

McQuinn, Kieran; O'Toole, Conor; Kenny, Eoin; Hauser, Lea

Research Report

Quarterly Economic Commentary, Autumn 2023

ESRI Forecasting Series

Provided in Cooperation with:

The Economic and Social Research Institute (ESRI), Dublin

Suggested Citation: McQuinn, Kieran; O'Toole, Conor; Kenny, Eoin; Hauser, Lea (2023) : Quarterly Economic Commentary, Autumn 2023, ESRI Forecasting Series, The Economic and Social Research Institute (ESRI), Dublin,
<https://doi.org/10.26504/qec2023aut>

This Version is available at:

<https://hdl.handle.net/10419/295123>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

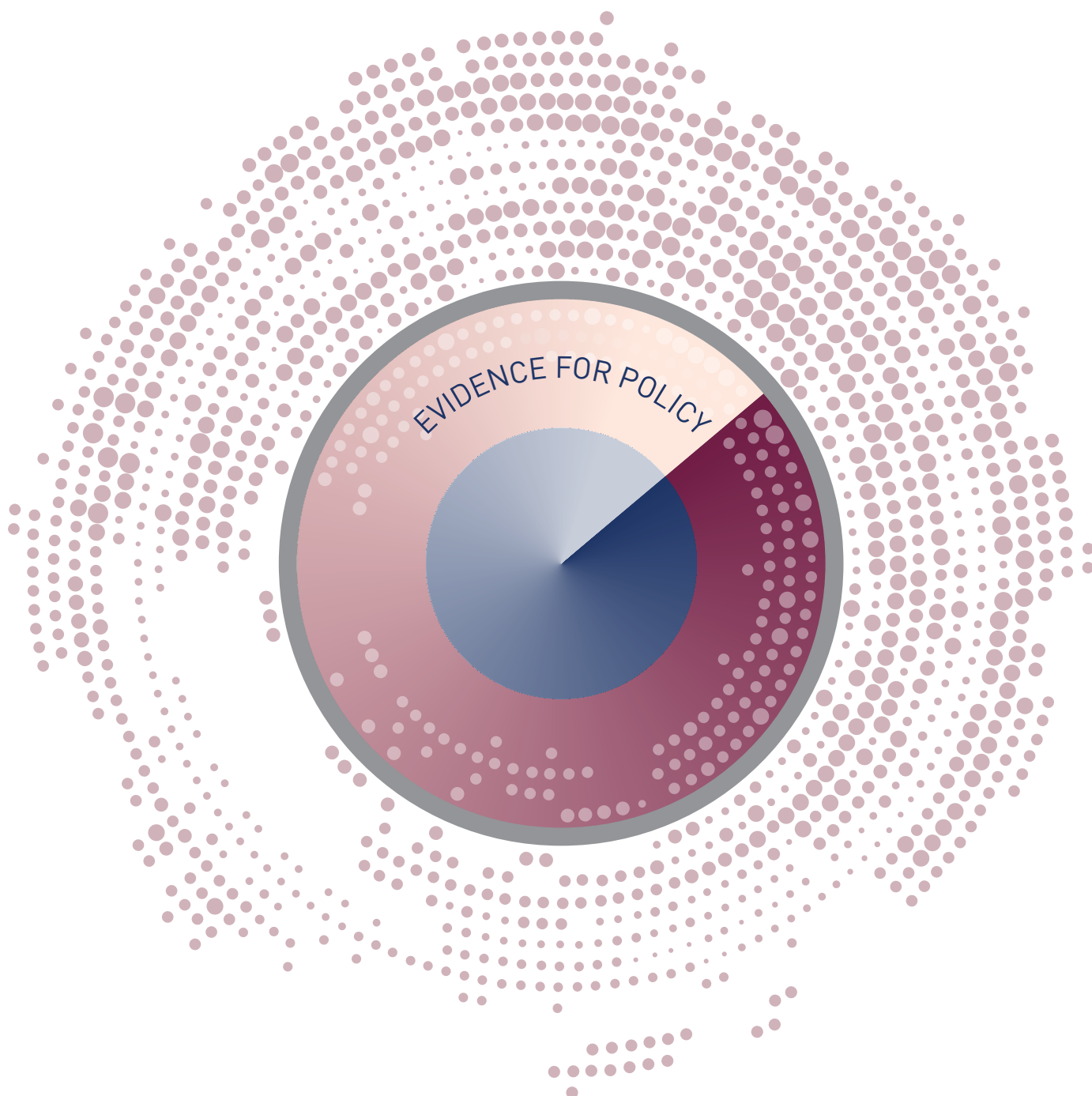


<https://creativecommons.org/licenses/by/4.0/>

QUARTERLY ECONOMIC COMMENTARY

AUTUMN 2023

KIERAN MCQUINN, CONOR O'TOOLE AND EOIN KENNY



QUARTERLY ECONOMIC COMMENTARY

Kieran McQuinn

Conor O'Toole

Eoin Kenny

Autumn 2023

The forecasts in this *Commentary* are based on data available by 1 September 2023

Draft completed on 20 September 2023

© The Economic and Social Research Institute,
Whitaker Square, Sir John Rogerson's Quay, Dublin 2.

ISSN 0376-7191

DOI: <https://doi.org/10.26504/qec2023aut>



This Open Access work is licensed under a Creative Commons Attribution 4.0 International License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly credited.

ABOUT THE ESRI

The Economic and Social Research Institute is an independent research institute working towards a vision of 'Informed policy for a better Ireland'. The ESRI seeks to support sustainable economic growth and social progress in Ireland by providing a robust knowledge base capable of providing effective solutions to public policy challenges.

The Institute was founded in 1960 by a group of senior civil servants, led by Dr T.K. Whitaker, who identified the need for independent and in-depth research to support the policymaking process in Ireland. Since then, the Institute has remained committed to independent research and its work is free of any expressed ideology or political position. The Institute publishes all research reaching the appropriate academic standard, irrespective of its findings or who funds the research.

The ESRI brings together leading experts from a variety of disciplines who work together to break new ground across a number of research initiatives. The expertise of its researchers is recognised in public life and researchers are represented on the boards and advisory committees of several national and international organisations.

ESRI researchers uphold the highest academic standards. The quality of the Institute's research output is guaranteed by a rigorous peer review process. Research is published only when it meets the required standards and practices. Research quality has also been assessed as part of three peer reviews of the Institute, in 2010, 2016 and 2022.

ESRI research findings are disseminated widely in books, journal articles and reports. Reports published by the ESRI are available to download, free of charge, from its website. ESRI staff members communicate research findings at regular conferences and seminars, which provide a platform for representatives from government, civil society and academia to discuss key findings from recently published studies and ongoing research.

The ESRI is a company limited by guarantee, answerable to its members and governed by a Council, comprising a minimum of 11 members and a maximum of 14 members, who represent a cross-section of ESRI members: academia, civil service, state agencies, businesses and civil society.

THE AUTHORS

The *Commentary* is edited by Kieran McQuinn and Conor O'Toole. Kieran McQuinn is a Research Professor and Conor O'Toole is an Associate Research Professor at the Economic and Social Research Institute (ESRI). Eoin Kenny is a Research Assistant at the ESRI.

The Quarterly Economic Commentary has been accepted for publication by the Institute, which does not itself take institutional policy positions. It has been peer reviewed by ESRI research colleagues prior to publication. The authors are solely responsible for the content and the views expressed.

TABLE OF CONTENTS

SUMMARY TABLE.....	IV
SUMMARY – FORECAST OVERVIEW	1
DOMESTIC AND INTERNATIONAL OUTLOOK – TRENDS AND CHALLENGES	2
Irish growth slows as domestic economy normalises and trade weakens.....	2
Labour market reaching capacity	28
Inflation easing with energy costs set to fall	32
Climbing tax revenues continue to be driven by main headings.....	36
GENERAL ASSESSMENT OF THE IRISH ECONOMY.....	50

SUMMARY TABLE

	2022	2023	2024
Output (Real Annual Growth %)			
Private Consumer Expenditure	9.4	3.0	2.5
Public Net Current Expenditure	3.5	0.5	0.8
Investment	5.1	-0.5	4.3
<i>Modified Investment</i>	15.9	0.1	3.5
Exports	13.9	1.0	3.4
Imports	15.9	2.0	3.0
Gross Domestic Product (GDP)	9.4	-1.6	3.5
Gross National Product (GNP)	9.2	-0.7	5.6
<i>Modified Domestic Demand</i>	9.5	1.8	2.4
Domestic Demand (excl. Stocks)	6.7	-0.9	2.8
Labour Market			
Employment Levels ('000)	2,548	2,622	2,664
Unemployment Levels ('000)	119	113	110
Unemployment Rate (as % of Labour Force)	4.5	4.1	4.0
Public Finances			
General Government Balance (€bn)	8.0	8.0	13.2
General Government Balance (% of GDP)	1.6	1.5	2.3
Price Developments			
Inflation (CPI)	7.8	6.0	3.2
Inflation (HICP)	8.1	5.6	2.8

Notes: Labour market data from March 2020 to February 2022 are based on the monthly unemployment and the COVID-adjusted monthly unemployment series published by the Central Statistics Office (CSO).
 Import forecasts for 2023 and 2024 refer to underlying activity. However, if National Accounts data reveal a significant impact of distortionary activity on import levels later in the year, modified and headline forecasts will be provided in future *Commentaries*.
 Modified Domestic Demand refers to Modified Final Domestic Demand, which excludes large transactions of foreign corporations that do not have a large impact on the domestic economy. Definition available here: <https://www.cso.ie/en/interactivezone/statisticsexplained/nationalaccountsexplained/totaldomesticdemandandmodifiedtotaldomesticdemand/#:~:text=Modified%20Total%20Domestic%20Demand%20goes%20further%20in%20trying,to%20exclude%20certain%20items%20that%20are%20in%20TDD>. Modified investment excludes investment in aircraft for leasing and investment in R&D from abroad.

Summary – Forecast overview

- While the Irish economy emerged in a strong and resilient manner post the COVID-19 pandemic, it now looks set to experience more moderate, normalised, rates of growth.
- International economic activity is contributing to this slowdown; inflation remains elevated, interest rates have continued to increase, and demand in countries such as Germany and, in particular, China, has faltered.
- Typically, developments in the multinational (MNE) sector tend to overstate underlying domestic growth in the Irish economy. However, at the present time, we believe modified domestic demand (MDD) – a more accurate reflection of domestic activity – is growing at 1.8 per cent in 2023, while GDP is set to decline by 1.6 per cent.
- Notwithstanding the normalising activity domestically and the slowdown in international trade, the domestic Irish economy is currently operating at capacity, in particular in relation to employment intensive sectors like construction. The Irish labour market continues to perform robustly, with unemployment stabilising at approximately 4 per cent over the past year, indicating the economy is close to, or at, full employment.
- In this environment, additional domestic pressures are likely to feed through to prices in the short term. However, targeting expenditure towards addressing infrastructure bottlenecks and improving the productive capacity of the economy can alleviate capacity constraints in the medium term.
- With increased construction costs and rising interest rates, challenges facing the housing market continue. Many of the issues in the housing market can be traced back to the Great Financial Crisis (GFC). A Box to the *Commentary* estimates how house prices would have evolved if supply had increased at a much more vigorous pace post-2010 than was actually the case.
- Inflationary effects appear to be broadening and the direct impact of initial energy prices has subsided. Given this changing context for inflation, it increases the likelihood of domestic sources predominating and inflation becoming more engrained as second round effects occur. The CPI for 2023 and 2024 is forecast to be 6.0 per cent and 3.2 per cent, respectively.
- The high intake of tax revenue continues to be driven by income tax, VAT and corporation tax. Included in the public finances section are two Boxes: the first examines how the composition of tax revenue in Ireland has changed historically; the second seeks to highlight historical trends in Irish State expenditure and to examine Irish expenditure across countries.

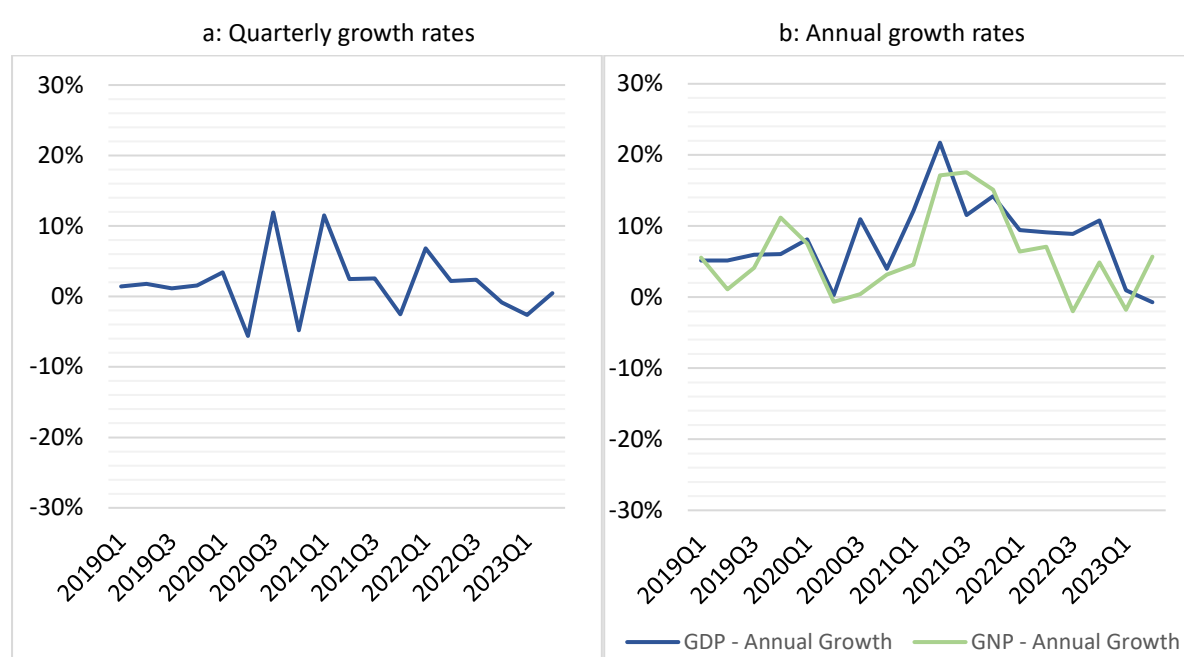
Domestic and international outlook – trends and challenges

IRISH GROWTH SLOWS AS DOMESTIC ECONOMY NORMALISES AND TRADE WEAKENS

Resilience tested as global growth slows and domestic economy normalises

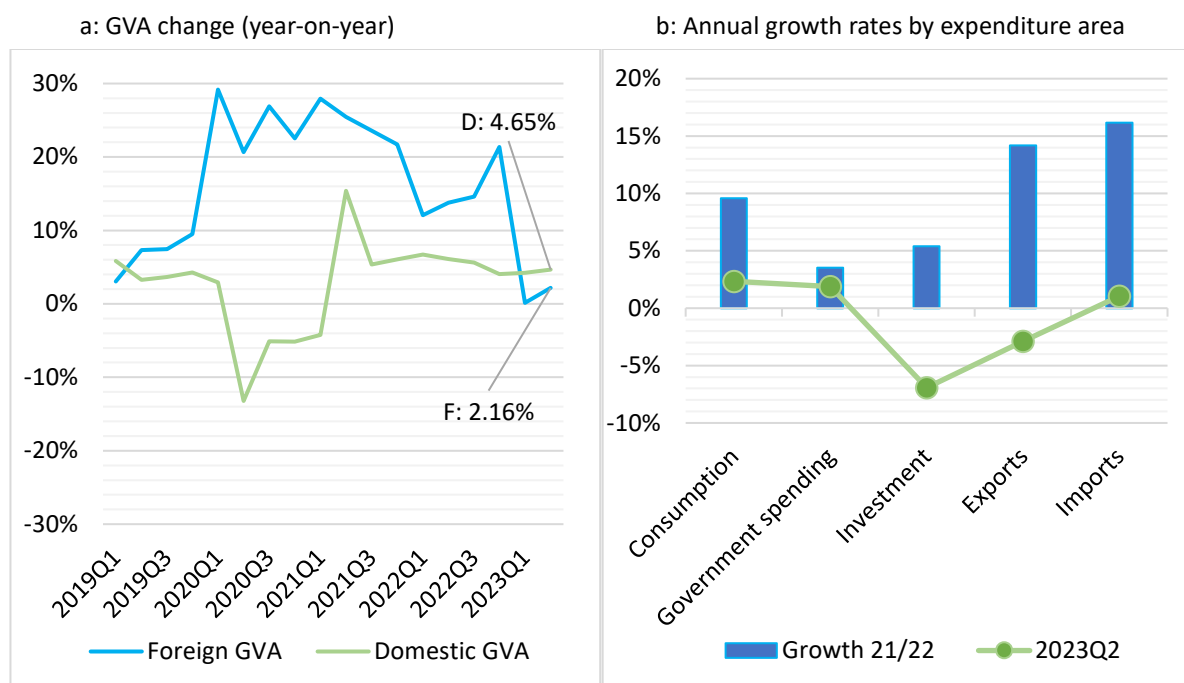
The Irish economy is experiencing a noticeable decline in the pace of activity following a period of considerable FDI-export led growth and a re-normalisation of domestic activity following multiple shocks (including the COVID-19 pandemic and the fallout from the war in Ukraine). To this point the dual nature of the economy, mainly though the strong FDI-led export growth, has provided considerable resilience to withstand these economic shocks. However, with global economic conditions beginning to slow, the impact on export activity is materialising. International growth is experiencing a number of headwinds including the ongoing geopolitical fragmentation, the continued elevation in inflationary pressures, and the rise in policy rates to counter inflation. The difficulties in the Chinese economy are also weighing on activity with notable downside risks to its growth. Figure 1 highlights the slowing trend in GDP and GNP in Ireland. The quarterly trend in GDP growth points towards a sizeable loss in momentum with declines in Q4 2022, Q1 2023 and a relatively flat outturn in Q2 2023. The corresponding drop in the annual growth rates is clearly evident in Figure 1b.

FIGURE 1 OUTPUT GROWTH IRELAND – QUARTERLY AND YEARLY GROWTH RATES (SEASONALLY ADJUSTED)



Given the dual nature of activity in Ireland (between FDI-led exports and domestic activity), it is important to understand the factors contributing to the slowdown in growth. Figure 2a presents the breakdown of the growth in gross value added by foreign dominated sectors as well as domestic-oriented sectors (as defined by the CSO).¹ It can be clearly seen in panel A that the major downward pressure in terms of GVA comes through the foreign-dominated sectors. Having grown at considerable double-digit levels in the period 2020 through 2022, the sharp downturn which was documented in the previous *Commentary* in Q1 2023 has continued into Q2 2023, pointing towards a more moderate rate of growth from these sectors. On the other hand, the domestic oriented sectors are continuing to grow relatively strongly at 4.65 per cent year-on-year.

FIGURE 2 FOREIGN AND DOMESTIC GVA AND COMPONENTS OF GDP



Source: Central Statistics Office.

This divergence can be seen more clearly in Figure 2b which presents data for the expenditure components of GDP; consumption, government spending, investment, exports and imports. The latter three are affected by multinational globalisation issues as documented in FitzGerald (2018; 2023)² and Lane (2018),³ whereas the former are not. In the figure, the blue bars present the annual growth

¹ Gross Value Added by Activity - CSO - Central Statistics Office.

² FitzGerald, J. (2018). 'National Accounts for a Global Economy: the Case of Ireland', *Quarterly Economic Commentary* Special Article, Summer 2018.
FitzGerald, J. (2023). *National Accounts for a Global Economy. Challenges of Globalization in the Measurement of National Accounts*, 81, p.65.

³ Lane, P.R. and G.M. Milesi-Ferretti (2018). 'The external wealth of nations revisited: international financial integration in the aftermath of the global financial crisis', *IMF Economic Review*, 66, pp.189-222.

rate for the full year 2022 which provides context for the Q2 2023 year-on-year growth in green.

It can clearly be seen that household consumption is continuing to grow in Q2 2023, albeit at a much-reduced rate relative to the full year 2022. This highlights both a return to more normal rates of growth post-COVID and the erosion of spending power due to inflationary pressures. The growth rates for investment, exports and imports are all lower in Q2 2023 than their corresponding rates in 2022. This suggests the post-COVID bounce experienced by the domestic economy has fully materialised.

In summary, we expect GDP to decline by 1.6 per cent in 2023 before returning to growth of 3.5 per cent in 2024.

The dual nature of the economy is examined in the following Box, which examines the effects of investment patterns on Irish economic growth.

BOX A INTANGIBLE INVESTMENT AND OVERALL GROWTH IN IRELAND

In the last few years, a significant amount of research activities have been devoted to analysing the performance of the Irish economy, distinguishing between the state of the domestic economy and the part that is dominated by large multinational enterprises (MNEs).

In a recent paper, Kostarakos et al. (2023) consider the role of investment in the performance of the Irish economy over the period 2000 – 2016, focusing mainly on the impact of intangible assets. We believe the Irish case is a particularly interesting example of the role played by intangible investment for three separate but interrelated reasons. First, over the period in question, the Irish economy experienced some of the most volatile growth rates amongst OECD countries; after the high growth period of the ‘Celtic Tiger’ (1995 – 2007), the domestic economy sharply contracted following the emergence of a severe credit bubble in the residential and commercial property sectors. Since 2013, however, the economy has grown at a significant rate in both output and employment. Second, Ireland has attracted some of the largest inflows of intangible capital across countries for a prolonged period of time mostly due to the consistently low corporate tax rate. At the same time, it is one of the most open economies in international terms with much of the post-2013 recovery characterised by export-led growth (see Allen-Coghlan et al. (2020) and the references therein for more on this).

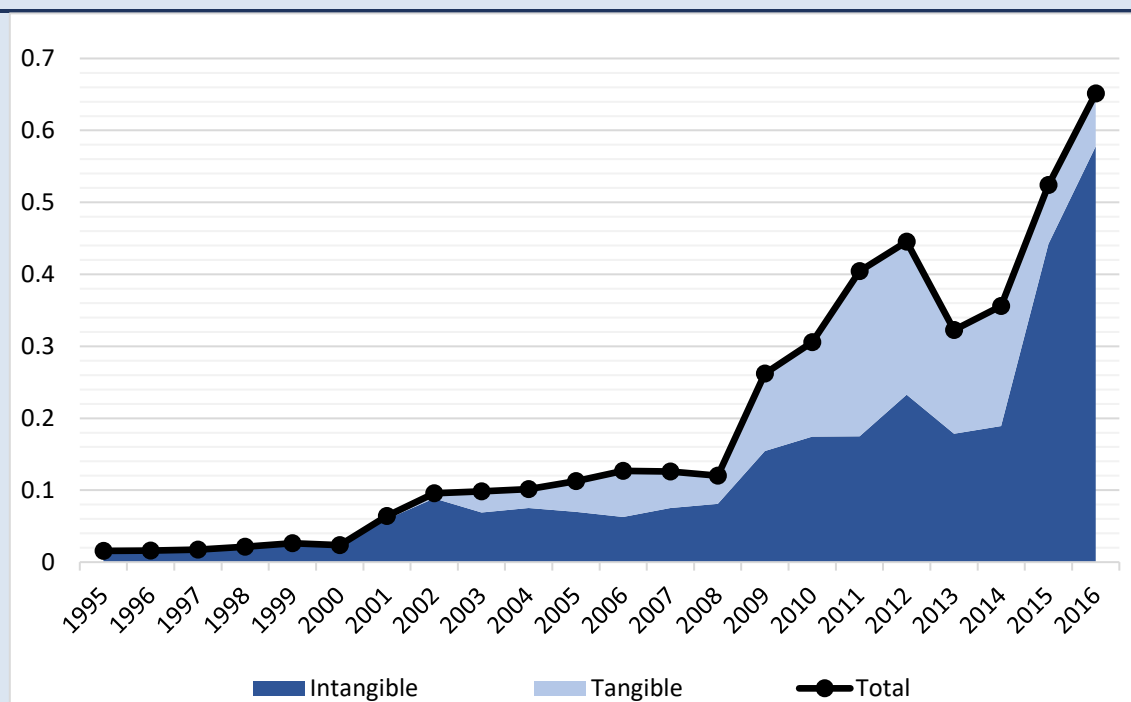
In this Box, we will focus on the impact that the operations of MNEs had on the level of investment in the Irish economy. We refine the measure of investment as reported in the National Accounts by making use of a data series made available by the CSO. Additionally, we incorporate into our analysis the so-called ‘new’ or ‘non-National Accounts’ intangible investment assets introduced by Corrado et al. (2005). With these data on hand, we

perform a standard Solow-type sources-of-growth analysis in order to analyse the contribution of the various capital assets in the Irish growth story.

The impact of globalisation on Ireland's official investment data has been extensively discussed (see, among others, FitzGerald (2020), Honohan and Walsh (2002) and Whelan (2014)). These issues include changes in patents held by pharmaceutical companies, the growth of the aircraft leasing sector, and the inclusion of Intellectual Property Products (IPP) in investment figures, along with changes in the ownership of these assets. The most significant development occurred in 2015 when foreign MNEs transferred their IPP to Ireland, leading to a 53 per cent increase in the country's capital stock, nearly three times the size of its GDP. This transfer also resulted in a significant rise in official investment figures, with Gross Fixed Capital Formation increasing by 57 per cent and 52 per cent in 2015 and 2016, respectively.

However, a large portion of these IPP comprises foreign-owned intangible assets, and the returns on these assets flow abroad rather than staying within the Irish economy. Using data from the Central Statistics Office's Modified Total Domestic Demand database, Figure A.1 illustrates the magnitude of the issue over time. The difference between the payment to the firm manufacturing the goods, and the profit on the goods which used the parent firm's IPP, is then recognised as output in the Irish National Accounts where the IPP formally reside. This was the reason for the substantial increase in Ireland's GDP in 2015. The dotted black line depicts the distortion as a percentage of total investment which has risen considerably since 1995 from 1.6 per cent to 65 per cent at the end of 2016. Our measure of the distortion is based on data from the CSO's Modified Total Domestic Demand database, which attempts to exclude the impact of large transactions by MNEs that ultimately do not affect the domestic economy.

In particular, the CSO provides two unique time series – namely Gross Fixed Capital Formation in R&D service imports and trade in IP and aircraft related to leasing – which are the only publicly available estimates of these transactions by MNEs. As such, we use them as an approximation of the size of the distortion in the Irish accounts. The dark blue and light blue shaded areas decompose the aggregate distortion into the distortion related to intangible (i.e. Gross Fixed Capital Formation in R&D service imports and trade in IP assets) and tangible assets (i.e. Gross Fixed Capital Formation in aircraft related to leasing) respectively. As can be seen, the distortion attributed to intangible assets is substantial since 2001, while from 2009 onwards it is consistently more than 10 per cent of the official figure of Irish investment series (see the dark blue shaded area). At the same time, a large part of tangible assets also distorts the official statistics, mostly during the 2009-2014 period. However on average over the 1995-2016 period, the distortion attributed to tangible assets is much smaller in magnitude with respect to the associated share attributed to intangibles.

FIGURE A.1 DISTORTION AS PERCENTAGE OF THE OFFICIAL INVESTMENT LEVELS

Source: Authors' calculations based on data from Central Statistics Office Modified Total Domestic Demand database. Tangible assets refer to aircraft related to leasing while Intangible assets refer to R&D service imports and trade in IP.

In addition to the difficulties associated with the measurement of investment as currently defined in the National Accounts, there is the equally important issue of the classification of various investment assets. In order to better understand the role played by intangible capital, Corrado et al. (2005) introduced a set of criteria based on which various types of expenditures can be classified as investment assets rather than intermediate inputs.⁴ This led to an expansion of the definition of intangible assets and a corresponding modification of the output measure of the economy. Although the intangible asset definition in the System of National Accounts has been amended a number of times – most recently, the 2008 revision introduced Research and Development and Artistic Originals into the set of Intellectual Property Products assets – there is still a number of assets (such as industrial design, financial product development, marketing and branding, management practices and employer-provided training) that are excluded as noted by Corrado et al. (2022). The work of Corrado et al. (2005; 2009) has led to the publication of the INTAN-Invest database (henceforth INTAN), which provides unified time series for both categories of intangible assets; namely, both those currently reported in National Accounts (henceforth NA intangibles) and the intangible assets that have not yet been included in National Accounts (henceforth non-NA intangibles).⁵

In order to account both for the distortions in the official investment series and for the non-NA intangible assets, Kostarakos et al. (2023) detail how the distortions can be stripped out from the official Irish time series (namely, Gross Value Added and tangible and NA-intangible investment) so that the associated filtered time series can be obtained. Moreover, they adjust the measure of output to include the Corrado et al. (2005) intangible assets.

Table A.1 compares the results of the sources-of-growth analysis performed both for the official (distorted) data and for the filtered (net of distortions) data. Regarding the effect of the distortions in Irish investment series, our analysis indicates that the overall size of the potential mismeasurement from a growth accounting perspective is quite substantial for the period 2000-2016. Specifically, once we remove the distortions, labour productivity growth falls by 2.17 p.p. (percentage points) and capital deepening falls by 1.39 p.p., i.e. a significant decrease of 60 per cent and 39 per cent respectively (see the last column of Table A.1). Total factor productivity is also reduced and actually turns negative, falling by 0.79 p.p. over the 2000-2016 period. Thus, computing the sources of Irish growth by using the official statistics leads to a substantial overestimation of Irish labour productivity growth and the contribution of capital deepening to it. The fall in TFP, which is used in the growth accounting literature as a measure of the unexplained component of growth, clearly illustrates the magnitude of this mismeasurement and the size of the error where the unfiltered official Irish data are used.

TABLE A.1 GROWTH ACCOUNTING USING OFFICIAL AND FILTERED DATA

	Official %	Filtered %	Difference %
Labour productivity growth	3.63	1.46	-2.17
TFP	0.12	-0.67	-0.79
Capital Deepening	3.52	2.13	-1.39
<i>Decomposition of capital deepening</i>			
Tangible Capital	2.03	2.11	0.08
NA Intangible Capital	1.64	0.18	-1.46
Non-NA Intangible Capital	-0.16	-0.16	0

Source: Authors' calculations.

Having identified the impact of the distortions caused by foreign MNEs on the analysis of the sources of Irish growth, we now turn to the examination of the effects of intangible capital assets. In order to facilitate the analysis, we perform the sources-of-growth exercise firstly using only the intangible assets currently included in the National Accounts (column 'NA-PF') and then incorporating the INTAN intangible assets ('column PF'). Moreover, because the evolution of Irish output growth rates was quite volatile during 2000-2016 as this period was characterised by two distinct phases of the business cycle (a boom period up to 2007 and a bust period triggered by the Great Financial Crisis), we split the sample into two sub-periods. Overall, based on the results contained in Table A.2, we find that the inclusion of non-NA intangible capital as a source of growth robustly affects labour productivity growth through the business cycle. In particular, the contribution of non-NA intangibles is pro-cyclical. Our results indicate that adjusting GVA for non-NA

- ⁴ The increase in intangible capital across major developed economies in the present century has had a major impact on a number of significant macroeconomic issues – for a thorough analysis see Haskel, J. and S. Westlake (2018). *Capitalism without capital: The rise of the intangible economy*. Princeton University Press.
- ⁵ The Corrado et al. (2016) comprehensive database includes data for intangible assets for 19 EU countries and the US. We note that this refers to a previous vintage of the dataset, which was available at the time of the writing of this article.

intangible assets increases Irish labour productivity growth by 0.53 p.p. during the 2000-2007 boom period and reduces it by 0.98 p.p. during the 2008-2016 bust period (see column PF in Table A.2).

TABLE A.2 GROWTH ACCOUNTING FOR THE PRE-CRISIS AND POST-CRISIS PERIOD

	Growth accounting over 2000-2007		Growth accounting over 2008-2016	
	%		%	
	NA-PF	PF	NA-PF	PF
Labour productivity growth	2.28	2.80	1.24	0.26
TFP	-1.00	-0.25	-2.15	-0.91
Capital Deepening	3.28	3.05	3.39	1.17
<i>Decomposition of capital deepening</i>				
Tangible Capital	3.07	2.28	3.12	1.95
NA Intangible Capital	0.20	0.16	0.28	0.20
non-NA Intangible Capital		0.62		-0.98

Source: Authors' calculations.

The inclusion of non-NA intangibles diminishes the contribution of total factor productivity (TFP). In particular, the (negative) TFP contribution is reduced by 0.75 p.p. in 2000-2007 and 1.24 p.p. in 2008-2016. Thus, accounting for non-NA intangibles reveals a more intuitive account of the sources of Irish growth. Indeed, the reduction of TFP contribution moves in accordance with the rise and the subsequent fall of non-NA intangibles. These results for TFP are in line, for example, with recent estimates by FitzGerald (2023).

Moreover, the inclusion of non-NA intangible assets substantially changes the relative importance of factors that explain Irish labour productivity growth. In particular, the share of the contribution of capital deepening to growth increases substantially from 77 per cent to 93 per cent during the 2000-2007 boom period and from 61 per cent to 77 per cent during the 2008-2016 bust period. On the other hand, the share of TFP as a source of growth falls substantially from 23 per cent to 7 per cent during 2000-2007 and from 39 per cent to 23 per cent during the 2008-2016 period.

In summary, although Ireland is one of the most intangible-intensive European economies, the official share does not accurately measure the share of intangible assets in the Irish economy, due to distortions in the official investment measurement. One should adjust Irish investment data for these distortions to accurately measure the contribution of intangible capital to the Irish growth rate. Once we decompose total capital deepening into its components, i.e. tangible, NA intangible and non-NA intangible capital deepening, we find that the largest share of it is attributed to tangible capital followed by non-NA intangible capital. Perhaps more interestingly, the share of the contribution of NA-intangible capital becomes quite small. Thus, the remarkable NA-intangible intensity of Ireland, observed in the official statistics, does not translate to a similar order of magnitude growth in labour productivity once the MNE-related distortions are filtered out.

Moreover, our analysis illustrates the productivity slowdown experienced by the Irish economy during and after the eruption of the Great Financial Crisis, i.e. the 2008-2016 period. The key drivers of this slowdown are the halt of tangible capital deepening and the negative contribution of non-NA intangible capital.

References:

- Allen-Coghlan, M., K. McQuinn and P. Varthalitis (2020). 'Sovereign debt after COVID-19: How the involvement of the ECB can impact the recovery path of a Member State', *Quarterly Economic Commentary*, p.67.
- Corrado, C., C. Hulten and D. Sichel (2005). 'Measuring Capital and Technology: An Expanded Framework', in Corrado, C., J. Haltiwanger and D. Sichel (Eds) *Measuring Capital in the New Economy*, pp. 11-46. University of Chicago Press.
- Corrado, C., C. Hulten and D. Sichel (2009). 'Intangible capital and US economic growth', *Review of income and wealth*, 55(3), pp.661-685.
- Corrado, C., J. Haskel, C. Jona-Lasinio and M. Iommi (2016). 'Intangible Investment in the EU and US before and since the Great Recession and its Contribution to Productivity Growth'. EIB Working Papers 2016/08, European Investment Bank (EIB).
- Corrado, C., J. Haskel, C. Jona-Lasinio and M. Iommi (2022). 'Intangible capital and modern economies', *Journal of Economic Perspectives*, 36(3), pp. 3-28.
- FitzGerald J. (2023). 'Understanding the Irish economy', Special Article, *Quarterly Economic Commentary*, Economic and Social Research Institute (ESRI), Summer.
- FitzGerald, J. (2020). 'National Accounts for a Global Economy: The Case of Ireland', in Ahmad, N., B. Moulton, J.D. Richardson and P. van de Ven (Eds) *Challenges of Globalization in the Measurement of National Accounts*. University of Chicago Press.
- Honohan, P. and B. Walsh (2002). *Catching Up with the Leaders: The Irish Hare*. Brookings Papers on Economic Activity, 2002(1):1-57.
- Kostarakos, I., K. McQuinn and P. Varthalitis (2023). 'The role of intangible investment in Ireland: A growth accounting perspective', *Review of Income and Wealth*. Available online: <https://onlinelibrary.wiley.com/doi/10.1111/roiw.12651>.
- Whelan, K. (2014). 'Ireland's Economic Crisis: The Good, the Bad and the Ugly', *Journal of Macroeconomics*, 39:424-440.

This Box was prepared by Ilias Kostarakos and Petros Varthalitis.

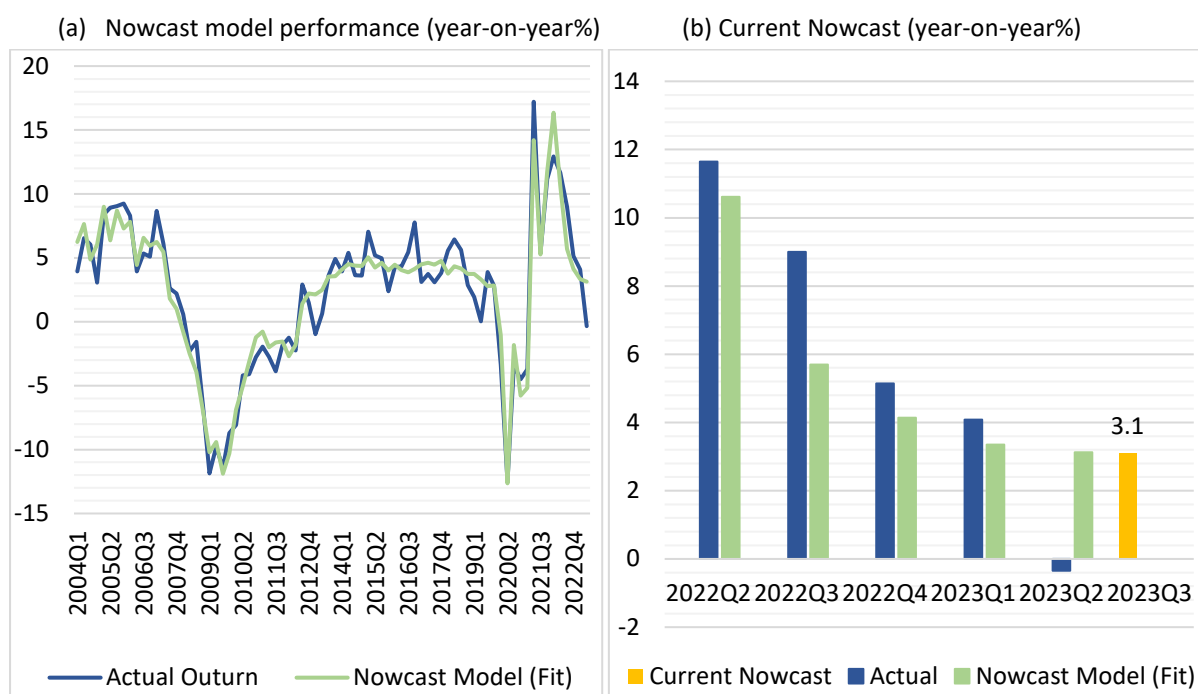
In terms of underlying activity in the domestic economy, Figure 3 presents the ESRI's Nowcast for modified domestic demand that is published on a monthly basis, following an approach outlined in Egan (2022).⁶ Figure 3a presents the performance of the Nowcasting model over the period Q1 2006 – Q2 2023. The figure shows that despite a relatively strong performance historically, there was a large forecasting error in Q2 2023 (model fit value of 3.1 per cent versus actual outturn of -0.4 per cent). This error is likely due to a large increase in investment in actual infrastructure such as buildings and other fixed assets on the part of MNEs

⁶ Egan, P. (2022). 'Nowcasting domestic demand using a dynamic factor model: the case of Ireland', *Applied Economics Letters*, DOI: 10.1080/13504851.2022.2103500.

in Q2 2022, which is included in MDD, and its subsequent fall in Q2 2023. As there is no monthly indicator available that would pick up these transactions, the Nowcasting model failed to predict the fall in overall MDD.

The current Nowcast for Q3 2023 based on one full month of data for July and partial data for August is presented on the right-hand side of Figure 3b. The early Nowcast estimates that MDD will grow by 3.1 per cent year-on-year in Q3 2023. A decomposition of the growth of the Nowcast indicates that labour market variables, consumer prices and industrial production were the main drivers of the estimate for the quarter.

FIGURE 3 **MODIFIED DOMESTIC DEMAND NOWCAST**



Source: Central Statistics Office.

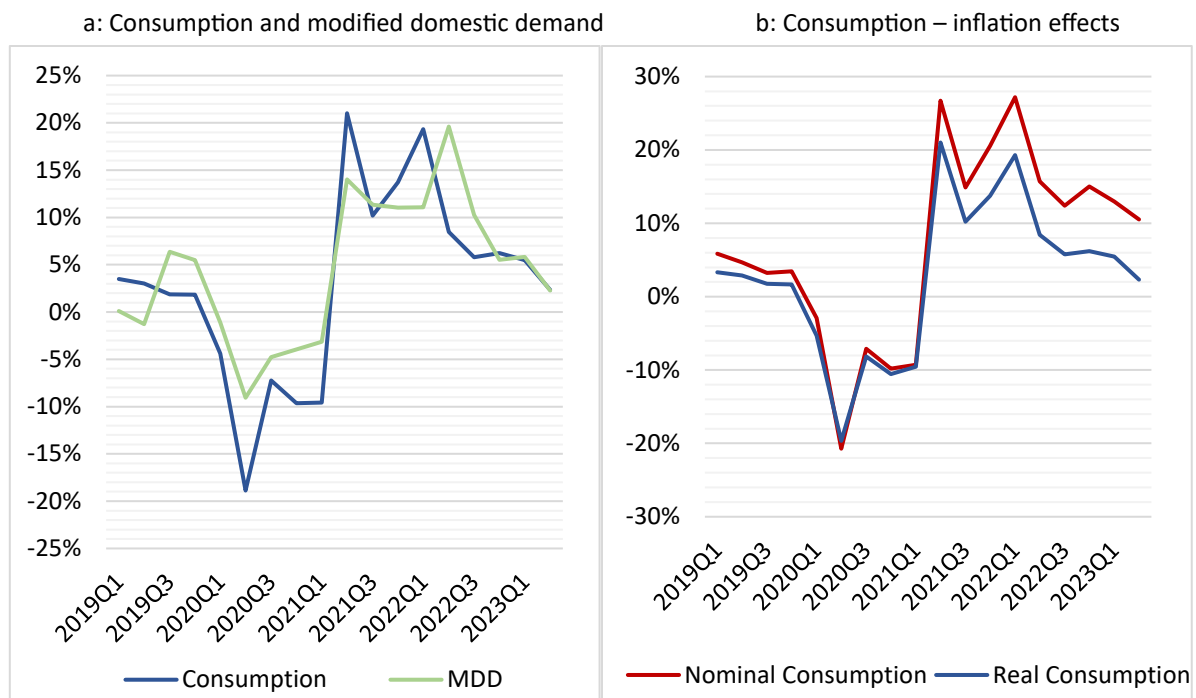
Domestic spending slows as real incomes hit and savings normalise

While global trading growth has slowed, the domestic Irish economy, through 2022 and for the first quarter of 2023, has continued to perform well. However, part of this relatively strong performance was based on a re-normalisation of economic activity following the global pandemic, which has continued to affect year-on-year calculations until Q1 2023. This re-normalisation is driven by two factors; first the continued unwinding of elevated savings levels and second the impact on the base data in 2021 and 2022 from the public health restrictions on activity. However, following the onset of the war in Ukraine and the acceleration in inflationary pressures for consumers, expenditure has been squeezed as household budgets

have come under increasing pressure. This has led to a notable decline in the growth of household consumption for the first and second quarters of 2023.

Figure 4a presents the growth rate in personal household consumption and modified domestic demand (this is the adjusted domestic demand calculation which replaces overall investment, with the modified series removing aircraft leasing and R&D IP). The growth in both modified domestic demand and consumption are moderating, with a clear downward trend evident in the series. Figure 4b highlights the impact of inflation on consumption, demonstrated as the difference between the nominal growth rate and the real growth rate (inflation adjusted). The gap between these series has widened as inflationary pressures have risen.

FIGURE 4 DOMESTIC ECONOMY DEVELOPMENTS

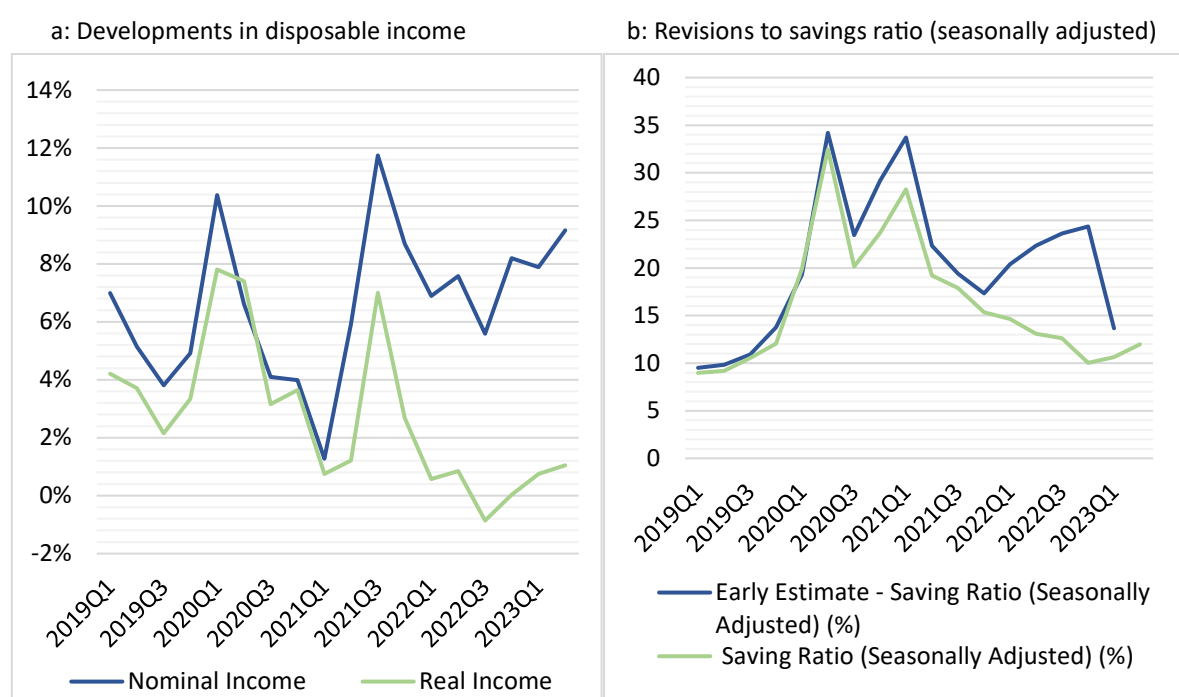


Source: Central Statistics Office.

The moderation of the increase in consumption growth relative to previous forecasts can be decomposed into two main effects: incomes and savings. In terms of income developments, Figure 5a presents developments in disposable income, with both the real and nominal figures. It is clear that since early 2022 real income growth has declined sharply, with real income falling in certain quarters due to increased consumer prices. This has put downward pressure on consumption growth.

Second, in relation to the savings ratio, a feature of the post-pandemic Irish economy has been an elevated rate of household savings. Up to Q1 2023, these savings rates had not been declining as expected as the public health measures had waned. However, revised estimates from the Central Statistics Office have reduced the savings ratios to rates more akin to those before the pandemic (see Figure 5b) suggesting that the normalisation of the savings ratio has already taken place. The implication of these data revisions is that there is less upward support to consumption from the moderating path of the savings ratio: in previous *Commentaries*, we had assumed a decline in the savings ratio towards pre-pandemic levels, and this led to a relatively high consumption forecast. With this influence no longer as strong, the outlook for consumption expenditure this year is more muted than before.

FIGURE 5 TRENDS IN INCOME AND SAVINGS

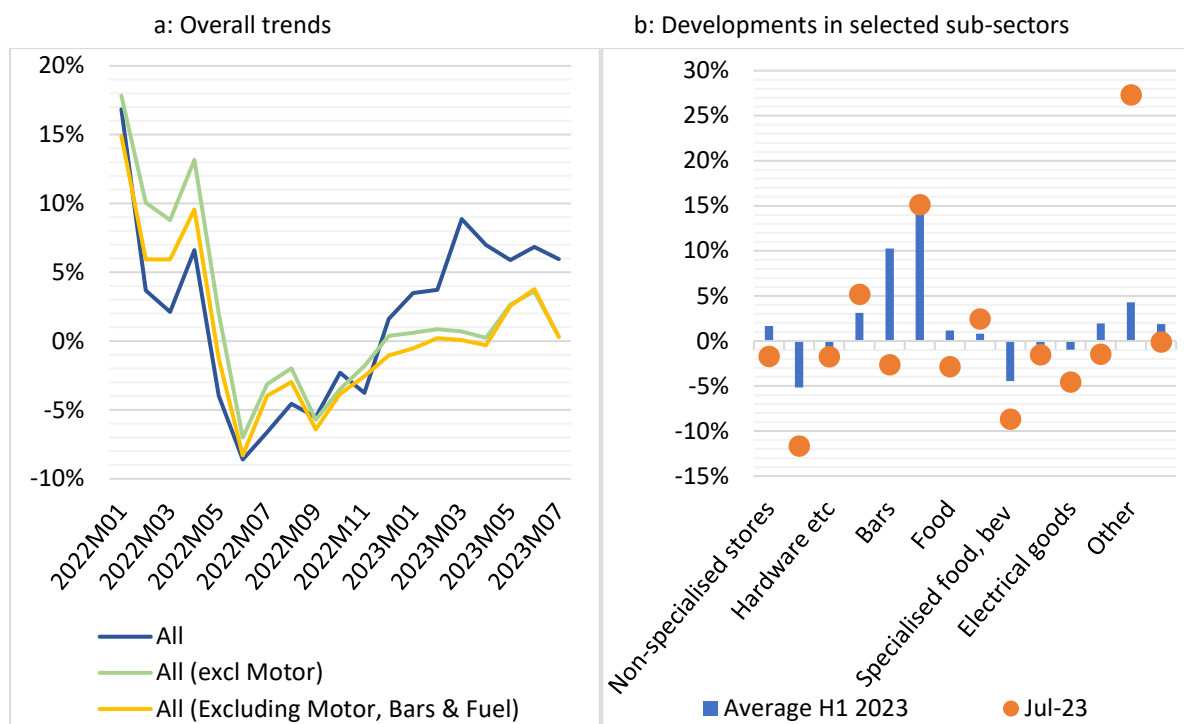


Source: Central Statistics Office.

Further insight into the downturn in domestic household expenditure can be seen from the retail sales data in Figure 6a. While the overall series has been trending downwards since the end of the first quarter of 2023, the series excluding motors, bars and fuel has turned down sharply in July 2023. While it is too early to indicate whether this trajectory will continue, it is evidence of a more broad-based downward pressure on household spending. Figure 6b breaks down the retail sales by sub-sector. It presents the year-on-year growth of each sub-sector for the first half of 2023 (average growth over the six months) compared to the same period in 2022. It also presents (orange circles) the year-on-year growth to July 2023. The aim of this chart is to understand the 'direction of travel' in terms of spending

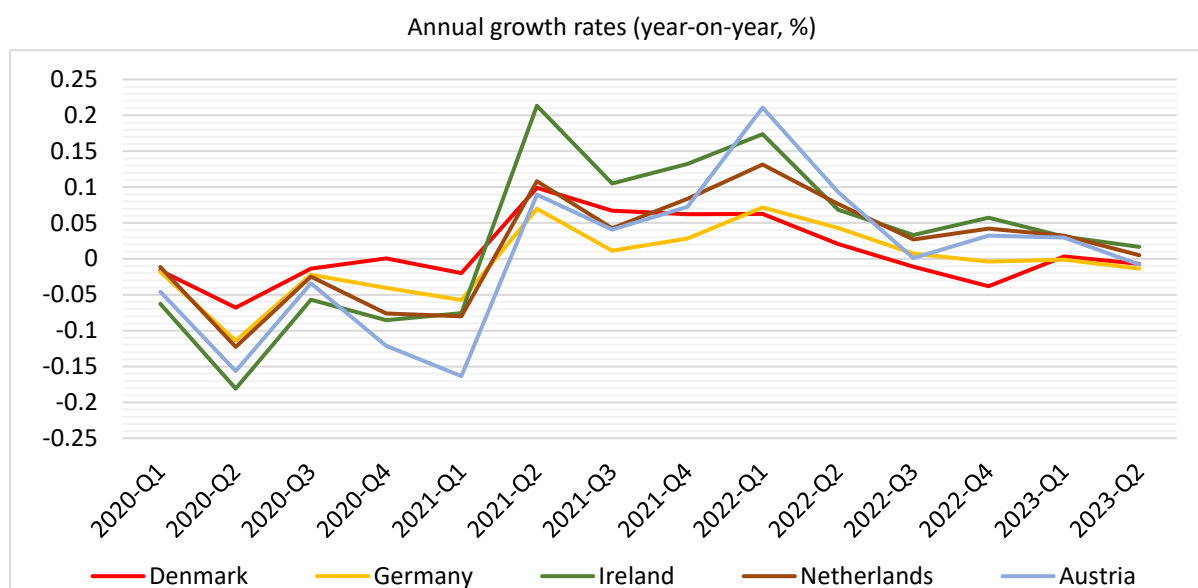
momentum i.e. if the year-on-year growth for July 2023 is less than the first half of the year, momentum in household spending is waning and vice versa. It is clear that across a large number of sectors, growth is beginning to taper off. This includes non-specialised stores, department stores, hardware, furniture, household equipment and clothing and footwear. These developments point to a broad ranging moderation in the growth rate which is spanning both spending on durables and non-durables.

FIGURE 6 DEVELOPMENTS IN RETAIL SALES



Source: Central Statistics Office.

To provide some further context for Irish household spending developments, Figure 7 presents Ireland along with selected other European economies. It is very clear across these countries that the growth in household spending has begun to decline, likely driven initially by the inflationary effects of the war in Ukraine and subsequently by the rising interest rates which dampen credit demand and raise debt servicing costs.

FIGURE 7 FINAL CONSUMPTION OF HOUSEHOLDS – SELECTED EUROPEAN ECONOMIES

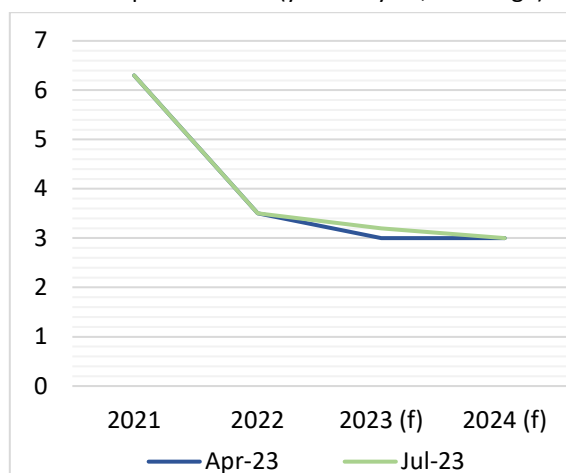
Source: Eurostat.

Global trade slows as international economy headwinds bite

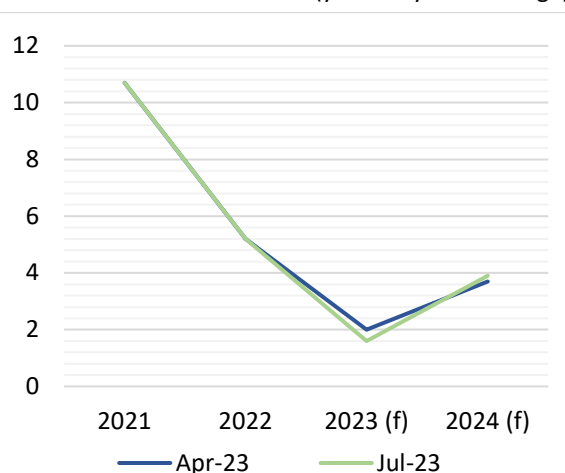
Following a number of years of stellar FDI-led increases in exports, a reversal in the trend has begun to materialise. As a small open economy, with a considerable reliance on two specific export sectors (pharmaceuticals and computer services), any international slowdown is likely to impact Ireland's net trade. Figure 8 presents the IMF's most recent global output and trade volume forecasts. They forecast global growth in trade is likely to continue into 2023 and 2024 but at reduced rates relative to previous years. Indeed, the IMF downgraded somewhat their trade forecast for 2023 in July, citing slowing international activity.

FIGURE 8 INTERNATIONAL FORECASTS

a: IMF output forecasts (year-on-year, % change)



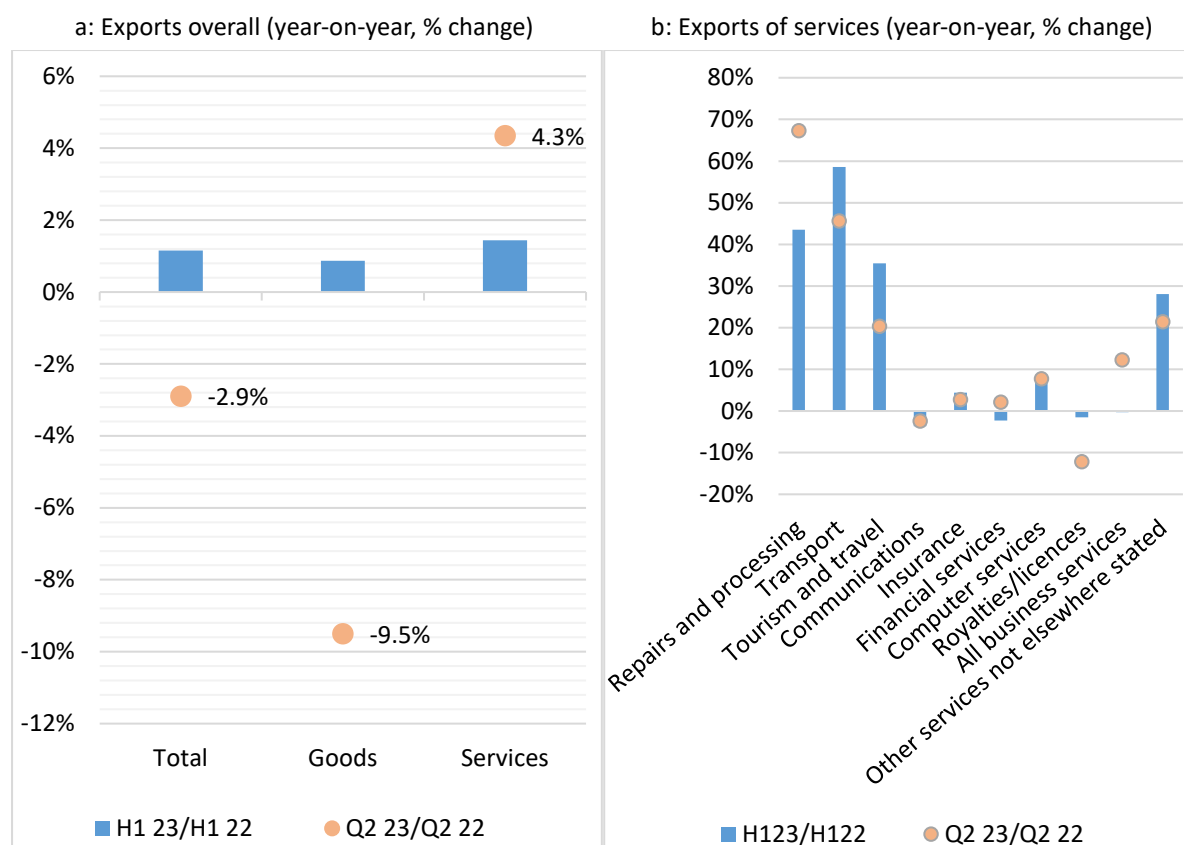
b: IMF trade volume forecasts (year-on-year, % change)



Source: IMF.

For Ireland, any slowdown in the pace of international growth feeds through into slower growth in the demand for goods and services from abroad. Figure 9 presents the year-on-year growth in exports (in constant price terms) for the first half of 2023 (relative to 2022) and for the second quarter of 2023. Export growth was down overall by 2.9 per cent in the second quarter, falling relative to the half year growth. The drop was much greater for goods at 9.5 per cent relative to services which held up well at 4.3 per cent.

FIGURE 9 EXPORTS OF GOODS AND SERVICES



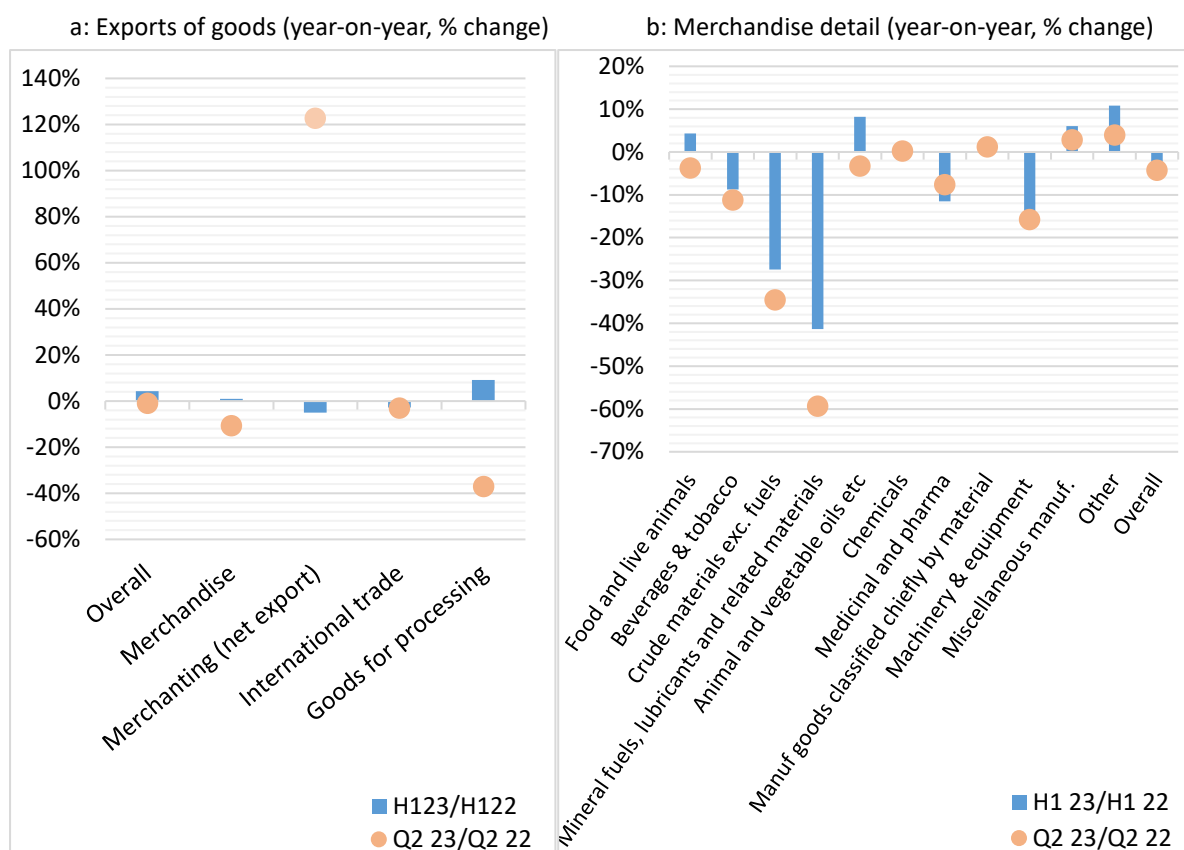
Source: Central Statistics Office.

Panel B presents the exports of services by the type of service export in current prices (unadjusted for price changes due to data availability). It is clear most sectors continued to enjoy robust service growth but with some evidence of a slowdown in particular subsectors. Of particular note is the robust performance of ICT exports which grew strongly in the quarter and for the first half of the year. Given the broader challenges in the ICT sector, it is a positive sign that the sector in Ireland is continuing to grow in terms of its export activity.

Figure 10 presents the growth in exports by category (panel A) and more detail on the merchandise categories in panel B. While ongoing volatility is observable in the international globalisation factors (such as contract manufacturing), it is clear that

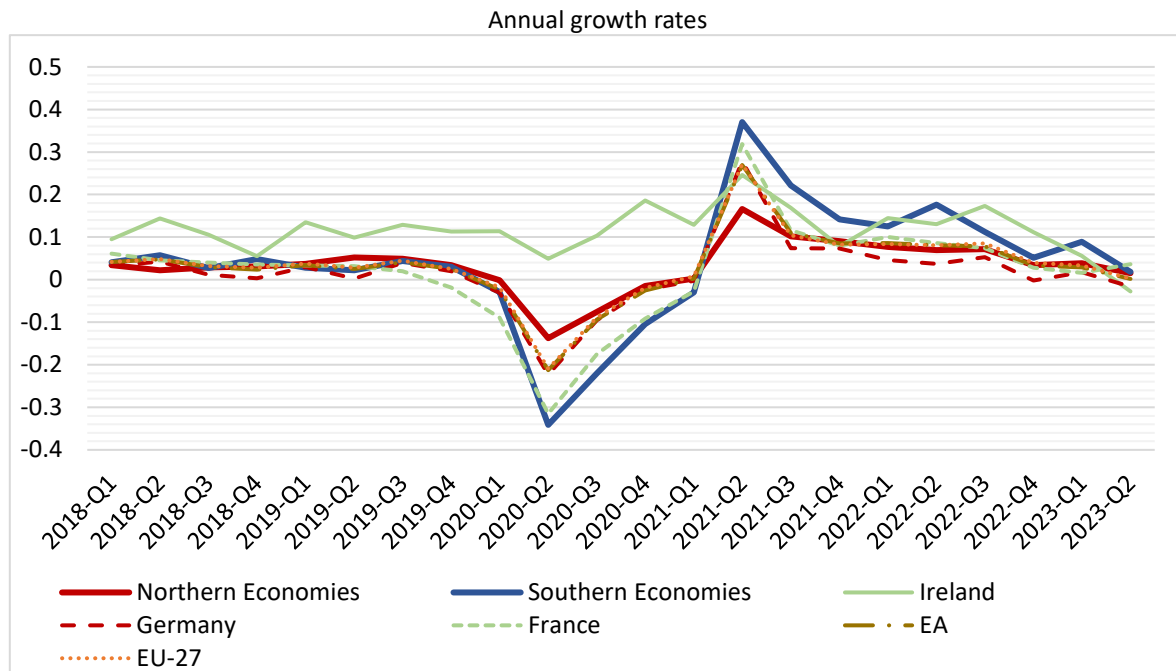
international goods trade is dropping in current prices. Furthermore, looking across the product areas where this is occurring indicates a broad-based decline across a range of products with the drop in medical and pharmaceutical exports being very evident. As this sector accounts for approximately half of Irish goods exports, the decline in this product grouping is a major factor in explaining the overall decline in goods export.

FIGURE 10 EXPORTS OF GOODS AND SERVICES – EUROPEAN COMPARISON



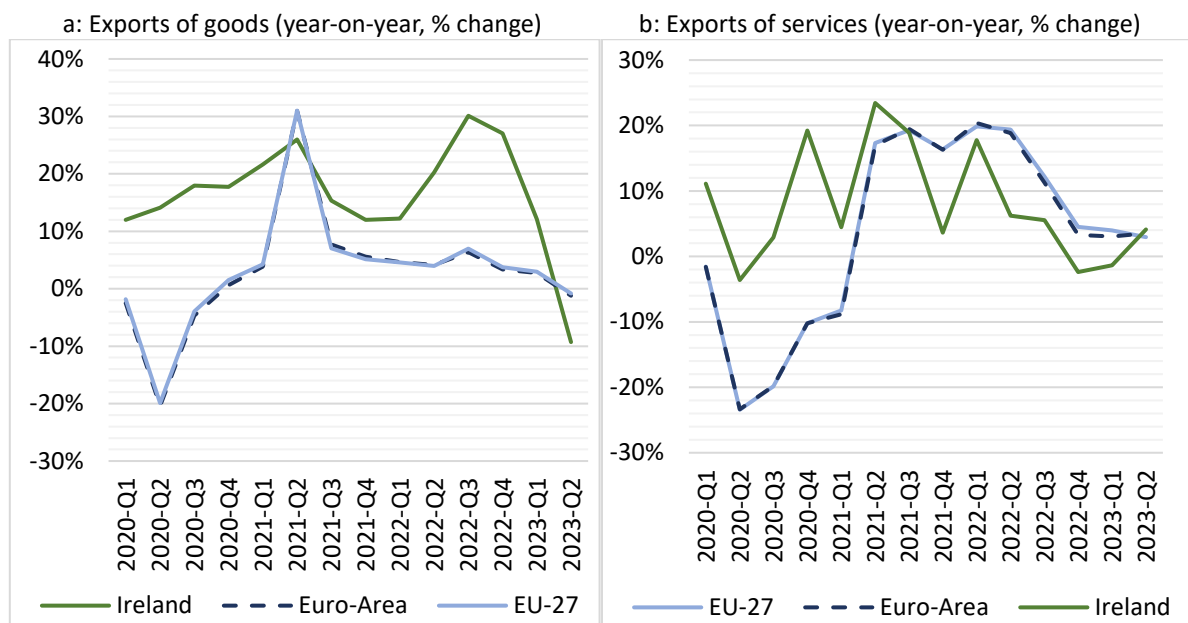
Source: Eurostat.

To place Irish export activity in context, we present data in Figure 11 on export growth (in constant prices) for groups of European economies. Larger economies like France and Germany, as well as European aggregates (EU27 and the Eurozone) are presented separately while other economies are grouped into northern and southern geographic regions. It is very clear that export growth is declining rapidly across countries as the international economy slows. German exports in particular declined in the latest quarter as the global slowdown continued.

FIGURE 11 INTERNATIONAL EXPORTS – SELECTED EUROPEAN ECONOMIES

Source: Eurostat.

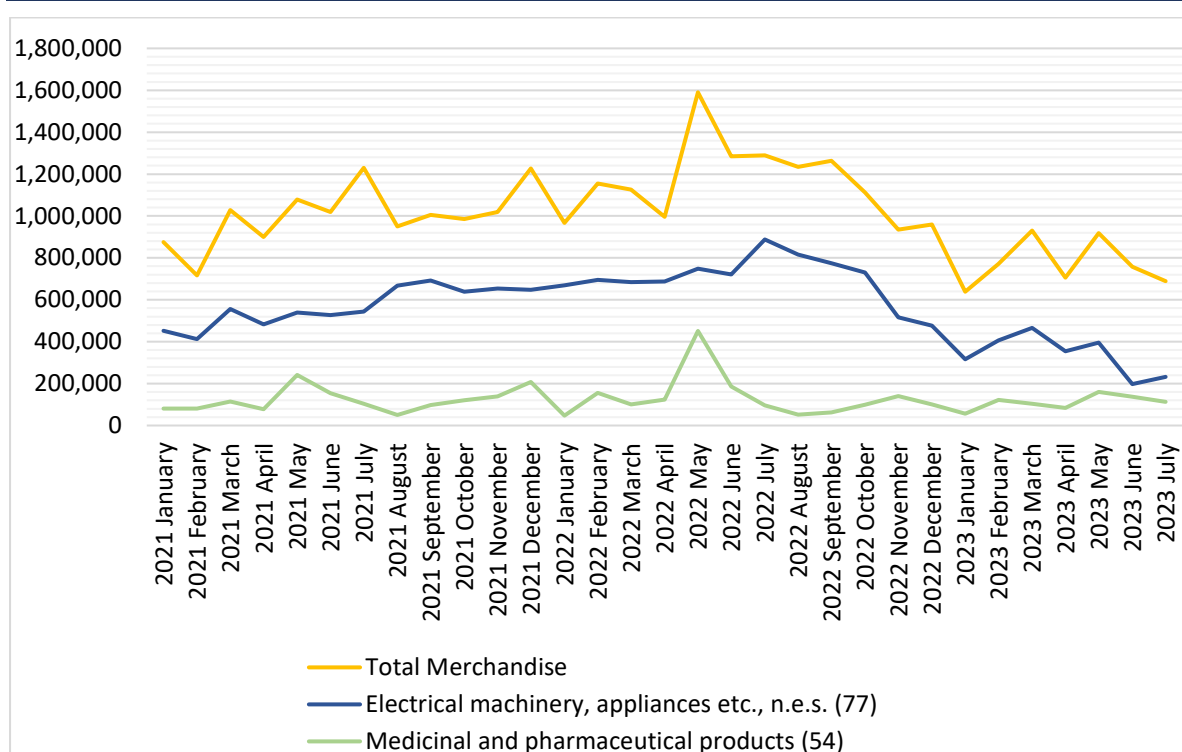
The slowdown in an Irish and global context is different across services and goods. In Figure 12, comparisons for broad European aggregates are juxtaposed against the Irish data for both services and goods. It is clear the downturn is much more acute in the goods market, with services continuing to grow.

FIGURE 12 EXPORTS OF GOODS AND SERVICES – EUROPEAN COMPARISON

Source: Eurostat.

A significant factor in the easing of exports has been the slowing of growth rates in the Chinese economy. As a significant economic unit in the world economy, Chinese demand has a large impact on trade. It is shown in Figure 13 that overall goods exports to China have been declining in the last 12 months. This is being driven by declines in exports of electrical machinery, appliances, etc. and medical and pharmaceutical products. An important development in this scenario has been the sharp drop in the export of semiconductors due to the restrictions on exports of such products to China by American companies.

FIGURE 13 EXPORTS OF GOODS TO CHINA (€ 000)



Source: Central Statistics office.

Given the slowdown in international growth, and the observed decline in Irish exports in the year to Q2 2023, we forecast exports to grow by 1 per cent in 2023 and 3.4 per cent in 2024. This is a substantial moderation given that exports have grown by 10-15 per cent per annum since 2019.

Investment slows on rising financing costs

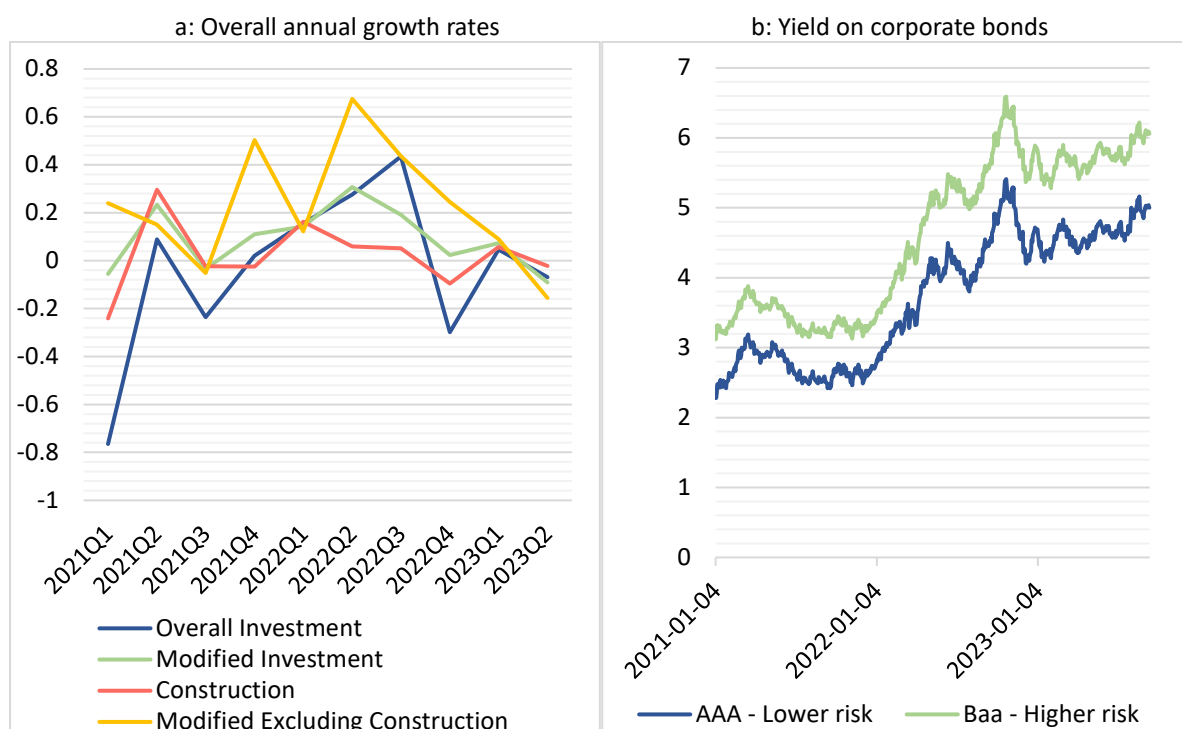
In the *Summer 2023 Commentary*, we outlined the headwinds facing companies in terms of their investment expenditure with both high and rising financing costs, financial instability, and ongoing international trading challenges as explanatory factors (IMF, 2023a).⁷ While some of the more acute financial distress pressures

⁷ World Economic Outlook, April 2023: A Rocky Recovery, 2023. International Monetary Fund.

have abated since February 2023 (IMF, 2023b),⁸ investment had begun to slow in the first quarter of 2023 in Ireland, likely driven by the above effects. In the most recent National Accounts data, a downward trend in investment activity is clearly evident with year-on-year declines in overall Gross Fixed Capital Formation in both the first and second quarters of the year.

Figure 14 presents the annual growth rate of overall investment, modified investment (which removes the aircraft leasing and R&D intellectual property assets), construction investment and non-construction modified investment. Since the middle of 2022, a clear downward trend is evident with respect to the growth rate of modified investment. In the second quarter of 2023, overall investment declined on an annual basis by nearly 7 per cent while modified investment declined by 9 per cent. Construction investment was also down on a year-on-year basis in the second quarter of the year by 2 per cent with non-construction modified investment (other machinery and equipment for example), dropping back sharply by just under 16 per cent on a year-on-year basis.

FIGURE 14 **IRISH INVESTMENT TRENDS**



Source: Central Statistics Office; St. Louis FRED database.
 Note: Moody's bond yield data on long term 20+year data.

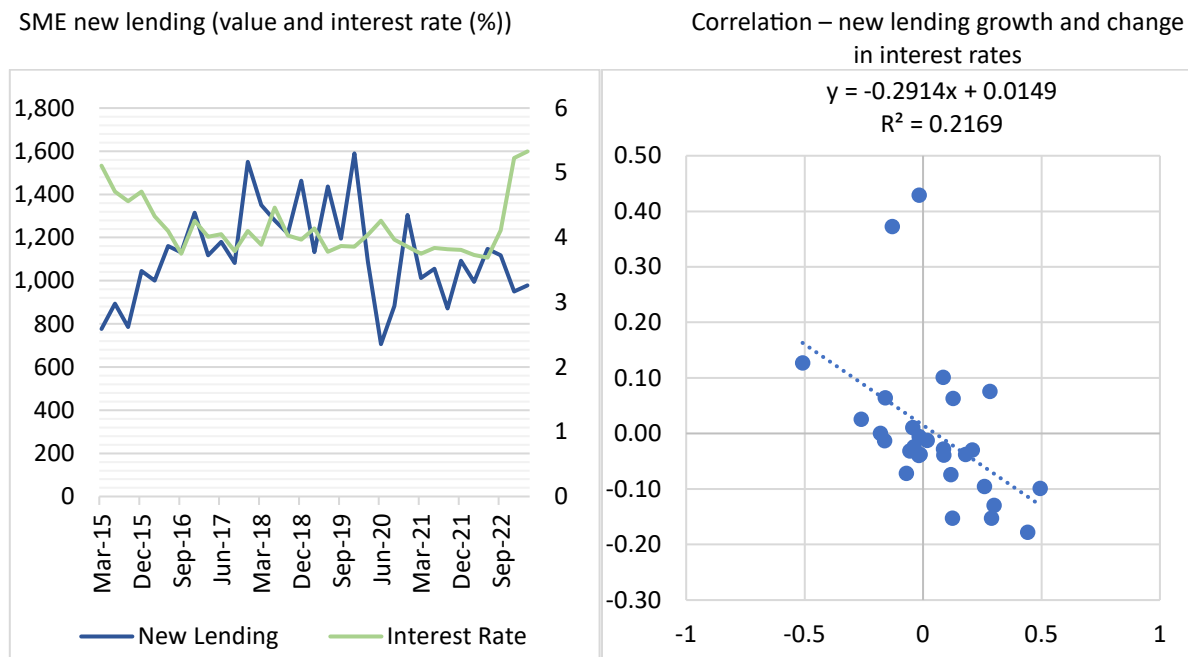
⁸ World Economic Outlook Update, July 2023: Near-Term Resilience, Persistent Challenges, 2023. International Monetary Fund.

While some of these effects are likely to be driven by a waning of the large FDI related investments in previous periods, the rise in global financing costs is also likely to be playing a role. To demonstrate the international nature of the rise in financing costs, Figure 14b shows the yield on corporate bonds of lower risk (AAA) and higher risk (Baa) companies on a global scale. Since the middle of 2022, corporate financing costs have been rising steadily, likely putting downward pressure on capital investments.

The impact of rising policy rates has been evaluated in terms of their impact on Ireland in a recent analysis (Egan et al., 2023).⁹ They find that increasing interest rates from a pre-Ukraine war baseline (January 2022) to the rates observed in 2023 (following the European Banking Authority baseline forecast from early 2023) would lead to notable declines in investment in construction, other domestic sectors as well as for firms in the traded sector. Indeed, the impact in 2023 indicates a 1.8, 1.5 and 1 per cent reduction in investment levels for construction firms, for other domestic sectors, and for trading firms respectively relative to the pre-Ukraine war baseline. These effects take into consideration both the slower domestic economy but also the international trade effects of rising policy rates. It is clear that the rise in financing costs is causing challenges for enterprises in deploying capital profitably, with the effects likely to persist until financing costs moderate.

As can be seen in the sensitivities presented in Egan et al. (2023), the domestic sectors are more sensitive to the cost of financing than the large global trading firms (the impacts on construction and domestically traded firms are greater than on the traded sector). This is likely due to the structure of financing activity, with international firms having a greater ability to self-finance and access to international capital and banking markets, as well as due to size effects whereby smaller, domestic firms are charged a risk premium. These effects are likely to be even more acute for SMEs operating within the domestic economy. Figure 15 presents the level of new lending to SMEs, the interest rate associated with the new lending and the correlation between changes in new lending and changes in the interest rate. Interest rates have risen sharply towards the end of 2022 and into 2023 up to approximately 6 per cent for SMEs. This is likely to put downward pressure on credit demand and stifle new investment; the scatterplot shows a clear and negative relationship between interest rates and new lending for SMEs.

⁹ Egan, P., E. Kenny and C. O'Toole (2023). 'Interest rate snapback and the impacts on the Irish economy', Working Paper No. 757. Economic and Social Research Institute (ESRI).

FIGURE 15 SME INTEREST RATES AND NEW LENDING

Source: Central Statistics office.

Given these factors, we expect investment to remain weak for the remainder of 2023 but recover somewhat in 2024. Therefore, investment is forecast to decline by 0.5 per cent in 2023 before recovering in 2024, with an increase of 4.3 per cent forecast.

Housing output slows but commencements rise

Over the past number of years, a range of factors have acted as a drag on residential housing production including the COVID-19 public health measures and international supply chain bottlenecks which were worsened by the war in Ukraine. The very evident rise in the cost of construction materials demonstrated the difficulties in the sector.

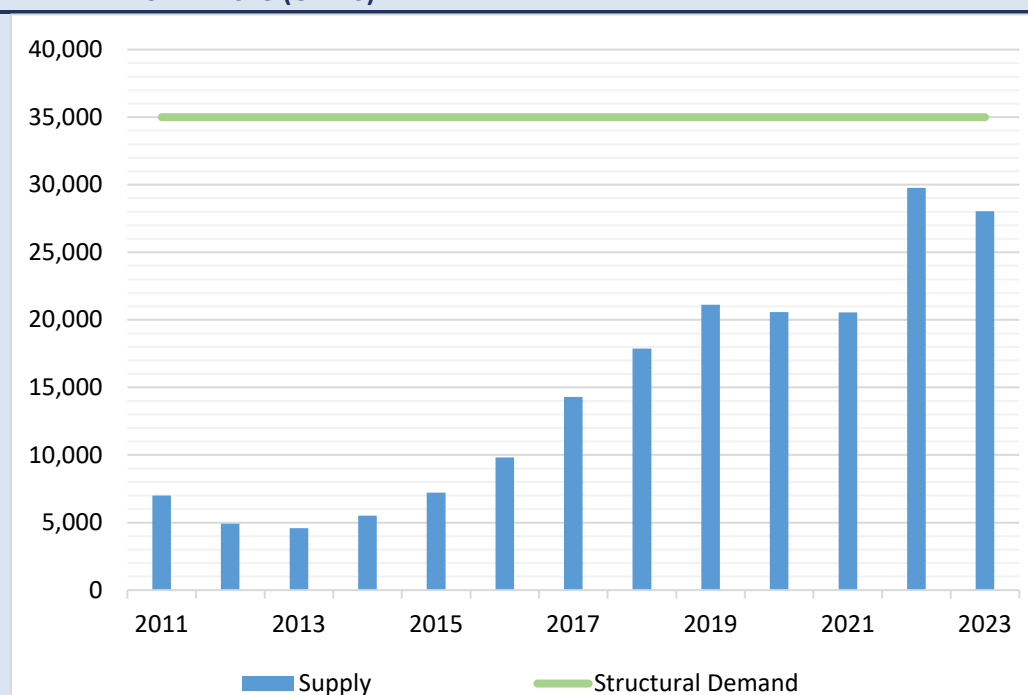
Many of these challenges are a result of disinvestment and sharp declines in activity in the construction sector after the financial crash in 2008. The following Box by Egan and McQuinn seeks to examine the effects of policy in this period by estimating how the housing market would have developed had the sector been supported through the recession post-2008.

BOX B SIMULATING THE IMPACT OF HIGHER LEVELS OF HOUSING SUPPLY*Introduction*

There is general acknowledgement at present as evidenced by the ‘Housing for all’¹⁰ policy initiative that lack of housing supply is one of the most important issues in the Irish housing market. Estimates of the structural demand for housing in the Irish economy (Bergin and Garcia-Rodriguez, 2020) indicate that between 30,000 to 35,000 units are required on an annual basis to meet new additional demand due to demographics and net migration. However, as can be seen from Figure B.1 which plots both actual supply and the structural level of demand, over the period 2011 to 2017 an average of just over 7,600 units per annum were built.

A number of commentators have documented the difficulties experienced by the supply side of the Irish construction sector in the aftermath of the Great Financial Crisis (GFC); Egan and McQuinn (2022) and Cronin and McQuinn (2021) note the implications of the crisis on the sector in terms of its impact through regulatory changes in the financial sector and the overall scarring effects of the collapse in Irish house-building with many developers going into liquidation and leaving the sector altogether. Cumulatively, these factors have impaired the ability of the construction sector to respond to the significant increase in housing demand which accompanied the substantial recovery exhibited by the Irish economy as a whole post-2012.

FIGURE B.1 ACTUAL IRISH HOUSING SUPPLY AND THE STRUCTURAL DEMAND FOR HOUSING: 2011 – 2023 (UNITS)

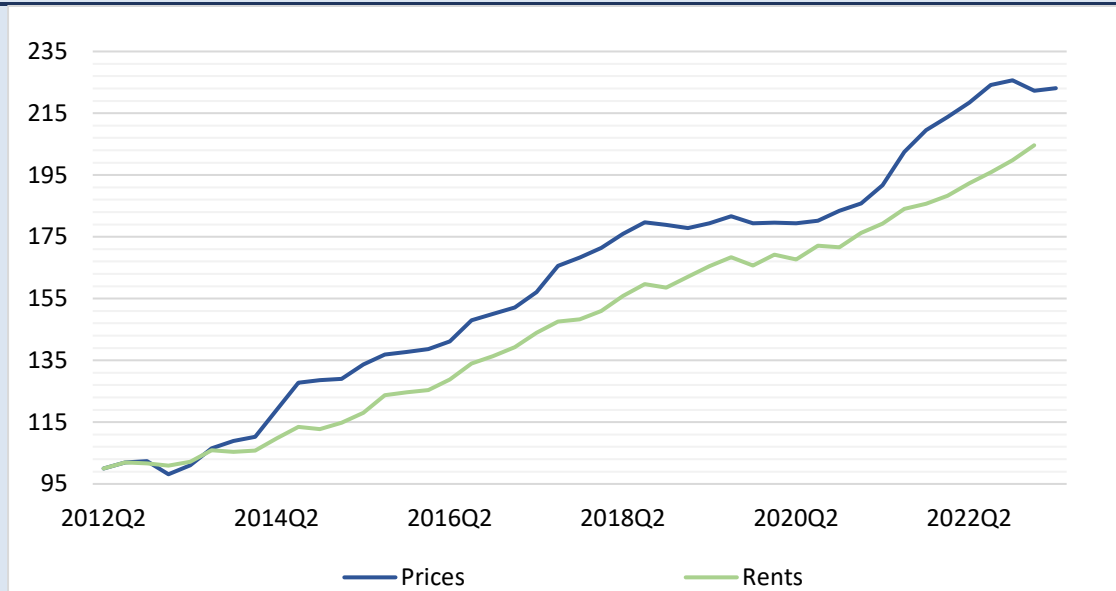


Source: CSO; Quarterly Economic Commentary.

¹⁰ See <https://www.gov.ie/en/publication/ef5ec-housing-for-all-a-new-housing-plan-for-ireland/> for more details.

The resulting imbalance between supply and demand in the Irish economy post-2012 has had a sizeable impact on the cost of housing which has increased in a persistent manner over the period. Figure B.2 presents Irish house price and rental levels since 2012.

FIGURE B.2 IRISH HOUSE PRICE AND RENTAL LEVELS: 2012 – 2023 (INDEX 2012=100)



Source: CSO; Quarterly Economic Commentary.

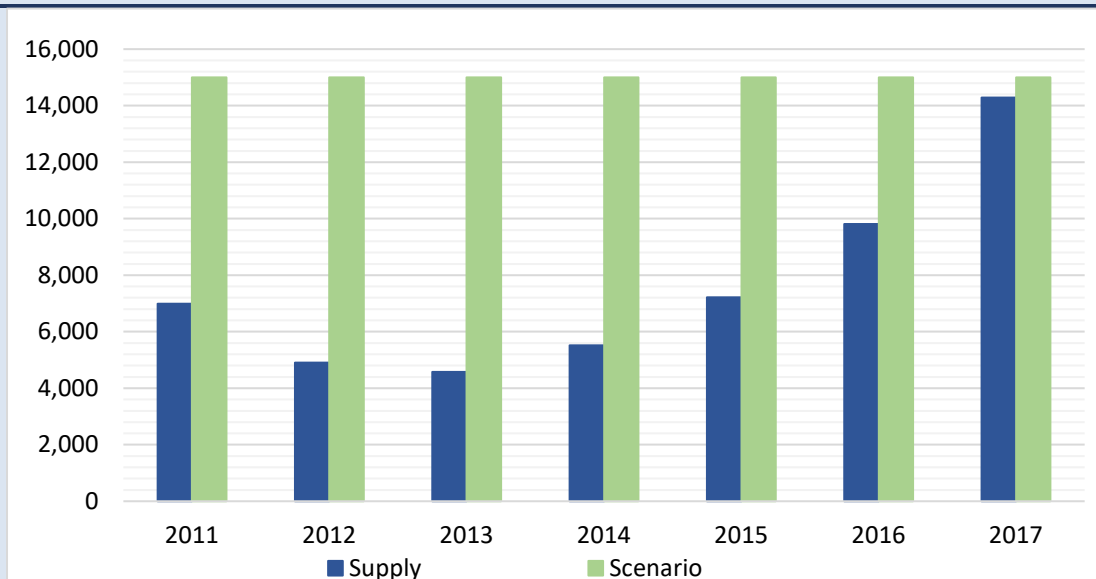
Clearly the cost of housing, either in terms of prices and rents, has grown considerably and the implications for Irish households of these increasing costs have been examined in a detailed manner by Corrigan et al. (2019).

COSMO simulation

An interesting question which arises is what would have occurred regarding housing costs, and house prices in particular, if policymakers had, in 2009/2010 (i) anticipated both the strength of the recovery in the economy and hence housing demand and (ii) if they had been in a position to invest heavily in housing supply at that time. In many respects this would have constituted a classic Keynesian style intervention, where the State, recognising that the private sector was incapable because of the effects of the GFC from responding to increased housing demand, elected to substantially increase housing supply itself. Of course, both the condition of the Irish public finances in 2009/2010 along with the terms and conditions of the International Monetary Fund/European Central Bank/European Commission¹¹ programme of support for the Irish State provided in October 2010, precluded such a response at the time.

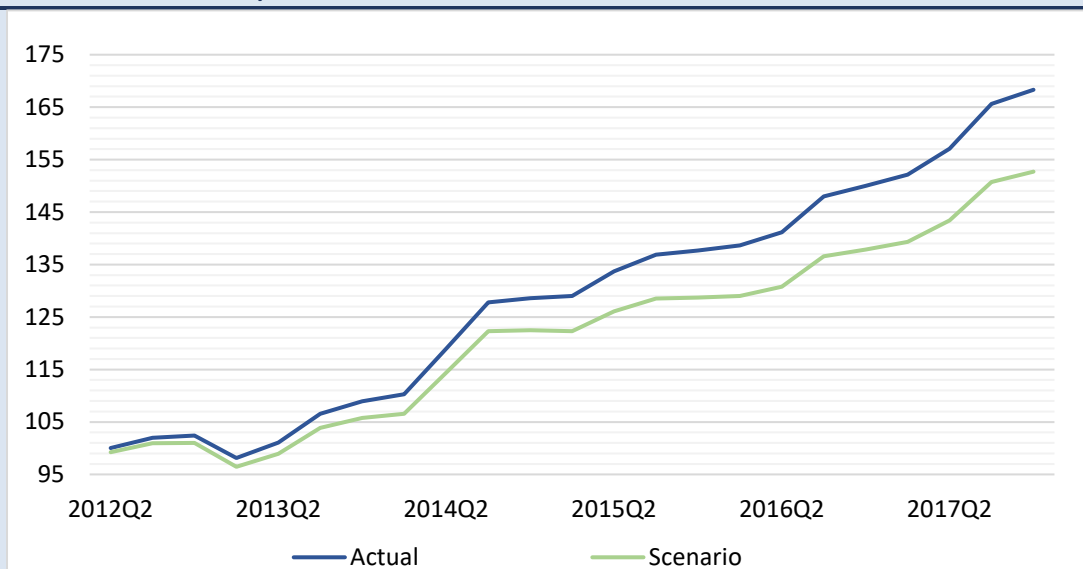
Using COSMO, the large-scale macro-econometric model of the Irish economy (see Bergin et al., 2017) and more particularly the housing component which has been recently added (Egan and Bergin, 2022), we now simulate the impact on Irish house prices over the period 2011-2017 if the State had been in a position to provide 15,000 housing units in the Irish economy.

¹¹ Commonly referred to as the 'Troika'.

FIGURE B.3 IRISH ACTUAL HOUSING SUPPLY AND SCENARIO LEVEL (UNITS) 2011–2017

Source: CSO; Quarterly Economic Commentary.

Therefore housing supply is now set at 15,000 units per annum between 2011 and 2017.¹² In Figure B.4 the implications for the baseline house price in the model of such an increase in supply are presented. From the graph it is clear that by 2017, the scenario house price is now 9 per cent lower than the baseline level because of the additional supply.

FIGURE B.4 ACTUAL AND SCENARIO IRISH HOUSE PRICES AND RENT LEVELS: 2012 – 2017 (INDEX 2012 = 100)

Source: CSO; Quarterly Economic Commentary.

Concluding comments

It is clear that if Irish policymakers had been in a position to intervene in the property market earlier and provide a significant boost to the supply side of the market, housing costs in the Irish economy would not have risen as sharply as they have. A significant house building stimulus in the aftermath of the GFC would have also smoothed the Irish economy's recovery from the GFC. For example, unemployment in the economy went from

5.3 per cent in Q1 2008 to 15.5 per cent in Q4 2010 as the construction sector as well as other housing related sectors went into sharp decline.

The potential for the State to play a more active role in the property market is also noted in an international context. OECD (2021) observes the significant decline in Government investment in the property market since the GFC. Similarly, commentators such as Panetta (2022) and Staehr and Urke (2022) have noted how public investment in the EU is low in general and has declined since the GFC.

The results of the scenario and the subsequent experience of the Irish housing market raise interesting questions about the nature of the financial programmes such as the one Ireland entered into in 2010. In particular, it suggests that had such a programme enabled an investment stimulus, the path to recovery for the Irish economy would have been a smoother one and more sustainable in terms of lower housing costs.

References:

- Bergin, A. and A. Garcia-Rodriguez (2020). *Regional demographics and structural housing demand at a county level*, Research Series. Economic and Social Research Institute (ESRI), RS111.
- Bergin, A., A. Garcia-Rodriguez, E. Morgenroth and D. Smith (2017). 'Modelling the medium-to-long-term potential macroeconomic impact of Brexit on Ireland', *The Economic and Social Review*, Economic and Social Studies, Vol. 48(3), pp.305-316.
- Corrigan E., D. Foley, K. McQuinn, C. O'Toole and R. Slaymaker (2019). 'Exploring affordability in the Irish housing market', *The Economic and Social Review*, Vol. 50, pp. 119-157, No 1, Spring.
- Cronin D. and K. McQuinn (2021). 'House prices and the credit-driven household demand channel: The case of the Irish economy', *Credit and Capital Markets*, Vol. 54, Issue 2, pp. 199-221.
- Egan P. and K. McQuinn (2022). 'Regime switching and the responsiveness of prices to supply – The case of the Irish housing market', *The Quarterly Review of Economics and Finance*, available online: <https://www.sciencedirect.com/science/article/abs/pii/S1062976922001363>.
- Egan P. and A. Bergin (2022). 'Adding a construction sector to COSMO: Structure and policy analysis'. Economic and Social Research Institute (ESRI) Working Paper, WP738.
- OECD (2021). *Brick by brick: Building better housing policies*. OECD publishing, Paris. <https://doi.org/10.1787/b453b043-en>.
- Panetta F. (2022). 'Investing in Europe's future: The case for a rethink'. Speech by Fabio Panetta, Member of the Executive Board of the ECB, at Istituto per gli Studi di Politica Internazionale (ISPI). Available online at: <https://www.ecb.europa.eu/press/key/date/2022/html/ecb.sp221111~9dfd501542.en.html>.
- Staehr K. and K. Urke (2022). 'The European structural and investment funds and public investment in the EU countries', *Empirica* Vol. 49 pp. 1031-1062 <https://doi.org/10.1007/s10663-022-09549-6>.

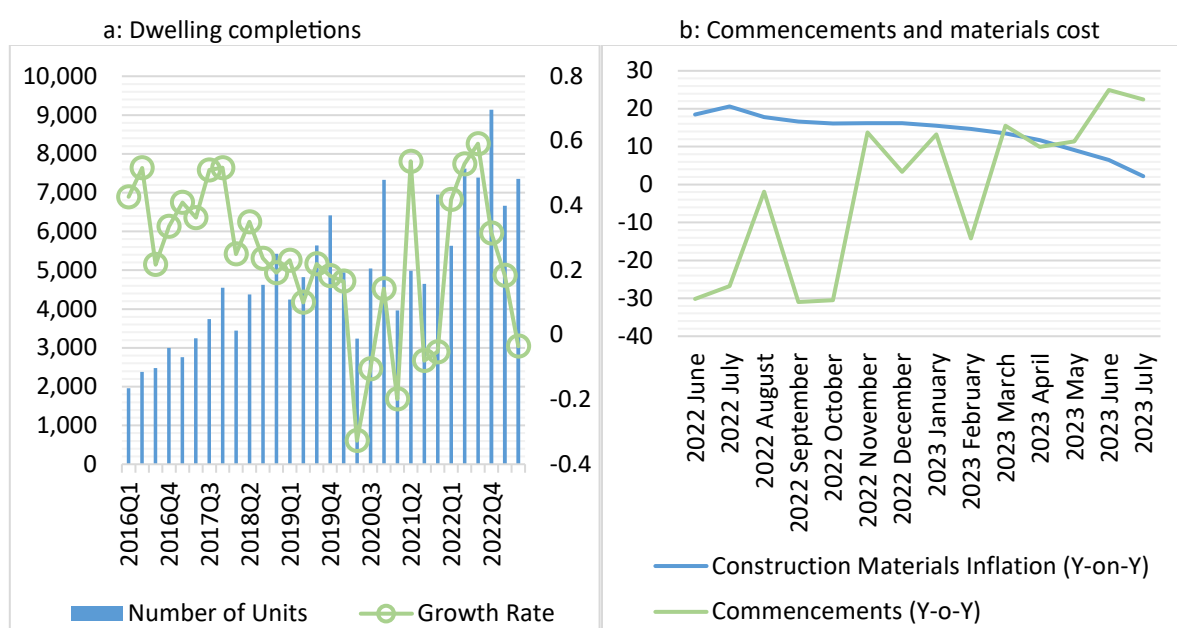
This Box was prepared by Paul Egan and Kieran McQuinn.

¹² Note we do not model the fiscal or sovereign debt implications of the additional cost of such an investment. Therefore all interest rates, for example, in the model are left unaffected. The supply level is fixed, and the model is simulated purely for the demand-side implications.

Despite these challenges, investment in construction had begun to recover in the first quarter of 2023 (as shown in Figures 15a and 15b) with over 6,600 housing units completed. Completions increased again in the second quarter to just over 7,300 units. However, on a year-on-year basis, this represents a decline of 3 per cent due to the large volume of completions in Q2 2022 (following the ending of lockdown rules). Commencements have continued to grow throughout 2023 on an annual basis which indicates an increasing pipeline for future housing output.

In terms of supply-side effects, material cost inflation has moderated significantly over the past number of quarters dropping to just over 2 per cent in the year to July (Figure 16b). Indeed, some elements like structural steel are seeing annualised declines in prices. Previous research has indicated a strong effect of building costs on housing production in Ireland (Egan et al., 2022),¹³ therefore these reductions will likely act to support production by stabilising input prices.

FIGURE 16 HOUSING INVESTMENT AND OUTPUT



Source: Central Statistics Office.

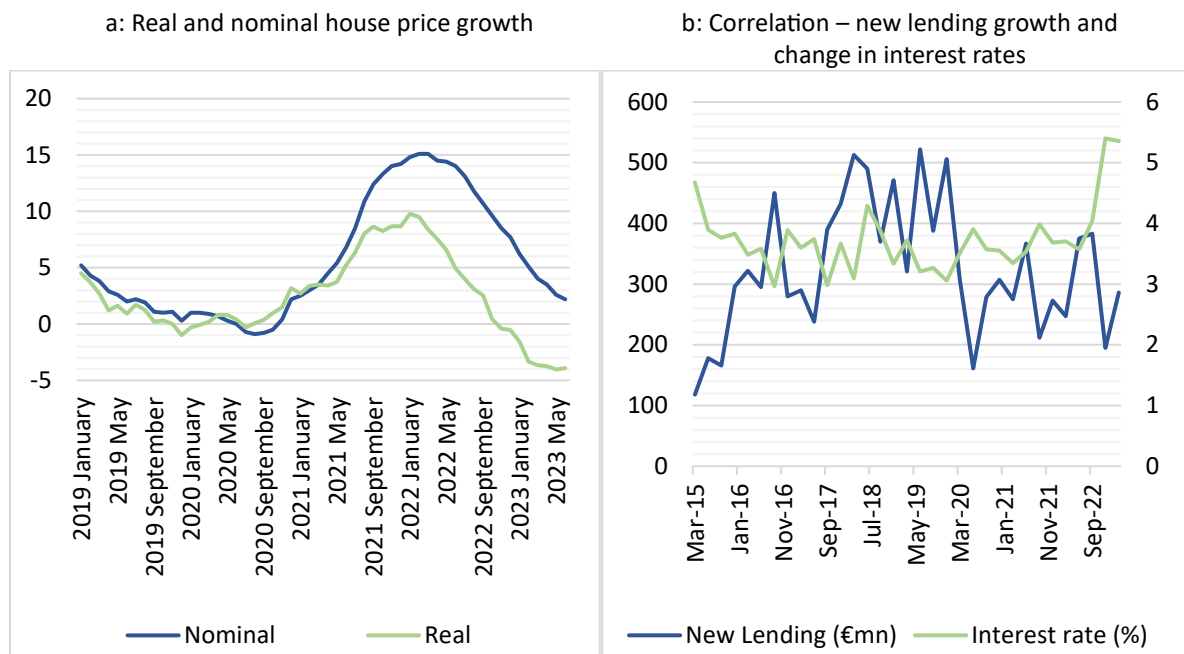
While some recovery is evident in terms of housing commencements, and the moderation in construction materials is likely to act to lower the supply-side constraints, there are other potential headwinds to the construction sector which may begin to challenge the viability of projects. Figure 17 presents the real and nominal growth in house prices as well as the cost, and level, of financing for SMEs in the construction sector. For the past number of months, house prices have been declining in real terms and are growing at low single digits in nominal terms (2.2 per

¹³ Egan, P., K. McQuinn and C. O'Toole (2022). 'A revised financial satellite model for COSMO'. Working Paper No. 737. Economic and Social Research Institute (ESRI).

cent per annum in the latest data). If prices continue on a downward trajectory (as real incomes are under pressure and interest rates tighten credit access conditions for households), this may dampen new supply as providers question viability and their sales prospects.

Furthermore, credit to construction and real estate is becoming more expensive as policy rates rise. This will increase the cost of existing liabilities and increase the cost of production through investment and working capital channels. Both of these effects are likely to act as a drag on the growth in housing production. Increasingly active State investment and policy supports in the sector may counteract these effects. Furthermore, as noted in the previous *Commentary*, the construction sector is likely to be operating at or close to capacity at present given the extremely low unemployment rate and tight labour market. This is likely to put upward pressure on wages in the period ahead and could dampen output.

FIGURE 17 VIABILITY CHALLENGE – HOUSE PRICES FALLING AND COST OF FINANCING RISING



Source: Central Statistics Office.

Given these considerations, we expect housing completions to reach 29,000 in 2023 and 30,000 in 2024.

LABOUR MARKET REACHING CAPACITY

Unemployment bottoming out

Throughout this year the Irish labour market has continued to perform strongly. This is indicated by falling unemployment and higher employment levels. The unemployment rate was 4.2 per cent in Q2 2023, indicating that the unemployment rate is bottoming out, with the rate expected to remain at this level for the remainder of the year.

This is evident in Figure 18, as unemployment has remained between 4 and 4.2 per cent since Q2 2022. This means that the labour market is at or very near to capacity at present. This may lead to worries surrounding overheating in the domestic economy. However, as economic growth moderates domestically and continues to prove challenging in an international context, risks around overheating may abate somewhat through the remainder of 2023 and into 2024. This is also reflected in Figure 18, which shows that job vacancies have declined every quarter since Q2 2022. This may indicate the normalisation of economic activity. The trend is also evident in data from jobs website Indeed, which shows that job postings have decreased since the end of 2022, although both postings and vacancies remain elevated on a historical basis.

FIGURE 18 UNEMPLOYMENT AND VACANCIES



Sources: Labour Force Survey, Central Statistics Office.

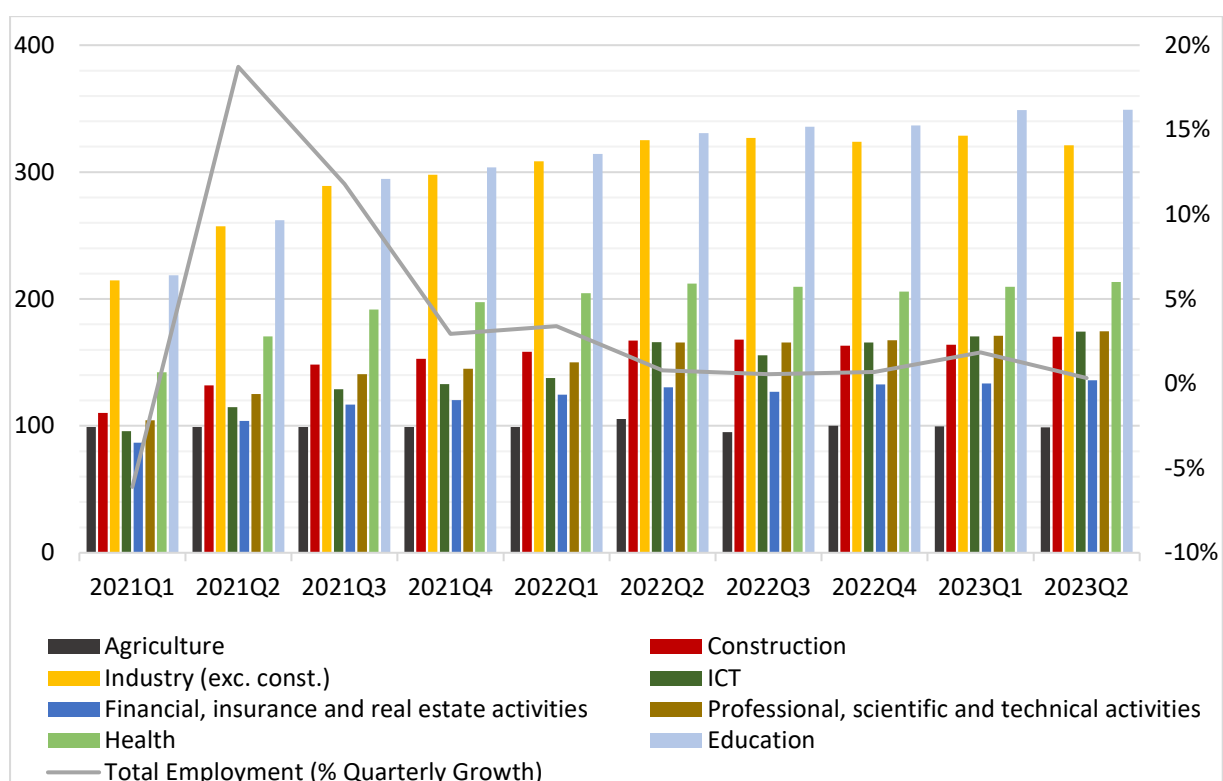
The growth in the labour force has also slowed, meaning that supply as well as demand for labour is reaching its peak. The growth in employment levels across

sectors is shown below as well as the annual change in overall numbers employed. The rate of growth throughout 2021 was driven by significant employment growth in construction, industry, health, and services sectors. Since Q3 2022, growth in numbers employed has slowed naturally as labour supply has tightened.

However some sectors have seen employment numbers drop in recent quarters. Industry (excluding construction) saw employment levels decline in Q2 2023 on both an annual and quarterly basis. This may reflect a slowdown in the performance of large pharmaceutical firms and the export sector as a whole.

Employment levels in the ICT sector remain stable, with small increases in employment levels in the period shown. The overall performance of the sector is noteworthy given the significant attention paid to a number of layoffs by some large ICT firms in 2022. This saw employment numbers decrease by 6.15 per cent from Q2 2022 to Q3 2022. However in the following quarter employment levels recovered, with growth of 6.42 per cent. Since then, employment levels in the sector have continued to grow and now stand at their highest level on record.

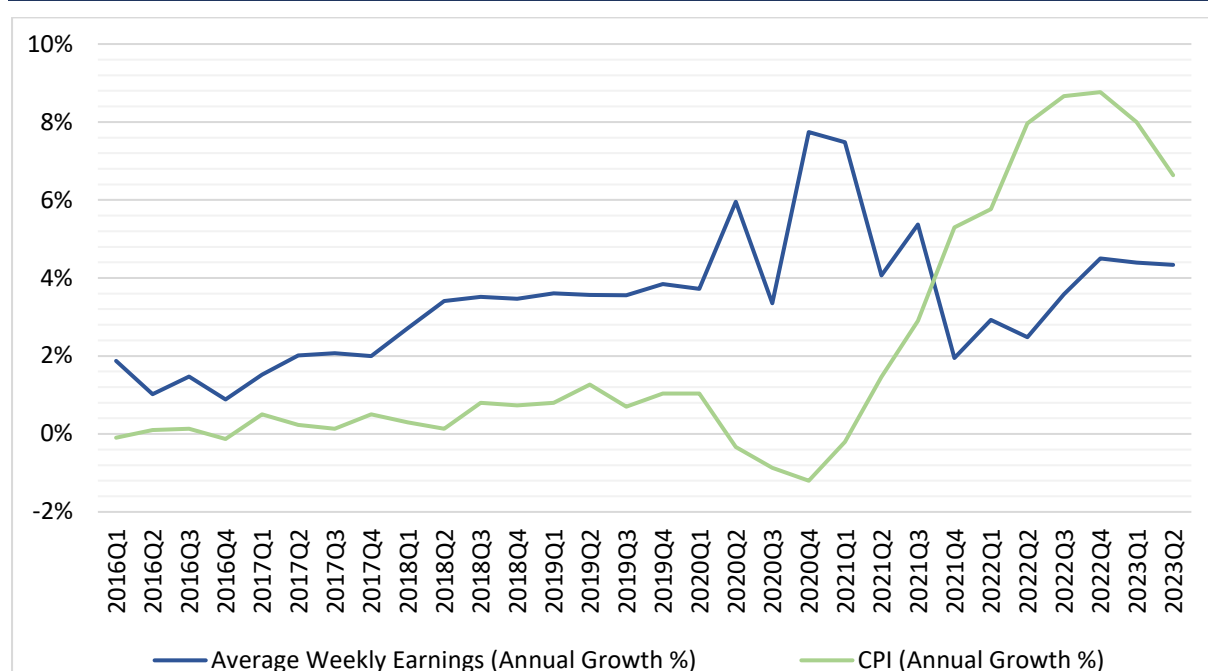
FIGURE 19 EMPLOYMENT LEVELS ACROSS SECTORS (LHS, '000) AND QUARTERLY GROWTH OF OVERALL EMPLOYMENT (RHS)



Sources: Labour Force Survey, Central Statistics Office.

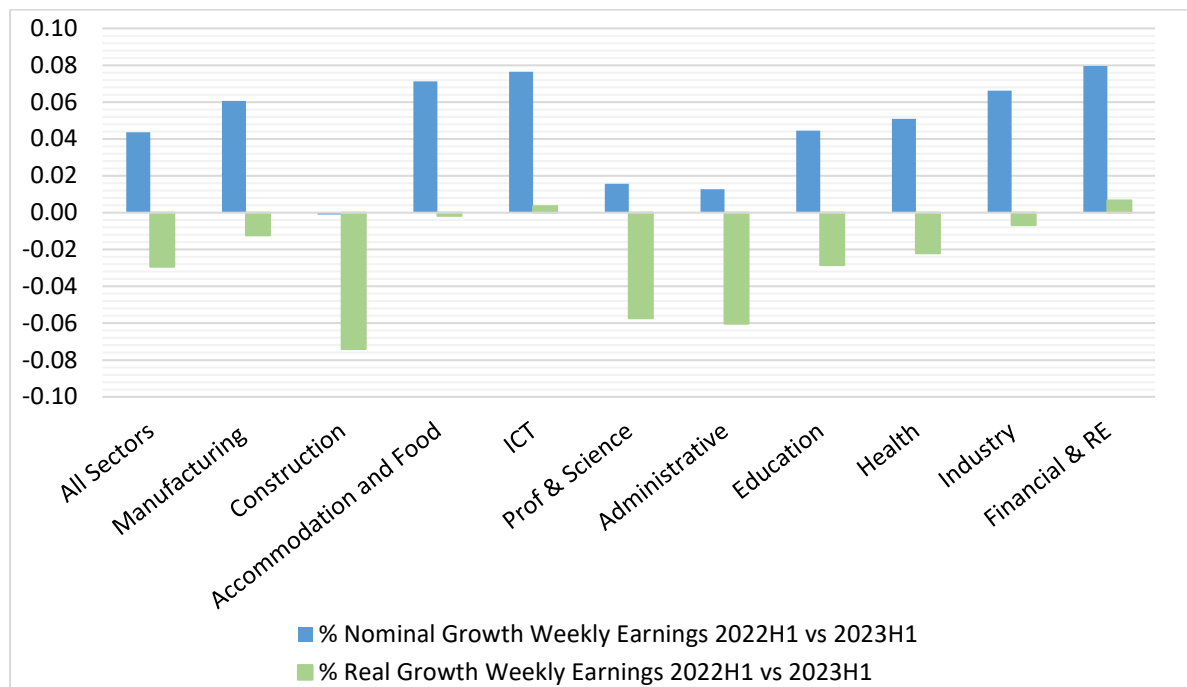
Wage pressures to materialise?

With such low rates of unemployment and historically high numbers of job vacancies, and the elevated rates of inflation, wage pressures are set to continue to build. Average weekly earnings have increased by 4.37 per cent annually in the first half of 2023. Figure 20 shows that annual CPI growth has outstripped that of earnings since Q1 2022. Hence, average weekly earnings in real terms have declined in this period. If the labour market continues to display the current level of resilience as the domestic economy normalises, it is likely that wage expectations will rise on the back of higher inflation. However, if the domestic economy slows faster than expected or if the international outlook darkens, this may dampen some of the upward pressure on wages.

FIGURE 20 GROWTH IN EARNINGS VS. GROWTH IN THE CPI

Sources: Labour Force Survey, Central Statistics Office.

Figure 21 compares nominal and real growth in average gross weekly earnings across sectors for the first half of 2023. Although real earnings have declined across most sectors, some have been insulated due to substantial nominal growth in earnings. In particular, workers in the ICT sector, as well as those in the Financial, insurance and real estate sector have seen small increases in real earnings. Sectors which have seen the largest decline in real earnings include the Construction sector, the Administrative and support services sector, and the Professional, scientific and technical activities sector. This highlights the fact that there is a cohort of workers which has been insulated from inflation, but others have seen reductions in real wages.

FIGURE 21 REAL AND NOMINAL WAGE GROWTH ACROSS SECTORS

Sources: Labour Force Survey, Central Statistics Office.

Labour Market Outlook

Given the continued expected growth in the economy, albeit at a more moderate pace, it is forecast that unemployment will remain at 4.1 per cent for 2023 and decline slightly to 4 per cent in 2024. At these levels, the Irish economy is operating at or close to capacity in a labour market context. This is assuming that economic activity normalises domestically and internationally with inflation continuing to decline. We expect income growth to be 4.8 per cent in 2023 and 5.8 per cent in 2024.

The low levels of unemployment have consequences outside of earnings also, with capacity constraints in important sectors acting as a drag on future growth and productivity. Recent labour supply increases have been driven by net inward migration, accounting for 40 per cent of the annual growth in the labour market in 2022 (Conefrey and Keenan, 2022).¹⁴ With limited domestic labour available, it is likely that migration will be the main avenue of any short-term increases in labour supply for certain sectors, such as the health and construction sectors.

Population and migration estimates released by the CSO show that immigration levels are at a 16-year high, with Ireland experiencing positive net migration of 77,600 in the year to April 2023.

¹⁴ Conefrey, T. and E. Keenan (2022). *Quarterly Bulletin* Q4 2022. Central Bank of Ireland.

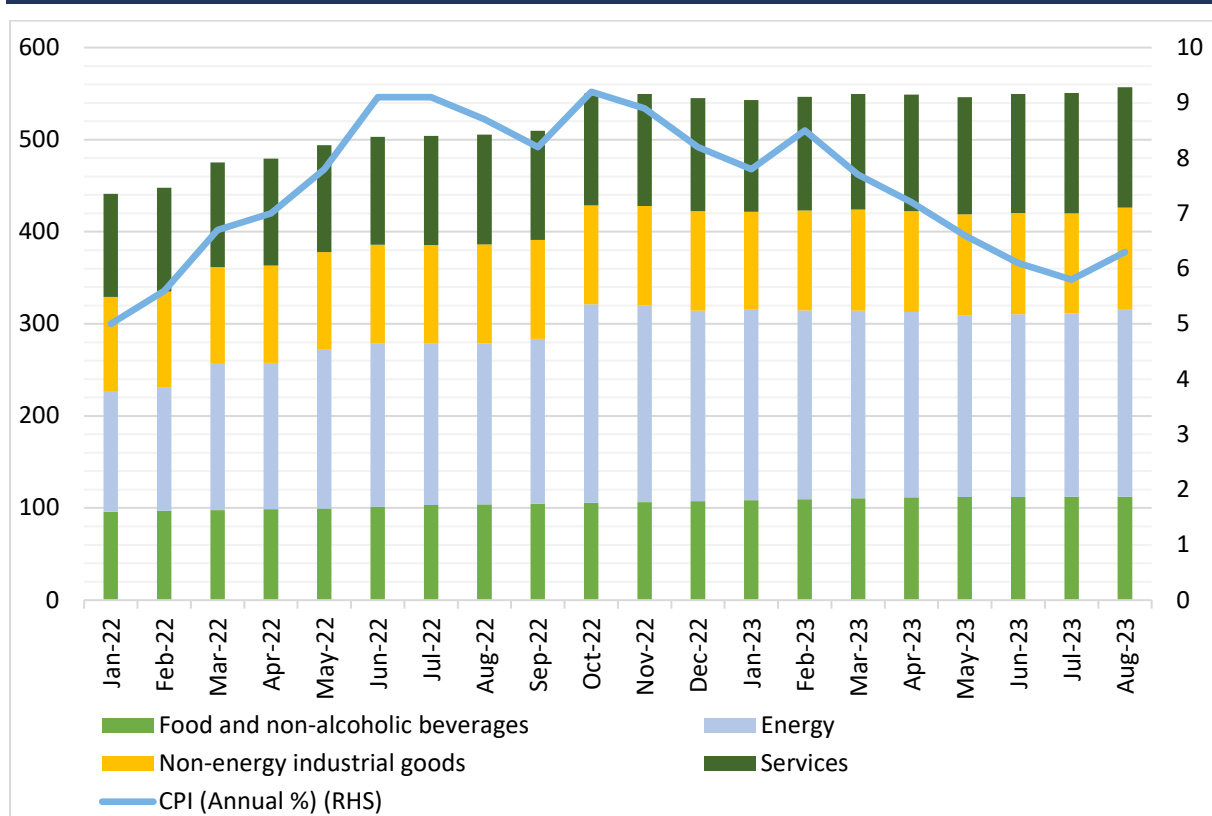
INFLATION EASING WITH ENERGY COSTS SET TO FALL

Changing nature of inflation

Inflation has been elevated since the recovery from COVID-19. It has, however, peaked and is now coming down to more moderate rates. This is largely due to the easing of supply-side pressures. A more substantial stock of gas inventories at an EU level as well as a recovery of global supply chains have seen energy prices stabilise and begin to decline. This is passing through to domestic prices, with several Irish energy retailers announcing price cuts in the coming months. Additionally, the slowdown in the demand side of the economy across the globe will also have a downward impact on inflation.

Furthermore, increases in retail interest rates due to a tightening of monetary policy has had adverse implications for growth in the euro area, however this reduced demand will lead to less inflationary pressures. On an international level, the recent difficulties in China, with its faltering housing market and lack of recovery in economic demand, will also mean less price pressures as economic activity wanes globally as a result.

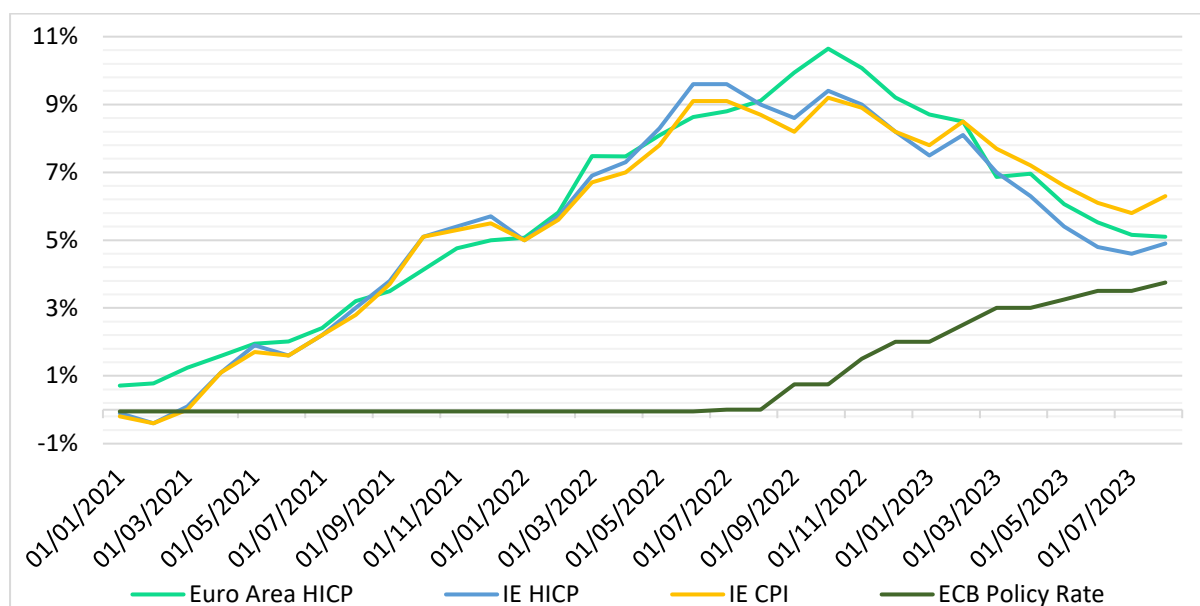
However, there are still some areas where prices remain elevated. As discussed in the previous *QEC*, inflation began to be driven by food as opposed to energy prices, as the current year progressed. This remains the case, with food price inflation still one of the main drivers of the CPI and the HICP. The other main driver is that of housing costs, with higher policy rates translating into higher mortgage costs. The composition of the CPI is shown in Figure 22.

FIGURE 22 **COMPOSITION OF CPI**

Sources: Central Statistics Office.

As can be seen above, the increases in the CPI were largely driven by energy price increases, and since energy prices have stabilised, inflation rates have decreased from the high rates of over 8 per cent observed in the second half of 2022. Rates still remain above the 2 per cent target which, as shown in Figure 22, is being driven by food prices and services.

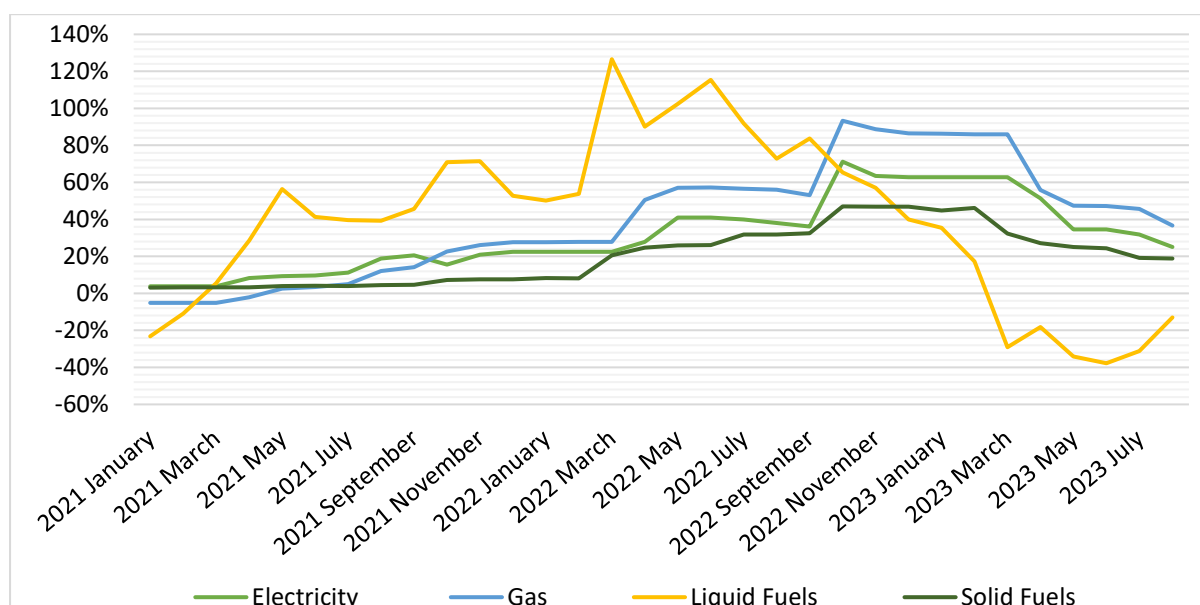
Nevertheless, inflation is slowing across the euro area. Increases in the HICP fell to 5.1 per cent in August 2023 in the euro area, down from its peak of 10.6 per cent in October 2022. Euro area prices have been declining since, but the rate of inflation remains above the ECB target of 2 per cent which triggered another interest rate increase of 25 basis points by the ECB in September 2023. With this increase, the policy rate has now increased by 450 basis points since July 2022.

FIGURE 23 DEVELOPMENTS OF EURO AREA HICP, IE HICP, IE CPI, AND ECB POLICY RATE

Sources: Central Statistics Office, Eurostat.

Energy prices as winter approaches

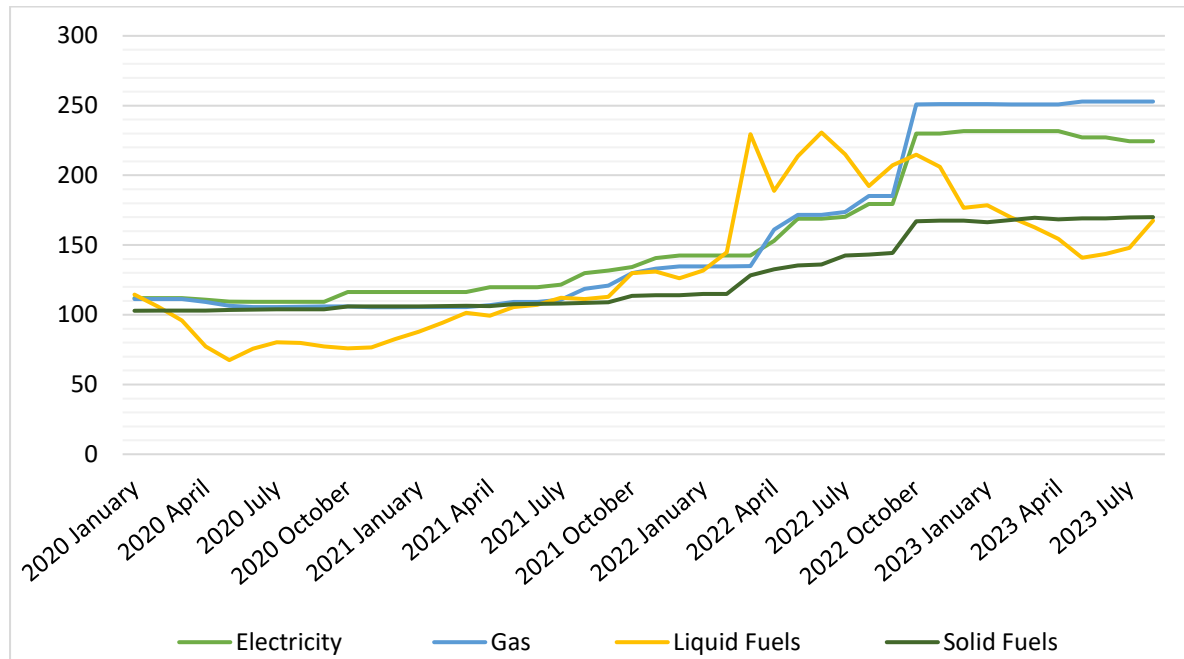
Energy price increases have slowed and, as shown below, the rate of inflation for several elements of energy are coming down, with liquid fuel prices decreasing year-on-year since March 2023. Although prices are still increasing for solid fuels, electricity and gas, the magnitude of these increases is getting smaller. As mentioned previously, several domestic energy retailers have announced price decreases to come into effect in the coming months, which will see electricity prices decline.

FIGURE 24 KEY ELEMENTS OF ENERGY INFLATION (ANNUAL CHANGE %)

Sources: Central Statistics Office.

As shown in Figure 24, prices have largely stabilised since October 2022, although some volatility remains when it comes to liquid fuel prices. However, given that Russia was a large supplier of oil to the euro area before the war in Ukraine, as well as the historical volatility in oil prices, this volatility is not surprising.

FIGURE 25 KEY ELEMENTS OF ENERGY INFLATION (INDEX)



Sources: Central Statistics Office.

Inflation outlook

Energy and food price increases in 2022 have caused core inflation to increase as firms seek to pass on increased costs. However, the volatility in inflation rates has largely been caused by shocks to the energy market. Therefore, while inflation is set to remain above the ECB's target both this year and next year, it is unlikely that the rates witnessed in 2022 will materialise again; our baseline expectation is for a return to less volatile energy price movements and a moderation in energy price pressures. Supply chain disruptions are expected to continue to unravel, and economic activity will normalise and even decrease in certain sectors. Therefore, both demand- and supply-side pressures on inflation will ease through the remainder of 2023 and throughout 2024.

As a result, it is forecast that the CPI and the HICP will grow by 6 per cent and 5.6 per cent for the year. This would represent a fall of 1.8 per cent and 3.8 per cent on 2022, respectively. Inflation rates are forecast to decline further in 2024, with the CPI forecast to fall to 3.2 per cent and the HICP to fall to 2.8 per cent.

As was discussed in the previous *Commentary*, one of the main differences between the CPI and the HICP is that mortgage interest costs are not included in calculations of HICP. This is what causes the HICP to be lower than the CPI at the present time. While the increases in interest rates since July 2022 have dampened demand, they also increase mortgage costs. This has seen a divergence in the CPI and the HICP, as the CPI has been slower to decline than the HICP as a result of the ECB's policy rate increases.

CLIMBING TAX REVENUES CONTINUE TO BE DRIVEN BY MAIN HEADINGS

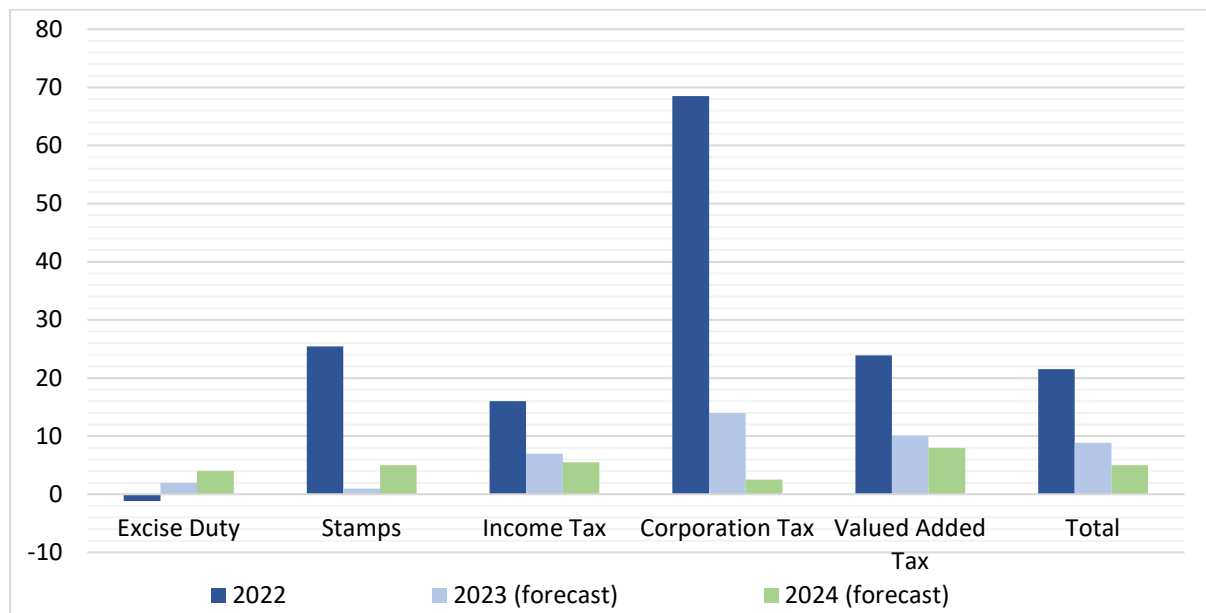
Tax take increases continue but expected to slow with economic growth

Tax receipts of €53.1 billion were collected from January-August 2023, which is €3.3 billion more than what was collected in the same period in 2022. This increase has been driven by continued increases in the revenues brought in through the three main tax headings, i.e. income tax, VAT and corporation tax.

Income tax revenues have increased by €1.6 billion (8.2 per cent) in this period, VAT revenues have increased by €1.4 billion (11.2 per cent), and corporation tax receipts have increased by €0.9 billion (7.3 per cent). There has been some commentary surrounding the low intake in corporation tax in August 2023 compared to August 2022. However, when one considers that corporation tax collected in August 2022 was €1.7 billion greater than that of August 2021, it is clear that there is a significant base effect. CT receipts for the year remain above 2022 levels, and we forecast that CT receipts will increase by 14 per cent in 2023.

Nevertheless, the recent slowdown in global activity and international trade as well as increased interest rates will have an impact on MNEs. This could mean that the large growth in corporation tax observed in recent years may ease going forward.

The effects of this international slowdown in economic activity will, and indeed is, having an impact on the domestic economy. This will impact certain revenue streams. As real incomes decrease, consumption is slowing, and while this is yet to have any significant effect on VAT receipts, it may do so if real incomes continue to deteriorate. Some of these effects can already be observed in some of the other tax headings, with declines in revenues for capital gains tax, Customs, and stamp duty for the year to date. These are smaller in comparison to the three main tax headings, but they do illustrate the slowing of economic activity. The growth across tax headings is shown in Figure 26.

FIGURE 26 GROWTH RATE AND FORECASTS OF MAIN TAXATION HEADINGS

Sources: Department of Finance and authors' calculations.

As can be seen in Figure 26, taxation revenues are expected to increase for 2023 and 2024, but this growth is slowing compared to previous years. Income tax is expected to grow by 7 per cent in 2023 and a further 5.5 per cent in 2024. This is due to the expectation that wages will continue to increase. As mentioned in the above discussion on inflation and consumption, real earnings are lower due to the high inflation rates. This is likely to put upward pressure on wage demands to restore purchasing power. This may pass through into a greater nominal income tax take as a result. VAT and CT receipts are also forecast to grow more moderately in 2024, as both domestic and international economic growth returns to more modest levels. The following Box examines the changing distribution of Irish taxation receipts over the past 15 years.

BOX C DISTRIBUTION OF IRISH TAXATION RECEIPTS*Introduction*

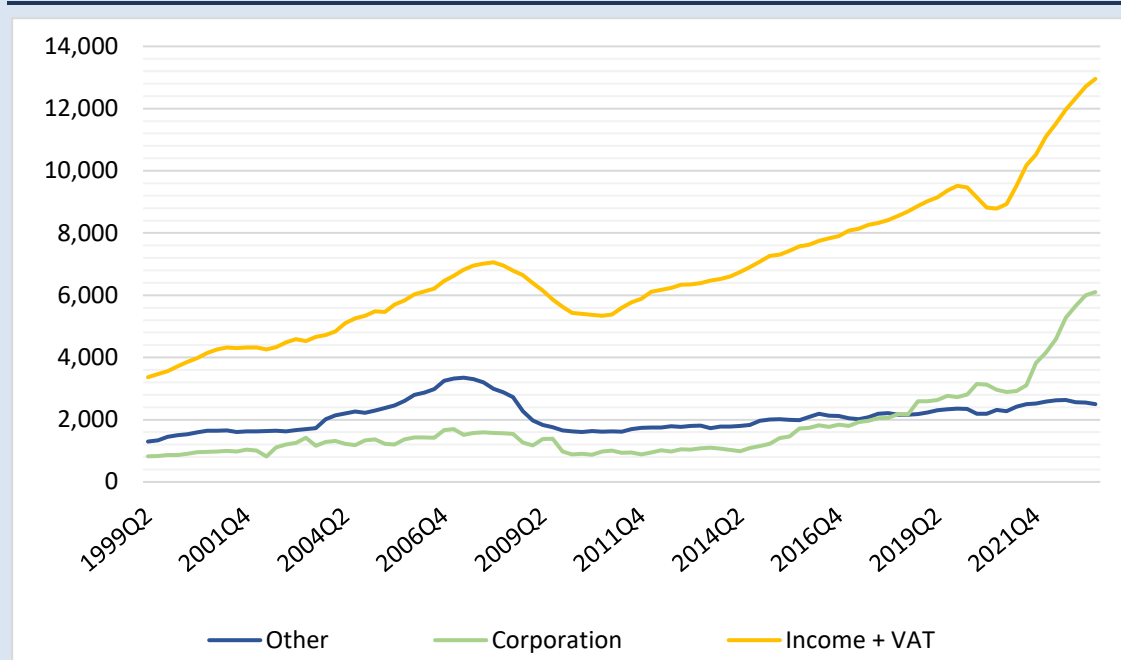
The continuing strong increases in Government taxation receipts has placed the Exchequer in a particularly healthy position at the present time and has enabled the Government to fund measures aimed at alleviating, initially, the cost of COVID-19 and, secondly, the sharp increases in the cost of living associated with recent inflationary pressures. Clearly with such a substantial increase in taxation receipts there have been concerns about the sustainability of such developments, and this has prompted the establishment of the special reserve fund (SRF). This fund aims to take some of the taxation receipts associated with the especially strong increases in corporation receipts and use them for non-current expenditure purposes.

Given the particularly robust nature of Exchequer receipts, it is worth examining the distributional nature of taxation levels to further assess the sustainability or otherwise of the taxation base. In this Box, we examine taxation receipts over the period 1998 – 2023 to analyse the different compositional mix of Government revenue over the period.

Exchequer receipts compositional mix

Figure C.1 plots total Irish Government Exchequer receipts over the period Q3 1998 to Q2 2023. Three different classifications are used; corporation taxes, income + VAT, and 'other'. The 'other' category consists of excise duty, stamp duty, capital gains tax, capital acquisitions and Customs.

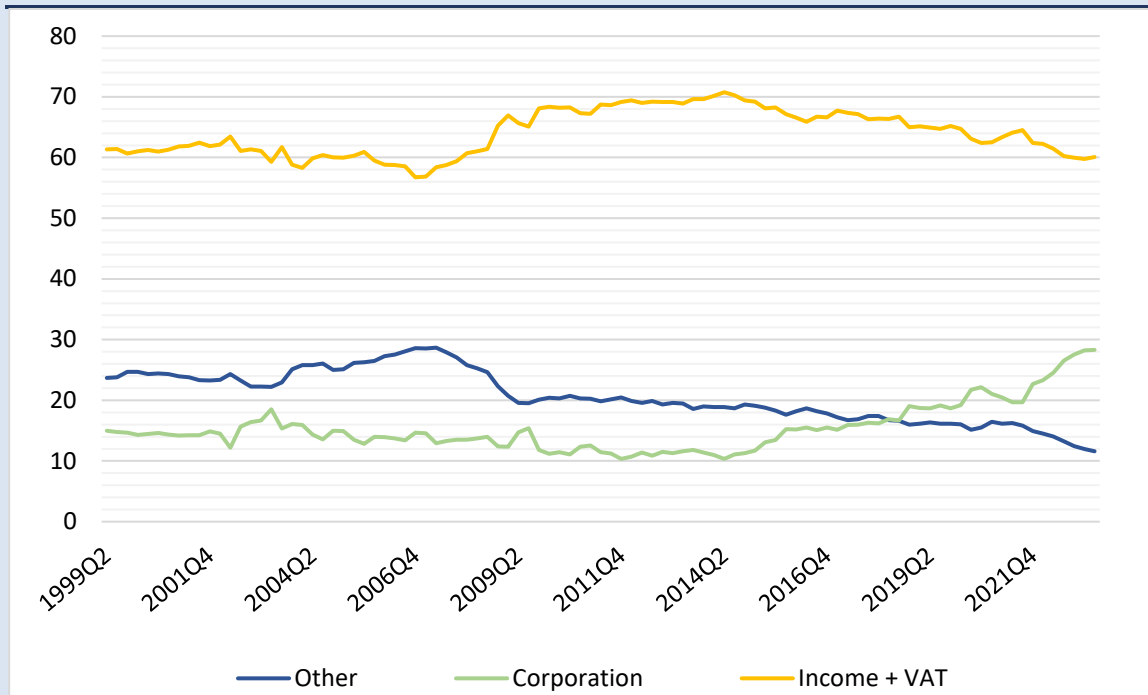
**FIGURE C.1 BREAKDOWN OF IRISH GOVERNMENT EXCHEQUER RECEIPTS 1998 – 2023
(€ MILLIONS)**



Source: Department of Finance and Quarterly Economic Commentary.

A number of trends stand out over the period. First, the clear impact of the Great Financial Crisis (GFC) on Exchequer receipts; the emergence of the Celtic Tiger in the mid-1990s saw taxation receipts across all categories increase substantially. Figure C.2 plots the relative share of total Exchequer receipts accounted for by the three categories.

FIGURE C.2 SHARE OF IRISH GOVERNMENT EXCHEQUER RECEIPTS 1998 – 2023 (%)



Source: Department of Finance and *Quarterly Economic Commentary*.

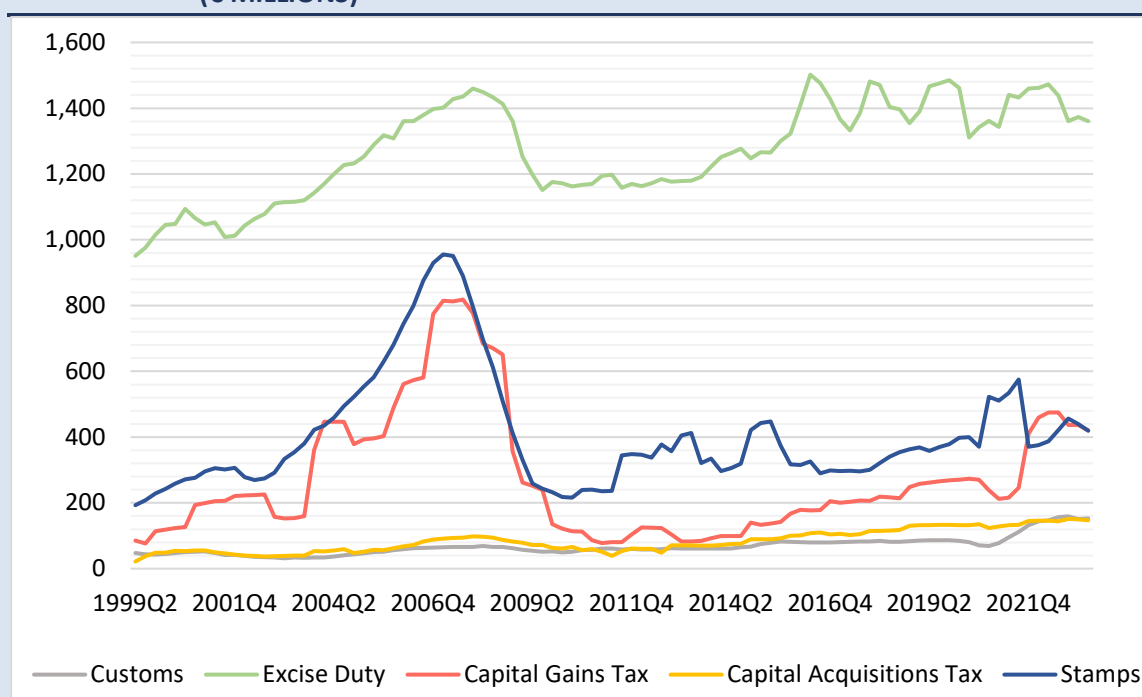
Table C.1 summarises the changes in receipts for different sub-periods. The periods chosen correspond to the pre-GFC Celtic Tiger (Q2 1999 – Q4 2007), the subsequent economic downturn (Q4 2007 – Q4 2010), the pre-pandemic, post-GFC recovery (Q4 2010 – Q1 2020) and the post-pandemic recovery (Q1 2020 – Q2 2023).

TABLE C.1 CHANGES IN TAXATION HEADINGS (%)

Period	Other	Corporation	Income + VAT
Q4 2007 – Q2 1999	146	95	108
Q4 2010 – Q4 2007	-50	-39	-24
Q1 2020 – Q4 2010	46	186	77
Q2 2023 – Q1 2020	7	117	37

Source: Department of Finance and *Quarterly Economic Commentary*.

What is interesting is that for the Celtic Tiger period, corporation tax registered the lowest increase, while the 'other' category saw the largest increase. This is because of the boom in the housing market at this time, with many of the other categories such as capital gains tax (CGT) and stamp duty experiencing substantial increases as their values were heavily linked to the volume of housing output in that period (see Addison-Smyth and McQuinn, 2010 and 2016). Figure C.3 plots the breakdown of the 'other' category. The large increase in the housing related categories such as CGT and stamp duty is clearly observable.

**FIGURE C.3 BREAKDOWN OF 'OTHER' CATEGORY OF EXCHEQUER RECEIPTS: 1998 – 2023
(€ MILLIONS)**

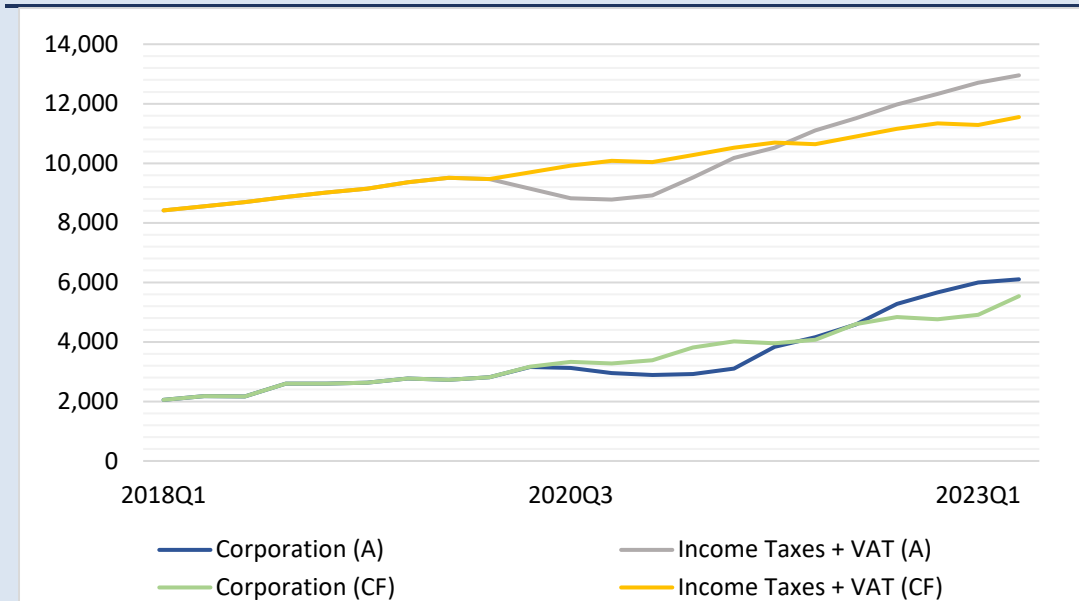
Source: Department of Finance and *Quarterly Economic Commentary*.

Neither CGT nor stamp duty have to this date experienced the same level of revenue intake that they witnessed in 2007.

All taxation categories saw a significant fall in receipts during the post-GFC economic downturn with revenues for the 'other' category falling by 50 per cent between the end of 2007 and the end of 2010.

Over the course of the post-GFC recovery phase (2010-2020), it is clear that income, VAT and corporation receipts increased in a persistent and significant fashion. These spearheaded the return to fiscal sustainability of the Irish sovereign after the calamitous effects of the GFC. However, while income taxes, VAT and corporation tax saw a fall during the early part of the COVID-19 pandemic, since early 2021 receipts from these categories have increased at a faster pace than was the case before 2020.

This is evident from Figure C.4 where we plot actual versus counter-factual levels for income tax and for VAT and corporation taxes. These levels show how both tax categories would have grown post-Q1 2020 if they had followed the same average growth rate as the Q2 2014 – Q1 2020 period.

FIGURE C.4 ACTUAL AND COUNTER-FACTUAL LEVELS OF INCOME TAX AND VAT AND CORPORATION TAX RECEIPTS: 2018 – 2023 (€ MILLIONS)

Source: Department of Finance and *Quarterly Economic Commentary*.

From the graph, the increase in both categories' revenue levels relative to what they would have been if pre-COVID-19 growth rates in the tax headings had occurred subsequently is clear. Overall, despite actual revenues declining somewhat in late 2020, taxation revenues are greater in actual terms since the start of Q1 2020 relative to what they would have been in the counter-factual scenario.¹⁵ It is worth noting that increases in corporation taxes in recent years have benefitted significantly from the exceptional performance of the ICT and pharma sectors, both of which have a well-established presence in the Irish economy. Also, over this period, income taxation receipts reflect the increase in tax-rich jobs emanating from the multinational sector.

Conclusion

The Irish economy has undergone significant change since the Celtic Tiger era and the Great Financial Crisis which brought the earlier period of economic growth to an end. Nowhere is that more evident than in the tax base of the national Exchequer. Whereas tax headings such as stamp duty and capital gains tax were once very significant contributors to national Exchequer levels, income tax, VAT and corporation tax have grown in importance since 2014. Indeed, as is evident from Figure C.2, since 2018 and for the first time ever, corporation taxes now make a larger contribution to the national Exchequer than the other components of CGT, VAT, stamp duty and excise duty combined.

Finally, since the end of the COVID-19 epidemic, there appears to have been a jump in the contribution of income tax and VAT and corporation taxes. It is unlikely that all three headings will likely grow at present rates on a sustained basis into the future. Hence the

¹⁵ Corporation taxes are up by €123 million since Q1 2020 vis-à-vis the counter-factual level while income taxes and VAT are up by €376 million relative to the scenario.

initiation of the special reserve fund by the Department of Finance, which seeks to allocate some of these windfall receipts to specific projects and areas, is a wise and prudent development.

References:

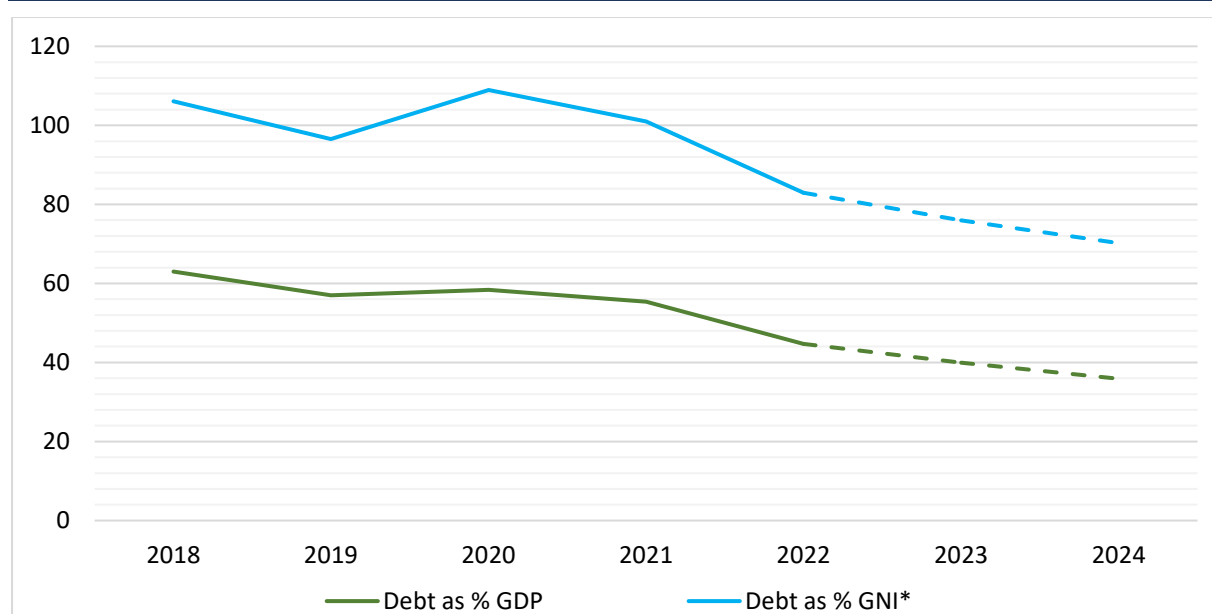
- Addison-Smyth D. and K. McQuinn (2010). 'Quantifying revenue windfalls from the Irish housing market', *The Economic and Social Review*, Vol. 41(2), pp.201-223.
- Addison-Smyth D. and K. McQuinn (2016). 'Assessing the sustainable nature of housing-related taxation receipts: The case of Ireland', *Journal of European Real Estate Research*, Article first published online: June, <http://www.emeraldinsight.com/doi/pdfplus/10.1108/JERER-01-2016-0004>.

This Box was prepared by Kieran McQuinn.

Debt ratios continue to decline despite economic slowdown

The continued growth of Irish tax revenues will see debt ratios continue to decline, as shown in Figure 27. The decline in the debt-to-GDP ratio is significant, as GDP is set to decline in 2023 given the slowdown in the international sector. Tax revenues have, therefore, grown at a faster pace than GDP has decreased. Debt-to-GDP is forecast to decline to 39.9 per cent in 2023 and to decrease further to 35.9 per cent in 2024. Debt-to-GNI* is also forecast to remain on a downward trajectory, falling to 76 per cent in 2023 and 70.2 per cent in 2024.

FIGURE 27 **PATH OF DEBT RATIOS**



Sources: Department of Finance and authors' calculations.

Update on incoming Base Erosion and Profit Shifting (BEPS) rules

Given the significance of corporation taxes in recent years and the possibly temporary nature of recent spikes in tax revenues, it is important to note developments with the incoming OECD Base Erosion and Profit Shifting (BEPS) rules.

As discussed in previous QECs, there are two pillars to these rules – the introduction of a 15 per cent minimum corporation tax rate and the reallocation of multinational enterprises' profits to jurisdictions where the sale/activity took place. The European Commission has dropped immediate plans to incorporate this second pillar, which would have introduced a new formulaic approach to splitting the total pre-tax profit earned by multinationals between the jurisdictions where business is done or where value is created.

The delay of this plan is due to push back from certain countries who feared losing large swathes of tax revenue in the process and continued uncertainty as to how EU plans may align with Pillar One¹⁶ work at the OECD. This delay shows how complex these issues are, and the political wrangling that reforms may have to work their way through before they become commonplace.

Additionally, the introduction of the minimum effective tax rate of 15 per cent under Pillar Two¹⁷ of the BEPS rules is due to be introduced in 2024. Ireland can keep its tax rate at 12.5 per cent, but it must introduce a qualifying domestic top-up tax to in-scope MNEs (i.e. those groups with annual turnover of over €750 million). The full procedure for the calculation of the effective tax rate and the top-up tax can be found on the OECD website.¹⁸ The effects of the BEPS rules have been examined last year in a Box to the *Commentary* by Kenny (2022)¹⁹ and have also been discussed more recently by Hubert (2023).²⁰

The large increases in taxation receipts generally and corporate taxes in particular have resulted in the creation of a special reserve fund (SPF). Another Box by McQuinn assesses the nature of expenditure policy in light of the recent increases in taxation receipts.

¹⁶ Pillar One of the OECD's BEPS rules seeks to reallocate amounts of taxable income to market jurisdictions, i.e. the jurisdiction in which consumers and users associated with specific profits are located. For more see: Pillar One: Summary » oecdpillars.com.

¹⁷ Pillar Two of the OECD's BEPS rules is designed to ensure large MNEs pay a minimum effective tax rate (ETR) of 15 per cent on profits. This can be accomplished through a 15 per cent ETR or, if the ETR is below 15 per cent, through a top up tax. For more see: Pillar Two Model Rules in a Nutshell (oecd.org).

¹⁸ ETR Calculation and Top-Up Tax » oecdpillars.com.

¹⁹ Kenny, E. (2022). *Quarterly Economic Commentary*, Autumn 2022 - Corporation Tax Box. ESRI.

²⁰ The green jersey – Part 2: Irish corporation tax in a 15 per cent world - The Currency :The Currency.

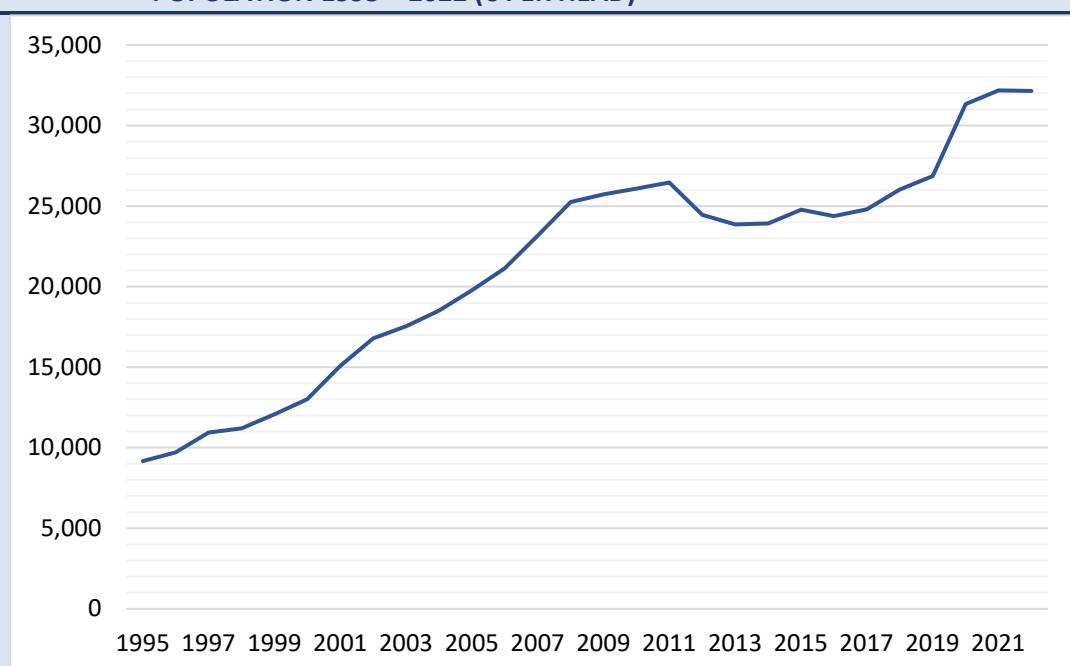
BOX D BENCHMARKING IRISH EXPENDITURE LEVELS*Introduction*

As outlined in the Summer Economic Statement,²¹ the upcoming budget is set to see a further increase in Government expenditure from both current and capital perspectives. Both current and capital expenditure have been increased in a significant manner in the Irish economy over the past number of years, coming after a period when capital expenditure, in particular, was sharply cut back due to the fiscal constraints imposed after the Great Financial Crisis (GFC). In this Box we seek to place current Irish Government expenditure levels (total, current and capital) in a historical and cross-country (EU) perspective. Along with estimates of capacity in the economy, this should provide an important context for current and future Irish budgetary policy.

Total Irish Government expenditure

Figure D.1 plots total Irish Government expenditure over the period 1995 – 2022. In order to compare expenditure levels with other countries, it is important to normalise expenditure levels. Frequently, GDP is used to do this; however, in an Irish context, GDP is distorted by various transactions of certain multinational firms. Therefore, for the purposes of this Box, we normalise expenditure levels across all countries with the active population level i.e. those between the ages of 15 and 64.

FIGURE D.1 TOTAL IRISH GOVERNMENT EXPENDITURE PER HEAD OF WORKING AGE POPULATION 1995 – 2022 (€ PER HEAD)



Source: AMECO and Quarterly Economic Commentary.

From the graph it is clear that there appears to be two distinct sub-periods over the 1995 – 2022 interval. The first is up to and including the Great Financial Crisis (GFC) and the second is the post-GFC period. The sharp decline in expenditure post-2011 is clearly apparent as the Irish Government was compelled to reduce expenditure to match the

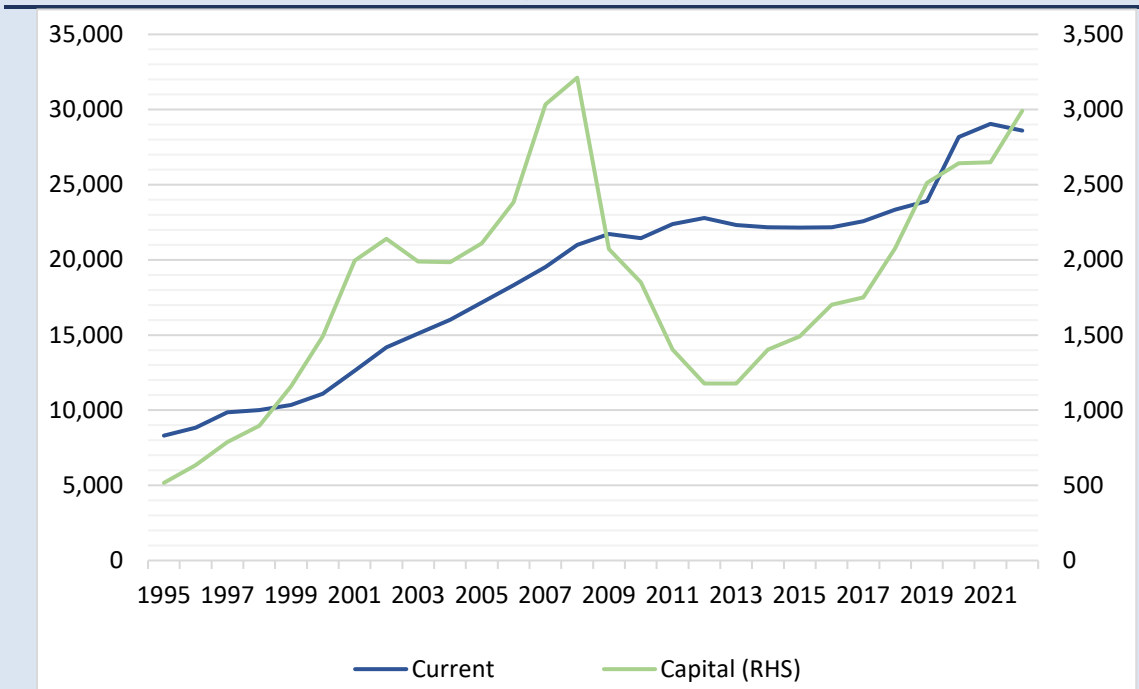
²¹ See <https://www.gov.ie/en/publication/cfde8-summer-economic-statement-2023/> for details.

decline in taxation revenues which occurred following the crisis. On a per capita basis, expenditure levels only reached the previous highs of the GFC period in 2019. Thereafter, expenditure levels have remained at this higher level.

Recent trends in Irish current and capital expenditure

To get a better breakdown of Government expenditure in Figure D.2, we break out total expenditure into current and capital expenditure per head of population over the period 1995 to 2022.²²

FIGURE D.2 IRISH CURRENT AND CAPITAL EXPENDITURE PER HEAD OF WORKING AGE POPULATION 1995 – 2022 (€ PER HEAD)



Source: AMECO and Quarterly Economic Commentary.

From the chart the significant increase in expenditure during the Celtic Tiger phase is clearly apparent, with capital expenditure, in particular, experiencing a sharp increase. Current expenditure went from just over €8,000 per head in 1995 to almost €22,800 per head in 2012. It remained constant at that level until 2018 when it began to increase again. The significant increase in expenditure due to COVID-19 and the cost-of-living crisis is clearly evident in recent years with current expenditure reaching €28,500 per head in 2022. Capital expenditure was especially impacted after the GFC with levels falling from €3,212 per capita in 2008 to a low of just €1,200 per head in 2012 and 2013. This reflects the greater discretionary nature of capital expenditure where significant capital investment projects are typically paused or postponed during a period of fiscal retrenchment. Thereafter, capital levels have consistently increased to a post-GFC high in 2022 of just under €3,000 per head, although this level is still less than the Celtic Tiger high in 2008.

²² All data are in nominal terms unless otherwise stated. The definitions of capital and current Government expenditure are those used by AMECO, the annual macro-economic database of the European Commission's Directorate General for Economic and Financial Affairs.

Expenditure levels in an EU Context

How do these expenditure levels compare with other EU countries? Table D.1 ranks the 27 countries for both sets of expenditure from the largest to the smallest for 2022 and for the average period 2010 – 2022.

TABLE D.1 RANK OF EU COUNTRIES CURRENT AND CAPITAL EXPENDITURE (€ PER HEAD)

Current	Capital	Current	Capital
2022		2010 – 2022 average	
Luxembourg	Luxembourg	Luxembourg	Luxembourg
Denmark	Sweden	Denmark	Sweden
Finland	Finland	Sweden	Denmark
Belgium	Denmark	Finland	Finland
Sweden	Ireland	Belgium	Netherlands
Austria	Netherlands	Austria	France
France	Austria	France	Austria
Netherlands	France	Netherlands	Ireland
Germany	Slovenia	Germany	Belgium
Ireland	Estonia	Ireland	Estonia
Italy	Belgium	Italy	Germany
Spain	Germany	Spain	Slovenia
Slovenia	Czechia	Slovenia	Czechia
Malta	Malta	Cyprus	Malta
Czechia	Hungary	Greece	Italy
Cyprus	Italy	Portugal	Cyprus
Portugal	Latvia	Malta	Latvia
Greece	Spain	Czechia	Spain
Estonia	Cyprus	Estonia	Hungary
Lithuania	Greece	Slovakia	Greece
Slovakia	Lithuania	Croatia	Slovakia
Latvia	Poland	Hungary	Poland
Croatia	Croatia	Latvia	Lithuania
Hungary	Slovakia	Lithuania	Croatia
Poland	Romania	Poland	Portugal
Romania	Portugal	Romania	Romania
Bulgaria	Bulgaria	Bulgaria	Bulgaria

Source: AMECO and Quarterly Economic Commentary.

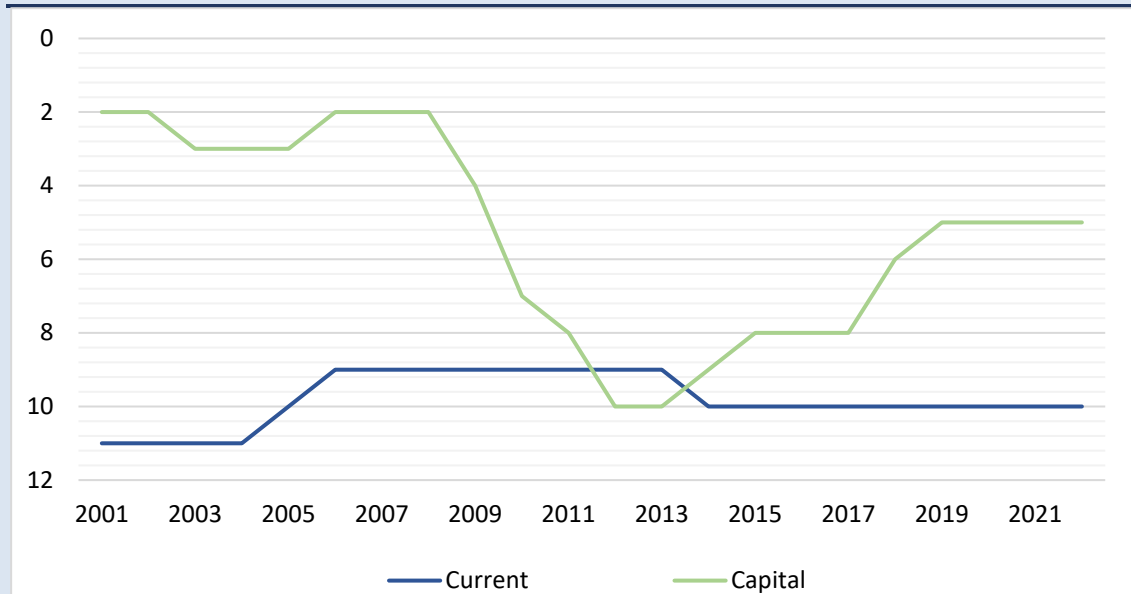
From the table, in 2022 Ireland ranks tenth highest for current expenditure in the most recent year while ranking fifth highest across the 27 countries for capital expenditure. When we look at the average spending over the period 2010-2022, it is apparent that Ireland's current expenditure has not varied much by European standards as it is also ranked in tenth place, however, it is clear that over the same period, Ireland's capital expenditure has varied somewhat as it averages eighth over this period. This reflects the sharp fall in Irish capital expenditure evidenced in Figure D.1 after the Great Financial Crisis.²³

²³ In terms of total expenditure, Ireland ranks tenth for the overall sample of countries in 2022 and ninth for the average over the 2010-2022 period.

Certain rankings stand out on a cross-country basis; Portugal, for example, seems to spend a relatively low amount on capital expenditure, while Poland, one of the more dynamic European economies, appears to have a relatively low level of current expenditure. Italy, for a developed economy, also appears to have a relatively low level of capital expenditure.

To place Ireland's ranking position in a historical context, Figure D.3 plots Ireland's rank in both current and capital expenditure levels over the period 2001 – 2022.

FIGURE D.3 IRELAND'S RANKING IN CURRENT AND CAPITAL EXPENDITURE, 2001 – 2022

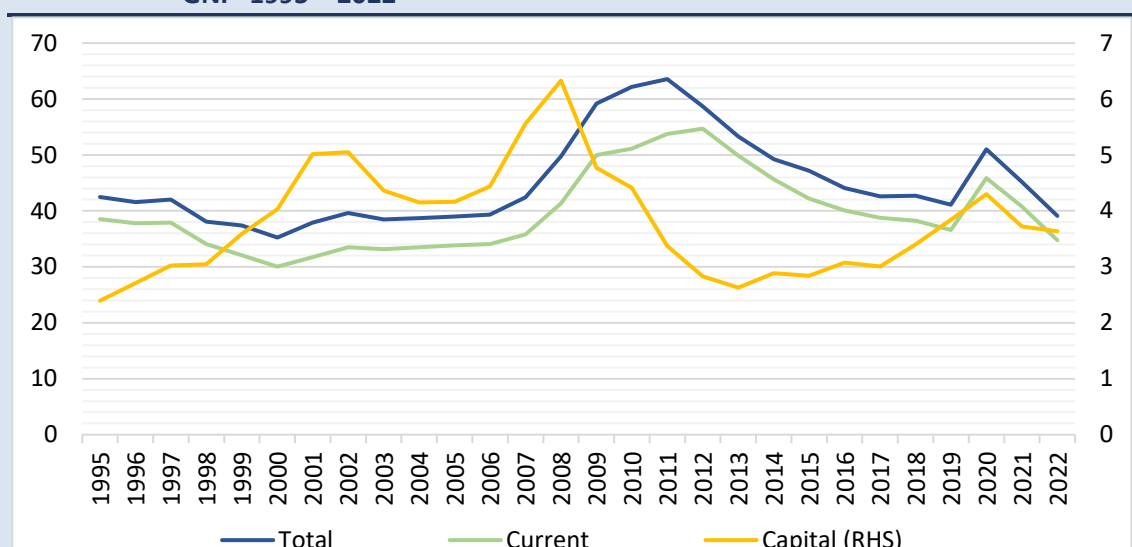


Source: AMECO and Quarterly Economic Commentary.

From Figure D.3 it is clear that Ireland's current expenditure has been relatively constant across the time period at or around tenth across the 27 countries. However, Ireland's expenditure on capital items has varied quite across the countries from a high of second in the early 2000s to a low of tenth in 2012 and 2013 before increasing to its present level of fifth across countries.

The size of the Irish economy

So far we have examined expenditure levels in terms of the comparative spend with respect to other countries in terms of population size. However, we will now try to look at expenditure levels in the context of the size of the domestic economy. As noted earlier, it is usual in such a context to examine expenditure levels vis-à-vis GDP, where the latter is taken as an indicator of the size of the respective economy. However, as noted in a variety of contributions (FitzGerald, 2020; 2023; Kostarakos et al., 2023), GDP is quite problematic in an Irish context owing to the disproportionate role played by the transactions of a certain small number of multinational firms. Therefore, we will take modified gross national income (GNI*) as proposed by Lane (2017) as representative of the size of the economy. Figure D.4 plots Ireland's current and capital expenditure as a percentage of GNI*.

FIGURE D.4 IRELAND'S TOTAL, CURRENT AND CAPITAL EXPENDITURE AS A PERCENTAGE OF GNI* 1995 – 2022

Source: AMECO and Quarterly Economic Commentary.

The graph shows that as far as total expenditure is concerned, it has averaged around 40 per cent of GNI* over the period 1995 – 2022. From 2007 to 2011, expenditure levels grew relative to the size of the economy and peaked at just under 64 per cent in 2011. This was mainly due to the collapse which occurred in economic growth due to the GFC. Expenditure levels took some time to adjust to this fall in economic activity. After 2011 the ratio fell continuously to just over 41 per cent in 2019. The spike in expenditure levels in 2019 and 2020 due to COVID-19 supports is clearly evident. However, in 2022, the ratio of expenditure to the economy size was back down to 40 per cent.

It is clear that again capital expenditure, this time as a percentage of GNI*, displays more variability than current expenditure; the ratio of capital spending has oscillated significantly over the period. It is worth noting that the current ratio at 3.6 per cent is somewhat below the peak in 2008 at 6.3 per cent and even a previous high of 5.1 per cent back in 2002. The State's relatively low level of investment has been noted as a potential drag on further economic growth. For this reason, it has been suggested that the Government must use some of the present surge in taxation revenues to expand the productive capacity of the domestic economy (Ibec, 2023).

Conclusion

Irish expenditure levels have displayed a significant amount of variability over the past 27 years. The substantial growth experienced in the domestic economy over the period has enabled greater levels of Government expenditure with both current and capital expenditure increasing over certain periods. However, the sharp downturn in capital expenditure post the GFC is clearly apparent and, while curtailing investment at a time of fiscal stress is frequently adopted as a means of 'balancing the books', the longer-run costs of a significant period of Government dis-investment can be substantial. For example, a period of Government investment in social and affordable housing after 2011, if permissible, would have alleviated some of the supply-side difficulties currently being experienced in the housing market.²⁴ Furthermore as the Irish economy grows at a

significant and persistent pace (see FitzGerald, 2023, for example), it is essential that key public social and physical infrastructure keeps apace.

The significant increase in expenditure experienced recently does give rise to questions about the appropriate level of Government expenditure. Inspection of a cross-country ranking amongst European countries indicates that Ireland's recent expenditure levels are not out of kilter with comparator countries. Indeed, Ireland's relatively high level of capital expenditure may reflect lower levels of investment by European countries rather than exceptional rates of domestic Government investment. As noted recently in Panetta (2022) and Staehr and Urke (2022) public investment is low and has declined in many EU countries since the Great Financial Crisis.

One other issue however which must be considered in terms of current Government budgetary policy is the heightened pace of inflation in the domestic and international economies and the related presence of capacity constraints within the economy. Currently unemployment is at a historically low rate and inflation is at rates last witnessed in 2006/2007. Therefore, budgetary policy has to be cognisant of stimulating these heightened domestic cost pressures. Of course, it is also worth observing that increased Government expenditure in an area such as the provision of social and affordable housing can help to reduce a key cost within the Irish economy (Corrigan et al., 2019).

References:

- Corrigan E., D. Foley, K. McQuinn, C. O'Toole and R. Slaymaker (2019). 'Exploring affordability in the Irish housing market', *The Economic and Social Review*, Economic and Social Studies, Vol. 50(1), pp. 119-157.
- FitzGerald J. (2020). 'National Accounts for a global economy: The case of Ireland' NBER Chapters, in: *Challenges of Globalization in the Measurement of national accounts*, pp. 65-101, National Bureau of Economic Research, Inc.
- FitzGerald J. (2023). 'Understanding the Irish economy'. Special Article, *ESRI Quarterly Economic Commentary*, Summer.
- Ibec (2023). 'Harnessing abundance. Budget submission 2024'. Available online at: <https://www.ibec.ie/budget2024>.
- Kostarakos I., K. McQuinn and P. Varthilitis (2023). 'The role of intangible investment in Ireland: A growth accounting perspective', *Review of Income and Wealth*, 2023, available online: <https://onlinelibrary.wiley.com/doi/10.1111/roiw.12651>.
- Lane P. (2017). 'The treatment of global firms in national accounts', *Economic Letters* 01/EL/17, Central Bank of Ireland.
- OECD (2021). *Brick by brick: Building better housing policies*. OECD publishing, Paris. <https://doi.org/10.1787/b453b043-en>.
- Panetta F. (2022). 'Investing in Europe's future: The case for a rethink'. Speech by Fabio Panetta, Member of the Executive Board of the ECB, at (ISPI). www.ecb.europa.eu/press/key/date/2022/html/ecb.sp221111~9dfd501542.en.html.
- Staehr K. and K. Urke (2022). 'The European structural and investment funds and public investment in the EU countries', *Empirica* Vol. 49 pp. 1031-1062 <https://doi.org/10.1007/s10663-022-09549-6>.

This Box was prepared by Kieran McQuinn.

²⁴ The lack of domestic Government investment in housing post the Great Financial Crisis is not an Irish-specific issue. OECD (2021) note this trend across Western economies.

General Assessment of the Irish Economy

Current expected outlook

The Irish domestic economy looks set to continue to grow in 2023 and into 2024. However, owing to the disproportionate impact of the multinational sector on headline economic data, it is a somewhat nuanced outlook. We expect GDP, which is very heavily influenced by the MNE sector, to contract this year by 1.6 per cent. This is the first episode of negative GDP growth since 2012; however, the factors determining this outcome are very different. From the multinational side, exports are likely to grow very modestly with notable contractions in key goods areas (pharmaceuticals and machinery related to semiconductors). Coupled with higher imports, this puts downward pressure on GDP.

However, on the domestic side, the economy is normalising after the notable volatility due to the repeated shocks of COVID and the war in Ukraine. Modified domestic demand (MDD), which captures consumption and modified investment, is set to increase by 1.8 per cent in the present year. In the past, GDP has generally tended to overstate the degree of growth in the domestic economy; in the present case, however, it actually understates the degree of activity in the domestic economy.

Notwithstanding the strength of the recent performance, it is now more than likely that the Irish economy will experience more moderate rates of growth going forward. There are a number of reasons for this. Much of the post COVID-19 growth performance had to do with the exceptional performance of the ICT and pharmaceutical sectors, sectors which have a significant presence in the domestic economy. While these sectors still perform well, it is highly unlikely that they will continue to sustain the rates of growth that characterised their recent performance. Therefore, as these sectors observe more modest rates of growth this will be reflected in the domestic economy. Indeed, the current moderation in exports in pharmaceuticals and the global challenges in the ICT sector highlight the reliance of our overall growth on these key sectors.

The immediate aftermath of COVID-19 gave rise to a significant degree of volatility in economic data as the periods of lockdown resulted in significant base effects where growth rates oscillated depending on the nature of Government restrictions up to a year previously. As we move beyond that period, the underlying pace of growth is more readily apparent.

Inflation is still exerting a negative impact on the Irish outlook. While the pace of price increases, which had peaked at over 9 per cent in May 2022, has been declining on a persistent basis to its present rate of 6.3 per cent, the decline has been somewhat more gradual than what many had originally envisaged. Energy prices are coming down, however inflation is now being driven by other factors like food and housing costs. Higher rates of inflation act as a drag on domestic consumption levels, in particular, as real household income levels are struggling to register positive growth.

To deal with the inflationary pressures, monetary authorities have raised interest rates considerably and this now, arguably, acts as a considerable drag on economic activity; the official policy rate of the European Central Bank (ECB) has increased by over 400 basis points in the past year. This constitutes a major degree of monetary tightening which has also been observed in the United Kingdom and the United States. While this is aimed at curbing inflation, it does bring significant adverse side effects as far as overall economic activity is concerned.

Present and future levels of Government expenditure

Given the upcoming Budget 2024, a Box in the *Commentary* assesses current and likely future levels of Irish Government expenditure. Spending levels have increased significantly in recent years, giving rise to some concerns about the sustainability of such increases and the implications for the economy given the relatively high rate of inflation still evident, and the exceptionally tight labour market which is currently evident.

McQuinn finds that current Irish expenditure per capita has tended to remain relatively stable across the 27 countries examined, while capital expenditure has shown a degree of variability. There is no evidence that Irish spending levels have risen sharply on a cross-country basis. Furthermore, expenditure levels would appear to be relatively stable given the persistent growth of the domestic economy since the Great Financial Crisis (GFC). Indeed, it would appear that there was a significant lag between the recovery in the economy and the recovery in Government expenditure levels.

The prevalence of ongoing high inflation and low unemployment rates does mean that additional expenditure risks the prospect of exacerbating living costs in the economy in the short term. Indeed, as the unemployment rate is close to 4 per cent, there is little to no capacity in the system from an employment perspective and, under these circumstances, any major untargeted, general stimulus to the economy would risk adding second round impulses to inflation.

However, there are always trade-offs. An absence of Government investment in areas such as housing, for example, can also fuel certain inflationary pressures over the medium term. Therefore, a growing economy, such as the Irish one, necessitates a certain rate of increase in Government expenditure especially targeted at infrastructural bottlenecks in the domestic economy. In short, there is a specific onus at the present time for targeted expenditure to enhance the productive capacity of the Irish economy while recognising the short-term inflationary pressures of further spending, in particular on the current expenditure side.

The other Box by McQuinn, which examines the changing nature of the distribution of Exchequer tax receipts over the period 1995 – 2022, emphasises the importance of the special reserve fund. It allows for an element of recent taxation receipts, which are deemed to be windfall in nature, to be diverted to the fund, where one of the main functions of this fund should be addressing some of the infrastructural deficits in the domestic economy.

A Box on the housing market by Egan and McQuinn underscores the importance of Government investment in certain parts of the economy. The Box highlights the implications for Irish housing costs if the Government had been in a position to provide a construction related stimulus in the aftermath of the Great Financial Crisis.

Understanding the dynamics of the Irish growth story

The previous *Commentary* had a Special Article proposing another output indicator seeking to capture underlying developments in the domestic economy. In this *Commentary*, a Box by Kostarakos and Varthilitis seeks to provide further clarity and insight into Irish economic growth by analysing the investment channel in particular. Specifically, the Box identifies the distortions that have arisen in quantifying the impact of this source of growth given the role played by intellectual property products (IPP). The Box also examines the contribution of what are labelled non-National Accounts intangible assets. These are assets which are typically presented as intermediate inputs in the National Accounts, but which should be more accurately labelled as investment assets.

The reasons why this is important is that correctly quantifying the investment channel in the National Accounts provides a more accurate understanding of the determinants of labour productivity and the role played more generally by total factor productivity. These concepts are crucial to our understanding of the long-run determinants of economic growth. Their results indicate that while labour productivity grew during the period in question, the scale of actual growth was considerably less than what headline indicators would suggest. This heightens the

need for renewed focus on maintaining and enhancing strategies for continuing growth rates into the future.

International uncertainty and difficulties in China

The Chinese economy is struggling to experience the same degree of post COVID-19 recovery that many leading Western economies have witnessed. While some believe that the present Chinese difficulties are somewhat transitory in nature, others such as Posen (2023)²⁵ are less sanguine and suggest more structural issues are at play. In particular, the increasingly autocratic nature of the Chinese regime appears to be impacting consumer and producer confidence with both Chinese consumers and companies increasingly prioritising short-term liquidity over longer-term investments. This trend of saving rather than investing in the Chinese economy could result in less spending by Chinese households on technology goods and other durable goods which require imports, resulting in the Chinese trade surplus with the rest of the world continuing to grow. In that regard it is worth recalling that Chinese growth in the aftermath of the GFC was one of the main instruments of global recovery at that point.²⁶ Posen (2023) is quite pessimistic about Chinese medium-term prospects and believes that the economy is set for a period of relatively stagnant growth. This would act as a significant drag on international economic performance and reduce the global outlook over the medium term. Given the small open nature of the Irish economy, it would be particularly impacted by any such slowdown.

²⁵ Posen A. (2023). 'The end of China's economic miracle. How Beijing's struggles could be an opportunity for Washington'. Op-editorial in *Foreign Affairs*. Available online at: <https://www.foreignaffairs.com/china/end-china-economic-miracle-beijing-washington>.

²⁶ See for example Wen, Y. and J. Wu (2017). 'Withstanding Great Recession like China', Federal Reserve Bank of St. Louis Working Paper 2014-007. URL <https://doi.org/10.20955/wp.2014.007>.

Whitaker Square,
Sir John Rogerson's Quay,
Dublin 2
Telephone **+353 1 863 2000**
Email **admin@esri.ie**
Web **www.esri.ie**
Twitter **@ESRIDublin**