€151.50 & €203) will be reinstated in place of the current enhanced rate structure.
- From March and April 2022, a single flat rate of €100 per week will apply.
- The existing reduced rate of Employers' PRSI (0.5%) will continue to apply until end February 2022. Thereafter, the full rate of Employers' PRSI will be reintroduced from 1 March 2022 until the scheme ends.
- The scheme will conclude on 30 April 2022.

Essentially, these arrangements will ensure that the EWSS will remain in place for 6 months after the removal of public health restrictions on October 22<sup>nd</sup> and for over two months after the PUP closes.

Broadly, there will be no change in qualifying criteria. Businesses that qualify for entry to the scheme as at the last day of December 2021 may continue to avail of the EWSS until April 30<sup>th</sup> 2022.

However, the scheme will close to new employer entrants with effect from January 1<sup>st</sup> 2022.

There will be no such restriction in the case of new employees of employers benefitting from EWSS having regard to the fact that the PUP will effectively close on February 8<sup>th</sup> 2022 and the proposed arrangements envisage a continuing pathway to employment through EWSS for those exiting the PUP.

Finally, the current arrangements for the childcare sector will continue to apply, so that childcare businesses registered in accordance with the Childcare Act 1991 are eligible for the EWSS. As the proposed revised rates take effect at various stages for the duration of EWSS as outlined, these rates would also apply to the childcare sector.

### 3 Forecasting Methodology

This section outlines the methodologies used for estimating the number of persons on the LR and the associated jobseeker expenditure for the remainder of 2021 and 2022. Forecasts assume that the PUP will be wound down as currently planned, that there are no further policy changes (including economic restrictions), and no further economic shocks. It is unclear to what extent the closure of the EWSS, which will remain in situ until end-April 2022, will affect the live register (see section 4.3, Box 3).

#### Box 1: Previous Live Register Forecasts<sup>4</sup>

The table below outlines how the LR forecasts from previous iterations of the Live Register paper have performed compared to the actual LR outturn Item. It shows, that in non-COVID-19 years, the variance is between 0% and 3%. In contrast, the variance is much wider in COVID-19 years, reaching as high as 161%, owing to the substantial labour market impacts of unforeseen restrictions.

LR paper	Forecast Average LR (+PUP*)	Actual Average LR (+PUP*)	Variance (No.)	Variance (%)
2014	395,000	385,000	- 10,000	- 3%
2015	340,000	344,234	+ 4,234	+ 1%
2016	306,250	303,749	- 2,501	- 1%
2017	267,800	263,876	- 3,924	- 1%
2018	225,967	221,323	- 4,644	- 2%
2019	192,282	192,122	-160	0%
2020**	187,984	491,394	303,410	161%
2021**	359,767	439,095 est.	78,193	22%

\*The PUP is only included in 2020 and 2021.

\*\*The substantial variance is owing to the disruption in the labour market caused by the pandemic.

The mean absolute percent error (MAPE) expresses accuracy as a percentage of the error. The MAPE for the LR forecasts from 2014 to 2019 was -1%, which means, on average, the LR forecasts have a deviation of -1%, and as such are considered accurate and within acceptable standard deviations for forecasting (Athanasopoulos, 2018).

<sup>4</sup> 2014 LR paper: <https://igees.gov.ie/wp-content/uploads/2014/11/Analysis-of-Jobseekers-and-Related-Expenditure.pdf>

2015 LR paper: <https://igees.gov.ie/wp-content/uploads/2014/11/Analysis-of-Jobseekers-and-Related-Expenditure-1.pdf>

2016 LR paper: <https://igees.gov.ie/wp-content/uploads/2013/06/FINAL-Estimating-JA-and-JB-for-2016-2017.pdf>

2017 LR paper: <https://igees.gov.ie/wp-content/uploads/2018/04/Analysis-of-Live-Register-and-Related-Expenditure.pdf>

2018 LR paper: <https://igees.gov.ie/wp-content/uploads/2019/01/Analysis-of-Live-Register-Related-Expenditure.pdf>

2019 LR paper: <http://www.budget.gov.ie/Budgets/2020/Documents/Budget/Analysis%20of%20Live%20Register%20Expenditure.pdf>

2020 LR paper: <https://igees.gov.ie/wp-content/uploads/2019/10/Analysis-of-Live-Register-Expenditure.pdf>

2021 LR paper:

<http://www.budget.gov.ie/Budgets/2021/Documents/Budget/Forecasting%20Jobseeker%20Numbers%20and%20Expenditure%202021.pdf>

Athanasopoulos, R. J. (2018). Forecasting Principles and Practice Section 3.4 . Melbourne: OTEXTS.

### 3.1 Summary of Jobseeker Recipient Projection Methods

Economic forecasters often have a variety of different models and forecasts of the same variable from which to choose. These models and forecasts may differ due to their underlying assumptions, or differences in the data used. Forecasts from a given method may provide some useful information that is not conveyed in forecasts from other methods. Additionally, exogenous factors may make some forecasting methods more appropriate than others, given context. In order to capture a range of information, the approach taken in this analysis is to employ both macro and micro level approaches. Given the present circumstances, the models have been built to include the impact of Covid-19 interventions.<sup>5</sup>

#### Box 2 Description of Forecasting Methodologies

Approach	Forecast Method	Description
<b>A. Macro Level Approach (Top down)</b>	<b>Method 1: The Adjusted Conversion Rate Approach</b>	<ul style="list-style-type: none"> <li>This is a “top down” approach, meaning that the method captures full effects on the labour market, including both the PUP and LR. Full economy wide dynamics, and jobseeker movements, are assumed to be captured in these unemployment forecasts.</li> <li>The estimate is based on the unemployment rate forecasts from the Department of Finance and the Central Bank of Ireland.</li> <li>Expenditure can be estimated on aggregate but these methods cannot estimate specific expenditure components.</li> </ul>
<b>B. Micro Level Approach (Bottom up)</b>	<b>Method 2: The Adjusted Trend Drift Approach</b>	<ul style="list-style-type: none"> <li>The Adjusted Trend Drift method is a “bottom up” approach which estimates the LR and PUP separately.</li> <li>Three scenarios, incorporating a range of assumptions, are made concerning the rate of PUP exits, the proportion of PUP recipients who are transitioned to the LR per the current policy, as well as the rate of recovery affecting the LR.</li> <li>Using these assumptions, PUP and LR recipient numbers (inclusive of former PUP recipients) and costs are projected to the end of 2022.</li> </ul>

---

<sup>5</sup> Methods used in previous years, such as the ARIMA (Autoregressive integrated moving average) Method and the Trend Flows Method, were excluded as they were less appropriate in the post Covid-19 context.

## 3.2 Macro Level Approaches

The LR and PUP levels are estimated using a “macro approach”, namely an Adjusted Conversion Rate Method. For the purposes of this paper, official Department of Finance 2022 projected unemployment levels are used to estimate jobseeker numbers. The same method is also applied to the Central Bank of Ireland and ESRI’s projections, for additional context.

### Method 1: Adjusted Conversion Rate Method

Outside of the context of COVID-19, the conversion rate method calculates the relationship between the current LR for every 1% of the current unemployment rate. This gives an estimate of LR recipients per 1% of unemployment. This number of recipients, is then multiplied by the projected unemployment rate, to give an LR projection for the time period of interest.

Adjustments in respect to the unemployment level and the conversion rate, need to be made.

### LR Projections extrapolated from the conversion rate

Generally, the number of LR recipients is greater than the number of unemployed persons. This is partly a consequence of the number of people in receipt of a partial payment on the LR not being counted as unemployed, per the ILO definitions used in CSO surveys. However, currently, the conversion rate is much lower than what is normally seen in a non-COVID-19 context. For example, over the course of the labour market recovery since the financial crisis (from 2012 to 2019, the monthly conversion rate ranged from 123.4% to 176.6%). In Q3 of 2021 there was an average of 335,919 LR and PUP recipients. Using the CSO’s Traditional Unemployment Rate for Q3, which is 190,086, results in a conversion rate of 170%. However, using the CSO’s upper bound Covid-19 Adjusted Monthly unemployment Rate of 368,504, results in a conversion rate of 91%, implying that the number of payments is fewer than the number of persons classified as unemployed. Averaging the two unemployment measures results in a current conversion rate estimate of 120%.

As the PUP is phased out and the labour market returns to normal levels of activity, including normal rates of inflows and outflows, one would expect the proportion of LR recipients, in receipt of payment for a given unemployment level, to revert back to normal. Therefore, to account for this, an average adjusted conversion rate of 130% is used, as this estimate assumes that the current conversion rate (and implicitly, that the normal relationship between the unemployment rate and LR) will converge



with the historical trend by the end of 2022 i.e. between end Q3 2021 and end Q4 2022 the conversion rate will revert to historical trends<sup>6</sup>.

**Table 2: Unemployment Rate Scenarios/Forecasts 2021 – 2022.**

<b>Unemployment Rate Forecasts</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
<b>Department of Finance<sup>7</sup></b>			
Unemployment ('000)	455	419	182
Unemployment Rate (%)	19.2%	16.8%	7.2%
Employment ('000)	1,932	2,082	2,357
<b>Central Bank of Ireland<sup>8</sup></b>			
<i>Unemployment ('000s)</i>	<i>139</i>	<i>181</i>	<i>182</i>
<i>Unemployment Rate (%)</i>	<i>5.9%</i>	<i>7.3%</i>	<i>7.2%</i>
<i>COVID-Adjusted Unemployment Rate (%)</i>	<i>21.1%</i>	<i>16.9%</i>	<i>7.3%</i>
<i>Employment ('000s)</i>	<i>2,253</i>	<i>2,351</i>	<i>2,410</i>
<b>Economic and Social Research Institute<sup>9</sup></b>			
<i>Unemployment ('000)</i>	<i>455</i>	<i>395</i>	<i>176</i>
<i>Unemployment Rate (%)</i>	<i>19.4%</i>	<i>16.3%</i>	<i>7.1%</i>
<i>Employment ('000s)</i>	<i>1,976</i>	<i>2,039</i>	<i>2,307</i>

Source: Department of Finance, Central Bank of Ireland, Economic and Social Research Institute

<sup>6</sup> To clarify, while the headline rate of 130% appears to be remaining stable per quarter, this hides the movement in the Live Register and unemployment rates due to the assumed labour market recovery i.e. both the Live Register and unemployment rate are estimated to reduce proportionately with one another, hence why the overall conversion rate ratio is staying the same.

<sup>7</sup> Department of Finance 2022 Budget Forecasts.

<sup>8</sup> See Central Bank Q4 Bulletin 2021. <https://www.centralbank.ie/publication/quarterly-bulletins/quarterly-bulletin-q4-2021>

<sup>9</sup> See ESRI Autumn 2021 Quarterly Economic Commentary. <https://www.esri.ie/publications/quarterly-economic-commentary-autumn-2021>

### **3.3 Micro Level Approaches**

The Trend Drift Method is a micro level approach which uses labour market activity in the current year as the basis for projecting jobseeker recipients into the next year. In previous years, this approach has been successful in capturing the overall trajectory of the labour market, as well as the within year seasonal variation.

#### **Method 2: Adjusted Trend Drift Method**

In non-COVID-19 years, The Trend Drift Method uses the estimated end year position for the starting point of the next year. It then uses the observed weekly rate of change in the previous year (as measured by the week on week percentage variance) and adjusts it to account for developments in the LR. It, therefore, applies the same trajectory, as observed in the previous year (adjusted for developments in the LR), and rolls this into the next year. The method captures the increase in the LR during the summer period as it follows a similar seasonal trajectory to that of the previous year.

This approach is less appropriate for 2022 projections given the number of jobseeker recipients has, largely, been a consequence of exogenous lockdown restrictions. Therefore, using 2020 or 2021 as a reference period results in unrealistic projections. As a result, an adjusted approach, which employs three difference scenarios is used to define the reasonable boundaries of recipient projections to the end of 2022. These span from a less favourable outlook (Scenario 1) to a more favourable outlook (Scenario 3), from a labour market recovery perspective.

These scenarios, outlined below, are developed with assumptions pertaining to the rate of recovery affecting the PUP recipient population, the proportion of PUP recipients projected to transition to the LR, and the overall recovery expected to affect the LR population.

#### **Rate of recovery affecting the PUP and PUP transitions to the LR**

As discussed, the current policy position is for the PUP to be wound down until its closure in February 2022. Therefore, at the time of writing there are fewer than 20 payment weeks remaining in the lifecycle of the scheme.

Weekly declines on the PUP are continuing apace, with some slight evidence of a slowdown in the rate of exits. Since the National Recovery Plan's staggered reopening, a number of key phases and PUP policy actions have accelerated weekly exits. This includes: the closure of the PUP to new entrants (which inhibits the active replenishment of social welfare recipients on the scheme) on July 8<sup>th</sup>, the subsequent re-certification requirement for all PUP recipients that ended on July 26<sup>th</sup>, and more recently, the removal of around 20,000 students from the scheme after September 7<sup>th</sup>.

Including the weeks in which these changes took effect, the PUP has fallen over the last 21 weeks by a weekly average of 13,163 (-6.0%) per week. Excluding the weeks in which these changes took effect provides a more accurate estimate of the “natural” rate of recovery as indicated by to exits from the PUP. Weekly average exits, excluding these outliers, is 11,663 (4.9%).

Despite the positive signs of strong labour market recovery, as indicated by the weekly PUP exits, there is also evidence of scarring affecting this population, particularly given the increased proportion of LR and PUP recipients who could reasonably be classified as long term recipients, and arguably, have moved further from the labour market, requiring greater activation. This implies that, while exits have remained reasonably consistent, the rate and number of exits could slow dramatically as the PUP population will increasingly be comprised of longer term recipients. . Therefore, in line with DPER and DSP expectations, the PUP weekly exits range from -1% per week in Scenario 1 to -1.75% in the Scenario 3.

DSP snapshot analysis indicates that in excess of 90% of PUP recipients may be eligible for some level of jobseekers support. Therefore, assuming all PUP recipients who are eligible to transition to the LR do, forms the upper bound assumption, and is used in Scenario 1.

### **LR Recovery**

Normally, using the Trend Drift to project jobseeker recipients to the end of the current year is based on the weekly variation seen in the previous year, adjusted for changes to the labour market. Controlling for overall changes to the labour market, this captures the seasonal improvement seen in Q3 and Q4, as teachers and other seasonal workers return to work. However, normal levels of seasonal variation has not been observed in 2021 owing to the distortionary effects of COVID-19. Consequently, using a muted seasonality approach – one where the weekly variance is half of what was observed in 2019, the last pre-COVID year – is more appropriate based on back testing.

Similarly, the COVID-19 distortion has made it unreasonable to use 2020 or 2021 as appropriate reference periods for basing projections. Consequently, to adjust this approach for COVID-19, and to simultaneously maintain the within year seasonal variation, alternative reference periods are used. The three scenarios are based on three years in the recovery period following the 2008 financial crisis. Scenario 1, as a lower bound, reflects a relatively slow rate of recovery, while Scenario 3 reflects more positive growth rates.

**Table 3: Summary of Scenario Assumptions**

	Scenario 1.	Scenario 2.	Scenario 3.
<b>PUP Trajectory</b>			
Weekly exits from PUP until scheme expiry	-1.0% per week	-1.5% per week	-1.75% per week
<b>PUP Movements</b>			
Step 1. PUP rates decrease, September 2021.	-	-	-
Step 2. PUP recipients on in lowest band begin transition; % of which are transitioned to the LR.	16k; 90% (≈15k)	16k; 75% (≈12k)	16k; 65% (≈10k)
Step 3. PUP recipients on the new lowest band being transition; % of which are transitioned to the LR.	14k; 90% (≈12k)	13k; 80% (≈11k)	13k; 70% (≈9k)
Step 4. Remaining (top two) PUP brackets removed; % of which are transitioned to the LR.	57k; 85% (≈49k)	52k; 85% (≈44k)	51k; 75% (≈37k)
<b>LR Recipient Trends</b>			
To end 2021 – Muted seasonality (i.e. half net change of the 2019 LR profile) applied for remainder of 2021.	Average -.3% LR exits per week	Average -.3% LR exits per week	Average -.3% LR exits per week
2022 – LR profile is assumed to match a historical profile from a specified year; this captures both seasonality, as well as the overall improvement in the labour market.	Base year: 2015; LR improvement: -10.59%	Base year: 2016; LR improvement: -14.83%	Base year: 2017; LR improvement: -15.36%

## 3.4 Cost Estimate Methods

### PUP Cost Estimate Methods

The PUP recipient payment rates are reducing by €50 at key stages (see Table 1), and recipients who are in receipt of the minimum €203 rate are being transitioned from the PUP following each key stage. Therefore, estimates of PUP costs are based on the projected number of PUP recipients that fall into each payment band in each week, based on the three scenarios outlined.

### Live Register Decomposition Cost Estimate Method

The LR is comprised, mostly, of JA and JB recipients. Within either scheme, each payment received may be contingent upon a range of factors, such as means testing, dependents etc. The average payment in either scheme differs quite substantially from a 2021 average of around €190 per week on JA to €221 per week on JB, excluding outliers. From a total LR perspective, the main driving element of its costs is a combination of the number of LR recipients, the proportion of LR recipients in receipt of either a JA or JB payment, and the proportion of those in payment working part time. To estimate an appropriate average LR cost per 1,000 per year, the approach adopted is to investigate the composition of the LR, and how it is projected to change with PUP inflows.

To date, of those in payment in the LR<sup>10</sup>, 78% are JA and 22% are JB, which cost on average €10.80m and €9.30m per 1,000 recipients per year, respectively. However, DSP analysis on PUP recipient eligibility indicates that, of those who may transfer to the LR, 70% will likely be JB recipients, with the remaining 30% being JA recipients. Therefore, as PUP recipients are transitioned to the LR it will change the ratio of JA to JB recipients on the LR, and subsequently change the average cost. Therefore, for the LR cost estimate, this analysis weights the average LR cost by the projected JA to JB composition in each quarter (see Table 4). Total costs in each quarter are estimated by multiplying this weighted average by the projected average number of LR recipients in the quarter.

**Table 4: Projected Average Cost per 1,000, composition of the LR, 2022**

Average Costs per 1,000 (€m)	Q1 2022	Q2 2022	Q3 2022	Q4 2022	2022 Average
<b>Weighted Average LR Cost</b>	<b>10.59</b>	<b>10.63</b>	<b>10.46</b>	<b>10.36</b>	<b>10.51</b>
Average JB Cost	9.90	10.10	9.90	9.70	9.90
Average JA Cost	10.80	10.80	10.80	10.80	10.80

---

<sup>10</sup> For analysis, this deals only with JA and JB, and, therefore, excludes JBSE.

## 4 Estimation Results 2021 – 2022

This section outlines key results from the Adjusted Conversion Rate Method, the Adjusted Trend Drift Method and then summary results of the two, for cost and recipient projections to the end of 2022.

### 4.1 Method 1: Adjusted Conversion Rate Method

As part of the Budget process, the Department of Finance publishes medium term macroeconomic projections. The labour market elements (see Table 5), as discussed in section 3.2 Method 1: Adjusted Conversion Rate Method, are used to estimate jobseeker recipient numbers based on the adjusted average conversion rate of 130%. Central Bank of Ireland and ESRI projections and resulting estimates are included for context and discussed further below.

The Adjusted Conversion Rate projects an average of 236,925 jobseeker recipients across 2022, ranging from 262,600 in Q1 to 213,200 in Q4 of that year. Notably, while estimates are inclusive of PUP numbers, it is not possible to parse these, owing to the “top down” nature of the approach.

Using the weighted average cost estimate of €10.51m per 1,000 recipients, results in a total 2022 cost of €2,492m. This may slightly underestimate costs as it implicitly costs all recipients, including the on average more costly PUP recipients, as if they were LR recipients. However, this effect will likely be negligible given PUP rates will have converged substantially with LR rates, at this stage of the wind-down of the scheme.

**Table 5: Adjusted Conversion Rate Recipient and Cost Estimations, 2022**

Dept. of Finance Quarterly Projections	Q1 2022	Q2 2022	Q3 2022	Q4 2022	2022 Average
Unemployment levels ('000)	202	188	175	164	182
Employment levels ('000)	2,336	2,350	2,365	2,377	2,357
Unemployment Rate (%)	8%	8%	7%	7%	7%
Adjusted Conversion (%)	130%	130%	130%	130%	130%
<b>Adjusted Conversion Rate No ('000)</b>	<b>263</b>	<b>244</b>	<b>228</b>	<b>213</b>	<b>237</b>
Quarterly Costs (€m)	Q1 2022	Q2 2022	Q3 2022	Q4 2022	2022 Total
Annual cost per 1,000 Recipients pa	10.59	10.63	10.46	10.36	10.51
<b>Adjusted Conversion Costs</b>	<b>695</b>	<b>649</b>	<b>595</b>	<b>552</b>	<b>2,492</b>

Source: DoF Macroeconomic Projections, and author's cost and recipient estimates.

The Central Bank Estimates the same unemployment level as the Department of Finance, while the ESRI estimates an unemployment level of 176,000. Using the ESRI projections as an input results in a 2022 average estimate of 228,000 jobseekers, with an associated cost of €2,405m.

## 4.2 Method 2: The Adjusted Trend Drift Approach

The Adjusted Trend Drift Method estimates PUP and LR recipient numbers and costs based on the assumptions of the three scenarios outlined previously. Unlike the Adjusted Conversion Rate approach, these recipient numbers and costs can be separated into the composite PUP and LR parts.

Averaging the scenarios, in the last week of 2021, there are expected to be 246,485 jobseeker recipients, comprised of 187,987 LR and 58,498 PUP. From this starting point, there are further decreases projected, such that the projected average number of jobseekers for 2022 is 219,581. This is comprised of an average 6,426 PUP recipients and 213,155 LR recipients per week.

**Table 6: Quarterly Projected LR and PUP Recipients, 2022**

Jobseeker Recipients (LR + PUP) ('000)	Q1 2022	Q2 2022	Q3 2022	Q4 2022	2022 Average	2022 End
Scenario 1	241	236	233	215	231	216
Of which PUP	27	-	-	-	7	-
Scenario 2	235	226	219	200	220	201
Of which PUP	25	-	-	-	6	-
Scenario 3	224	213	205	188	207	190
Of which PUP	24	-	-	-	6	-
<b>Average</b>	<b>233</b>	<b>225</b>	<b>219</b>	<b>201</b>	<b>220</b>	<b>202</b>
<b>Of which PUP</b>	<b>26</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>6</b>	<b>-</b>

In 2022, owing to most of the PUP recipients having either exited or been transitioned from the scheme, costs are estimated to be €75m for the PUP, while LR costs are estimated to be €2,235m, for a total of €2,310m.

**Table 7: Quarterly Projected LR and PUP costs, 2022**

Quarterly Jobseeker Costs (LR+PUP)	Q1 2022	Q2 2022	Q3 2022	Q4 2022	2022 Total
Average LR Cost per 1,000 pa (€m)	10.59	10.63	10.46	10.36	10.51
Scenario 1	641	622	609	558	2,431
Of which PUP	80	-	-	-	80
Scenario 2	625	596	574	521	2,316
Of which PUP	75	-	-	-	75
Scenario 3	594	562	537	490	2,183
Of which PUP	70	-	-	-	70
<b>Average</b>	<b>620</b>	<b>593</b>	<b>574</b>	<b>523</b>	<b>2,310</b>
<b>Of which PUP</b>	<b>75</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>75</b>

## 4.3 Estimation Results Summary

### 2021 Estimates

Jobseeker estimates for 2021, are mostly comprised of outturn to date, plus a less significant element estimations based on assumptions related to exits from the PUP and the impact of the muted seasonality which has been observed so far this year.

The 2021 Jobseeker estimate is 434,054, comprised of 257,141 PUP recipients and 176,913 LR recipients. These jobseeker estimates have an associated cost of €6,046m, which is comprised of €1,928m for the LR and €4,118m for the PUP.

### 2022 Estimation Summary

As discussed throughout the paper, a range projections are estimated, through the two different methods. The jobseeker estimate ranges from a lower estimate of 207,337, to an upper estimate of 236,925. Weighting the Adjusted Conversion Rate Method, such that it is equal to each individual scenario, results in a projected average number of jobseeker recipients of 223,917, for 2022 (this is an average 217,491 weekly LR recipients and 6,426 weekly PUP recipients<sup>11</sup>) for 2022.

The PUP estimate is the average of the Adjusted Trend Drift scenarios estimates for the PUP, as the Adjusted Conversion Rate cannot separately estimate PUP recipients.

**Table 8. Average Annual and Quarterly LR and PUP Recipient Projections, 2021 to 2022**

LR + PUP Recipient Projections ('000)	2021 Average	Q1 2022	Q2 2022	Q3 2022	Q4 2022	2022 Average
<b>Adjusted Trend Drift Method</b>						
Scenario 1		241	236	233	215	231
Of which PUP		27	-	-	-	7
Scenario 2		235	226	219	200	220
Of which PUP		25	-	-	-	6
Scenario 3		224	213	205	188	207
Of which PUP		24	-	-	-	6
<b>Adjusted Conversion Rate Method<sup>1</sup></b>		263	244	228	213	237
<b>Projection Average</b>	434	241	230	221	204	224
<b>Of which PUP<sup>2</sup></b>	257	26	-	-	-	6

<sup>1</sup> Results are based on official DoF projections. These exclude CB and ESRI projections, which are only for context.

<sup>2</sup> This is taken from the average of the scenarios, as the Adjusted Conversion Rate cannot individually estimate PUP recipients.

<sup>3</sup> As per methods outlined, 2021 projections are largely comprised of outturn to date, with some element of muted seasonality applied to the Live Register, and PUP projections per the Adjusted Trend Drift.

<sup>11</sup> Note: jobseeker recipients are conventionally reported on in terms of average recipients per year. The PUP closes in Q1 of 2022, but despite this, and so it is comparable with the LR recipient numbers, it will be reported on as the total number of PUP recipient claims, averaged across 2022.



Corresponding to the recipient numbers outlined in Table 8, Table 9 outlines the cost projections under the various methods and scenarios. As can be seen, the lower cost estimate for jobseekers for 2022 is €2,183m, with the upper estimate being €2,492m.

Using the average of the scenarios and conversion rate outlined, the total spend on jobseekers in 2022 is projected to be €2,355m. This is comprised of €75m for the PUP and €2,280m for the LR.

**Table 9. Annual and Quarterly LR and PUP Cost Projections, 2021 to 2022**

Cost Projections (€m)	2021 Total <sup>3</sup>	Q1 2022	Q2 2022	Q3 2022	Q4 2022	2022 Total
Average LR Cost per 1,000 pa (€m)	10.9	10.59	10.63	10.46	10.36	10.51
<b>Adjusted Trend Drift Method</b>						
Scenario 1		641	622	609	558	2,431
Of which PUP		80	-	-	-	80
Scenario 2		625	596	574	521	2,316
Of which PUP		75	-	-	-	75
Scenario 3		594	562	537	490	2,183
Of which PUP		70	-	-	-	70
<b>Adjusted Conversion Rate Method<sup>1</sup></b>						
		695	649	595	552	2,492
<b>Projection Average</b>	6,046	639	607	579	530	2,355
<b>Of which PUP<sup>2</sup></b>	4,118	75	-	-	-	75

<sup>1</sup> Results are based on official DoF projections. These exclude CB and ESRI projections, which are only for context.

<sup>2</sup> This is taken from the average of the scenarios, as the Adjusted Conversion Rate cannot individually estimate PUP recipients.

<sup>3</sup> As per methods outlined, 2021 projections are largely comprised of outturn to date, with some element of muted seasonality applied to the Live Register, and PUP projections per the Adjusted Trend Drift.

#### 4.4 The EWSS: 2022 Costs and Possible Live Register Implications

The TWSS/ EWSS schemes have provided unprecedented support for enterprise and employment since the COVID outbreak in March 2020. These supports will continue to play a significant role in supporting jobs and businesses up to 30 April 2022.

For the EWSS, to date (7 October), payments of over €5 billion and PRSI credit of almost €800 million have been granted to 51,500 employers in respect of over 668,400 workers.

The Department of Finance have indicated that the scheme will be phased out gradually as outlined above in section 2.5.

The Department of Finance have estimated that an average of 220,000 employees will continue to be supported by the EWSS scheme until it ceases. It is estimated that the cost of extending EWSS as set out above in section 2.5 from November 2021 until 30 April 2022 will be in the region of €1.26 billion comprising €1.1 billion in EWSS payments and €160m in PRSI foregone.

The LR implications for the closure of EWSS are uncertain, as these implications will be contingent upon the overall financial state of the enterprise base which is unknown. However, an illustrative scenario of the risks are outlined below to show how the LR costs could be impacted by a severe impact of the EWSS closure on job losses:

- If 25% of EWSS employees (=55,000) transferred to the LR on May 1<sup>st</sup> 2022, and remained on the LR to the end of 2022, it would have an additional associated LR cost of €385m.
- If 50% of EWSS employees (=110,000) transferred to the LR on May 1<sup>st</sup> 2022, and remained on the LR to the end of 2022, it would have an additional associated LR cost of €771m.

However, this illustration is simplistic as it seems unlikely this quantum of EWSS employees would move to the LR at the closure of the scheme, particularly all at once. Additionally, the assumption that this population would remain on the LR, and would no benefit from the projected improvement in the labour market in 2022, seems unlikely.

## 5 Conclusion

Over the last two years, Covid-19 has had a substantial and protracted effect on the labour market. Jobseeker numbers have increased dramatically owing to the restrictions on economic activity, which were introduced to minimise the potential negative health impacts of the pandemic. Two central measures, the PUP and the T/EWSS, were introduced to support incomes and employment throughout the pandemic. These are now set to close in in the first half of 2022. The closure of these schemes and the potential implications this may have for the Live Register, are part of the reason for the uncertainty in estimating jobseeker numbers in 2022.

Broadly speaking, the latest macroeconomic indicators, which feed into, and align with, this analysis, imply a reasonably positive outlook in 2022. Despite jobseeker numbers not returning to pre-pandemic levels in 2022, substantial numbers of current social welfare recipients are expected to leave the supports, as the last of the economic restrictions are removed and as the economy returns to its long term productivity levels.

However, this is not to say that the pandemic has not had substantial and far reaching negative economic effects. The cost of supporting employment and incomes through the pandemic has been great. Additionally, there is early evidence that the PUP may have caused a disincentive for work, and therefore, some element of expenditure could have been considered a deadweight loss. Simultaneously, there is also evidence of scarring affecting the population, which may require additional targeted intervention to support the activation of these persons.