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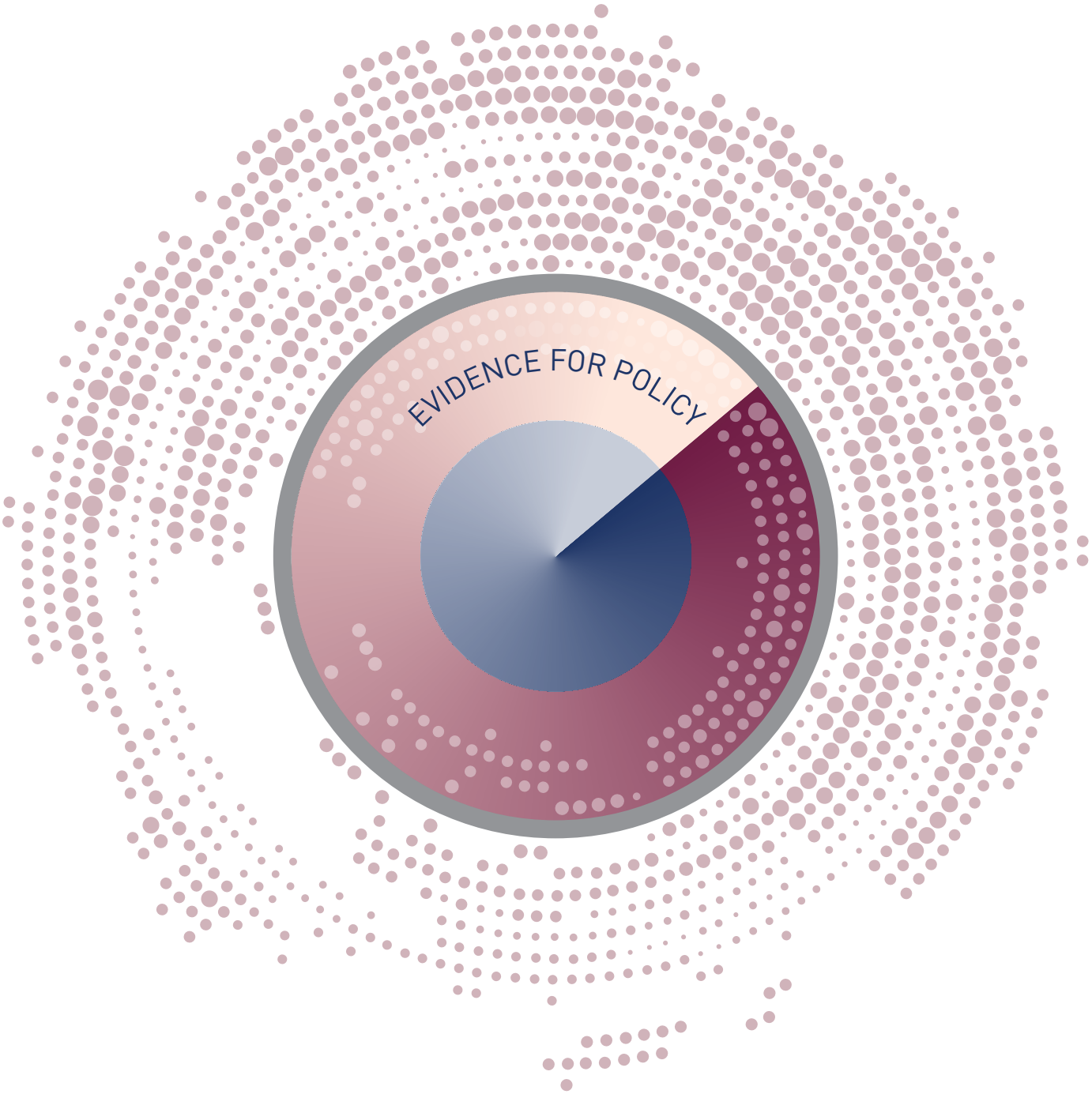
QUARTERLY ECONOMIC COMMENTARY

AUTUMN 2022

KIERAN MCQUINN, CONOR O'TOOLE, WENDY DISCH, EOIN KENNY AND EVA SHIEL



ESRI ECONOMIC & SOCIAL RESEARCH INSTITUTE

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Autumn 2022

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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.

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SUMMARY TABLE

	2021	2022	2023
Output (Real Annual Growth %)			
Private Consumer Expenditure	4.6	3.2	2.5
Public Net Current Expenditure	6.5	2.6	-0.1
Investment	-39.0	3.1	7.4
Modified Investment	*8.2*	*23.4*	*4.7*
Exports	14.1	10.5	6.2
Imports	-8.3	9.0	6.4
Gross Domestic Product (GDP)	13.6	8.1	4.4
Gross National Product (GNP)	14.7	7.5	3.5
Modified Domestic Demand	*5.8*	*7.5*	*2.5*
Domestic Demand (excl. Stocks)	-18.2	3.1	4.0
Labour Market			
Employment Levels ('000)	2,178	2,519	2,530
Unemployment Levels ('000)	402	128	107
Unemployment Rate (as % of Labour Force)	16.1	4.8	4.1
Public Finances			
General Government Balance (€bn)	-8.1	1.4	5.8
General Government Balance (% of GDP)	-1.9	0.3	1.2
Price Developments			
Inflation (CPI)	2.4	8.1	6.8

Notes: The employment figures are based on the COVID-adjusted level of employment at the end of each quarter published by the Central Statistics Office (CSO) along with the quarterly LFS. As a result, employment levels represents a lower bound estimate for employment in 2021. The unemployment rate and level through February 2022 are based on the monthly unemployment and the COVID-adjusted monthly unemployment series published by the CSO.

Import forecasts for 2022 and 2023 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.

Inflation is measured by the annual percentage change in CPI.

The Irish Economy – Overview

- Considerable uncertainty surrounds international macroeconomic conditions with an increasing probability of recession in the United States, the United Kingdom and the euro area.
- This uncertainty is also compounded by the growing possibility of energy supplies being rationed across Europe in the winter of 2023. The *Commentary* has a Box which discusses the risks to electricity supply in Ireland in winter 2022/2023.
- While the pace of consumption growth is moderating significantly, the domestic economy is still expected to grow robustly this year. This reflects both the contribution of modified investment and the strong performance of the traded sector.
- Modified domestic demand (MDD) is now forecast to grow by 7.5 per cent in 2022. Furthermore, the unemployment rate is set to fall to 4.1 per cent by the end of the year and the General Government Balance (GGB) is expected to register a surplus of 0.3 per cent. A Box in the *Commentary* assesses the impact of recent reforms on future corporation tax receipts.
- In 2023 we expect the economy to grow at a reduced pace with MDD set to increase by 2.5 per cent. However, the outlook is decidedly uncertain and elevated cost of living pressures are likely to exert downward pressure on key areas of growth such as consumption.
- The robustness of the public finances has enabled the Government to insulate many households from the increased cost of living pressures. The recent budget outlined a sizeable package aimed at minimising the impact of recent and expected future increases in energy costs on household budgets.
- Inflationary pressures are, however, set to continue with some moderation in the inflation rate expected in 2023. We now forecast inflation of 8.1 per cent in 2022 and 6.8 per cent in 2023. Another Box in the *Commentary* examines recent movements in Irish house prices and concludes that some overvaluation has emerged in the market since the pandemic.

Risk Analysis

Despite rebounding considerably from the COVID-19 pandemic, the domestic economy faces significant downside risks in the present year. The military invasion of Ukraine by Russia has spurred a humanitarian disaster and amplified a number of pre-existing macroeconomic risks. In particular, elevated inflation rates are now acting as a considerable drag on global economic activity. Higher prices have been a result of supply- and demand-side effects caused by the pandemic and are now escalating as a result of Russia's war in Ukraine. On the supply side, pandemic-related bottlenecks in global supply chains created upward pressure on prices; while on the demand side, fiscal and monetary supports successful in protecting nominal incomes and preventing higher levels of unemployment contributed to large swings in demand once the economy reopened, adding additional pressure on prices. Russia's invasion of Ukraine and the associated policy responses in the energy market have exacerbated pre-existing supply pressures in the energy market, leading to record high prices. Factors that will largely impact the course of inflation and thereby our economic outlook include: the trajectory of the international and domestic price pressures, the performance of global supply chains, the fiscal response to higher costs of living, and the monetary policy response to higher inflation rates. At the same time, geopolitical tensions and slowing economic activity amongst major economies also pose additional risks to domestic growth.

Strained supply chains: recovering from COVID-19 and navigating an increasingly volatile global environment

Supply chain bottlenecks had little time to adjust from the post-COVID surge in demand before the Russian invasion of Ukraine. Sanctions on Russia, declining export activity from Russia and Ukraine, limited access to transport hubs due to military activity, ongoing lockdown policies in China, extreme weather events and labour unrest are all impacting global supply chains.

The sanctions imposed on Russia as retaliation for the war have severely limited container shipping connectivity to and from Russian ports, creating additional pressures at a time of heightened stress for supply chains.[1] The disruption of Russian export activity due to the war is affecting global value chains, particularly value chains reliant on Russian metals and fertilisers. While countries neighbouring

[1] Arvis, J.F., C. Rastogi and D. Saslavsky (2022). 'Effects on Global Logistics and Connectivity', in M. Ruta (Ed.), *The Impact of the War in Ukraine on Global Trade and Investment*, The World Bank.

Russia are particularly dependent on Russian exports, production hubs in China, Germany and the US are also large importers of Russian commodities.[2]

The increase in food insecurity and prices from the war[3,4] is emerging at the same time as extreme droughts in multiple parts of the world are impacting harvests[5] as well as access to shipping routes.[6] Meanwhile, increased costs and delays have also been linked to labour unrest as workers struggle with higher living costs.[7] Continual disruptions to supply chains could amount to reductions in global trade and further upward pressure on prices.

Combatting higher living costs: fiscal support and navigating strained energy markets

At present, soaring energy costs and the uncertainty surrounding energy supply are the primary concern for governments across Europe. Fiscal supports will be necessary to assist households most acutely affected by the increased cost of living. At the same time, governments are shifting policy responses to energy markets in order to secure a stable market.

On the fiscal side, governments must maintain a delicate balance between supporting strained households and avoiding additional inflationary pressures. Significant levels of public spending have already been planned or announced in most countries.[8] Avoiding further upward pressure on prices will be dependent on governments' ability to target households most acutely affected by rising costs. In Ireland, 29 per cent of Irish households were spending more than a tenth of their

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2 Winkler, D. and L. Wuester (Eds) (2022). *Global Economic Consequences of the War in Ukraine: Sanctions, Supply Chains and Sustainability*, CEPR Press, London. https://cepr.org/chapters/implications-russias-invasion-ukraine-its-value-chains.

3 'Lack of Grain Exports Driving Global Hunger to Famine Levels, as War in Ukraine Continues, Speakers Warn', Security Council | Meetings Coverage and Press Releases.

4 14 per cent of Ukraine's grain storage has been destroyed by Ukraine since February; see: Russian Invasion Knocked Out 14% of Ukraine's Grain Storage - Bloomberg.

5 Drought in the Horn of Africa has led to a humanitarian crisis; see Horn of Africa Drought: Regional Humanitarian Overview & Call to Action, Revised 21 September 2022. | Food Security Cluster (fscluster.org); droughts in Europe are impacting crop production; Droughts in Europe in July 2022: almost half of the EU +UK territory at risk (europa.eu).

6 Drought in China caused shipping routes among the Yangtze River (the world's third largest river) to close temporarily. See: China drought causes Yangtze to dry up, sparking shortage of hydropower | China | The Guardian.

7 For example, port strikes in the UK; see: $4.7 billion in trade delayed in eight-day strike at Felixstowe (cnbc.com). For Germany see: Strikes in Germany over the summer led to increased container backlogs which have persisted through September; see: Transport strikes put supply chains under duress again - FreightWaves; German North Sea Port Congestion, Supply Bottlenecks Weigh on Global Trade - Bloomberg.

8 In France, energy vouchers provided by the end of the year are expected to cost €16 billion net in addition to the €30 billion spent earlier in the year. See: France claims it's doing the best job in Europe to protect citizens from energy crisis (lemonde.fr). A third relief package announced on 14 September in Germany is estimated to cost €65 billion in addition to the €35 billion spent earlier in 2022; see Germany: third relief package for the energy crisis | OSW Centre for Eastern Studies. Other country supports detailed here: National policies to shield consumers from rising energy prices (bruegel.org).

income on energy by April 2022 (Barrett et al., 2022).[9] Electricity credits announced in February to assist with higher prices resulted in a cost of €400 million to the government.[10]

Russia's manipulation of European natural gas markets has had a significant impact on an already vulnerable global energy market. While Member States have mobilised quickly to provide short-term relief packages for households and businesses, further coordination on how to secure the European energy market in the medium and long-term will be needed.[11] The vulnerability of Europe's energy market and the potential for an energy shortage is arguably the EU's most significant risk, both economically and politically, in the near-term (McWilliams et al., 2022).[12] The trajectory of energy prices and market stabilisation may be eased by an effective and timely EU-level energy policy.

Higher prices weigh heavily on household purchasing power and price increases could further impact consumption and investment activity across the euro area. Fiscal supports to households and businesses, and policies related to stabilising energy markets, could lead to further increases in public spending across the euro area. In the following Box to the *Commentary*, Lynch and Disch assess the risks to domestic electricity supply over the coming winter.

9 Barrett, M., N. Farrell and B. Roantree (2022). *Energy poverty and deprivation in Ireland*, ESRI Research Series 144, Dublin: ESRI, https://doi.org/10.26504/rs144.

10 State Ukrainian response cost almost €200m in first three months of conflict – *The Irish Times*.

11 Countries have put forward medium-term policy views, summarised here: Rising energy prices: European Union countries' views on medium-term policies (bruegel.org).

12 McWilliams, B., G. Sgaravatti, S. Tagliapietra and G. Zachmann (2022). 'A grand bargain to steer through the European Union's energy crisis', *Policy Contribution* 14/2022, Bruegel.

BOX A RISKS TO ELECTRICITY SUPPLY IN WINTER 2022/2023

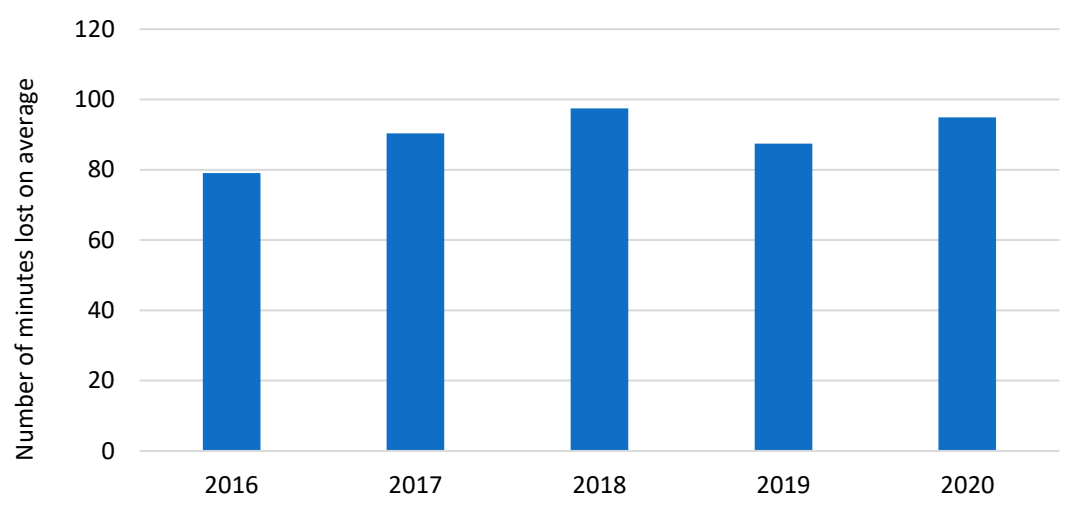
Secure electricity supply is an essential good in any economy, providing energy services to citizens and facilitating the day-to-day commercial and industrial activities of businesses. The impact of interruptions to electricity supply are difficult to quantify, both in general and in relation to the residential or specific commercial sectors. For this reason, quantifying the impact on the economy and on society from a loss of electricity supply is particularly challenging, and has not been done in an Irish context using up-to-date data. We do know that the negative value society places on a loss of a unit of electricity is high, and also that it varies significantly across sectors, with the residential sector seeing the highest impacts from the unavailability of electricity (Leahy and Tol, 2011).

Independent of the true loss to society from unmet electricity demand, there is a societal trade-off between the reliability of the electricity system and the cost of the investment required to render the electricity system sufficiently reliable. In practice, this means choosing a pre-determined standard of reliability in relation to electricity supply that is considered acceptable, and procuring an appropriate quantity and type of electricity generation that allows us to meet that standard (to a certain degree of probability). Intuitively, we increase investment when the reliability is below this pre-determined standard, but not when the system reliability exceeds the standard.

The standard chosen for the Irish electricity system is that of an eight-hour loss of load expectation (LOLE) (Eirgrid and SONI, 2021). This means that the system is considered to be sufficiently reliable if there is an unmet gap between supply and demand no more than eight hours per year. Any loss of load expectation that exceeds eight hours per year, however, is not considered acceptable, and would suggest that extra investment in the electricity system is required.

Historically, the electricity system in Ireland has been very secure. The data reported in ESB Network's report *Distribution Annual Performance 2020* (ESB Networks, 2020), the most recent year available, show the average number of unplanned minutes lost per customer per annum from 2016-2020, excluding any supply interruptions that arise from adverse weather conditions such as storms.

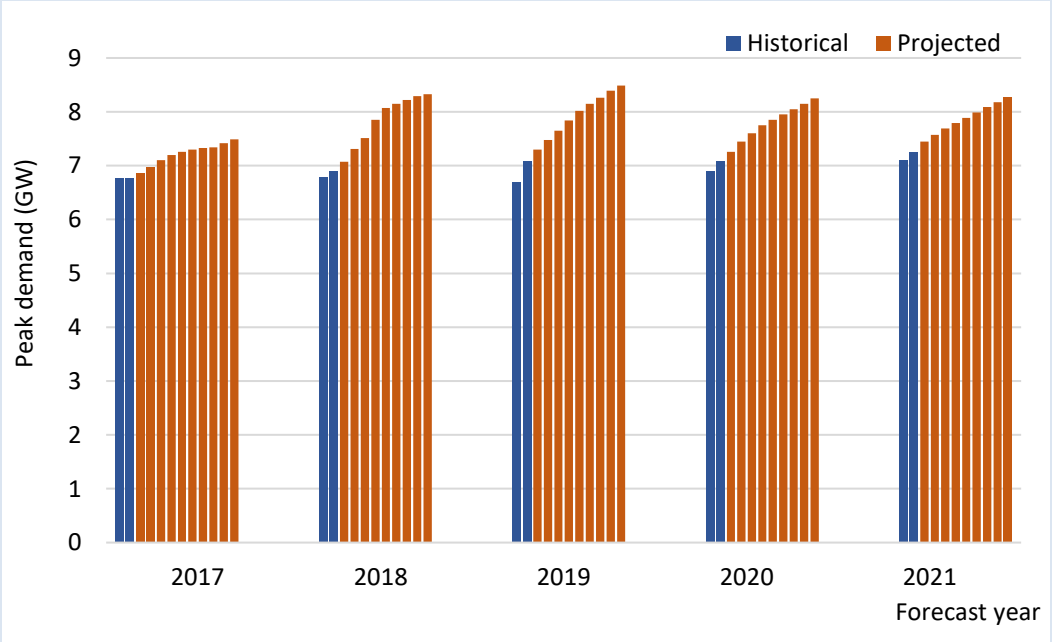
FIGURE A.1 AVERAGE NUMBER OF UNPLANNED MINUTES LOST PER CUSTOMER



Source: ESB Networks.

In order to ensure reliable electricity supply within the limits of loss of load expectation, a sufficient quantity of generation capacity must be available to meet the peak demand on the electricity system. EirGrid and the System Operator of Northern Ireland (SONI) produce annual forecasts of electricity demand as part of the Generation Capacity Statements. The forecasts for peak demand on the all-island electricity system of Ireland and Northern Ireland from 2017-2021 are shown in Figure A.2. In this figure, the blue bars indicate historical peak demand, while the orange bars indicate projected peak demand. In other words, in 2017, the two blue bars indicate the peak demand for 2015 and 2016, while the orange bars indicate the forecasts that were made in 2017 for peak demand in the years 2017-2026.

FIGURE A.2 HISTORICAL AND PROJECTED PEAK DEMAND 2017-2021 (GW)



Source: EirGrid and SONI.

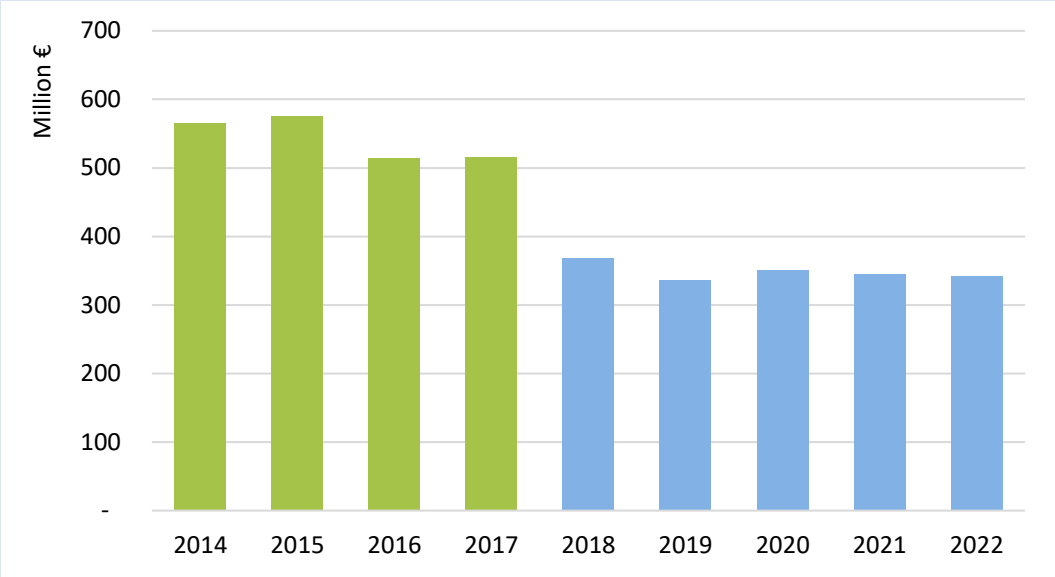
The impact of demand from datacentres can be seen from 2018; while the projected increase in peak demand over time was much shallower in 2017, from 2018 onwards much steeper year-on-year projections for growth in peak demand can be seen. In general, datacentre demand is growing rapidly year-on-year, but from a low base. Furthermore, there is uncertainty arising from the gap between (projected and actual) datacentre connections and the power drawn down by datacentres. In short, some datacentres are not yet using the full amount of power that they can physically take from the grid.

Regardless of any uncertainty arising from the demand from datacentres, Figure A.2 shows that the realised peak demand levels for the system as a whole have been broadly in line with those projected. For example, the 2017 projections for peak demand in 2019, 2020 and 2021 were 7.1, 7.2 and 7.26 GW respectively, while the final realised peak demand quantities were 7.09, 7.09 and 7.26 GW, respectively.

Given the demand projections, the Irish electricity market includes a specific mechanism for ensuring sufficient generation units are on the system to reliably meet demand at all times. This requires that there be enough generators on the system to cover the projected peak demand, plus an allowance to provide for contingencies. The vast majority of generation procured via this mechanism is conventional generation, rather than wind or solar, and so this mechanism ensures sufficient generation to meet peak demand regardless of whether wind or solar generation is available.

When the electricity market was launched in 2007, the capacity remuneration mechanism in place took the form of a price-based mechanism. This meant that a quantum of money was made available, and shared between all generators, on the basis of their availability to generate (independent of the actual generation they provided). The market was redesigned in 2018 and the price-based mechanism was replaced with a quantity-based mechanism. Under this new mechanism, capacity is procured via an auction process. The quantity of capacity to be procured arises from projections by the System Operators and the price is determined by the outcome of the auction. Figure A.3 shows the total monetary cost to consumers under the old and new capacity remuneration mechanisms on an annual basis, from 2014 to 2022.

FIGURE A.3 CONSUMER COSTS ARISING FROM THE OLD AND NEW CAPACITY MECHANISMS 2014-2022



Source: EirGrid and SONI.

Figure A.3 reveals that the move from the price-based to the quantity-based mechanism has resulted in the mechanism clearing at a lower price, resulting in financial savings for consumers. However, several of the units that were successful in the capacity auction post-2018 have failed to deliver in time for winter 2022/2023. Emergency procurement of new diesel generators to ensure sufficient supply has also failed. This means that a capacity shortfall is predicted for this winter, and as a result electricity supply interruptions, due to insufficient generation being available to meet demand at all times, is a live possibility. Interruptions are not inevitable; favourable wind generation, coupled with a responsive demand side, may prove sufficient to avoid that eventuality. However, the non-delivery of significant quantities of generation capacity that were awarded capacity contracts via the auction process is a concern, regardless of whether this leads to interruptions in supply. In particular, the low auction-clearing prices seen since 2018 may, in retrospect, have been unsustainably low.

There are several policy and regulatory implications arising from the above. The first is the need to consider whether the mechanisms in place to ensure only credible bids by generators can succeed in the auction are fit for purpose. Several of the successful projects that won contracts but did not deliver encountered challenges in the planning and regulatory systems. In the absence of robust mechanisms to vet bids and ensure that only credible bids gain contracts, there may be an argument for raising the barrier to participation in the capacity auction. High barriers to participation discourage competition and increase clearing prices, all else equal, but low barriers result in unsustainably low clearing prices and increase the probability of non-delivery of units. In particular, requiring that candidate participants in future capacity auctions have pre-cleared some of the planning and regulatory requirements may be advisable. Greater scrutiny of the credibility of accepted bids should also be considered, as should increasing the penalty for non-delivery.

Secondly, a review of the impact of planning and regulatory processes and decisions on the deliverability of energy projects would be a useful and informative exercise. As we move towards investment in offshore renewable energy projects, identifying and, where possible, addressing sources of delay in the planning and regulatory processes would be a fruitful exercise.

Finally, the suitability of the current capacity market design may be worth re-examining. In general, market redesign within a short period of time from the last redesign is not desirable, as frequent market redesign creates regulatory uncertainty and ultimately increases costs for consumers. However, in the context of the Ukrainian war, EU policymakers are considering redesign of the EU electricity market design. Capacity markets that deliver the required reliable supply, particularly in a high renewable future, must form part of any redesign, and so early analysis that underpins any design with sound research is advisable.

References

Leahy, E. and R.S. Tol (2011). 'An estimate of the value of lost load for Ireland', *Energy Policy*. 39(3): p. 1514-1520.
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This Box was prepared by Muireann Lynch and Wendy Disch.

Tackling inflation: repercussions of tightened monetary policy

Inflation has been above the ECB target of 2 per cent since July of 2021 and stood at 9.1 per cent as of August 2022. In an attempt to cool the pace of inflation, the European Central Bank has announced its plans to end net asset purchases and raise rates to 'neutral levels' – neither expansionary nor restrictive (Lagarde, 2022).[13] The ECB has raised key interest rates by 125 basis points this year and has indicated further hikes depending on the trajectory of inflation (Schnabel, 2022).[14] The rise in rates will likely depress investment activity and consumption across the euro area. In Ireland, increased rates will likely ease some of the recent pressure on Irish house prices.

The increase in interest rates has also raised concerns over sovereign debt management, especially as governments are now planning on increased spending in order to counter higher living costs after issuing significant amounts of new debt to respond to the pandemic. A tighter monetary policy environment may leave high-debt countries particularly vulnerable to higher debt burdens. In an attempt

13 Lagarde, C. (2022). 'Monetary policy in the euro area', 20 September. (Monetary policy in the euro area; europa.eu).
14 Schnabel I. (2022). https://www.ecb.europa.eu/press/inter/date/2022/html/ecb.in220922~0f586d9078.en.html.

to ease the effectiveness of monetary policy transmission across the euro area, the ECB announced the creation of the Transmission Protection Instrument (TPI). Effectively, the TPI allows purchases of sovereign paper in the event of a deterioration in financing conditions.[15] While the announcement of the TPI did temper Italian bond spreads slightly, Italian spreads from the German Bund in August were still 77 basis points above their level in January 2022.[16]

The humanitarian cost of the crisis

At present, over 7.4 million refugees have arrived across Europe.[17] The decision by the European Council to activate the Temporary Protection Directive on 4 March 2022 in reaction to the invasion of Ukraine has enabled refugees to avail of temporary protection in all EU Member States.[18] The protection measures allow refugees fleeing Ukraine access to suitable accommodation, access to social welfare and medical care, access to education for children and the right to access employment. While essential, these measures will not come without a significant cost to Member States. Early estimates suggest that the total cost of the influx to the EU could exceed €40 billion in 2022.[19] Just under 4.1 million refugees from Ukraine have been registered for Temporary Protection or similar national protection schemes across Europe. In Ireland, nearly 48,000 PPSNs had been issued to individuals from Ukraine arriving in Ireland as of the week ending 7 August 2022.[20] At the breakout of the war, the government had set aside up to €4 billion from its COVID-19 contingency fund for the associated costs of hosting refugees. By the end of June, €186 million of this fund was spent on accommodation and humanitarian assistance.[21] However, the extent of the war and the size of the influx could put further strain on the public finances.

Global factors: China's increasingly volatile outlook

Amidst the turmoil and devastation resulting from Russia's war in Ukraine, concerns have also been raised regarding tensions between the US and China. As the world's second largest economy, policies in China have had global consequences. Strict COVID-19 measures show no signs of easing as lockdowns continue in large parts of Chinese society.[22] The disruptions to China's

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15 European Central Bank (2022). The Transmission Protection Instrument, 21 July (The Transmission Protection Instrument (europa.eu)).

16 Italian spreads from the German Bund peaked 1 July 2022 at 2.28 before declining slightly to 2.24 in August. Greek spreads have also declined from their peak of 2.59 in May 2022 (Federal Reserve Bank of St. Louis).

17 Situation Ukraine Refugee Situation (unhcr.org).

18 Temporary Protection applies in all Member States, excluding Denmark. See more information here: https://www.citizensinformation.ie/en/moving_country/asylum_seekers_and_refugees/the_asylum_process_in_ireland/temporary_protection_directive.html.

19 Bold European Union action is needed to support Ukrainian refugees | Bruegel.

20 Arrivals from Ukraine in Ireland Series 5 - CSO - Central Statistics Office.

21 State Ukrainian response cost almost €200m in first three months of conflict – The Irish Times.

22 China's 'Zero COVID' Bind: No Easy Way Out Despite the Cost - The New York Times (nytimes.com).

manufacturing sector have motivated some tech firms to establish new production sites in other countries, but diversifying entire supply chains away from China will not be feasible in the short term.[23] While manufacturing woes and reoccurring lockdowns are enough on their own to warrant downward revisions in growth, China's economic outlook is also plagued by an increasingly unstable real estate sector. Heavily indebted developers are at risk of default, while home prices and construction have declined significantly.[24,25] The increased uncertainty of the property market coupled with slowing business activity and declining confidence have led to downward revisions to GDP growth in 2022 and 2023.[26] Additionally, increasing geopolitical tensions between China, the US and other countries such as Taiwan are likely to add to trade frictions and increase uncertainty.

Global factors: UK financial difficulties and slowdowns projected in Europe and US

The combined risks outlined in this section have all contributed to downward revisions of economic activity in most major economies. In the US, restrictive monetary policy and a contraction in GDP in Q2 2022 will contribute to slowed GDP growth in 2022 and 2023.[27]

The highly adverse market reaction to the UK's fiscal statement on 23 September last has plunged the British economy into crisis mode. Concerns about the fiscal sustainability of the plan allied to the lack of the usual scrutiny by the Office of Budget Responsibility (OBR) lead to a sharp deterioration in the value of sterling particularly vis-à-vis the dollar. Similarly yields on UK sovereign bonds rose sharply with the market factoring in sizeable increases in market interest rates. This gave rise to difficulties in certain sections of the UK pension fund sector resulting in an emergency intervention by the Bank of England on 28 September. These developments come on top of more long-standing issues confronting the UK economy. A recession had already been expected in Q3 2022 through Q1 2023 as inflation was above the euro area rate, investment activity remains weak since the pandemic, and import costs from Europe remain elevated as a result of trade barriers set by Brexit.[28] The risk of overturning the Northern Ireland Protocol and entering a trade war would further inflate trading costs for both the UK and Europe.

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23 Tech Companies Slowly Shift Production Away From China - The New York Times (nytimes.com).

24 Beijing's Debts Come Due: How a Burst Real-Estate Bubble Threatens China's Economy (foreignaffairs.com).

25 In August, investment declined 13.8 per cent per annum (China's property woes deepen in Aug as prices, sales and investment drop | Reuters).

26 The Asian Development Bank revised GDP growth in China for 2022 down from 5.0 per cent to 3.3 per cent. Growth for 2023 is forecast at 4.5 per cent (Rate hikes, Ukraine war, China woes dim Asia growth outlook -ADB | Reuters).

27 GDP forecast to increase 1.9 per cent and 1.1 per cent in 2022 and 2023 (FocusEconomics, 2022, August 30; FocusEconomics Consensus Forecast: Major Economies September 2022).

28 GDP growth in the UK is projected to be 3.5 per cent in 2022 and 0.5 per cent in 2023 (National Institute of Economic and Social Research, August 2022; National Institute UK Economic Outlook: A Risky Present. Summer 2022).

While the Irish economy has diversified away significantly from the UK over the past 30 years, a number of certain sectors of the domestic economy continue to export to the UK market. Consequently, the possibility of a significant recession in the UK will have adverse implications for certain areas of the agri-food sector, tourism and some financial services. Overall, while the Irish financial sector is in a much more stable position than it was in 2007 and is less integrated with the UK sector than before, it is very difficult to fully assess the contagion effects of a possible full blown financial crisis in the UK.

In the euro area, growth accelerated in Q2 2022 although subdued confidence, supply chain constraints and higher prices are likely to restrict growth in the near-term, with GDP growth expected to slow from 3.1 per cent in 2022 to 0.9 per cent in 2023.[29] Economic activity across Member States will largely vary as energy imports from Russia and energy prices fluctuate. For Germany, the cut-off of Russian gas deliveries has had a particularly negative impact on the economy;[30] a recession in winter and elevated inflation through 2023 are now anticipated for Europe's largest economy.[31]

Altogether, we anticipate that these slowdowns in the global economy will result in a moderation of Irish trade activity. In the event that slowdowns are more pronounced than current forecasts suggest, this will likely lead to additional downward revisions in domestic economic activity.

29 ECB (2022). Macroeconomic projections, 8 September. https://www.ecb.europa.eu/pub/projections/html/ecb.projections202209_ecbstaff~3eafaaee1a.en.html.

30 https://www.lemonde.fr/en/economy/article/2022/09/22/germany-finally-nationalizes-energy-company-uniper_5997850_19.html.

31 https://www.irishtimes.com/business/2022/09/13/germany-faces-winter-recession-as-gas-prices-and-inflation-bite/.

The Domestic Economy

OUTPUT

Key Points

- *Growth rate of economy set to slow in 2022 and 2023 vis-à-vis that in 2021.*
- *Modified total domestic demand in forecast to increase by 7.5 and 2.5 per cent in 2022 and 2023 respectively.*
- *Persistent growth in inflation and uncertainty due to the war in Ukraine will reduce the pace of domestic growth in 2023 compared with 2022.*

During the first half of 2022 the Irish economy experienced strong growth across all the major channels of consumption, investment and trade. While trade and investment are set to perform robustly for the year as a whole, it is evident that as we move through the year, the persistent increase in inflation has impacted the pace of consumption growth. Consequently, the contribution to growth from this source has diminished through 2022.

Modified investment, in particular, has performed quite strongly in 2022 with new housing completions and acquisitions of machinery and equipment witnessing significant increases. Some of the growth in completions is likely to reflect a kickback following the easing of public health restrictions relative to 2021, which resulted in a significant increase in commencements in that year. Increased rates of inflation along with general uncertainty look set to adversely impact commencements in 2022 and hence completion numbers in 2023.

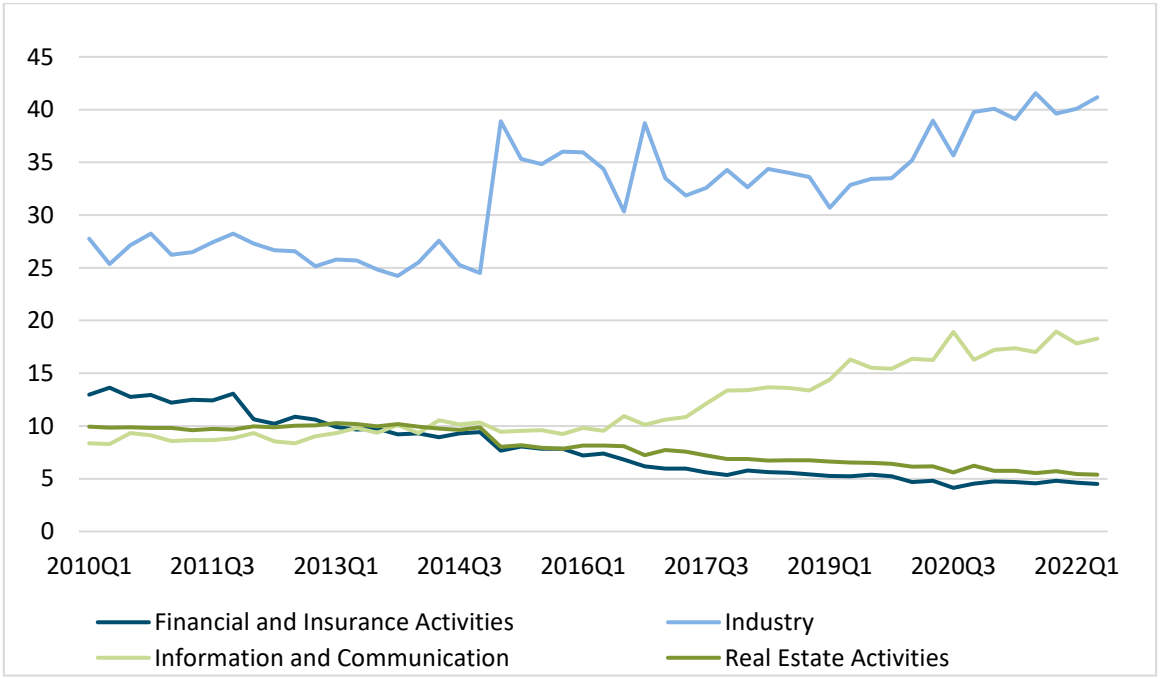
Overall, in 2022 GDP is expected to grow by 8.1 per cent, while modified domestic demand (MDD), the more representative indicator of domestic economic activity, is forecast to increase by 7.5 per cent.

As a number of indicators suggest that many of our key trading partners are likely to experience slower economic growth (if not full blown recessions) in 2023, we do not expect the same contribution to growth from exports next year. As consumption growth is expected to moderate also next year due to the persistence in elevated rates of inflation, we also expect a lower rate of import growth in 2023 than in 2022. Investment overall will grow by over 7 per cent next year, however this masks the differences between modified and non-modified investment; in 2022, for example, modified investment is expected to grow substantially by 23.4 per cent, whereas the overall level of investment is expected to increase by just 3.1 per cent. This reflects a significant fall in non-modified investment in the

present year in the 'other software' category. In 2023 we expect a more moderate rate of modified investment growth of 4.7 per cent. All of this means that GDP is expected to grow by 4.4 per cent in 2023 with modified domestic demand growing by 2.5 per cent.

From a sectoral output perspective, it is interesting to assess the relative contributions of different areas of the domestic economy to growth post the great financial crisis (GFC). Figure 1 plots the percentage of gross value added of the main contributors to growth over the period 2010-2022.

FIGURE 1 PERCENTAGE (%) OF GROSS VALUE ADDED OF SELECT SECTORS OF THE IRISH ECONOMY FROM Q1 2010 – Q2 2022



Source: Central Statistics Office and authors' calculations.

The significant increase in the relevance of the Industry category is evident since 2015, when a large amount of intellectual property (IP) was moved into the ownership of the resident affiliates of multinationals operating in the Irish jurisdiction. However, even allowing for this level change, it is clear that the Industry category has increased in importance since then, accounting for over 40 per cent of value added in the Irish economy.[32] The other significant change in the contribution to growth is from the ICT sector which back in 2010 accounted for just over 8 per cent of value added. It now accounts for over 18 per cent. The increasing importance of both the ICT and the pharmaceutical sectors to the Irish

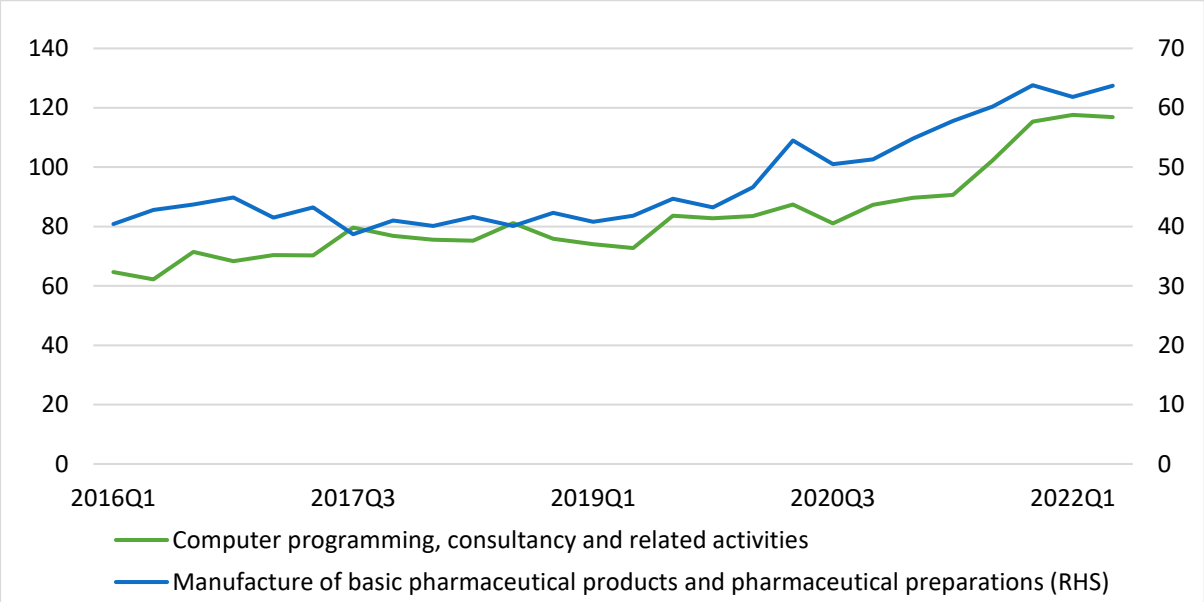
32 It is not possible to break out all the contributions within the Industry category due to data confidentiality reasons; however the pharmaceutical sector is a major source of growth with this category.

economy does highlight the potential vulnerabilities of the domestic economy to significant shifts in either sector.

What is also apparent over the period is the continuing decline in relative importance of those sectors (Real Estate and Financial and Insurance Activities), which were most associated with the housing market bubble prior to 2007.

The increasing importance of both the ICT and the pharmaceutical sectors to the Irish economy is further underscored by the strong increase in employment in both sectors in recent years. Figure 2 plots the numbers employed in certain NACE categories related to these sectors between 2008 and 2022.

FIGURE 2 NUMBERS (000s) EMPLOYED IN CERTAIN NACE SECTORS OF THE IRISH ECONOMY FROM Q1 2008 – Q2 2022



Source: Central Statistics Office and authors' calculations.

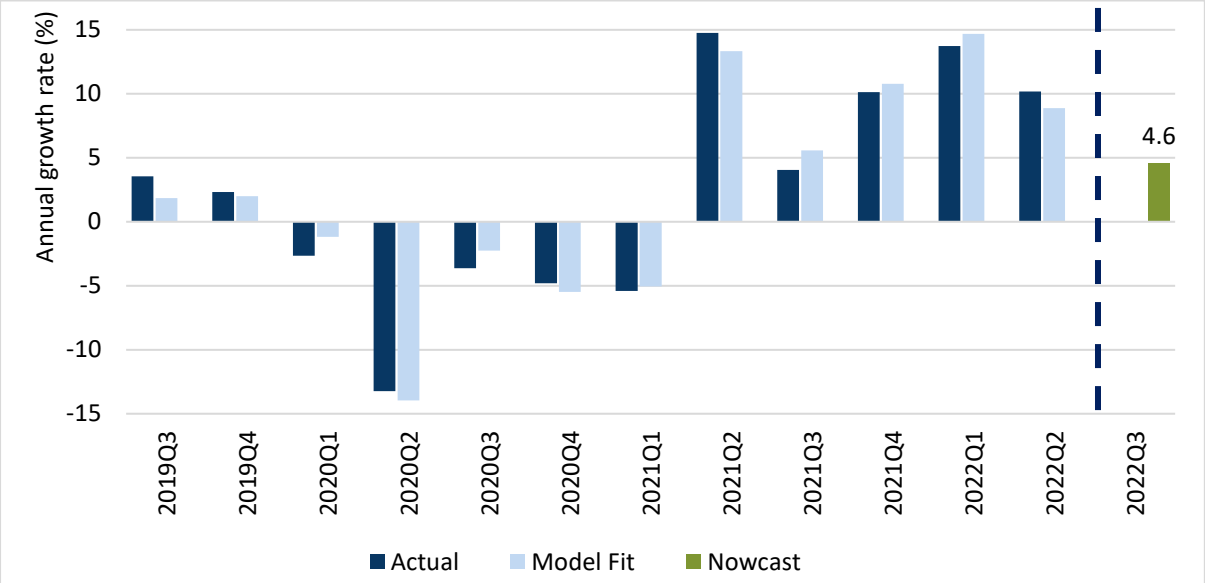
The significant increase in employment in both categories since 2019 is evident. This highlights that a significant portion of the recent growth performance of the Irish economy is due to these sectors and, hence, the potential vulnerabilities of the domestic economy to a significant correction in either sector.

The ESRI Nowcasting model (Egan, 2021),[33] currently employed to support the regular forecasting exercise in the *Commentary*, indicates that MDD is expected to

[33] Egan P. (2022). 'Nowcasting domestic demand using a dynamic factor model: the case of Ireland', *Applied Economics Letters*.

grow by 4.6 per cent in Q3 2022 on an annual basis. Figure 3 shows the performance of the Nowcasting model compared to actual growth in MDD since Q3 2020. The significant rebound in MDD in Q1 2022 and stronger than anticipated modified investment in the first half of the year have contributed to an upward revision in our forecast for MDD in 2022. We now expect modified domestic demand to increase by 7.5 per cent in 2022 and 2.5 per cent in 2023.

FIGURE 3 NOWCAST OF MODIFIED DOMESTIC DEMAND FROM Q3 2019 – Q3 2022



Source: Central Statistics Office and authors' calculations.
Note: Nowcast figures for Q3 2022 include data available through 15 September 2022. Unemployment data for the Nowcast now reflect COVID-adjusted figures for the period March 2020-February 2022. Excluding COVID-adjusted unemployment rates contributed to an underestimate of our MDD figure for Q2 2022 in the Summer *Commentary*.

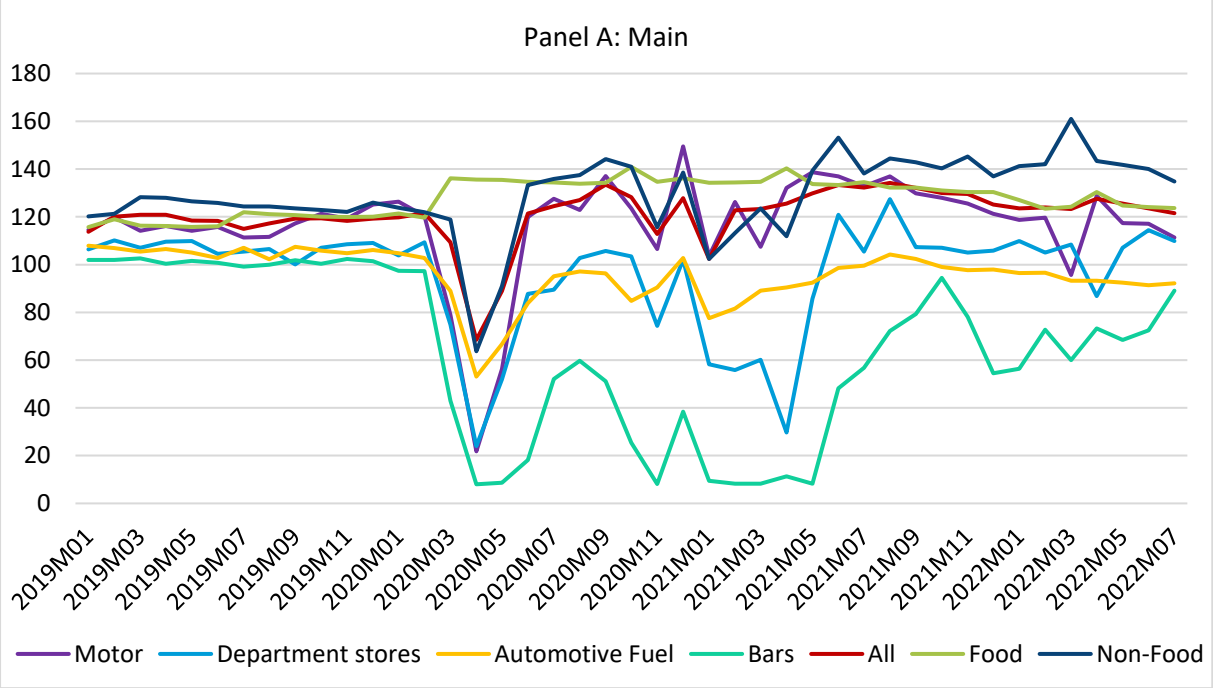
DEMAND

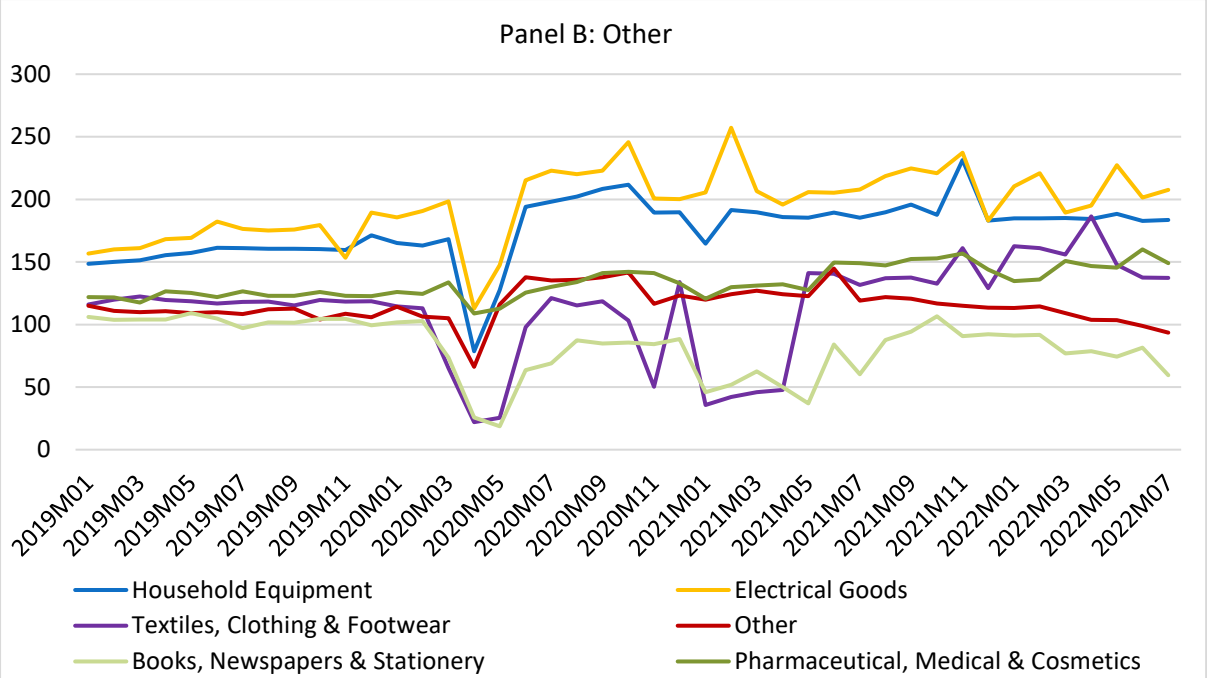
Key Points

- *Spending on retail sales activity fell in the second quarter of 2022 relative to Q2 2021 but overall consumption continued to rise on a year-on-year basis.*
- *Consumer sentiment is declining due to the continued inflationary pressures and other uncertainties.*
- *We are assuming a continued decline in the savings ratio in the coming months as many households use savings to absorb the higher cost of living.*
- *While we are revising down our forecast, consumption is still expected to grow by 3.2 per cent for 2022.*

Household expenditure is closely associated with developments in retail sales. Figure 4 shows these data in terms of both value and volume. As shown, the volume of retail sales overall has declined annually by 8.2 per cent in July 2022. Motor retail sales have decreased by 16.1 per cent, food has decreased by 8 per cent, non-food has decreased by 2.4 per cent and fuel has decreased by 7.4 per cent. While there is a possibility that developments in retail sales are impacted by the underlying surge in demand that occurred in Q2 2021 when the COVID-19 measures were eased, it is also a distinct possibility that the higher cost of living is resulting in lower consumption levels in certain areas.

FIGURE 4 RETAIL SALES INDEX: VOLUMES

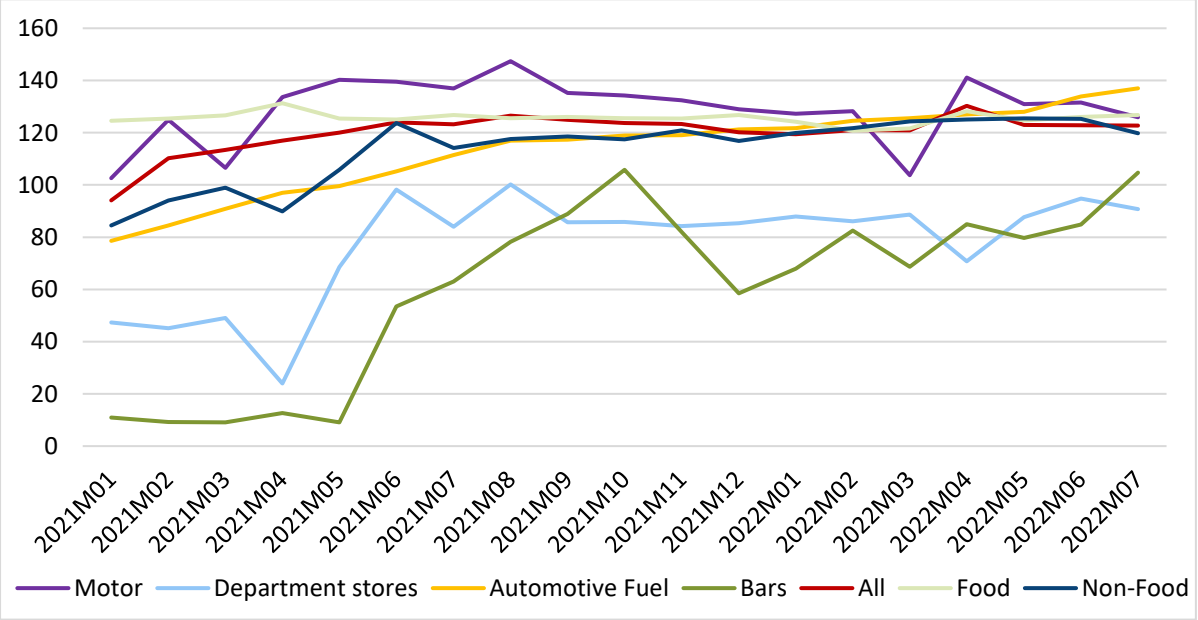




Source: Central Statistics Office.

The price effects can be seen when one examines the retail sales data in value terms, as illustrated in Figure 5. This shows that although the volume of retail sales has stagnated or decreased across many of the main headings since the beginning of 2021, the value of retail sales has increased. The clearest example of this trend is illustrated by automotive fuel sales.

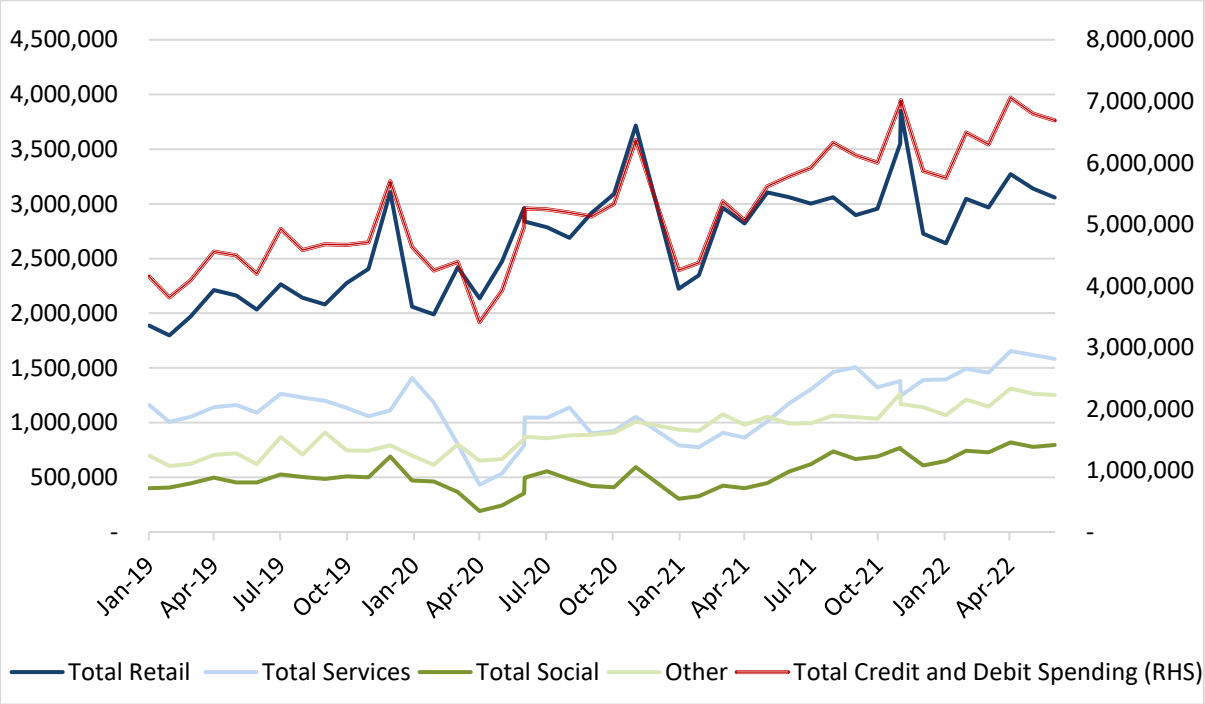
FIGURE 5 RETAIL SALES INDEX: VALUE



Source: Central Statistics Office.

Total expenditure on personal credit and debit cards[34] has continued to increase, with an annual growth rate of 13 per cent in July 2022. These data are not adjusted for inflation or seasonal trends. They are indicative of economic developments of the past two years, with large dips during periods with public health restrictions and more recently with a large uptick in expenditure as public health guidelines were eased and prices started to increase. However, total credit and debit spending has decreased in the last couple of months (Figure 6).

FIGURE 6 TOTAL EXPENDITURE FROM PERSONAL CREDIT CARD + DEBIT CARD DATA (NOMINAL €, NON-SEASONALLY ADJUSTED)



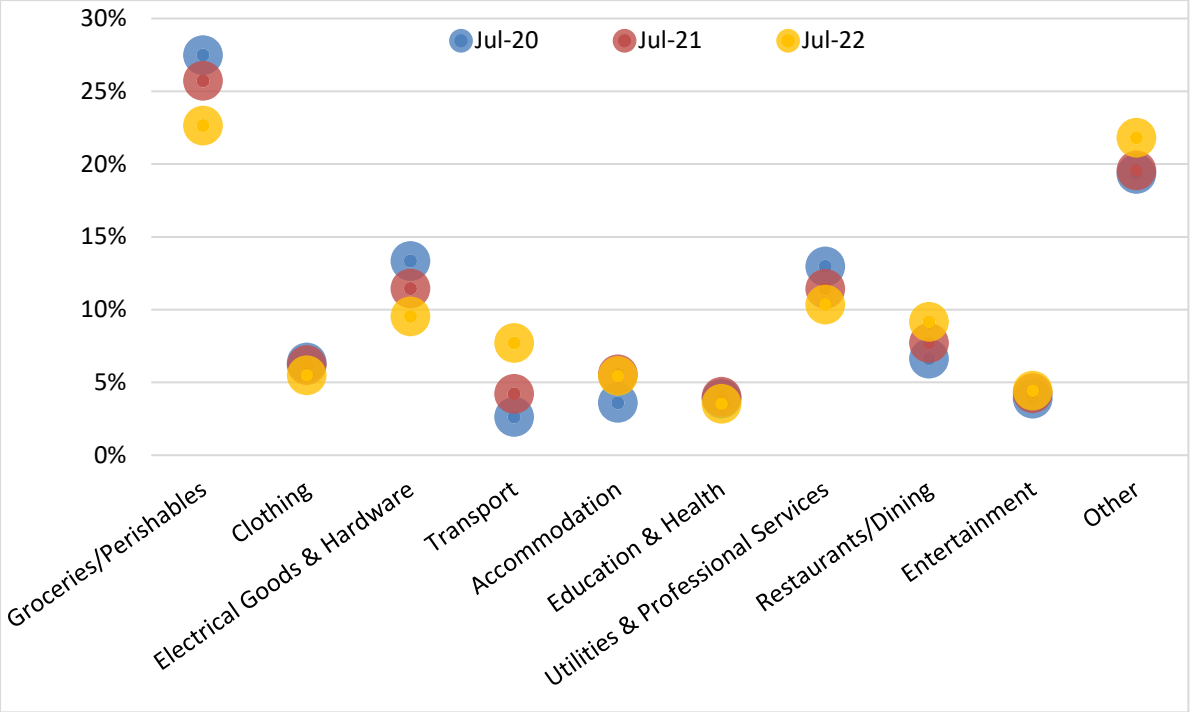
Source: Central Bank of Ireland.

It is clear that the current inflationary environment is having an impact on consumption, particularly with large rises in energy and fuel prices. Figure 7 presents the share of expenditure for different categories for July 2020, July 2021, and July 2022. The share of certain items has dropped considerably, with the share of some items dropping below rates seen during the pandemic (i.e. July 2020). This was the case for groceries/perishables, electrical goods and hardware, and professional services. It is likely that the lower expenditure shares for these items are due to a change in prices and demand, with more money being allocated to transport, restaurants and dining, and 'other' category in 2022. The increased share of expenditure on transport is, once again, indicative of the energy supply

[34] These data do not include cash expenditure and hence are not reflective of the overall expenditure in the economy.

shock the economy is currently experiencing as well as the boost in travel following the lifting of COVID-related restrictions.

FIGURE 7 SHARE OF EXPENDITURE FROM CREDIT CARD (PERSONAL) + DEBIT CARD DATA IN 2019, 2020, 2021, 2022 (NOMINAL, NON-SEASONALLY ADJUSTED)

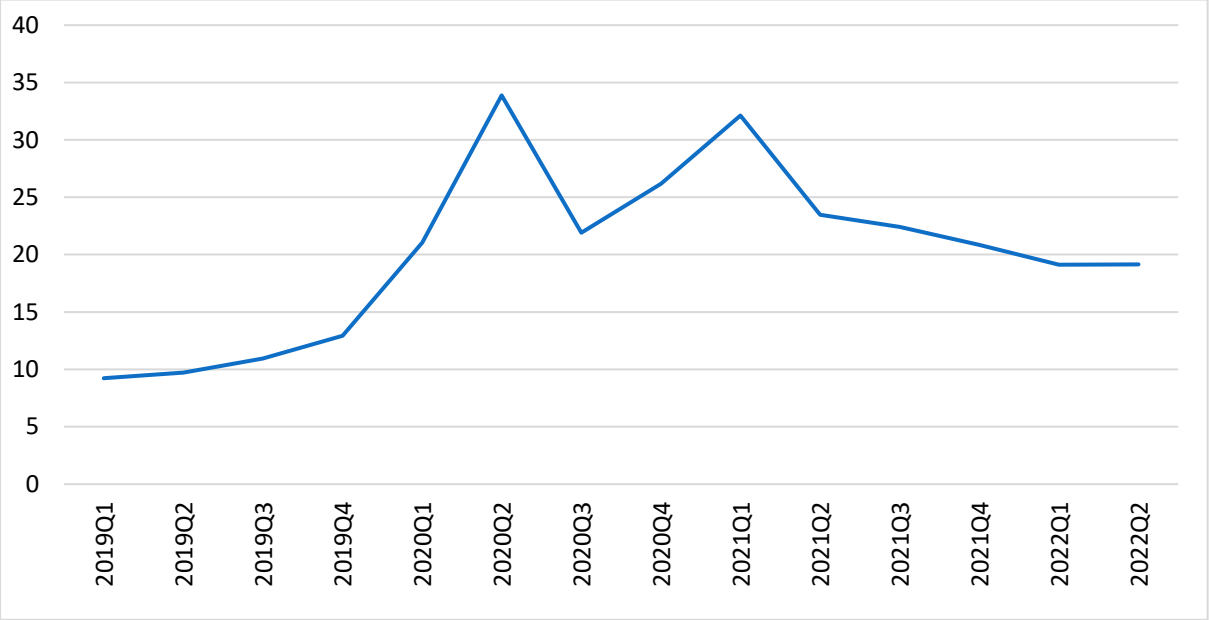


Source: Central Bank of Ireland.

Given the recent increases in the cost of living, the development of the savings ratio will be important in seeing how consumption behaviour has changed throughout the year and how it will change in the coming months. The savings ratio increased significantly during the pandemic as consumption was greatly reduced due to public health restrictions. However, with the strong rebound in consumption upon the re-opening of the economy, the savings ratio decreased throughout the latter stages of 2020. In 2021 with the imposition of another lockdown early in the year, the ratio peaked again in Q1 2021 (Figure 8).

The savings ratio has declined gradually through the latter half of 2021 and the first half of 2022. It is likely that certain households may begin to save on a precautionary basis due to the cost of living increases while other households (those facing immediate financial strain) may use some of their savings to withstand the increased cost of living. On balance, given the elevation of the savings ratio relative to historical norms as well as to European peers, we are assuming that the savings ratio will continue to decrease towards the end of 2022.

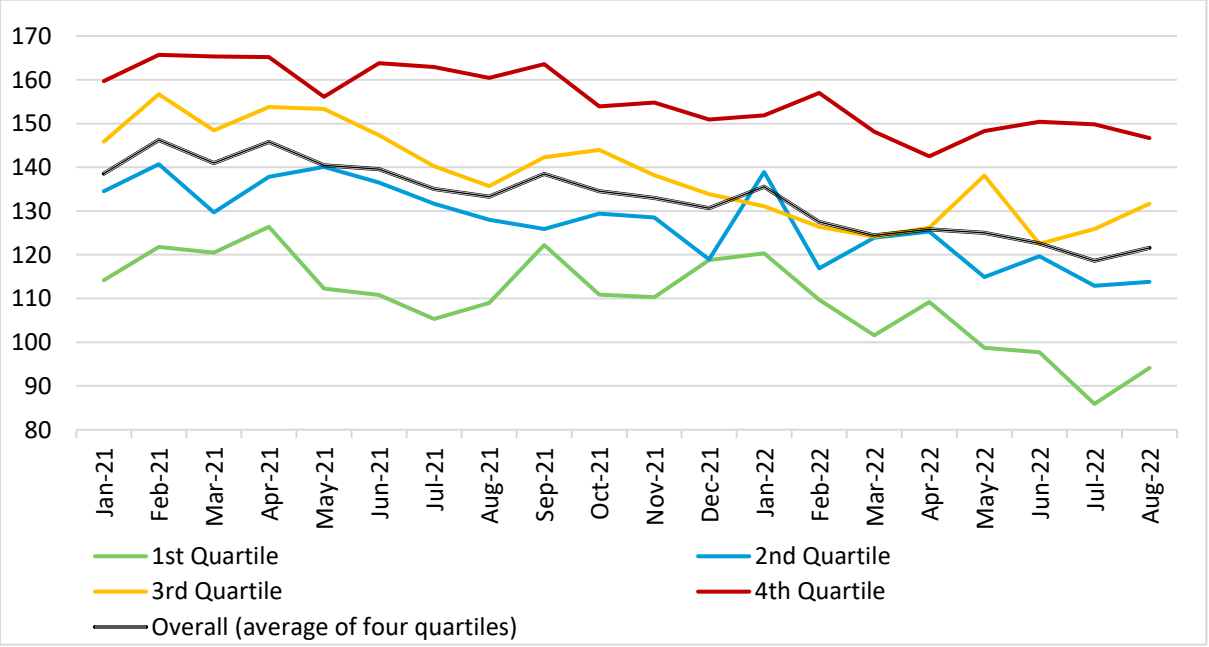
FIGURE 8 SAVING RATIO (SEASONALLY-ADJUSTED) – IRELAND



Source: Central Statistics Office.

It is clear that elevated rates of inflation will affect those with lower incomes more. To illustrate this point, responses from Irish consumers on how likely it is that they will save any money in the next 12 months are shown for each quartile of the income distribution, as well as the overall population, in Figure 9.

FIGURE 9 SAVINGS OVER THE NEXT 12 MONTHS BY INCOME GROUPS (INDEX JAN 2020 = 100)



Source: European Commission.

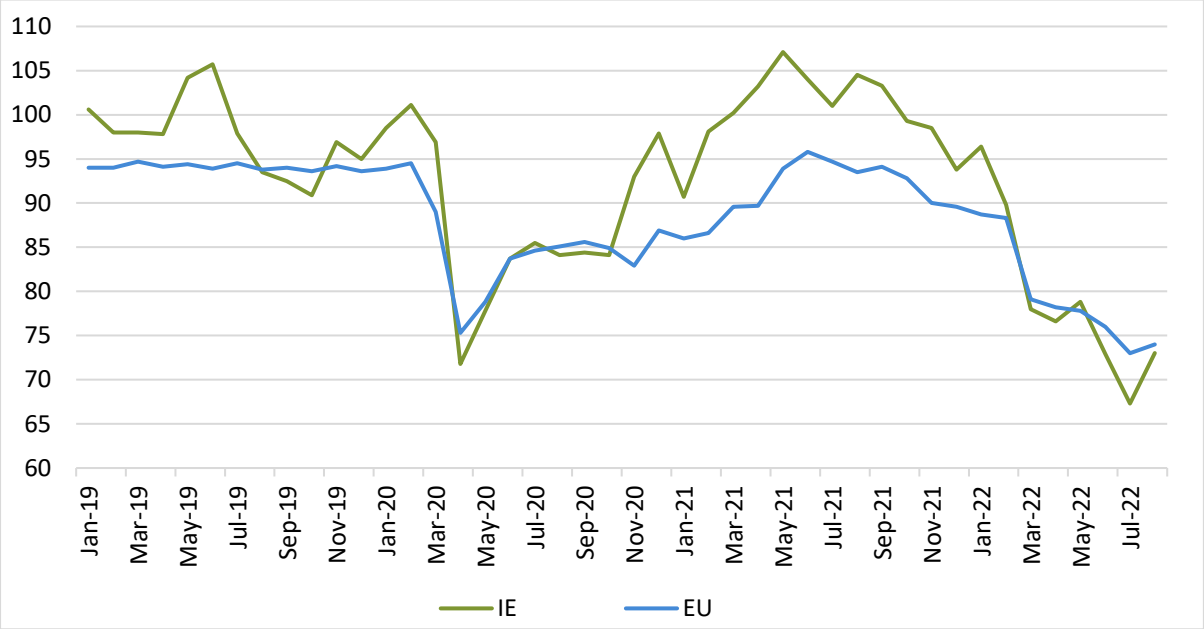
From Figure 9 it can be observed that, as one moves up the income distribution, the likelihood of saving increases. It is clear that those in the 4th quartile have a greater ability to absorb economic shocks on that basis. In the months after the 2021 lockdown, those in the bottom three quartiles of the income distribution expected their ability to save to drop by a much greater degree than those in the 4th quartile. With respect to more recent events, it seems as though those in the top two quartiles planned to increase their savings as there was an increase in the reported likelihood of savings for these groups. The bottom two quartiles, however, seem to be more pessimistic about their savings intentions. This is particularly evident for those in the 1st quartile of the income distribution.

Therefore, while some households will use their savings to absorb increased energy costs, households at the lower end of the income distribution will likely face considerable challenges in the coming winter months. Another reason for these stronger effects for those at lower quartiles of the income distribution is the nature of the goods that are undergoing price increases. Those at the lower end of the income distribution spend larger proportions of their income on items such as energy and food, and so inflation of these goods will have a larger effect on those groups compared to those at the higher end of the income distribution. This is discussed further in the Inflation Outlook. It must be noted that the considerable provision of energy-specific policy supports announced in the recent budget are likely to cushion the impact for low income households (Doorley et al., 2022).[35]

Consumer confidence has also declined throughout the year. This is, of course, not Ireland-specific, with global uncertainty due to inflationary pressures and geopolitical uncertainties, both of which stem from the Russian invasion of Ukraine. As shown in Figure 10, consumer confidence dipped during the pandemic and subsequently recovered to pre-pandemic levels, before declining significantly as a result of the uncertainties mentioned above.

[35] Doorley, K., B. Roantree and M. Regan (2022). *Assessment of the Budget 2022*, ERSI Budget Review Conference.

FIGURE 10 CONSUMER CONFIDENCE INDICATOR



Source: European Commission.

Consumption forecasts

Consumption continued to grow in Q2 2022, with growth of 5.2 per cent year-on-year. While this growth has slowed in comparison to Q1 2022, this is likely due to base effects from the COVID-19 lockdown in Q1 2021. Nevertheless, risks associated with global uncertainty and cost of living increases discussed previously are likely to impact the trajectory of consumption growth.

Despite these current economic uncertainties and forthcoming challenges, consumption is forecast to grow by 3.2 per cent in 2022, while consumption growth of 2.5 per cent is expected in 2023. Although the savings ratio has declined this year, it remains at an elevated rate historically. This will enable many higher-income households to withstand the increased cost of living by using a proportion of their savings. We expect the savings ratio to decline next year. However, it is now likely that inflation in 2023 will also be at a significant rate; we now forecast a rate of 6.8 per cent in 2023, which is an upward revision from what we had forecast in the Summer *Commentary*.

TRADED SECTOR

Key Points

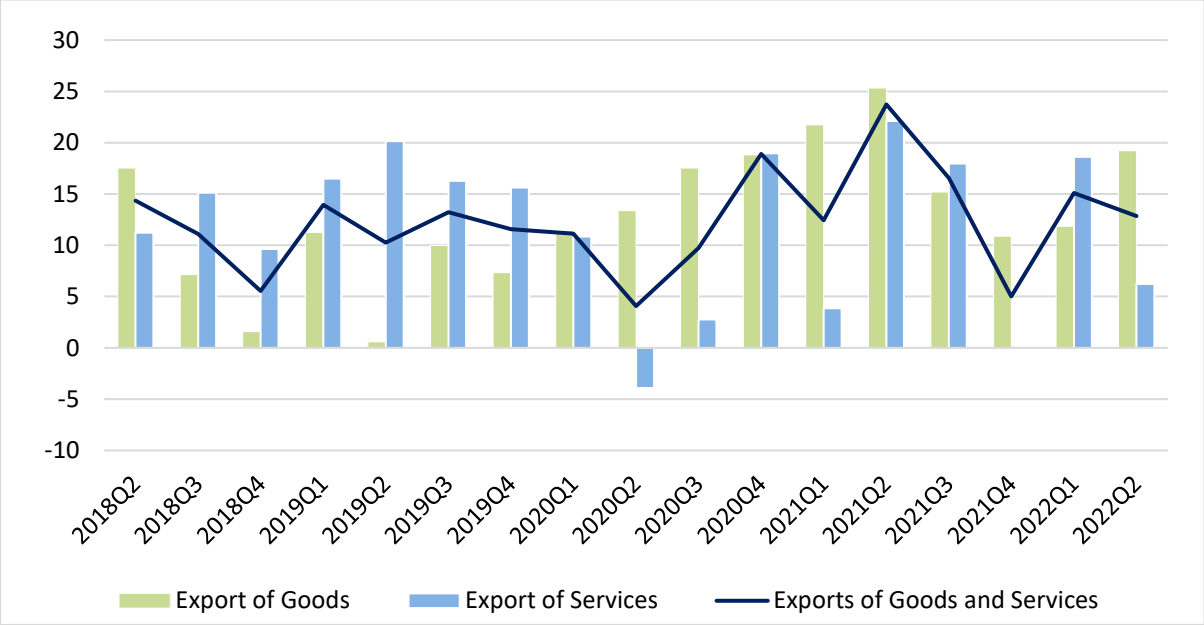
- *Irish net exports were €52.0 billion in Q1 2022.*
- *Exports grew by 3.0 per cent in Q2 2022 compared to Q1 2022 on a seasonally-adjusted basis.*
- *Seasonally-adjusted imports continued to increase in Q2 2022 (+16.8 per cent year-on-year and +5.5 per cent quarter-on-quarter) as a result of strong investment and consumption activity.*
- *Significant export growth is expected to continue in 2022 due to robust activity in the ICT and pharmaceutical sectors before moderating in 2023.*

Import and Export Activity

The robust performance of the export sector contributed significantly to Irish economic growth throughout the pandemic. Export growth has remained strong in the first half of 2022. In Q2 2022, exports of goods and services increased 12.8 per cent on an annual basis and 3.0 per cent on a quarterly basis. Imports have also rebounded significantly from 2021. Overall, the joint impact of these changes was to increase Irish net exports to €52.0 billion in Q2 2022.

Figure 11 shows the annual growth rate in Irish exports by quarter. In Q2 2022, export growth was driven primarily by a surge in goods exports, which grew 19.2 per cent compared to Q2 2021. Service exports are also strong on an annual basis, growing 6.2 per cent. Service exports declined slightly on a quarterly basis in Q2 2022 (-3.8 per cent) from their significant rebound in Q1 2022.

FIGURE 11 SEASONALLY-ADJUSTED EXPORTS (VOLUME GROWTH % YEAR-ON-YEAR)

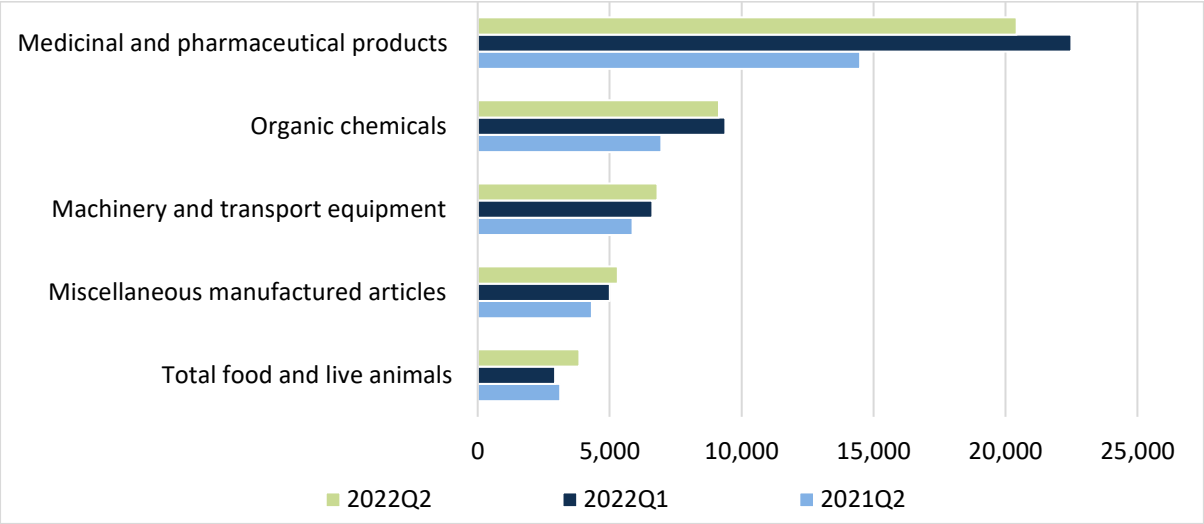


Source: Central Statistics Office, Quarterly National Accounts.

Goods exports in Q2 2022 grew on an annual basis across all major commodity groups. The 'chemicals and related products' commodity group is the largest contributor to the value of goods exports, accounting for nearly two-thirds (€34.1 billion) of total goods exports in Q2 2022. The two most significant commodities in this group, medicinal/pharmaceutical products and organic chemicals, grew 40.9 per cent and 31.4 per cent, respectively, on an annual basis (Figure 12). That these items continued to grow in the face of an international downturn highlights the insulated nature of these sectors and their lack of a co-movement with global events.

Exports of machinery and transport equipment also grew 16.1 per cent per annum and 2.8 per cent per quarter. Exports of miscellaneous manufactured articles increased on both an annual and quarterly basis (+22.6 per cent and +6.0 per cent). The continued growth in exports across a variety of commodity groups in the first half of 2022 reflects the recovery experienced across the economy as all sectors benefitted from the lifting of COVID-related restrictions in the first quarter of the year.

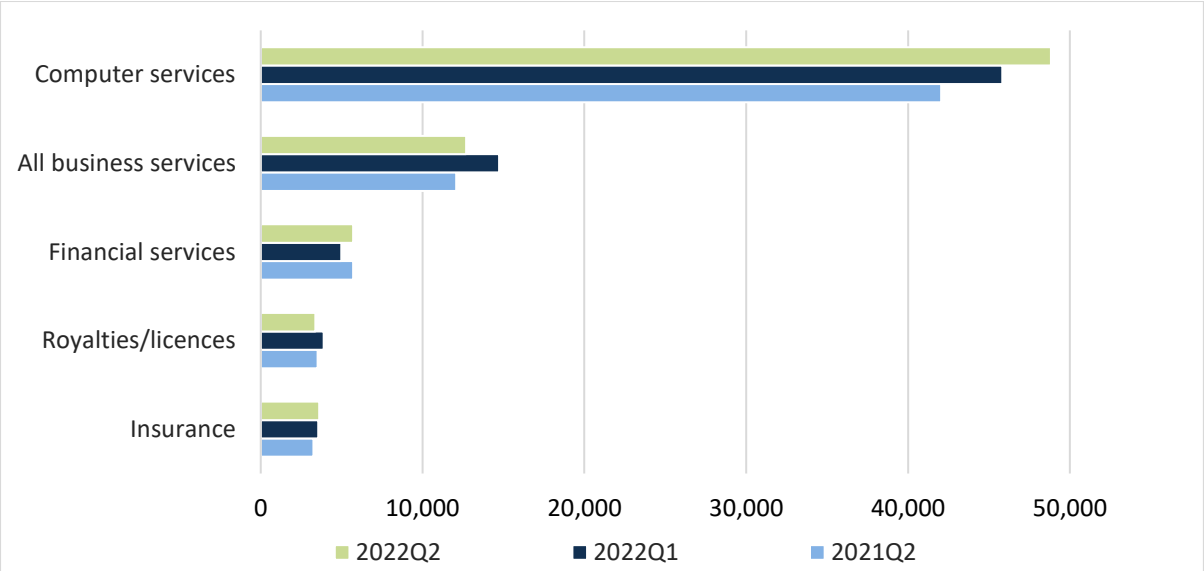
FIGURE 12 GOODS EXPORTS BY COMMODITY GROUP (VALUE, € MILLION)



Source: Central Statistics Office.

Many components of services exports continued to grow in Q2 2022 (Figure 13). Computer services, which account for nearly 60 per cent of total service exports (€48.8 billion), increased on an annual and quarterly basis (+16.1 per cent and +6.6 per cent). Insurance services and business services also grew considerably on an annual basis (+10.5 per cent and +5.1 per cent, respectively). From Q1 2022, royalties and licenses and business services declined (-13.0 per cent and -13.8 per cent) while exports of financial services rebounded (+14.7 per cent).

FIGURE 13 SERVICE EXPORTS BY COMPONENT (VALUE, € MILLION)

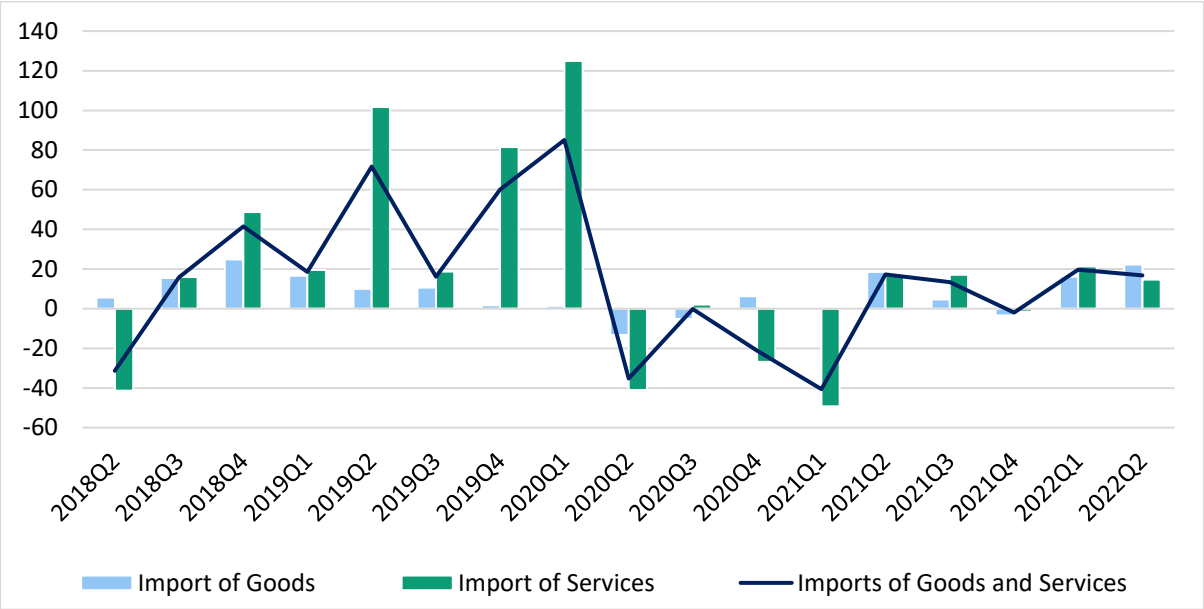


Source: Central Statistics Office, Current Account: Merchandise and Services.

The volume of imports continued to increase in Q2 2022, alongside a recovery in consumption and increased demand for goods and services.

Imports of goods and services increased 16.8 per cent from Q2 2021 to Q2 2022, with imports of goods increasing 22.3 per cent and imports of services increasing 14.7 per cent over this period (Figure 14). From Q1 2022, imports of goods and services increased 5.5 per cent; imports of goods increased 8.4 per cent over this period, while imports of services increased 4.2 per cent.

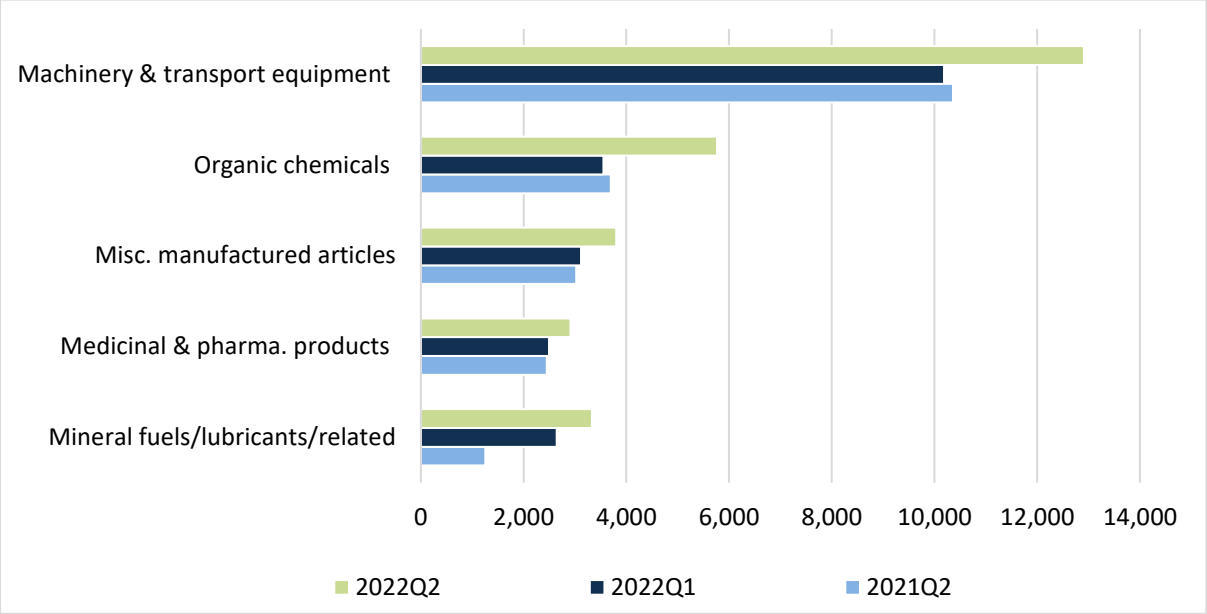
FIGURE 14 SEASONALLY-ADJUSTED IMPORTS (VOLUME, YEAR-ON-YEAR %)



Source: Central Statistics Office.

Goods imports increased across all major commodity groups in Q2 2022 on both a quarterly and annual basis (Figure 15). Machinery and transport equipment, which accounts for the largest share of goods imports (34.6 per cent; €12.9 billion), increased by 24.6 per cent annually and 26.7 per cent quarterly. Organic chemicals accounted for 15 per cent of total goods imports in Q2 2022 and increased 55.8 per cent from Q1 2021 and 62.1 per cent from Q1 2022. Miscellaneous manufactured articles also grew over both periods (+25.8 per cent year-on-year and +21.9 per cent quarter-on-quarter) as did medicinal and pharmaceutical products (+19.0 per cent year-on-year and +16.9 per cent quarter-on-quarter). The increase in imports of large manufacturing items mirrors the significant increase in investment activity experienced in the second quarter of 2022.

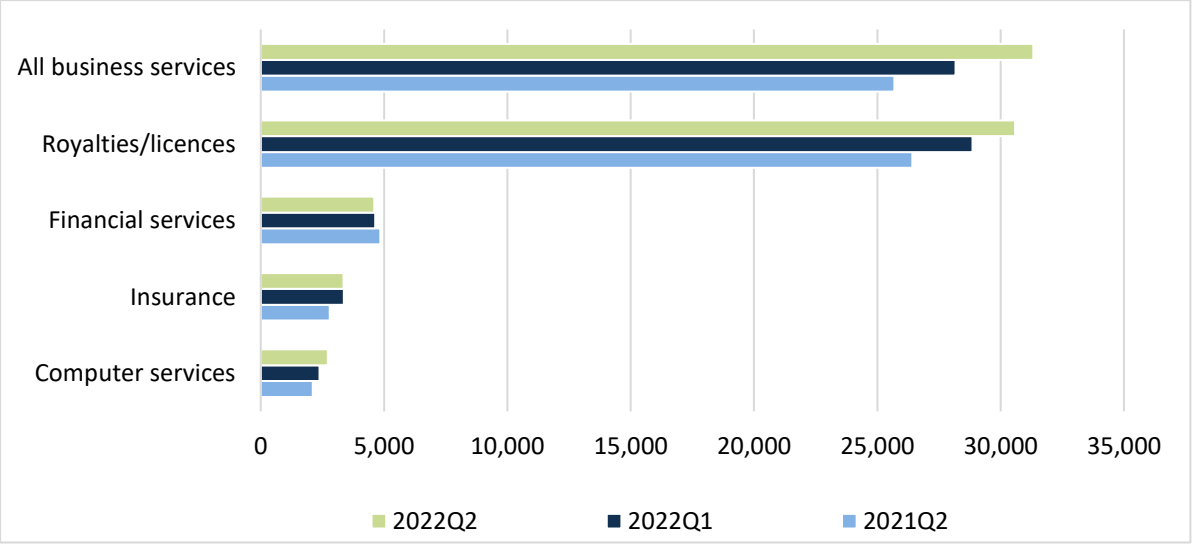
FIGURE 15 GOODS IMPORTS BY COMMODITY GROUP (VALUE, € MILLION)



Source: Central Statistics Office.

Service imports increased overall both on an annual and quarterly basis, as shown in Figure 16. This growth was driven in large part by imports of royalties and licenses which accounted for 38.9 per cent of total services in Q2 2022 (€30.6 billion) and grew 15.8 per cent per annum and 6.0 per cent per quarter. Business services (worth €31.3 billion of total service imports), also increased on an annual and quarterly basis (+21.9 per cent and +11.2 per cent). Imports related to financial services were the only major group to decline in Q2 2022 (-5.0 per cent from Q2 2021 and -0.8 per cent from Q1 2022).

FIGURE 16 SERVICE IMPORTS BY COMMODITY GROUP (VALUE, € MILLION)

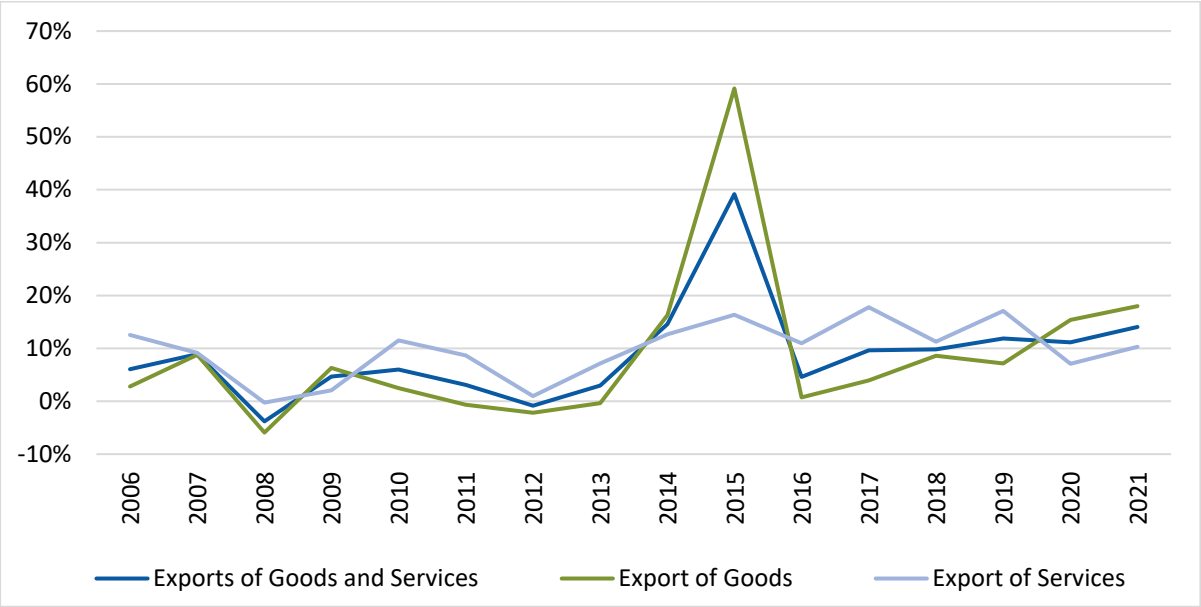


Source: Central Statistics Office.

Trends in the Irish Export Sector

Growth in exports continues to be a defining feature of the Irish economy in recent years. Figure 17 shows the growth of exports on an annual basis since 2006. While exports of goods and services experienced record growth in 2015 (+39.2 per cent), largely associated with the movement of intellectual property, exports have been increasing steadily since 2013. Even in 2020, when exports declined across most major economies,[36] Irish exports registered a growth rate of 11.2 per cent.

FIGURE 17 ANNUAL EXPORT GROWTH (VALUE, % YEAR-ON-YEAR)



Source: Central Statistics Office, National Accounts.

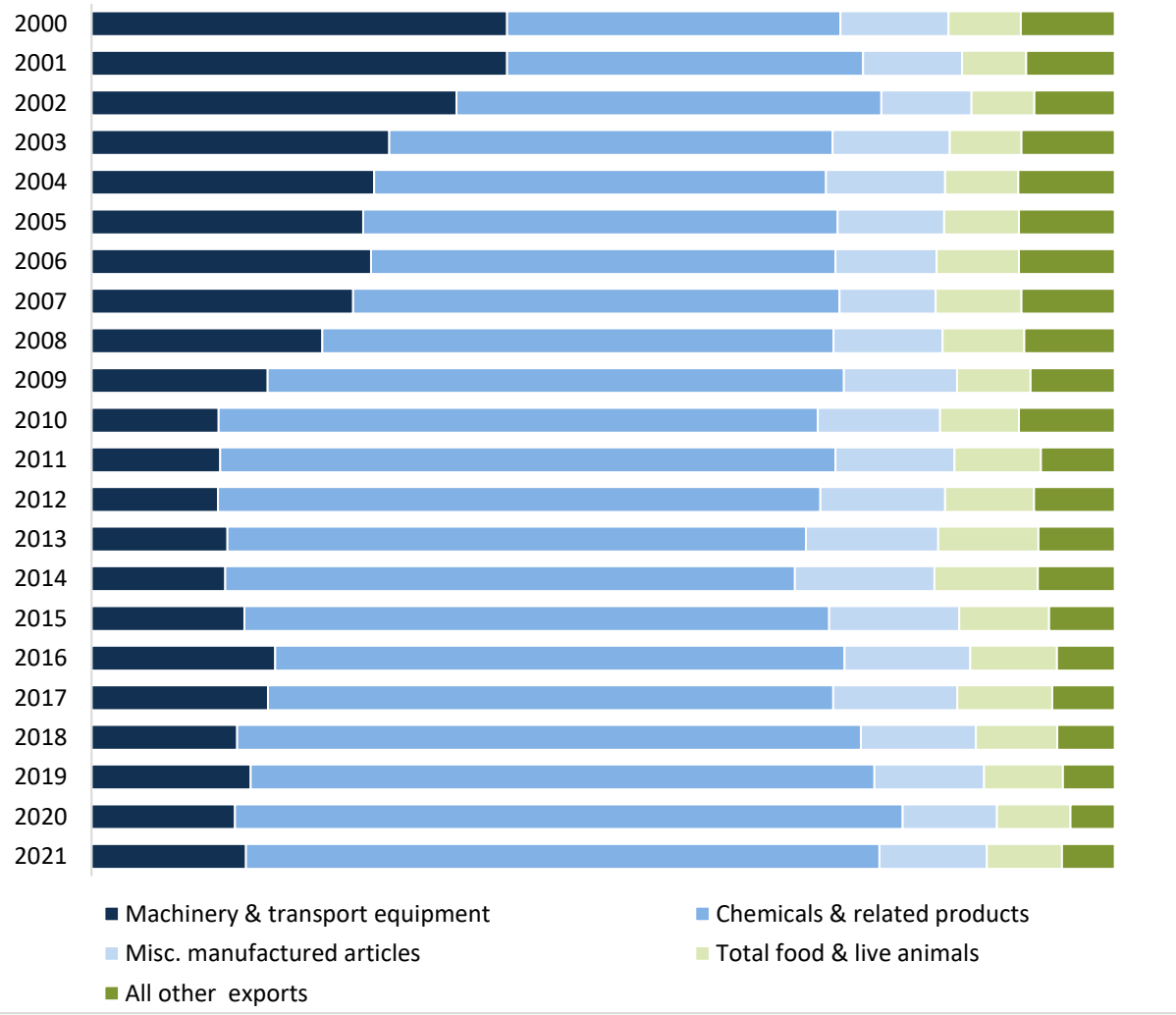
As outlined in the Output section of this *Commentary*, the Industry and ICT sectors have accounted for an increasingly large share of value added in the Irish economy. This trend is also evident in the export sector, as the share of merchandise and service exports have become increasingly dominated by trade related to these sectors over time.

Figure 18 displays the share of merchandise exports from 2000 to 2021. Over this time period, chemicals and related products have increased from just one-third of total exports to over three-fifths (61.9 per cent). In contrast, exports of machinery and transport equipment have declined significantly in their share of total exports

[36] On an annual basis, exports declined by 13.6 per cent in the US, 9.7 per cent in Canada, 11.6 per cent in Japan and 13.0 per cent in the UK in 2020 (FocusEconomics, 30 August 2022). FocusEconomics Consensus Forecast: Major Economies September 2022).

(from 40.6 per cent in 2000 to 15.1 per cent in 2021). These changes are indicative of the growing importance of the pharmaceutical sector in Ireland over time.

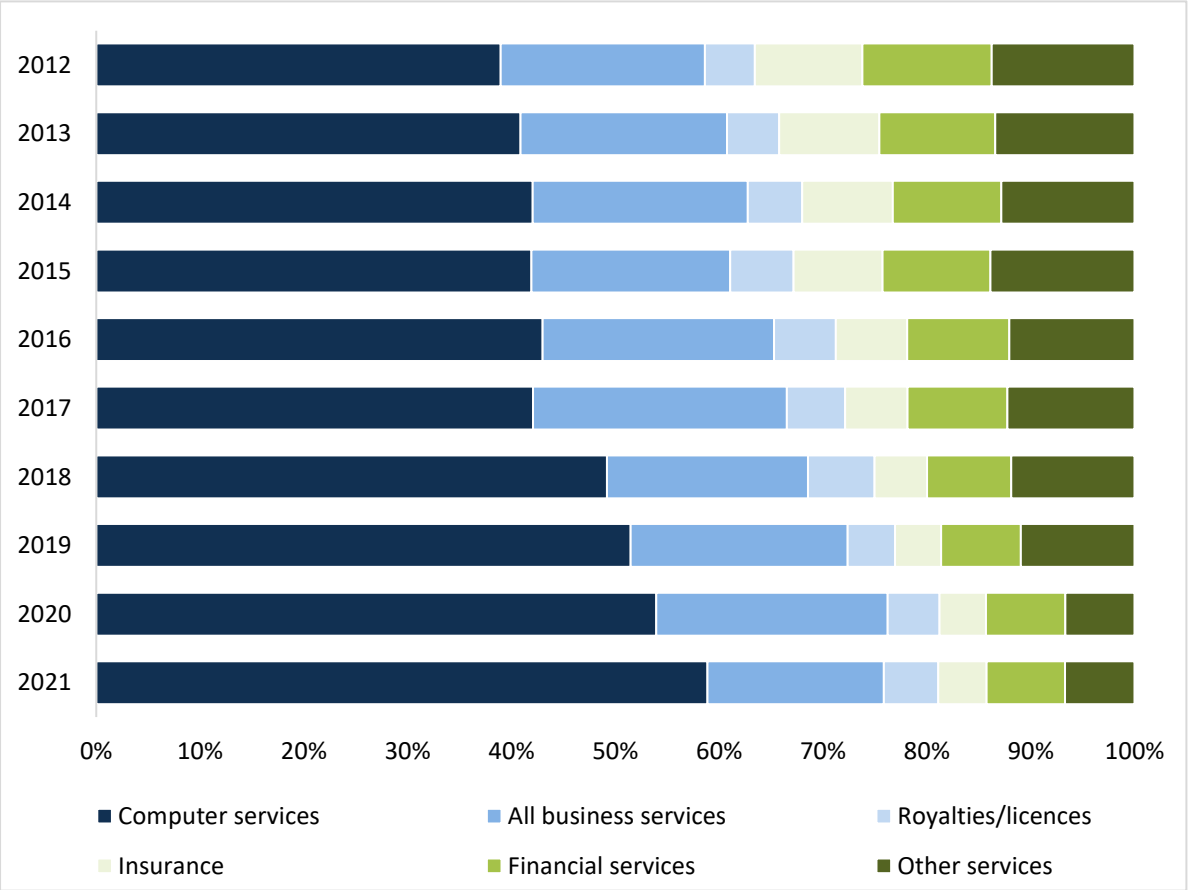
FIGURE 18 MERCHANDISE EXPORTS (% SHARE OF TOTAL VALUE)



Source: Central Statistics Office, authors' calculations.

Much like the pharmaceutical sector's influence on merchandise exports, the role of the ICT sector can be seen from the shift in service exports over time. From 2012 to 2021, computer services have grown from 39.0 per cent to 58.9 per cent of total service exports (Figure 19). Meanwhile, insurance and financial services have experienced relative declines in the share of total exports over the same period.

FIGURE 19 SERVICE EXPORTS (% SHARE OF TOTAL VALUE)



Source: Central Statistics Office, authors' calculations.
Note: Data series begins in 2012.

Imports and Exports by Trade Partner

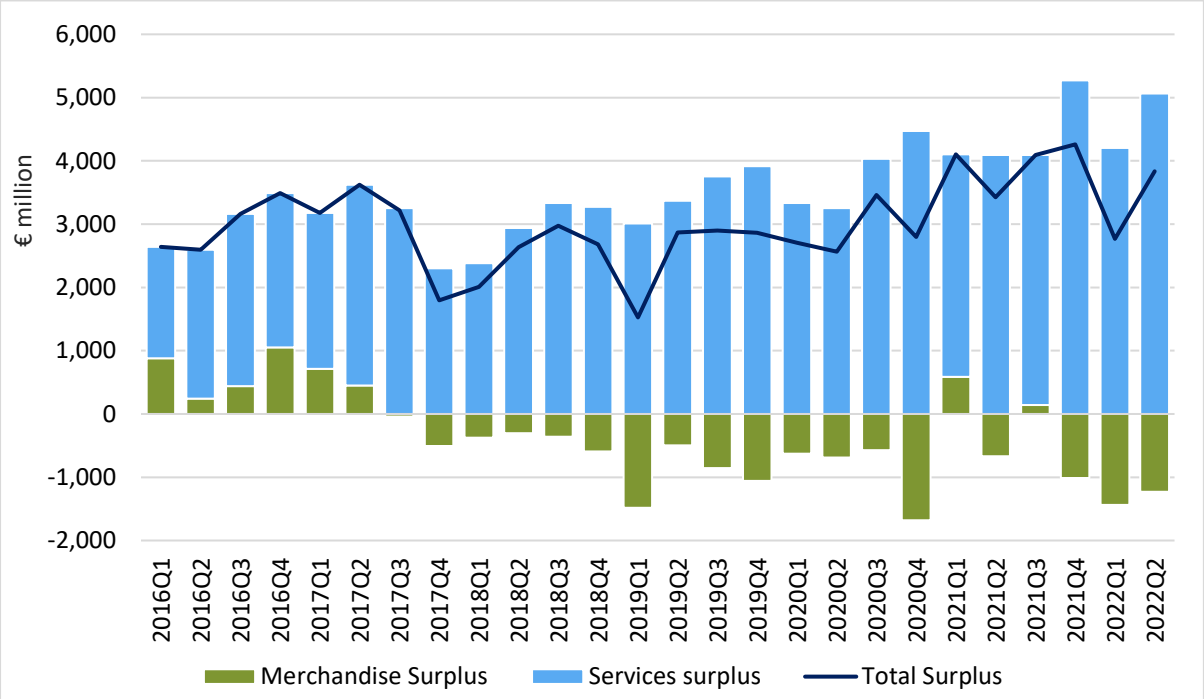
Irish trade has historically been dominated by its relationship with the UK and has been strongly affected by the recent negotiations and implementation of the Trade and Cooperation Agreement between the UK and the EU. Since January 2020, goods from Great Britain (GB) to the EU have been required to comply with new procedures and import requirements of EU Member States. Meanwhile, imports from the EU to GB have not been met with the same stringency. Given the increased costs associated with the energy crisis and Russia's war in Ukraine, the UK will not be implementing further import controls on EU goods in 2022.[37]

Mainly as a result of the asymmetries in customs checks, the overall trade surplus with the UK peaked in 2021, reaching €15.9 billion for the year. In comparison, the average trade surplus from 2016 to 2020 was €11.1 billion. However, as both

[37] For more information see: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1041528/2021_December_BordersOPModel.pdf.

countries adapt to the ongoing regulations on trade between the UK and the EU, the boost to Irish trade is not expected to continue. In Q2 2022, imports from the UK to Ireland and exports from Ireland to the UK increased 8.8 per cent and 13.6 per cent per annum, respectively. Imports of both merchandise and services from the UK to Ireland increased on both a quarterly and an annual basis, as did exports of merchandise and services from Ireland to the UK. The net benefit of this increase in trade resulted in a trade surplus of €3.83 billion for the quarter (Figure 20).

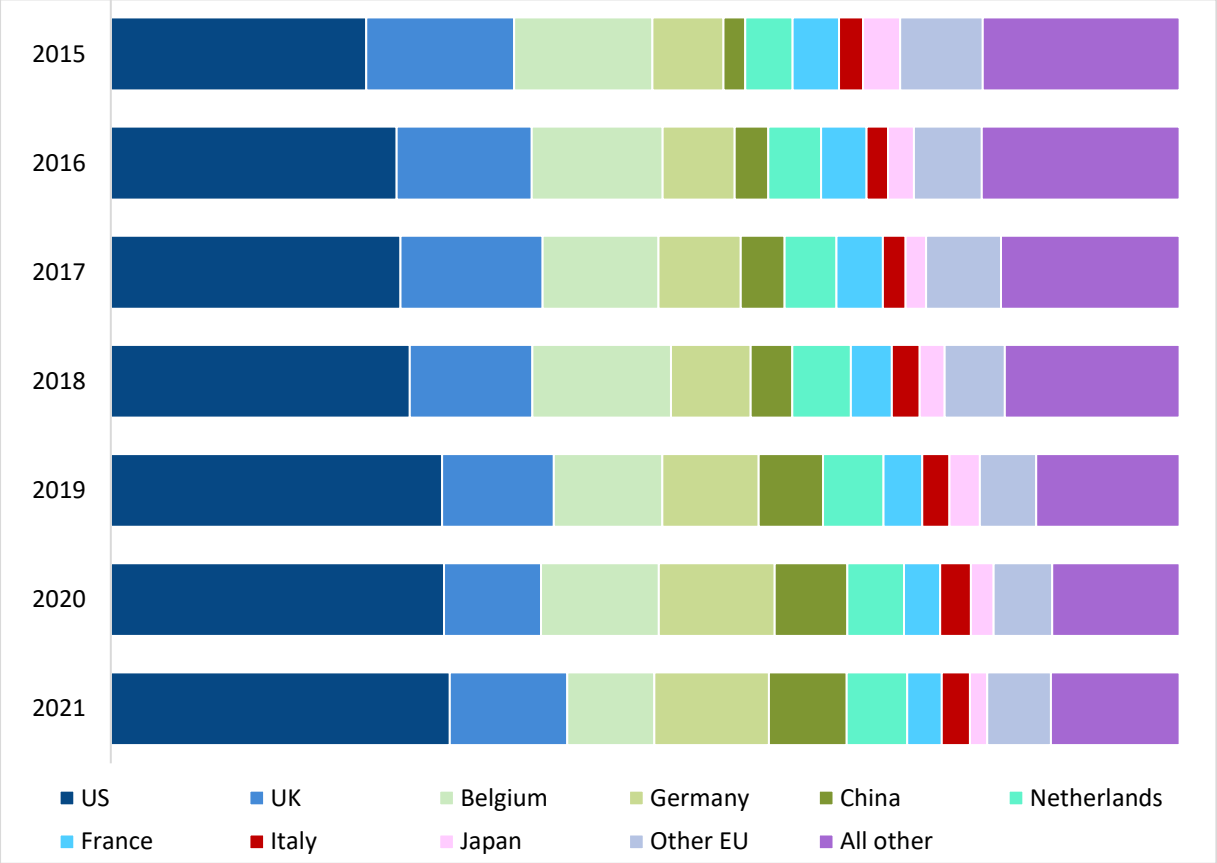
FIGURE 20 TRADE SURPLUS WITH THE UK, Q1 2016 – Q2 2022



Source: Central Statistics Office.

While monitoring ongoing changes in trade with the UK is important, the share of UK exports to and imports from the UK have been diminishing over time. Figure 21 shows the share of total exports amongst Ireland's top trading partners since 2015. Over this time period, the US has accounted for an increasing share of Irish exports, from just under a quarter in 2015 to over one-third in 2021. China and Germany have also grown as key recipients of Irish exports; in 2015, these countries received 2.0 and 6.7 per cent of Irish exports, respectively. By 2021, China accounted for 7.3 per cent of total exports while Germany accounted for 10.7 per cent. Total exports to the UK declined slightly during this period, from 13.8 per cent to 11.0 per cent. As Ireland shifts away from the UK and embraces new trading partners, monitoring the economic conditions amongst these partners will be a key factor in managing expectations of trade growth.

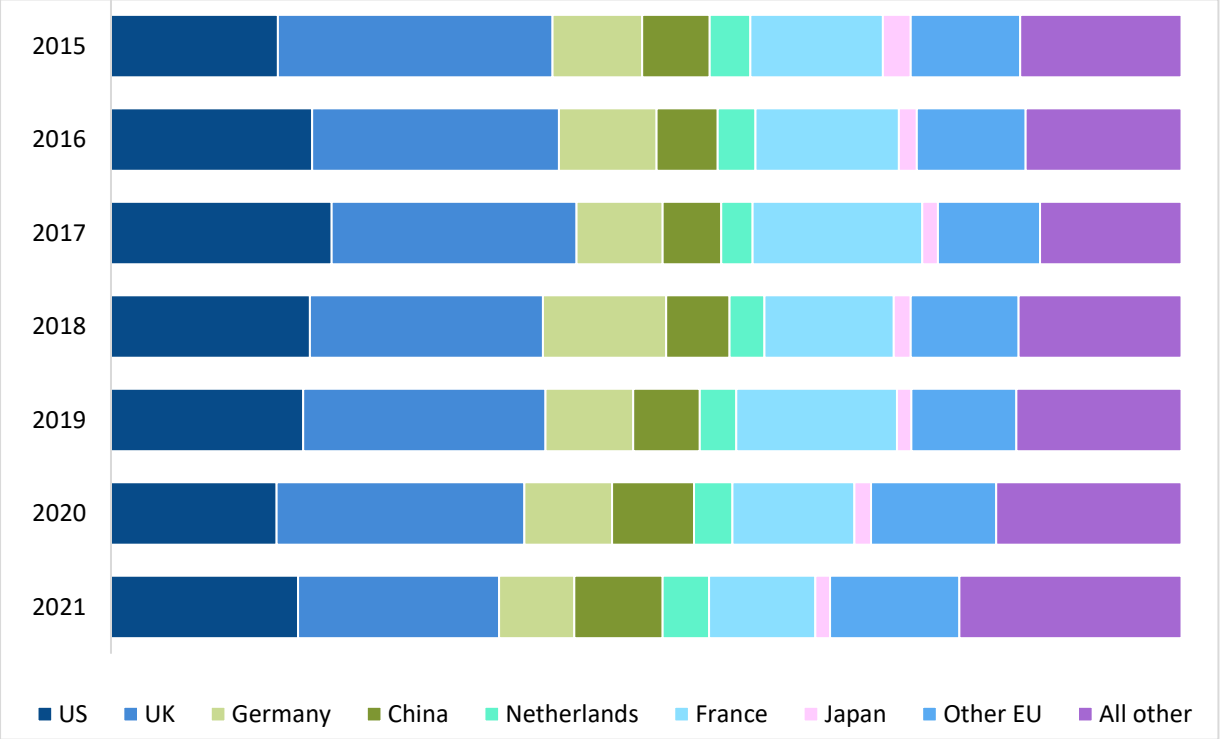
FIGURE 21 SHARE OF EXPORTS FROM IRELAND BY TRADING PARTNER (MERCHANDISE TRADE, % SHARE OF TOTAL VALUE)



Source: Central Statistics Office, authors' calculations.
Note: Data series begins in 2015.

The composition of imports to Ireland is much more diverse amongst trading partners than Irish exports; no singular country accounts for more than 20 per cent of total imports (Figure 22). The largest share of imports to Ireland come from the UK, representing 18.8 per cent of total imports in 2021. However, reliance on imports from the UK has declined significantly over time; in 2015, Ireland imported 25.7 per cent of total merchandise trade from the UK. Imports from China have increased from 6.3 per cent in 2015 to 8.2 per cent in 2021. French imports have declined slightly over the same period while imports from other EU countries have increased.

FIGURE 22 SHARE OF IMPORTS TO IRELAND BY TRADING PARTNER (MERCHANDISE TRADE, % SHARE OF TOTAL VALUE)



Source: Central Statistics Office, authors' calculations.
Note: Data series begins in 2015.

Trade Outlook

Continued growth of export activity in Q2 2022 despite the international slowdown has led us to revise upwards our expectations for the traded sector in 2022. We now anticipate exports and imports to grow by 10.5 per cent and 9.0 per cent for the year respectively. Despite the expected slowdown in economic activity amongst Ireland's key trading partners (most notably the US[38] and the UK),[39] we do not expect this to largely impact exports related to the pharmaceutical and ICT sectors, which have been increasingly dominating export activity. However, we do anticipate that other trade activity is likely to moderate relative to 2022 given the expectation for sluggish global activity, ongoing supply chain disruptions, and uncertainty related to the trajectory of the war in Ukraine and the impact on energy markets. Therefore, in 2023, imports and exports are forecast to grow at a reduced rate of 6.4 and 6.2 per cent, respectively.

38 US GDP growth was revised downwards after GDP contracted in Q2 2022. US GDP growth is expected to be 1.1 per cent in 2023 (FocusEconomics, August 30, 2022; FocusEconomics Consensus Forecast: Major Economies, September 2022).

39 The UK is expected to enter a recession from Q3 2022 to Q1 2023. GDP growth is projected to be 0.5 per cent in 2023 (National Institute of Economic and Social Research, 2022, August). National Institute UK Economic Outlook: *A Risky Present* (Summer, 2022).

INVESTMENT

Key Points

- *Despite international headwinds, capital investment in Ireland has been strong for the first half of 2022. We expect this to continue this year and for investment to be the main driver of domestic demand.*
- *Domestically, we expect housing investment to continue to increase with completions of approximately 28,000 residential units in 2022 and 26,000 units in 2023.*
- *Modified investment is forecast to increase by 23 per cent in 2022 and grow by just under 5 per cent in 2023. The moderation next year reflects the deteriorating international outlook.*

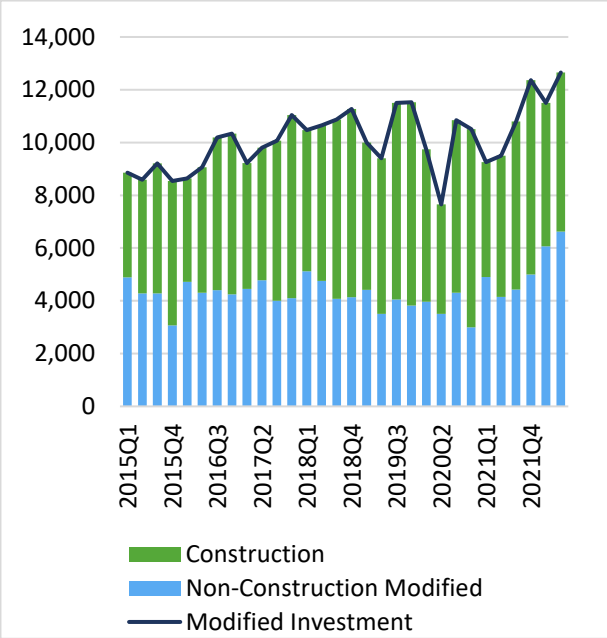
Despite the growing international economic challenges, investment expenditure by firms in Ireland continued to increase in the first half of 2022. Figure 23 presents the level of modified Gross Fixed Capital Formation in constant price terms for the period Q1 2015 to Q2 2022; modified investment excludes investment in aircraft leasing and investment in research and development related intangible assets. The level of investment increased notably in the second quarter, having dropped back somewhat on a quarter-on-quarter basis in Q1. Figure 23, Panel B highlights the year-on-year growth rate in investment activity. The overall rate of investment increased by 33 per cent in the second quarter, which represents a notable increase from the first quarter of the year.

The figure presents the breakdown in investment across two sub-groups: a) construction investment which includes dwellings, improvements and other non-residential building and construction activity; and b) the rest of investment which includes machinery, equipment, other intangible assets etc. but excluding the items noted above in the definition of modified.

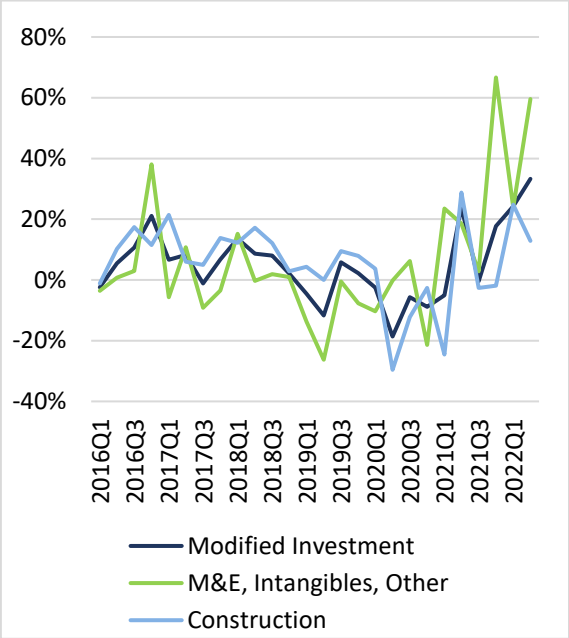
Considering the trajectory of investment in these two areas it is clear that the acceleration in investment is occurring in non-construction activity in Q2 2022. The fact that this series is increasing markedly is particularly notable as this represents a continued strong capital commitment to the Irish economy of firms operating here despite the international slowdown. Notably, investment is currently acting as the main driver of domestic demand in the economy. Construction investment also grew in the second quarter of 2022 by 13 per cent on a year-on-year basis.

FIGURE 23 MODIFIED GROSS DOMESTIC FIXED CAPITAL FORMATION

Panel A: Investment Levels (€m)



Panel B: Investment Growth Rate (Year-on-Year Change)

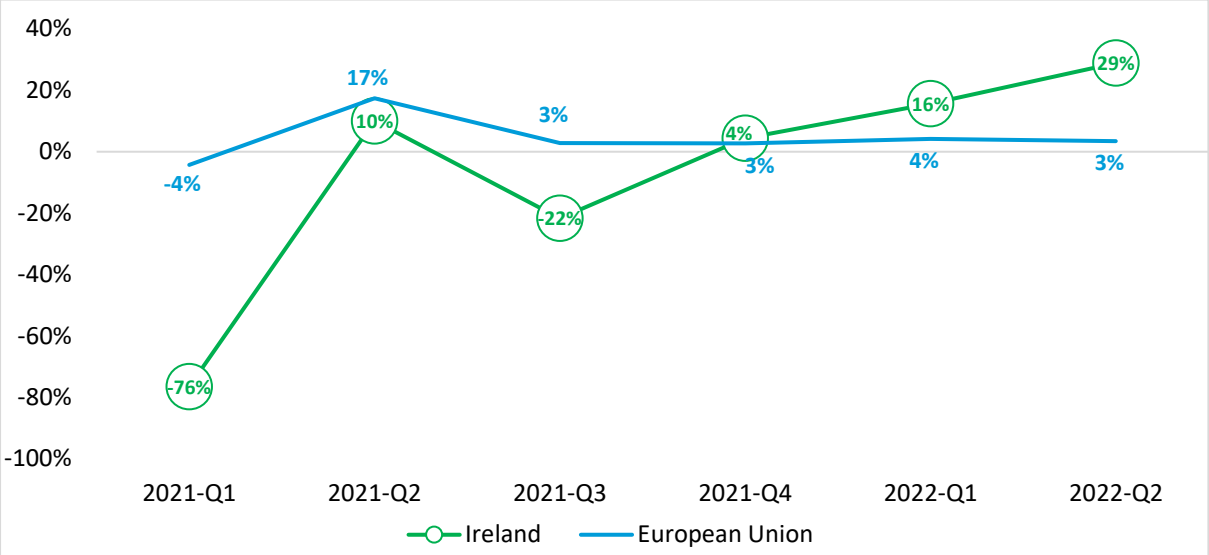


Source: Central Statistics Office.

Given the notable acceleration in investment in Ireland against a backdrop of deteriorating international economic conditions, it is useful to benchmark Ireland against other European economies to explore the extent to which the economic conditions are synchronised.

Figure 24 presents the year-on-year growth rate in Gross Fixed Capital Formation for Ireland as compared to the EU27 bloc of countries for the period 2021-2022. It must be noted that the definition of investment used in this comparison includes all capital assets including the aircraft leasing and other intangible assets that are excluded from the modified series above. The growth rate in the EU27 slowed from 4 per cent in Q1 2022 to 3 per cent in Q2 2022, which is in line with the worsening of economic conditions in the European economy on the back of the energy and inflation crisis. However, Ireland bucked this trend with accelerated growth of nearly 30 per cent on a year-on-year basis.

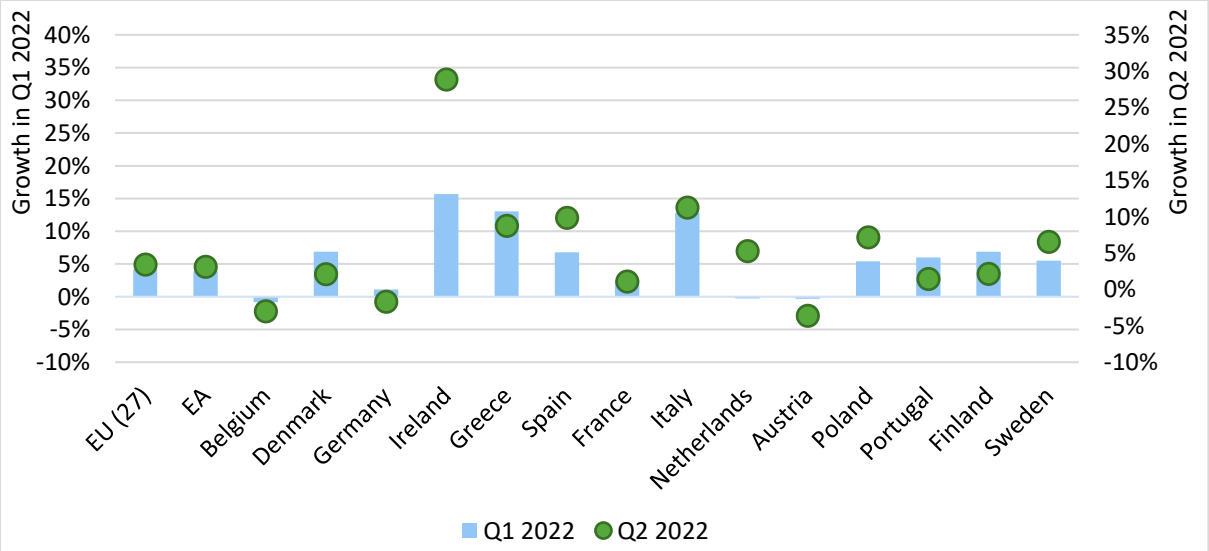
FIGURE 24 GROSS INVESTMENT GROWTH (YEAR-ON-YEAR) IRELAND VS EU



Source: Eurostat.

Given the small, open nature of the Irish economy, a more correct comparison of international trends may be with other similar sized economies or individual countries. Figure 25 presents the year-on-year growth rate in gross investment for Ireland versus other European economies for the first and second quarters. For many economies, such as Belgium, Germany, Denmark, Greece, Austria, Portugal and Finland, it is clear the economic deterioration is materialising in lower investment as we move through the year; the second quarter growth rate in 2022 is lower than in the first quarter. However, Ireland stands out as an outlier with very rapid growth rates of capital formation in both Q1 and Q2.

FIGURE 25 GROSS INVESTMENT GROWTH – IRELAND VS OTHER EUROPEAN COUNTRIES



Source: Eurostat.

To provide more insight into the extent to which business sentiment is changing given the current economic challenges, we draw on the European Commission's data on business sentiment. The Commission monitors trends in business confidence on a monthly basis for four sectors: industry, services, retail and construction. The data presented are simple arithmetic averages of the positive/negative balance of responses in Figure 26 and cover the period up to August 2022.

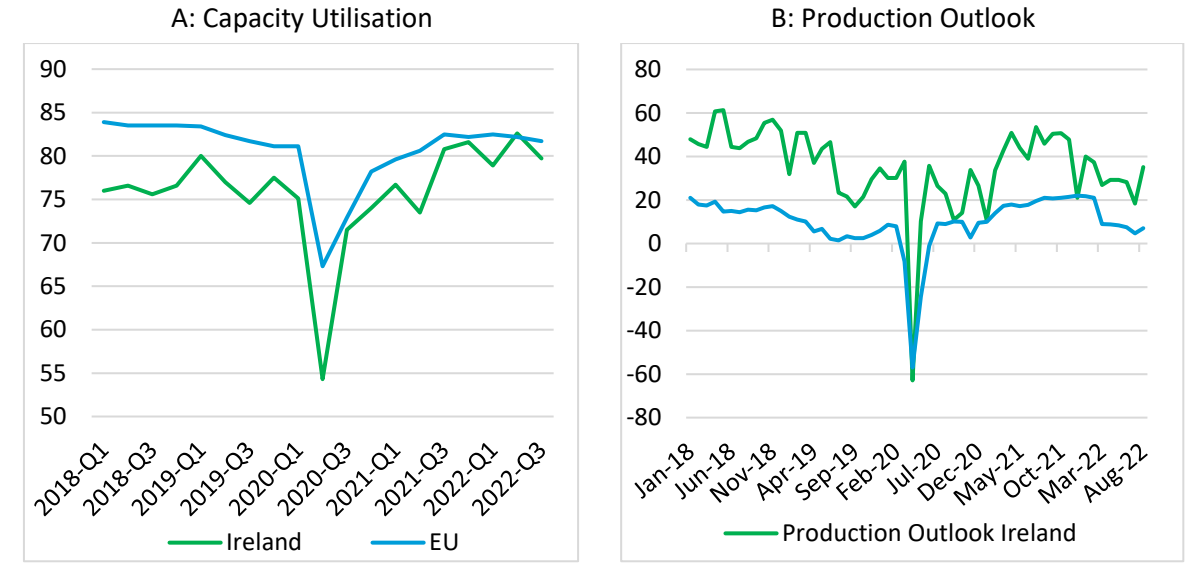
FIGURE 26 BUSINESS CONFIDENCE INDICATORS – IRELAND AND EU

Source: European Commission.

The deteriorating economic sentiment amongst businesses can clearly be seen in across all industries, in both Ireland and the EU27; business confidence has notably declined since the onset of the war in Ukraine in February 2022. As businesses are grappling with the twin challenges of rising business energy costs and subdued consumer spending patterns due to declining real incomes, it is unsurprising that companies are becoming more concerned about the current environment. The decline in Ireland appears to be broad based but also more extreme than in the rest of the EU. Across all sectors, the August data appear to reverse the decline but that may be just a seasonal effect. The fact that Irish sentiment is dropping but investment has continued to rise is likely due to compositional effects or heterogeneity in sectoral performance and challenges across firms in the economy. For example, multinational firms in Ireland (who are likely driving total investment) may be experiencing less difficulties than other businesses in the current environment.

Two further critical issues in terms of the path for future investment are the outlook for demand and the degree of capacity utilisation of current resources. Figure 27 presents the outlook for production and the existing capacity utilisation for Ireland and the rest of the EU for industrial firms (manufacturing and mining activities only). It is clear the production outlook has improved in Ireland through 2021 but it has dropped rapidly in both Ireland and the EU since March 2022 with the invasion of Ukraine. The only notable change since the previous *Commentary* is the rebound in the production outlook in August. Whether this remains as a continuing trend or just reflects seasonal patterns is difficult to ascertain.

FIGURE 27 PRODUCTION OUTLOOK AND CAPACITY ULTISATION – IRELAND AND EU

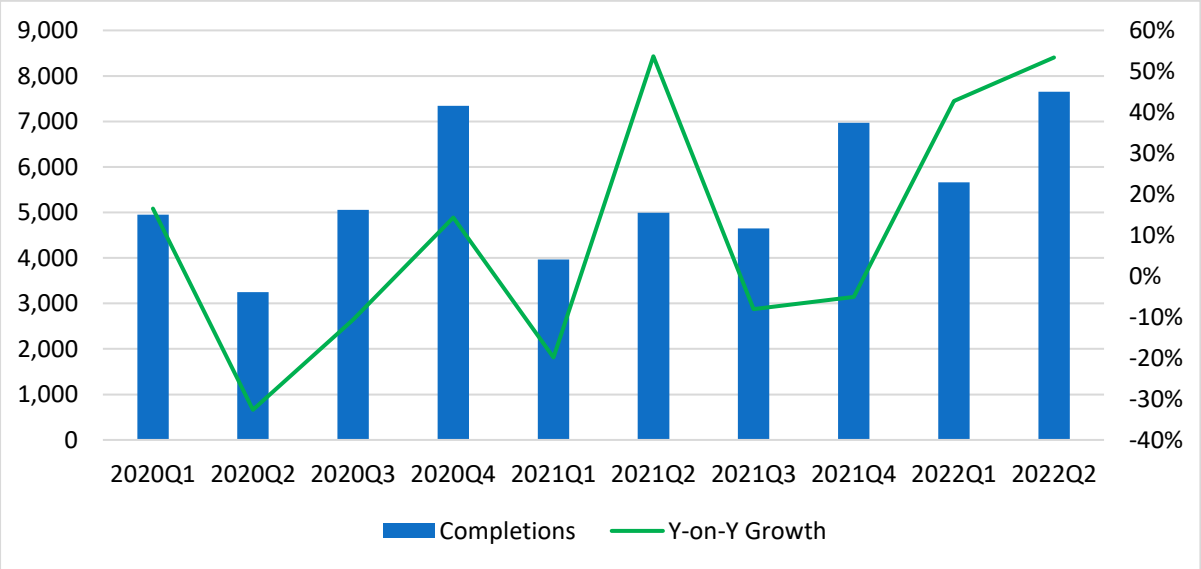


Source: European Commission.

Housing investment outlook

In the second quarter of 2022, a total of 7,654 residential units were completed in Ireland; a 53 per cent increase on the same period in 2021 (Figure 28). This brings the total completions for the first half of the year to 13,316. In terms of the growth rates, the base periods in 2021 were still likely affected by the public health restrictions on activity that were in place in the first and second quarters (albeit they were being lifted during this period). In line with these effects, a clear bounce back from 2021 is evident for the first half of 2022 in terms of unit delivery.

FIGURE 28 RESIDENTIAL COMPLETIONS – QUARTERLY PROFILES

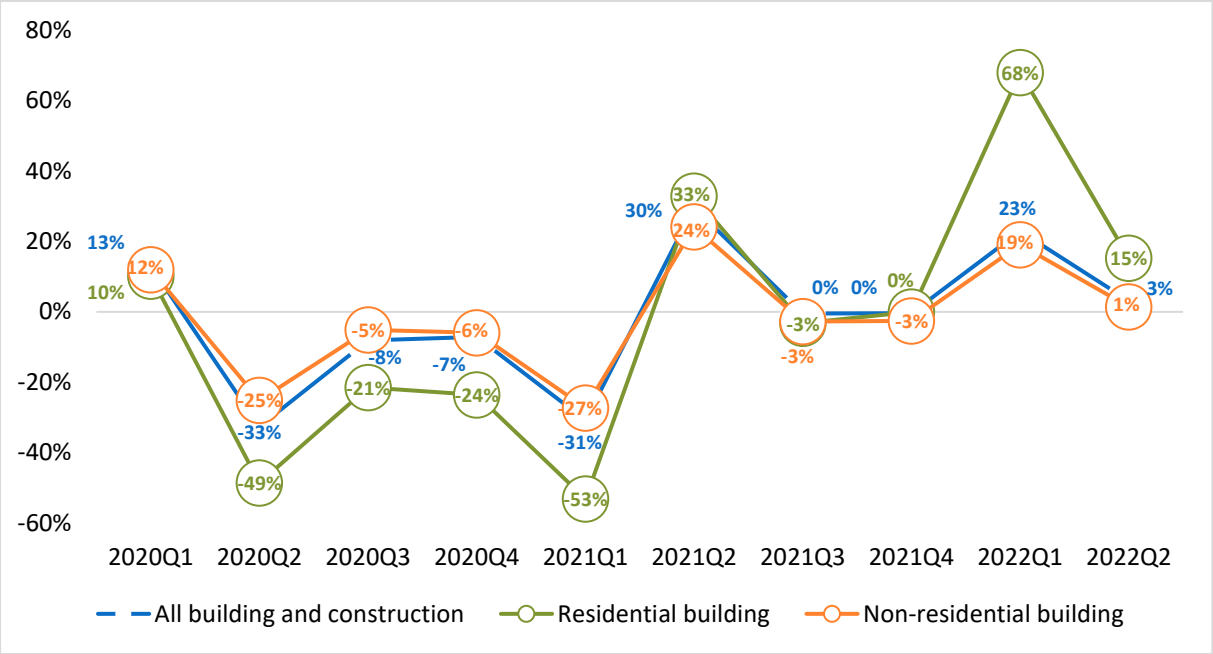


Source: Central Statistics Office

While delivering housing supply has been a long-term challenge for the Irish economy and Irish society, the current inflationary pressures in the construction sector pose a further risk to delivery. Furthermore, the general moderation in the broader economy, and rising interest rates, are also likely to present challenges on the demand side of the housing market as households struggle with affordability challenges. All of these factors together may result in a lower level of housing completions if such risks materialise or if the underlying downside factors weaken.

To explore this in more detail, Figure 29 presents the volume of production in construction from the CSO series; it is clear that output is continuing to grow for both residential and non-residential activity. However, the growth rate in the non-residential activity has declined notably in the most recent data point.

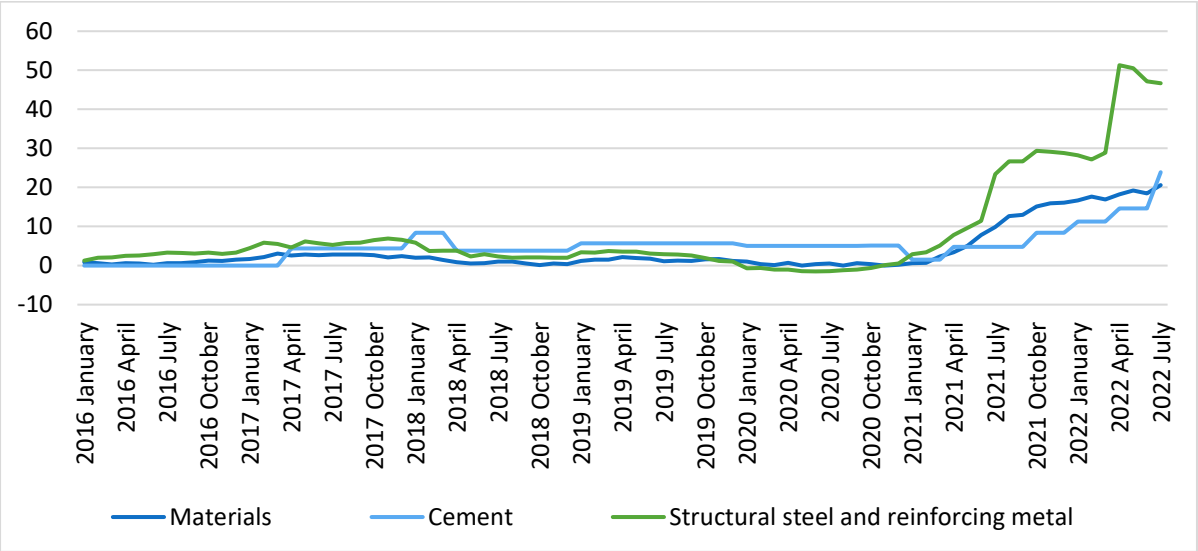
FIGURE 29 VOLUME OF PRODUCTION IN CONSTRUCTION (YEAR-ON-YEAR CHANGE)



Source: Central Statistics Office.

To highlight the extent of the inflationary risk to housing output, we present below the growth rate (year-on-year) in building and construction materials from the CSO wholesale price data. Overall materials price inflation has increased to over 20 per cent in July of 2022, while structural steel prices and cement prices have increased by nearly 50 and 25 per cent respectively.

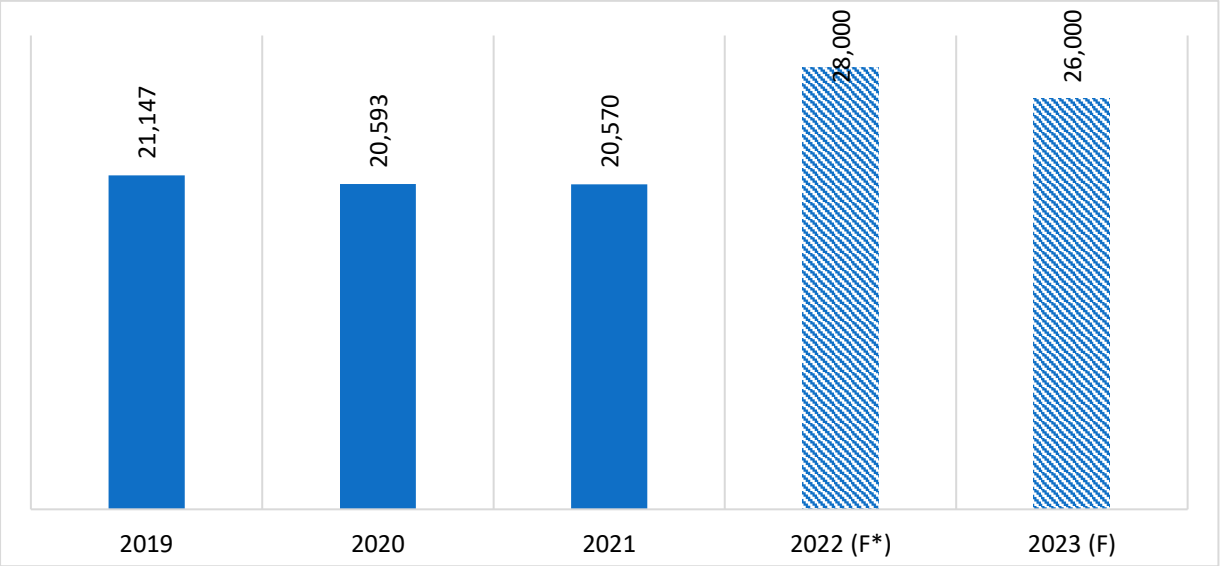
FIGURE 30 WHOLESALE PRICE INDICES BUILDING AND CONSTRUCTION (YEAR-ON-YEAR CHANGE)



Source: Central Statistics Office.

Given the multitude of economic factors resulting in downside risks for the construction sector (lower household demand, rising input cost pressures, uncertainty), we have revised our forecasts for housing supply. We now expect housing completions to be 28,000 units for this year and 26,000 units for next year.

FIGURE 31 HOUSING COMPLETION FORECASTS (YEAR-ON-YEAR CHANGE)

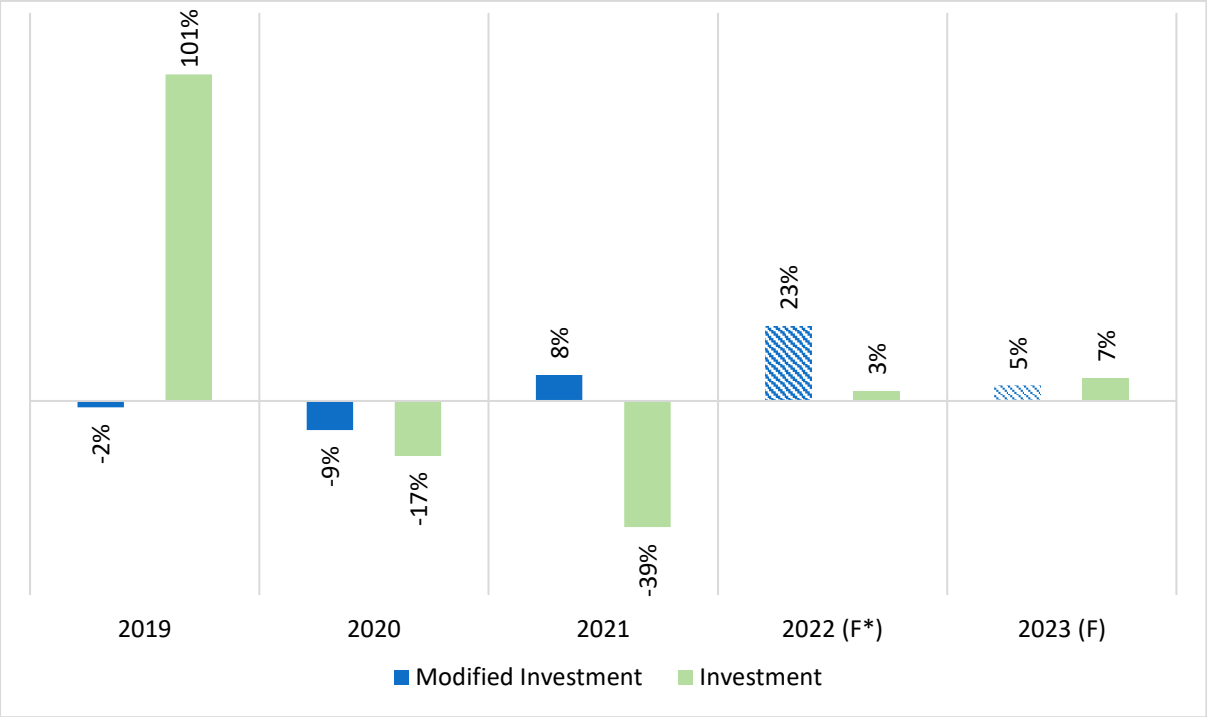


Source: Central Statistics Office and *QEC* projections.
Note: ESRI F*denotes actual data for Q1, Q2 2022, projection for Q3 and Q4. F denotes full year forecast.

Investment forecasts

At present, despite the deteriorating international economic conditions, we expect investment to be a strong driver of domestic demand in Ireland for the coming year. This is due to the exceptionally strong performance in terms of capital expenditure by firms on non-construction activities in the first half of 2022. Even if this growth moderates somewhat, it is likely to be well ahead of the investment levels in 2021. We expect that investment growth in 2023 will moderate somewhat from the high levels this year due to deteriorating international conditions and rising costs of financing. We do, however, still expect investment to grow next year given the strong presence of multinational firms and the evidence of their continued strong investment in 2022.

FIGURE 32 OVERALL INVESTMENT FORECASTS – YEAR-ON-YEAR CHANGE



Source: Central Statistics Office and *QEC* projections.
Note: ESRI F* denotes actual data for Q1, Q2 2022, projection for Q3 and Q4. F denotes full year forecast.

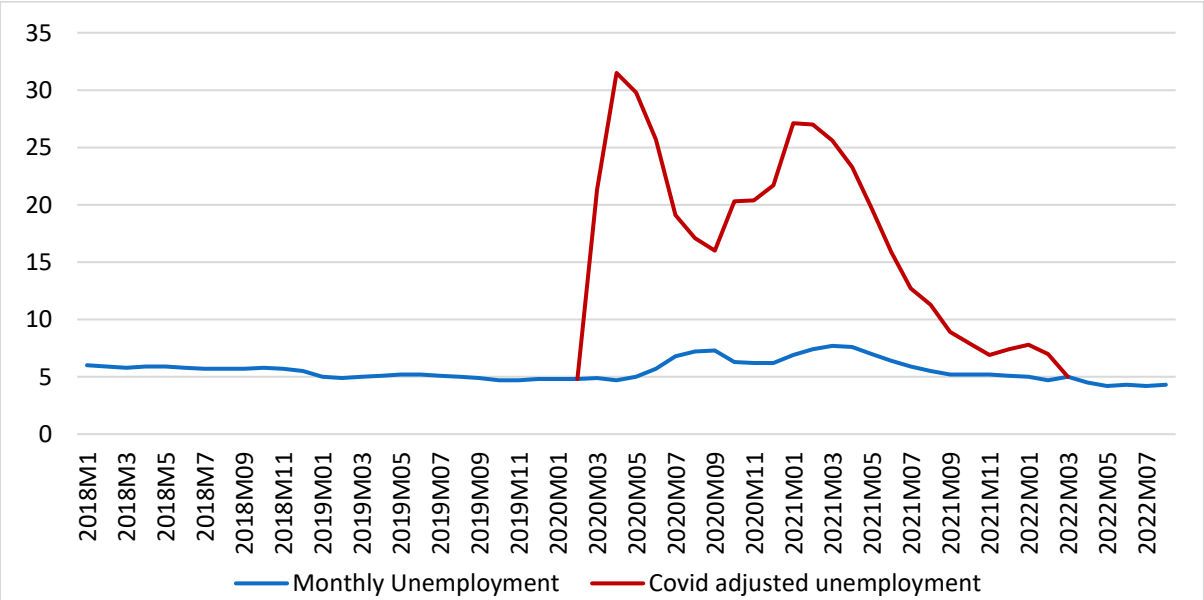
LABOUR MARKET

Key Points

- *Continued declines in the unemployment rate and higher participation rates are contributing to a tight labour market.*
- *The number of people on the Live Register is below pre-pandemic levels, even as individuals arriving in Ireland under the EU's Temporary Protection Directive avail of income supports.*
- *The unemployment rate is set to fall to 4.1 per cent by Q4 2022 and average 4.8 per cent for the year.*

With the end of public health restrictions in the first quarter of 2022 and the phasing out of all COVID-related employment supports, the labour force has rebounded markedly. The impact of COVID-19 on employment can be most easily seen in fluctuations of the unemployment rate between March 2020 to March 2022. Compared to peak unemployment rates of 31.5 (April 2020) and 27.1 per cent (January 2021) during lockdown periods, unemployment has recovered rapidly as the economy reopened. As indicated in Figure 33, a smooth transition back into the labour market occurred once restrictions were lifted, and strong economic activity in the first half of the year has led to further declines in unemployment. As of August 2022, the unemployment rate stood at 4.3 per cent. The unemployment rate for the year is now set to be below its pre-pandemic rate of 5.0 per cent in 2019.

FIGURE 33 UNEMPLOYMENT RATE BY MONTH (SEASONALLY-ADJUSTED, %)

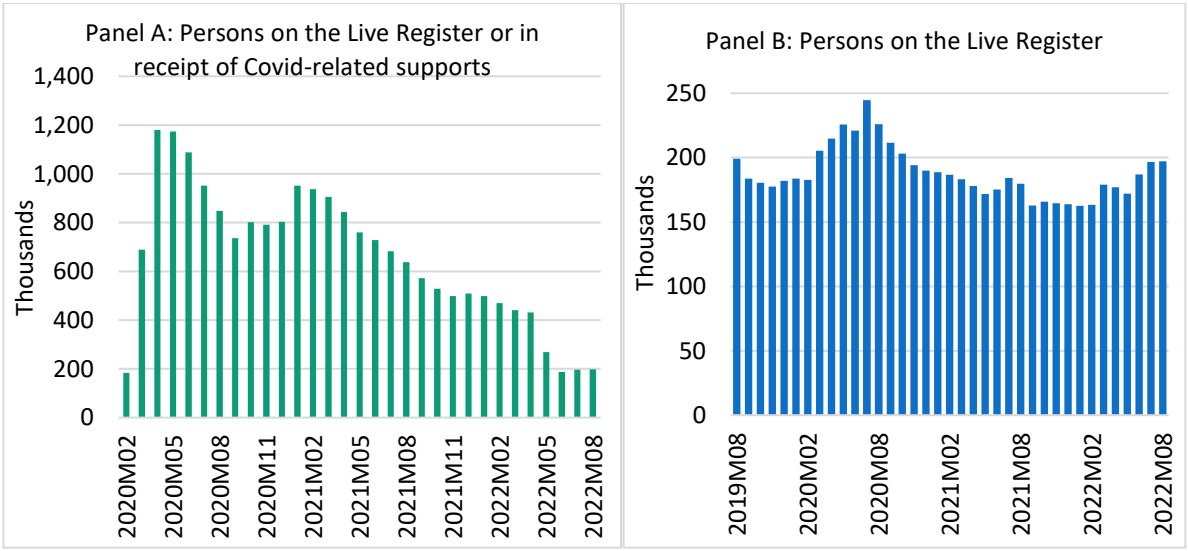


Sources: Seasonally-Adjusted Monthly Unemployment Rate Series. Central Statistics Office.
Note: The COVID-19 Adjusted Monthly Unemployment Rate Series is used for the period March 2020 – March 2022.

One factor that has allowed for a smooth transition from COVID-related job losses back to employment has been the successful deployment of the temporary COVID-19 income supports. Figure 34 depicts the number of individuals on the Live Register, as well as those who received some form of COVID-related payment. COVID-related supports commenced in March 2020 and were phased out throughout the first half of 2022. Individuals in receipt of the Pandemic Unemployment Payment (PUP) received final payments as of 29 March 2022, while those benefitting from the Employment Wage Subsidy Scheme continued receiving payments through 31 May 2022. In January 2022, 498,355 persons were in receipt of some form of pandemic-related subsidy. While there was some concern about long term scarring from the pandemic on most affected sectors, there were fewer people on the Live Register in August 2022 (197,125 persons) than in August 2019 (199,093) persons.

More recently, people arriving from Ukraine under the EU's Temporary Protection Directive can access supports from the Department of Social Protection. Working Age Income supports are one such scheme being provided to these individuals and those in receipt of these supports are included in the Live Register. As of the week ending 7 August 2022, nearly 48,000 PPSNs had been issued to individuals from Ukraine.[40] According to CSO data, 11,851 of these persons were included in the Live Register figures for August 2022.[41]

FIGURE 34 NUMBER OF PEOPLE ON THE LIVE REGISTER OR IN RECEIPT OF OTHER RELATED INCOME SUPPORTS

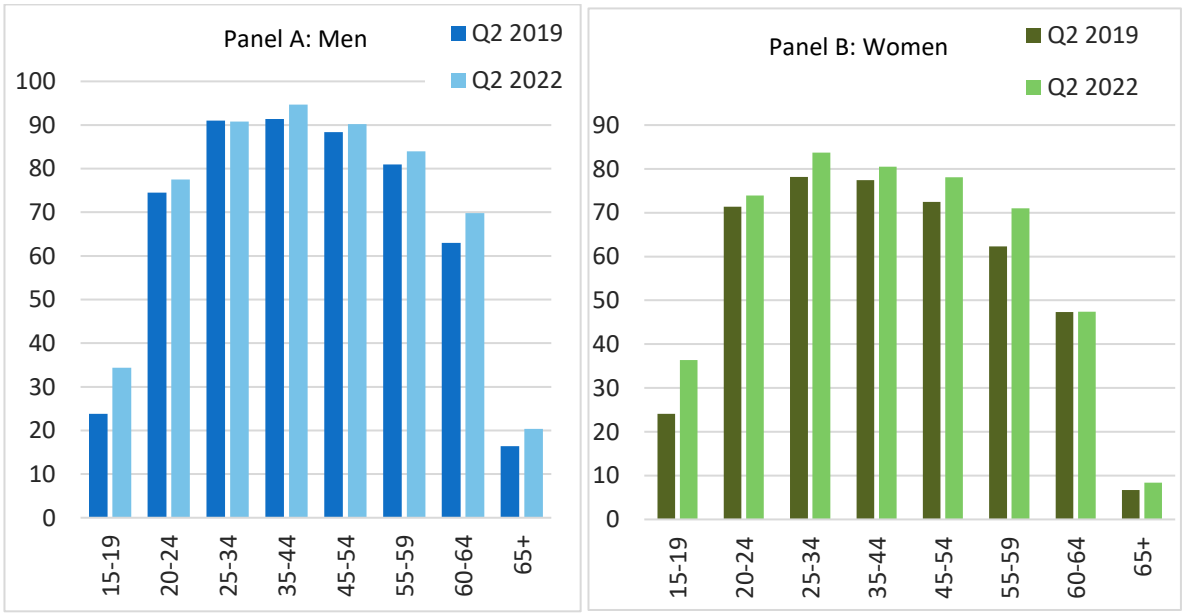


Source: Central Statistics Office.
Note: COVID-related welfare schemes include the Pandemic Unemployment Payment, Temporary Wage Support Subsidies and Employment Wage Support Subsidies.

40 Arrivals from Ukraine in Ireland Series 5 - CSO - Central Statistics Office.
41 Live Register June 2022 - CSO - Central Statistics Office.

While changes in the unemployment rate and number of persons on the Live Register appear to indicate a strong performance, participation rates are also an important indicator of the health of the labour market. Figure 35 depicts participation rates by age groups in Q2 2022 to Q2 2019. All age groups are experiencing higher participation rates now than they were prior to the pandemic. The change is especially notable in young people; the participation rate amongst 15- to 19-year-olds increased by 10.6 per cent for males and 12.3 per cent for females. Males in the 25-34 year old age group were the only cohort to experience a slight decline in participation rates (-0.2 per cent), while females in the same age group increased participation rates by 5.5 per cent.

FIGURE 35 PARTICIPATION RATES BY AGE GROUP AND SEX



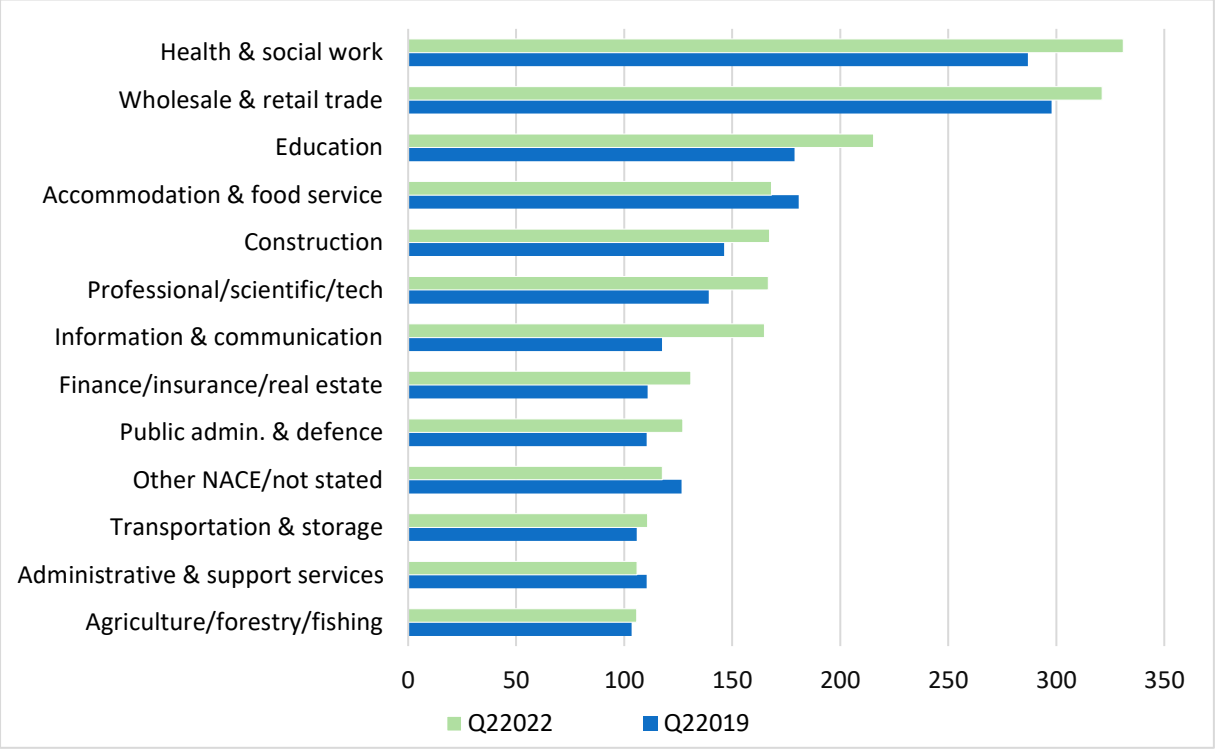
Source: Central Statistics Office.
Note: COVID-related welfare schemes include the Pandemic Unemployment Payment, Temporary Wage Support Subsidies and Employment Wage Support Subsidies.

COVID-19 had a significant impact on both working arrangements and employee preferences. As such, it is worthwhile to see if employment patterns have changed pre- and post-pandemic. Figure 36 shows the level of employment in Q2 2019 compared with Q2 2022 by sector. Overall employment increased from Q2 2019 to Q2 2022 as approximately 258,400 more persons entered employment. It is notable that the increase in employment has outpaced the increase in the labour force, which increased by approximately 247,500 persons in the same period.

While gains in employment were experienced in most sectors, declines were recorded in Accommodation and food service (-12,600), Other activities or not stated (-8,900), and Administrative and support services (-4,500). The sectors with

the greatest employment growth over the same period include Information and communication (+47,400), Health and social work (+44,200); Education (+36,700); and Professional, scientific and technical services (+27,600).

FIGURE 36 NUMBER OF PERSONS IN EMPLOYMENT BY NACE (000s, SEASONALLY-ADJUSTED)



Sources: Central Statistics Office, Labour Force Survey (seasonally-adjusted).

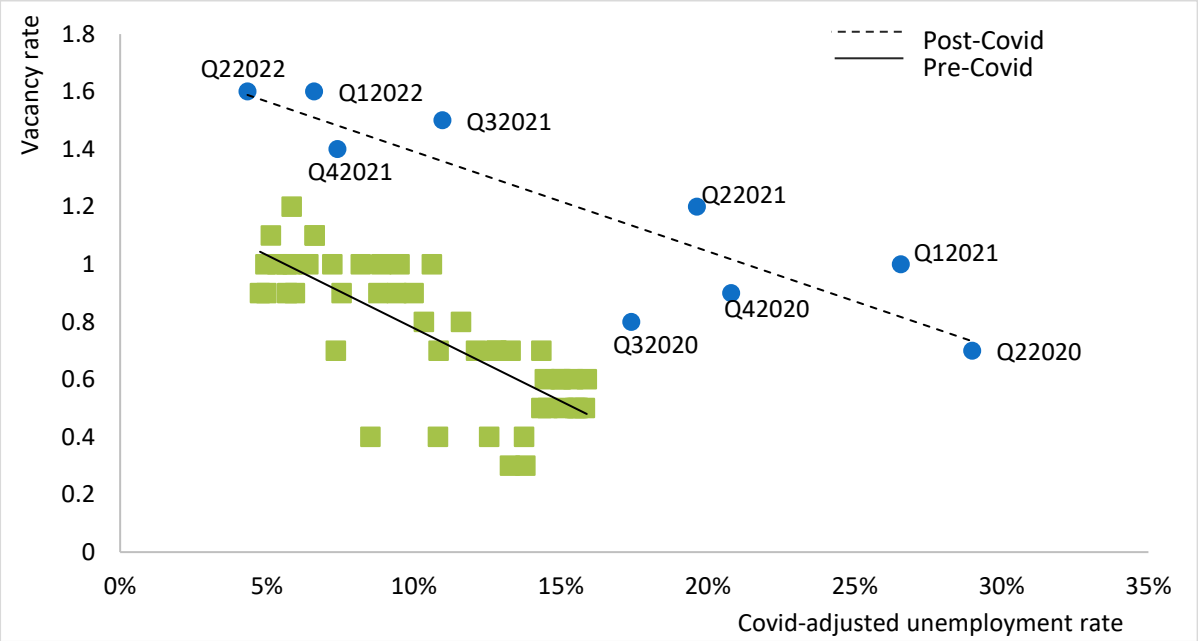
The reopening of the economy and reduction in unemployment has been accompanied by an increase in the vacancy rate across all sectors. While the number of persons employed increased by just over 7 per cent from Q2 2019 to Q2 2022 (2.30 million persons compared with 2.55 million), the number of vacancies across all sectors increased by just over 60 per cent during the same period (34,800 vacancies compared with 21,500).

Figure 37 plots the vacancy rate against the unemployment rate from Q1 2008 to Q2 2022 (the Beveridge Curve). The curve implies that as the number of vacant job positions increases, the number of people unemployed decreases. The vacancy-unemployment ratio is typically associated with labour market tightness and can be conveyed by shifts along the curve. Shifts of the curve itself, such as the change in the curve that occurred during the pandemic, are related to efficiency in the

labour market. An outward shift is typically associated with a decline in match efficiency which may stem from factors such as sectoral shifts or skills mismatch.[42]

Note that in Q2 2022, the Irish labour market is historically tight; the vacancy rate is at its highest level since Q1 2008, while unemployment is at its lowest rate over the same period.

FIGURE 37 BEVERIDGE CURVE: VACANCY AND UNEMPLOYMENT RATES Q1 2008 – Q2 2022

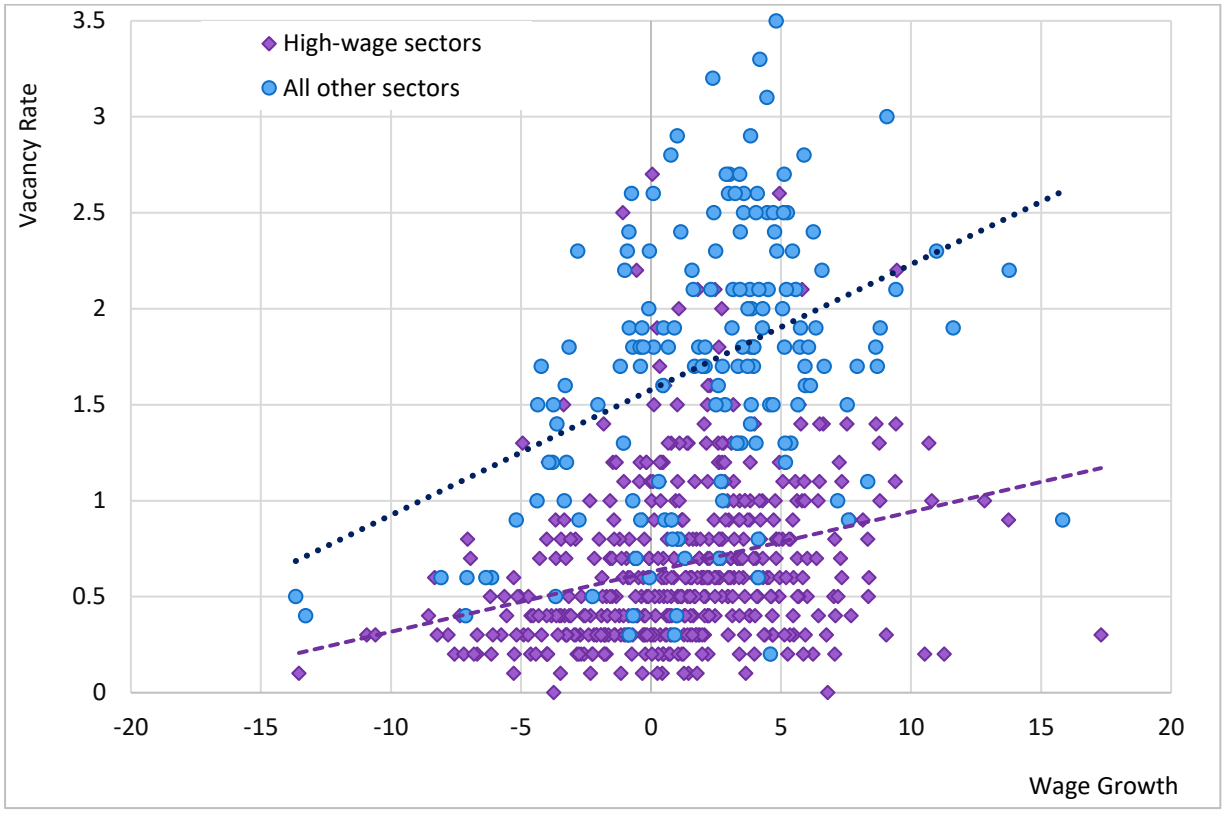


Sources: Central Statistics Office, authors' calculations.

An additional concern with rising vacancy rates is the potential for further pressure on wages. Figure 38 shows the relationship between vacancy rates and wage growth from Q1 2009 to Q2 2022. The positive slope across all sectors indicates that wage growth tends to increase as vacancy rates rise. However, both higher vacancy rates as well as higher growth rates in earnings are concentrated in the highest paid sectors. As detailed in our Summer *Commentary,* we forecast annual average wages to increase by 3.5 per cent in 2022 and 4.5 per cent in 2023. As depicted in Figure 38, average wage increases are typically higher amongst high earners. Given the pace of inflation, real wages are set to decline overall this year. Losses in real earnings will be particularly pronounced for lower-wage earners who historically have seen much slower wage growth.

[42] See: Lubik, Thomas (2021). *Revisiting the Beveridge Curve: Why Has It Shifted so Dramatically*? Federal Reserve Bank of Richmond. Revisiting the Beveridge Curve: Why Has It Shifted so Dramatically? | Richmond Fed.

FIGURE 38 VACANCY RATE AND WAGE GROWTH BY SECTOR (YEAR-ON-YEAR, %) Q1 2009 – Q2 2022



Sources: Central Statistics Office, authors' calculations.
Note: High-pay sectors include Information and communication; Financial, insurance and real estate activities; and Professional, scientific and technical activities. Wage growth refers to the annual growth rate in seasonally-adjusted average weekly earnings.

Labour Outlook

Given the rapid recovery of the labour market in the first half of 2022, we expect the unemployment rate to continue to improve gradually. We now anticipate an unemployment rate of 4.8 per cent and 4.1 per cent in 2022 and 2023, respectively. As outlined in the risk assessment, downside risks to this forecast include a potential slowdown in certain domestic sectors as global activity slows as well as the trajectory of the war in Ukraine and its impact on the provision of Working Age Income support payments provided for individuals arriving in Ireland under the EU's Temporary Protection Directive.

INFLATION OUTLOOK

Key Points

- *The acceleration in food and energy prices is contributing to higher and longer-lasting inflation rates.*
- *Households are experiencing differing rates of inflation to due differences in expenditure with older, lower-income and rural households are most acutely affected by the surge in energy prices.*
- *Forecast inflation has been revised upwards to 8.1 per cent and 6.8 per cent, respectively.*

Inflation overview

After an abrupt disruption to global demand and supply chains during the pandemic, rapid vaccination coverage and the re-opening of the global economy contributed to a sudden surge in demand: consumers were eager to spend on goods and services not previously available. Despite economic activity bouncing back rapidly in most parts of the global economy, friction has continued in a number of areas with supply chains particularly affected. Tensions between the US and China pose a further threat to the normalisation of supply chains: Chinese military exercises in August occurred in one of the world's busiest shipping routes.[43] China's pursuit of strict COVID management strategies also prolonged bottlenecks experienced this year. Meanwhile, extreme weather events[44] and labour unrest related to higher living costs[45,46] have presented further disruptions to already struggling supply chains this year.

For the present year, the war in Ukraine has contributed to further inflationary pressures, particularly through its amplification of disruptions in the food and energy market. The toll of the war in Ukraine on energy markets, the mismatch between producers and suppliers, and the rapid demand experienced during the reopening of the economy have all contributed to record high inflation rates experienced internationally (Figure 39).

Despite inflation in the US surging ahead of the euro area early in the year (7.5 per cent in January compared to 5.1 in the euro area), it also seems to have reached

43 See: China's Taiwan war games threaten more global supply chain disruption (france24.com).

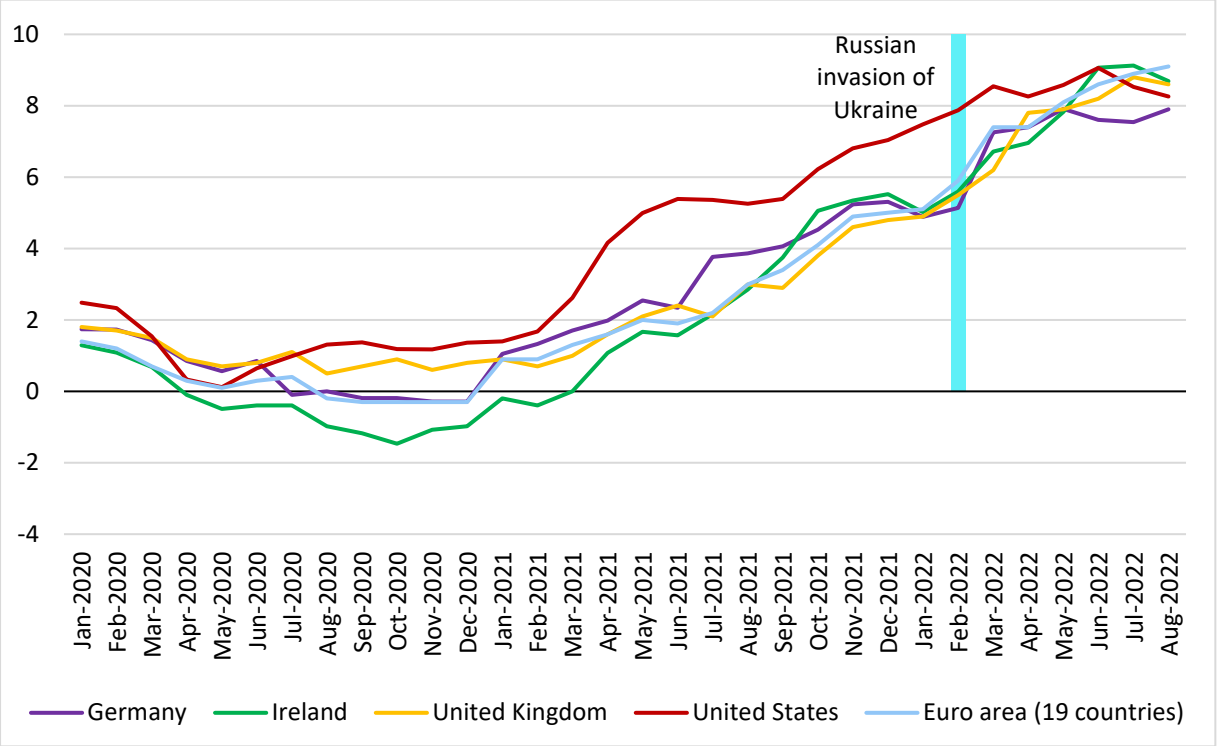
44 Drought in China caused shipping routes among the Yangtze River (the world's third largest river) to close temporarily (see: China drought causes Yangtze to dry up, sparking shortage of hydropower | China | The Guardian).

45 Strikes in the UK's largest container port are expected to increase congestion across Europe. See: $4.7 billion in trade delayed in eight-day strike at Felixstowe (cnbc.com).

46 Strikes in Germany over the summer led to increased container backlogs which have persisted through September. See: Transport strikes put supply chains under duress again - FreightWaves; German North Sea Port Congestion, Supply Bottlenecks Weigh on Global Trade - Bloomberg.

its peak sooner than the euro area. As of August 2022, inflation in the US stood at 8.3 per cent compared to 9.1 per cent in the euro area and 8.7 per cent in Ireland. This is due to the impact on European energy markets of the war in Ukraine given their reliance on Russian fossil fuel supply.

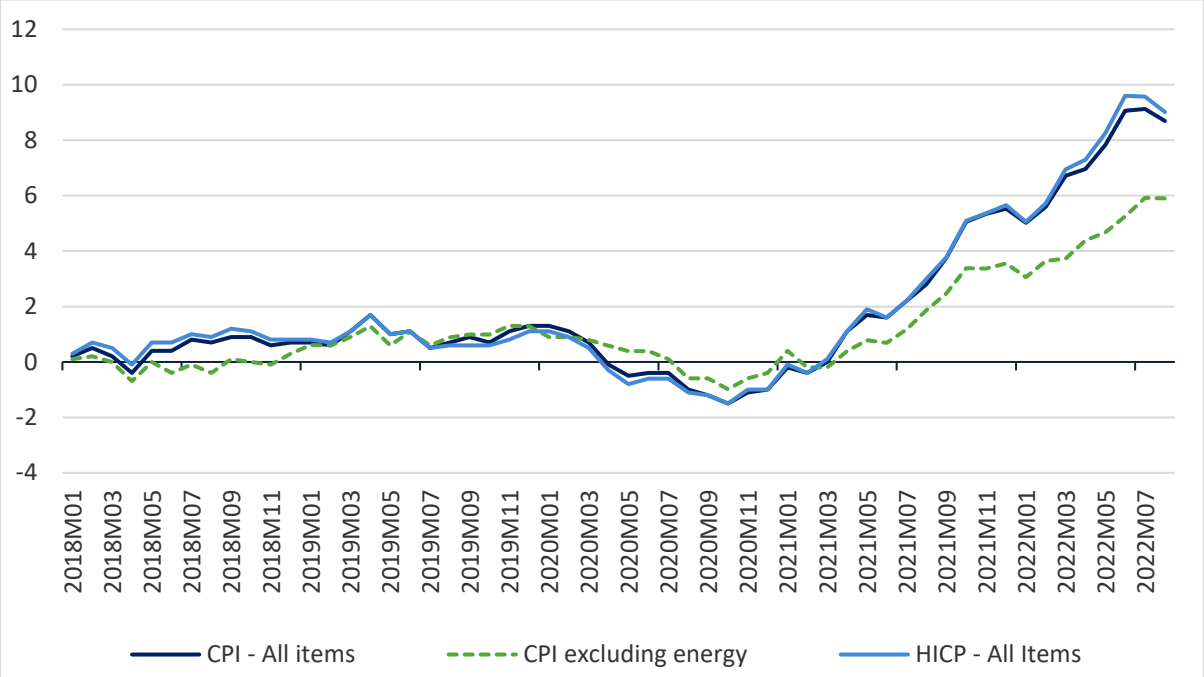
FIGURE 39 CPI ALL ITEMS, CROSS COUNTRY COMPARISON (YEAR-ON-YEAR %)



Source: OECD.

The impact of energy markets on Irish inflation during the past year is quite clear. While historically relatively aligned, a growing divergence can be seen between overall CPI and CPI excluding energy products in Figure 40. The increase in the CPI excluding energy products was 5.9 per cent in August 2022 compared to 8.7 per cent for overall CPI in the same period. However, the rising level of non-energy CPI also highlights the risk of domestic factors beginning to feature in the inflationary process in Ireland.

FIGURE 40 ANNUAL INFLATION RATE (%)

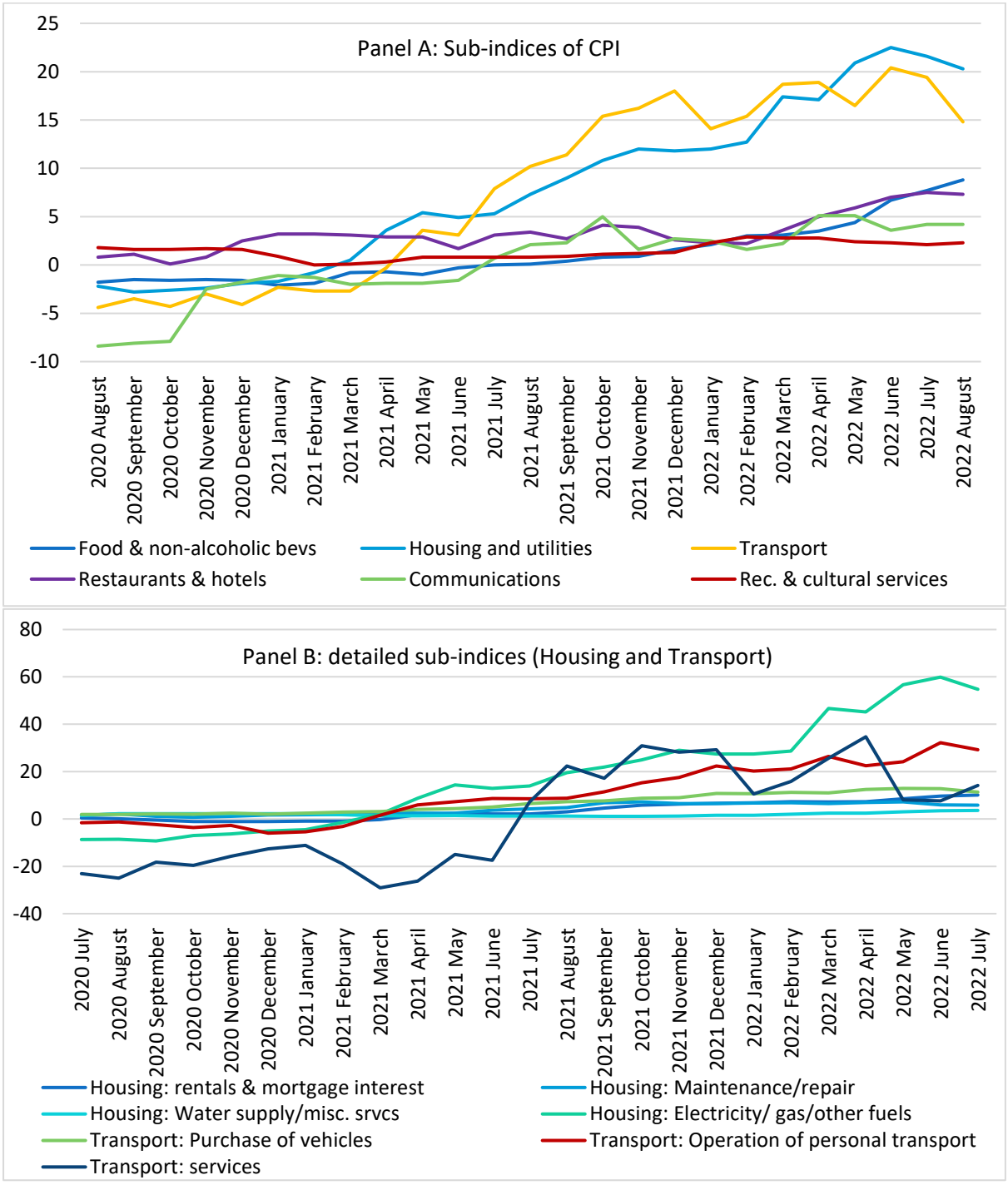


Source: Central Statistics Office.

Panel A of Figure 41 shows six of the main sub-indices of the Consumer Price Index experiencing significant price increases according to recent data. Housing, water and energy has been the largest driver of inflation since May 2022, with prices of this commodity group increasing 20.3 per cent on annual basis in August. The biggest determinant of this growth in prices is the rapid increase in energy products (Figure 41, Panel B). In August, the price of electricity, gas and other fuels increased 54.8 per cent. Transport is also a major contributor to overall inflation, increasing 14.8 per cent year-on-year in August 2022. Transport costs are being acutely affected by the increased cost of energy products as well as a surge in demand for travel (transport services increased rapidly throughout 2021 after declining substantially during the pandemic). Operation of personal vehicles, which includes the cost of petrol and related fuels has increased significantly alongside the cost of other fuel items (+20.4 per cent year-on-year in August 2022).

The spill-over effects from the war in Ukraine are also becoming increasingly apparent in food prices; prices of food and non-alcoholic beverages increased 8.8 per cent per annum in August 2022 compared to a growth rate of 2.1 per cent in January of this year. Consumers facing higher prices in food and staple commodities such as energy products may be more likely to change or limit consumption patterns if prices do not abate throughout the year. Restaurants and hotels are experiencing increases in prices as well (+7.3 per cent per annum in August 2022) likely due to a significant increase in demand as well increases in inputs such as energy and food items.

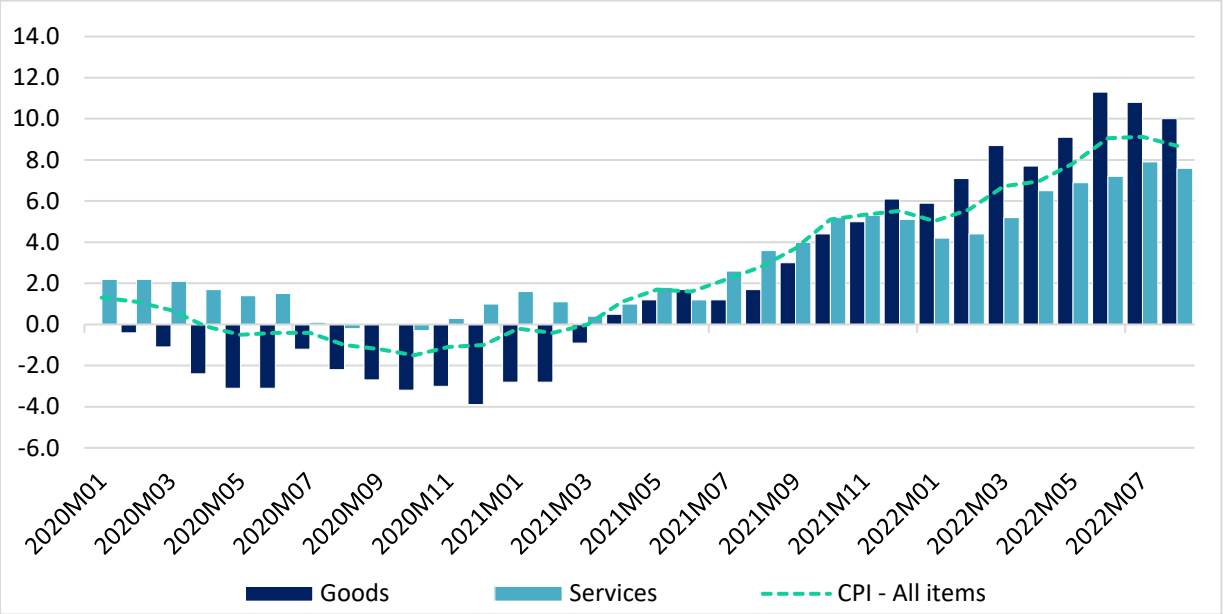
FIGURE 41 ANNUAL CHANGE IN INFLATION BY SUB-INDICES (%)



Source: Central Statistics Office.

Both goods and services are driving overall inflation. In August 2022, prices of goods and services were 10 per cent and 7.6 per cent higher than the year prior respectively (Figure 42). Within the services sector, transport and accommodation services are driving much of the high growth; these services increased 9.4 and 18 per cent per annum in August 2022, respectively. Energy items continue to be the largest contributor to the increase in goods prices, with electricity and gas prices increasing 38.1 and 56.1 per cent respectively in August 2022.

FIGURE 42 DECOMPOSITION OF ANNUAL CPI GROWTH INTO GOODS AND SERVICES GROWTH (%)



Source: Central Statistics Office.

Food and energy

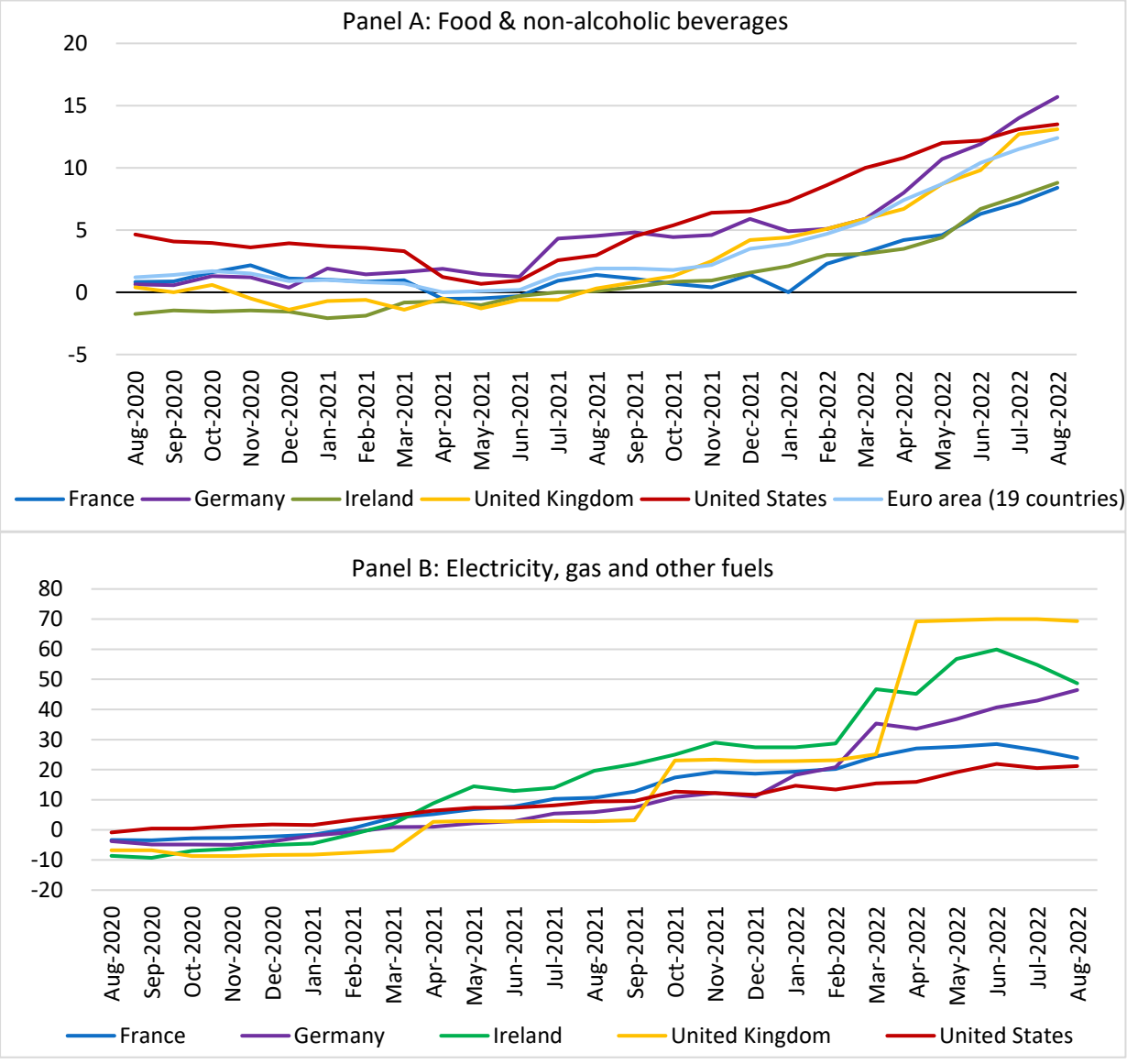
Food and energy prices have seen the most acute inflation throughout the year and represent much of households' and business' core spending. Therefore, significant increases in these items may lead to pronounced challenges, especially as wage forecasts are not expected to keep pace with inflation.

The cost of food and non-alcoholic beverages has accelerated in recent months in Germany, increasing 15.7 per cent per annum in August 2022 (Figure 43). In the UK and the US, food related costs increased by 13.1 and 13.5 per cent, respectively, over the same period. Food prices in Ireland have managed to remain much lower than the accelerated prices being experienced throughout the euro area, the UK and the US. In August 2022, prices of food and non-alcoholic beverages had increased 8.8 per cent in Ireland.

In terms of energy, greater price pressures have been experienced in Europe in recent months than the US. In August 2022, energy prices in the US increased 21.2 per cent year-on-year. In contrast, energy prices in Ireland and Germany increased by just under 50 per cent for the same period. Europe's natural gas market has been particularly affected by lower-than-average storage inventory and significant declines in Russian pipeline supplies following the invasion of Ukraine and the imposition of sanctions and countermeasures. Differential application of countervailing policy measures such as price caps also explain some

of the deviation in energy prices across Europe. In France, for example, the increase in prices is amongst the lowest in the Eurozone, largely due to the decision to implement a tariff shield effectively blocking rising prices of gas and electricity at the end of 2021;[47] however planned increases in energy prices are now set to occur in January 2023.[48] Price caps have also been in place in the UK but in line with the rapid increase of energy prices, caps were increased substantially in April 2022 and are set to increase further beginning October 2022.[49] Energy prices were 69.3 per cent higher on an annual basis in the UK in August.

FIGURE 43 CPI, CROSS COUNTRY COMPARISON (YEAR-ON-YEAR %)



Source: OECD.

47 See: France to block further natural gas and electricity price rises | Reuters.
48 See: France claims it's doing the best job in Europe to protect citizens from energy crisis (lemonde.fr).
49 See: Consumer price inflation, UK - Office for National Statistics.

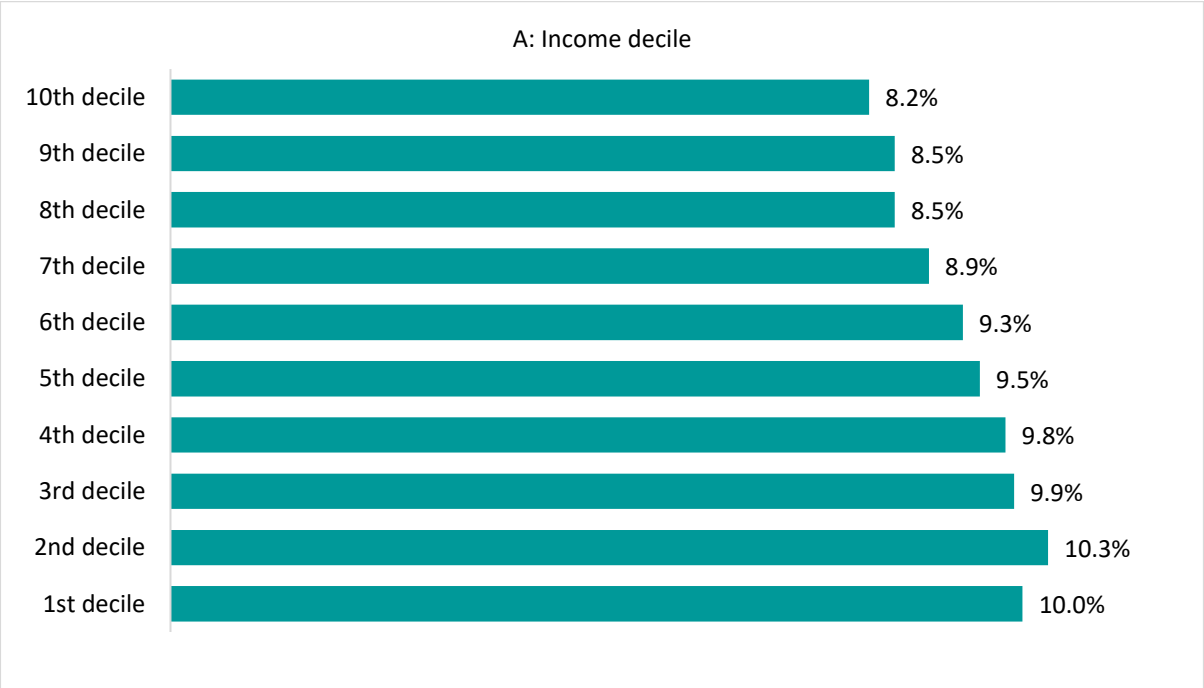
Distributional effects of inflation

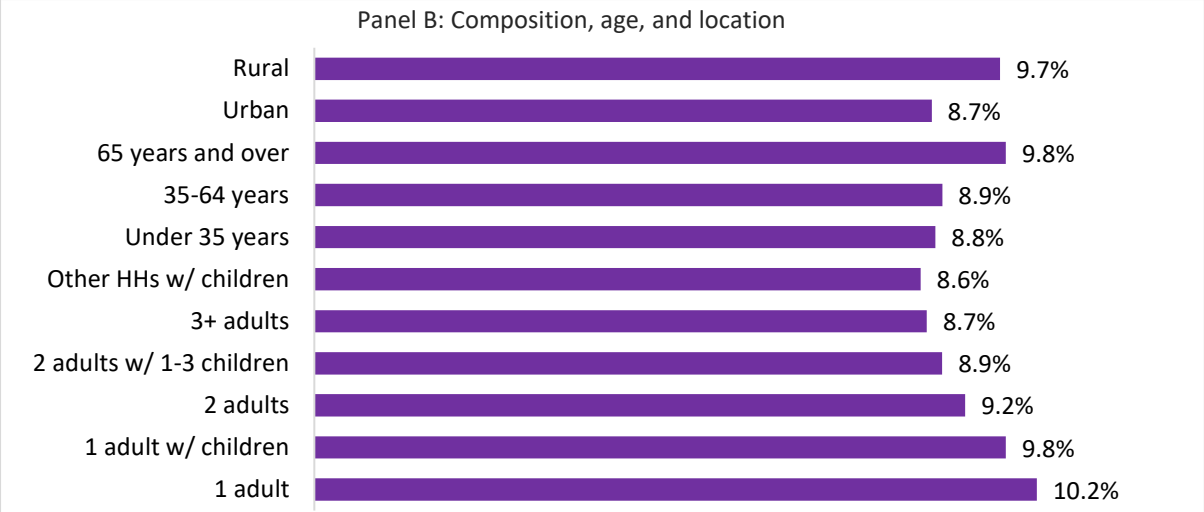
While all households are impacted by recent price increases, household expenditure varies greatly by characteristics of each household and, therefore, the consequences of inflation will be heterogeneous across households. As food and energy related costs are increasing at a faster rate than other components of CPI, households who typically spend more on these items are experiencing higher rates of inflation.

Figure 44 shows the diverging inflation rates across income deciles, location, age groups and household composition. Across income deciles, it is clear that lower income households are disproportionately affected by the recent increase in prices. For households in the bottom half of the income distribution, inflation exceeded 9.5 per cent in June 2022 (Figure 44, Panel A).

When considering household composition, single adult households experienced the highest inflation rate in June 2022 (10.2 per cent). Rural households also experienced higher inflation than urban counterparts, and households over age 65 experienced inflation of 9.8 per cent, while inflation remained under 9.0 per cent amongst younger households (Figure 44, Panel B).

FIGURE 44 MONTHLY CPI (ALL ITEMS) IN JUNE 2022 BY HOUSEHOLD CHARACTERISTICS



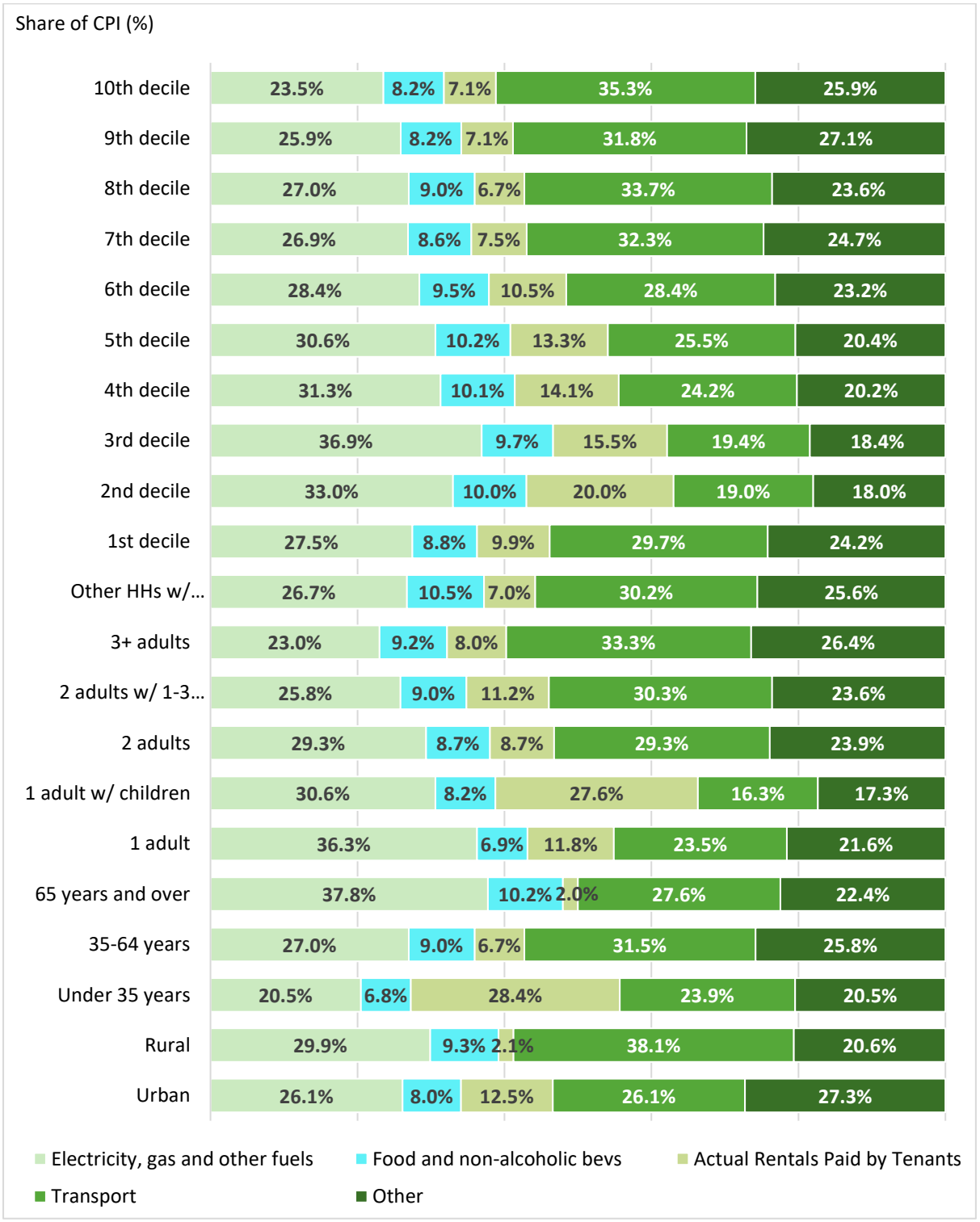


Source: Central Statistics Office.

The differences in inflation rates by households is largely due to differences in the composition of household expenditure.

Figure 45 depicts the contribution to inflation by expenditure categories across income decile, location, and household composition in June 2022. Energy costs contributed a substantial share to overall CPI for most households. However, these costs contributed to over one-third of CPI for households in the second and third income deciles, older households and single households with children. Energy costs related to transport were also a larger contributor to CPI for rural households compared to urban households. Rentals paid by tenants is a significantly greater contributor to CPI for single households with children compared to other household compositions (27.6 per cent). Transport contributed more to inflation in higher-income households and rural households than lower-income and urban households.

FIGURE 45 SHARE OF CPI BY HOUSEHOLD CHARACTERISTICS, (BY COIOCOP DIVISION, JUNE 2022)

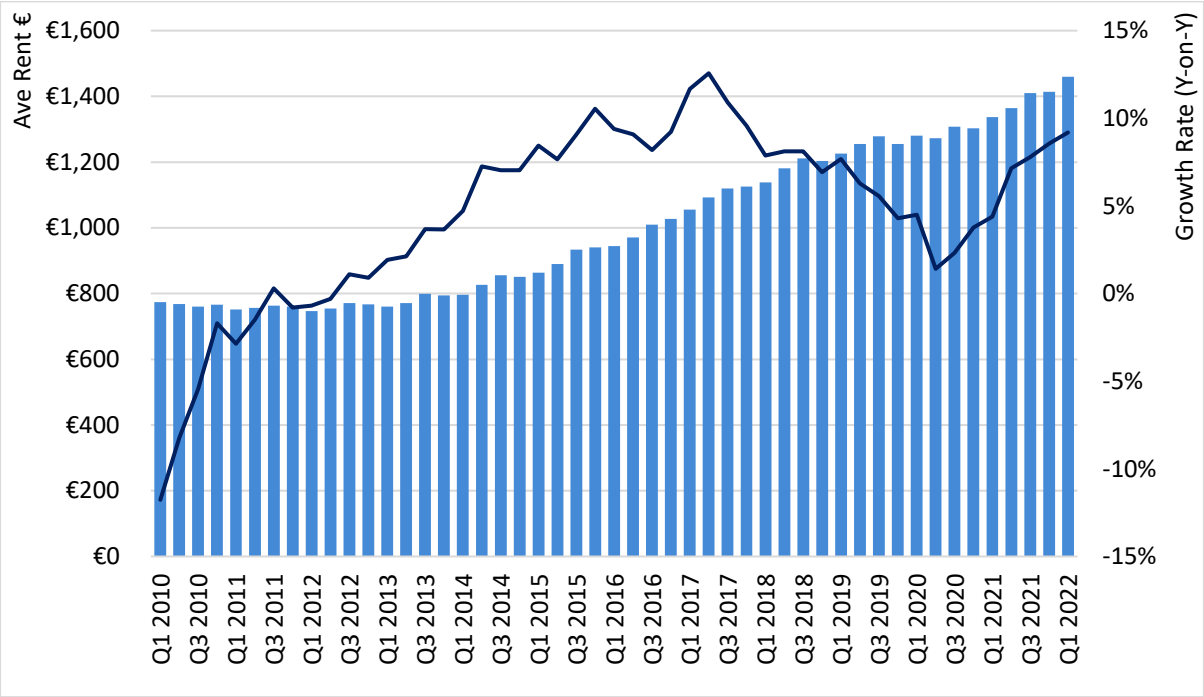


Source: Central Statistics Office, *QEC* estimates.

For many households, the recent shock to energy prices is a further strain on incomes already stretched thin by the sustained growth of rents and house prices, which have increased steadily since 2012. In Q1 2022, average rents amongst new

tenancies increased 9.2 per cent on an annual basis nationally, while house prices increased 15.1 per cent over the same period.[50]

FIGURE 46 STANDARDISED AVERAGE NEW RENTS (€) AND GROWTH RATES (YEAR-ON-YEAR), Q1 2015 – Q1 2022 (NATIONAL)



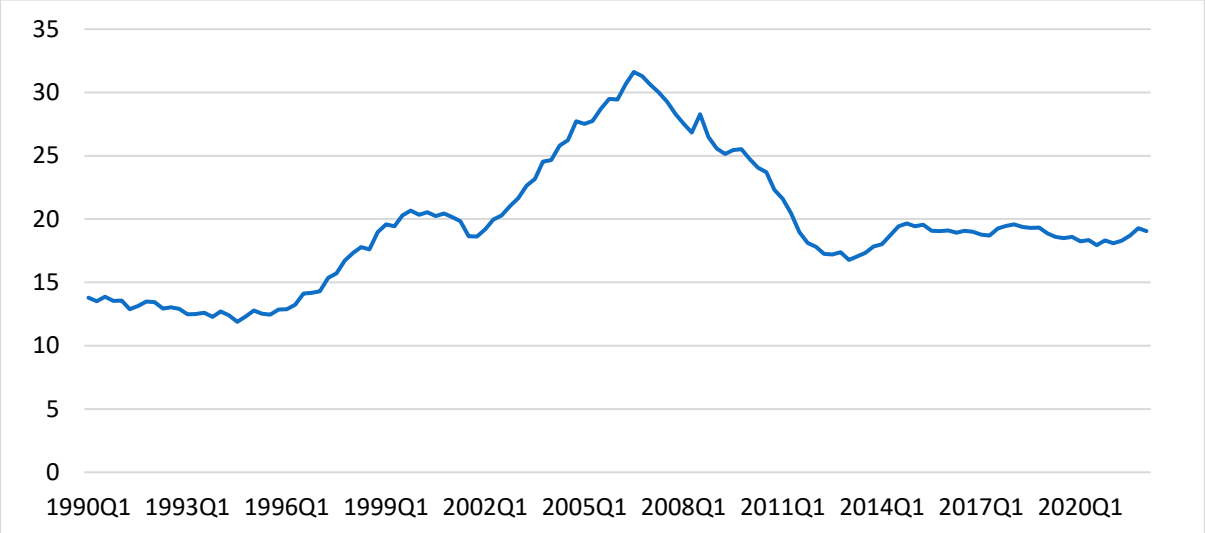
Source: Residential Tenancies Board and ESRI.

Given the recent sustained increase in both house prices and rent levels, it is interesting to look at a plot of the house price-to-rent ratio. This ratio is frequently used as an indicator of overvaluation in the property market (see McQuinn, Monteiro and O'Toole, 2021,[51] for an application to the Irish market). Figure 47 plots the ratio of national house prices to national rent levels over the period Q1 1990 to Q1 2022.

50 CSO, Residential Property Price Index (https://data.cso.ie/table/HPM09).

51 McQuinn K., T. Monteiro and C.O'Toole (2021). House price expectations, labour market developments and the house price to rent ratio: A user cost of capital approach, *The Journal of Real Estate Finance and Economics*, 62, pp.25-47.

FIGURE 47 IRISH HOUSE PRICE-TO-RENT RATIO Q1 1990 – Q1 2022



Source: Central Statistics Office, Residential Tenancies Board and *QEC* estimates.

A significant upward movement in the ratio would indicate the possibility of a bubble or an unsustainable movement in house prices. As can be seen, such an increase occurred from 2002 until 2006. In the present case, the ratio has been quite stable since 2014, after it had collapsed from 2007 onwards. However, it should be remembered that underpinning this ratio is a significant increase in both rents and prices. In a Box to the *Commentary*, McQuinn estimates a long-run model of house prices to assess the sustainability of such price increases.

Outlook

Much of the volatility likely to impact the overall CPI in the near term is the trajectory of food and energy prices. Given the planned price increases of residential gas and electricity products beginning in October of this year,[52] we have raised the expected inflation rate for 2022 relative to our previous forecast. We now anticipate an inflation rate of 8.1 per cent in 2022. In 2023, we anticipate no further worsening of energy prices beyond what is planned for the coming winter. However, with a historically low unemployment rate, and high savings ratios, we do see second round and general inflationary effects materialising, resulting in an inflation rate of 6.8 per cent in 2023.

[52] Electric Ireland set to increase residential electricity bills by 26.7 per cent and residential gas bills by 37.5 per cent beginning 1 October 2022 (see: Electric Ireland Announces Energy Price Increases Effective from 1 October 2022; esb.ie). Energia set to increase residential electric bills by 29 per cent and residential gas bills by 39 per cent beginning 7 October 2022 (see: Energia Price Change Announcement - Energia).

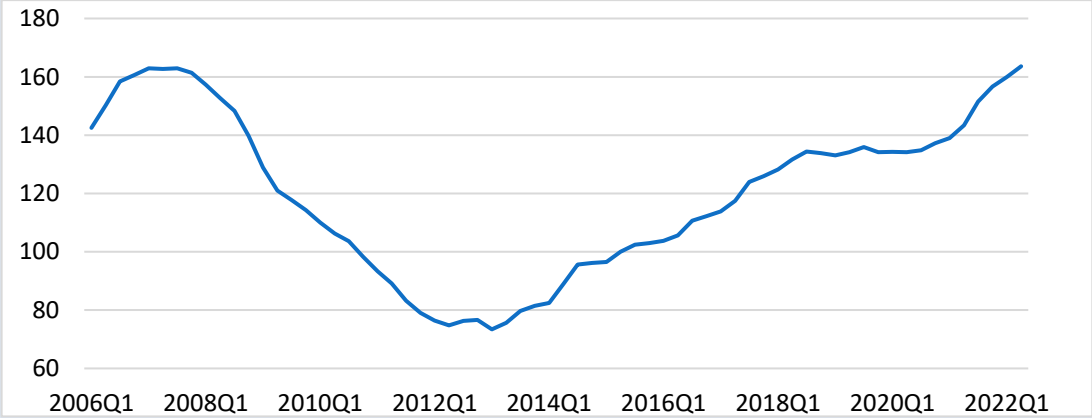
BOX B DIS-EQUILIBRIUM IN THE IRISH HOUSING MARKET?

Introduction

One of the sectors of both the domestic and international economies most impacted by the COVID-19 pandemic has been the housing market (IMF, 2021). The reduction in consumption along with significant levels of government payments offered during the pandemic led to an accumulation of savings for certain households, which some survey evidence[53] (European Commission Consumer Sentiment Survey)[54] would suggest fuelled housing demand, while public-health related lockdowns, the disruptions to supply-chains, coupled with the increase in inflationary pressures had an adverse impact on housing supply.

The Irish housing market is a particular example of this pandemic-related impact. Figures B.1 and B.2 plot nominal Irish house price levels and year-on-year growth from 2005 to 2022.

FIGURE B.1 NOMINAL IRISH HOUSE PRICES (INDEX 2015 = 100): Q1 2006 – Q2 2022

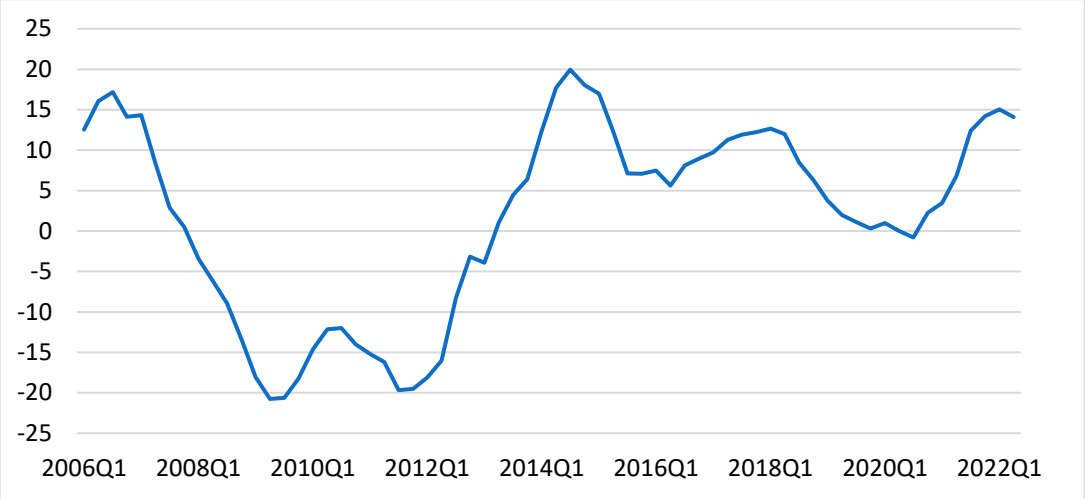


Source: Central Statistics Office.

[53] As noted in Summer *Quarterly Economic Commentary* (2022), according to the European Commission surveys, it appears that Irish households compared to other EU countries are more likely to channel extra savings into house purchase and home improvements since the onset of the pandemic.

[54] For more see https://economy-finance.ec.europa.eu/economic-forecast-and-surveys/business-and-consumer-surveys/download-business-and-consumer-survey-data_en.

FIGURE B.2 YEAR-ON-YEAR GROWTH IN NOMINAL IRISH HOUSE PRICES (%): Q1 2006 – Q2 2022



Source: Central Statistics Office and *QEC* estimates.

The turbulent nature of the Irish housing market over the period 2006 to the present is clearly apparent with Irish house price levels rising sharply up until 2007, declining significantly through 2008-2013 and recovering persistently thereafter. Previous contributions have analysed the post-2013 recovery in house prices (McQuinn, 2014; 2017).

However, what is also clear from Figure B.2 is that immediately prior to the pandemic, Irish house price growth had cooled significantly. Annual nominal growth in prices had, from Q1 2019 to Q1 2020 slowed considerably. However, once the pandemic impacted (Q2 2020), annual increases picked up swiftly reaching a peak of 15 per cent in Q1 2022.[55]

Model based assessment of current price levels

To assess the sustainability or otherwise of these price developments, an approach similar to McQuinn (2014) and (2017) is adopted; a long-run economic model of house prices is specified and estimated and the fitted value from the regression is then compared with the actual price. This is a standard approach used in the asset-pricing literature (see Blanchard and Watson, 1982, for example) to test for the presence of equilibrium in the market. House prices are assumed to be a function of a certain set of fundamental economic and demographic variables; therefore, if the actual price deviates significantly from what the model suggests then dis-equilibrium prevails. In the housing market case, the presence of dis-equilibrium means that house prices are either under-or over-valued.

Based on the model of house prices in Bergin and Egan (2022), the following model is estimated:

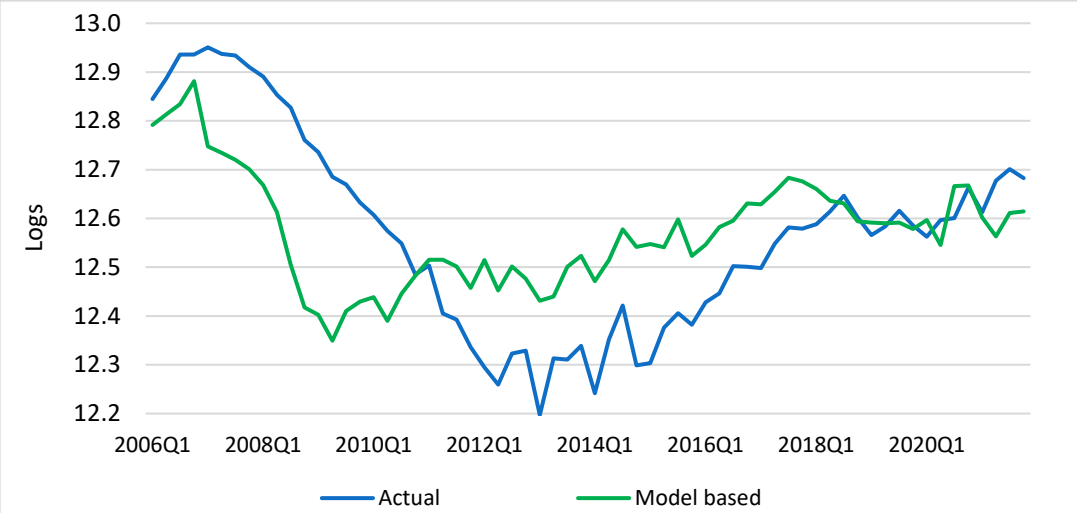
$$\ln P_t = \alpha + \beta_1 lnA_t + \beta_2 CC_t + \beta_3 PRAT_t + \beta_4 CAP_t \qquad (1)$$

Where P_t is house price levels, A_t is an affordability indicator, which combines household disposable income and mortgage interest rates (used in McQuinn, 2014; 2017). CC_t is a

credit conditions indicator, similar to that used in Kelly and McQuinn (2014), CAP_t is a housing stock variable and $PRAT_t$ is the ratio of the population in the key house purchasing cohort (25-44 years of age).[56]

The model[57] is estimated over the period 1981-2021 and the actual prices and model-based estimates are compared in Figure B.3.

FIGURE B.3 ACTUAL AND FITTED VALUES FROM THE HOUSE PRICE EQUATION: 2006-2021



Source: *QEC* estimates.

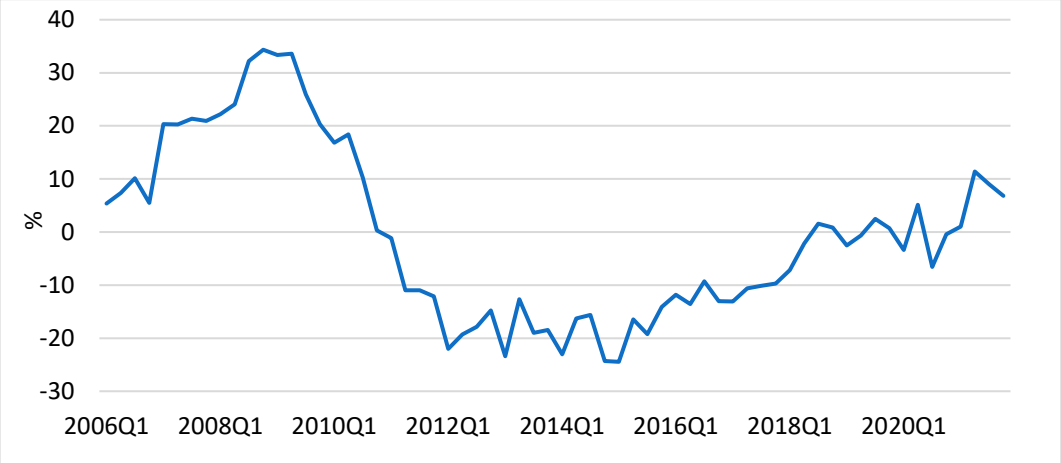
From the graph it is clear that there appeared to be significant under-valuation in the Irish market in the period up to 2018. This was a fall-out from the significant reduction in prices which occurred after the great financial crisis (GFC). House prices increased sharply and persistently during this period. From 2018 through 2020, the housing market was in equilibrium with actual prices and those suggested by the model being practically the same. However, a divergence has emerged over the past 18 months with actual house prices now somewhat larger than those suggested by the model. The difference is plotted in Figure B.4.

55 Another reason for the pick-up in house price inflation may have been due to distributional reasons; households at the lower end of the income distribution may not have been able to purchase housing at this time.

56 The model is very similar to one presented in the summer edition of the *Quarterly Economic Commentary* (2022). That model was used to assess the impact of prospective changes in Irish mortgage market rates.

57 Note all monetary variables are deflated by the Consumer Price Index.

FIGURE B.4 ESTIMATES OF DIS-EQUILIBRIUM IN THE IRISH RESIDENTIAL MARKET: 2014–2021



Source: *QEC* Estimates.

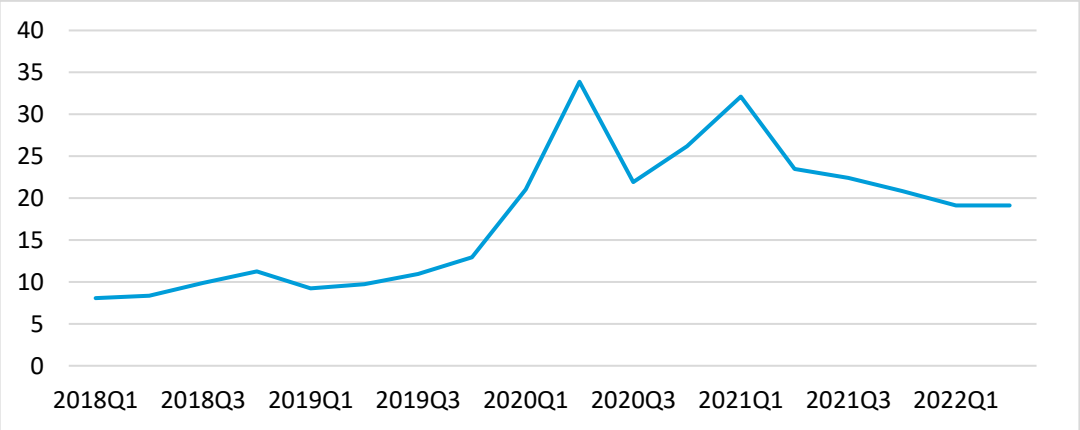
From Figure B.4, the model suggests Irish house prices are over-valued by approximately 7 per cent.[58]

Causes and implications

What are the causes and implications of such over-valuation? Unlike the period prior to 2007 when there was also significant over-valuation, excess credit is unlikely to be a factor. The model contains a credit conditions indicator and while credit levels have increased over the past number of years, they have not done so on an unsustainable basis.

One reason for the overvaluation relative to the model could be the increasing share of non-household purchasers. For example, if there are more institutional investors, local authorities or other AHBs purchasing housing units in the market, then they will not be impacted in the same way by the variables included in (1). They may, for example, be more influenced by their own financing conditions and government spending in the area.

FIGURE B.5 IRISH HOUSEHOLD SAVINGS RATIO (%): Q1 2018 – Q2 2022



Source: Central Statistics Office.

Another likely cause of recent house price movements is the sizeable increase in savings accumulated in aggregate by Irish households during the pandemic. As noted earlier, survey evidence would indicate that Irish households may be using some of these savings in the residential market. Figure B.5 plots the Irish household savings ratio over the period Q1 2018 – Q2 2022 with the substantial increase in 2020 apparent; between 2012 and 2019 savings in aggregate terms averaged €2.3 billion per quarter, in 2020 and 2021 this jumped to over €8 billion.

It is entirely likely that some of these excess savings have found their way into the Irish housing market. If this is the case, then technically speaking there may not be overvaluation in the market, as the recent increases in prices may be explained by the heightened savings levels.[59] However, even if the increase in prices can be explained by these developments, it is clear, going forward, that the recent surge in savings and wealth is not sustainable over the medium term. Therefore, changes in house prices will become re-aligned with movements in income over this period. This means that recent increases in house prices are likely to moderate substantially over the short to medium term. This is likely to be compounded by the declines in real income which many households are set to experience in 2022 as well as the significant uncertainty generally associated with macroeconomic developments. Furthermore, as identified by McQuinn (2022), the recent and future expected increases in mortgage interest rates will, in themselves, have a contractionary impact on house prices. One factor which may prop up house prices is the likely impact of recent inflationary pressures on housing supply with housing commencements in 2022 down somewhat for the year to date compared with 2021.

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This Box was prepared by Kieran McQuinn.

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58 This is based on the most recently available data up to the end of 2021. House prices have increased significantly into 2022, therefore the degree of overvaluation may well have increased in the present year.

59 Like most models of house prices, model (1) is specified in terms of income not wealth. Therefore, if one were to include savings and wealth, the divergence evident post-2020 may well be explained by economic 'fundamentals'.

PUBLIC FINANCES

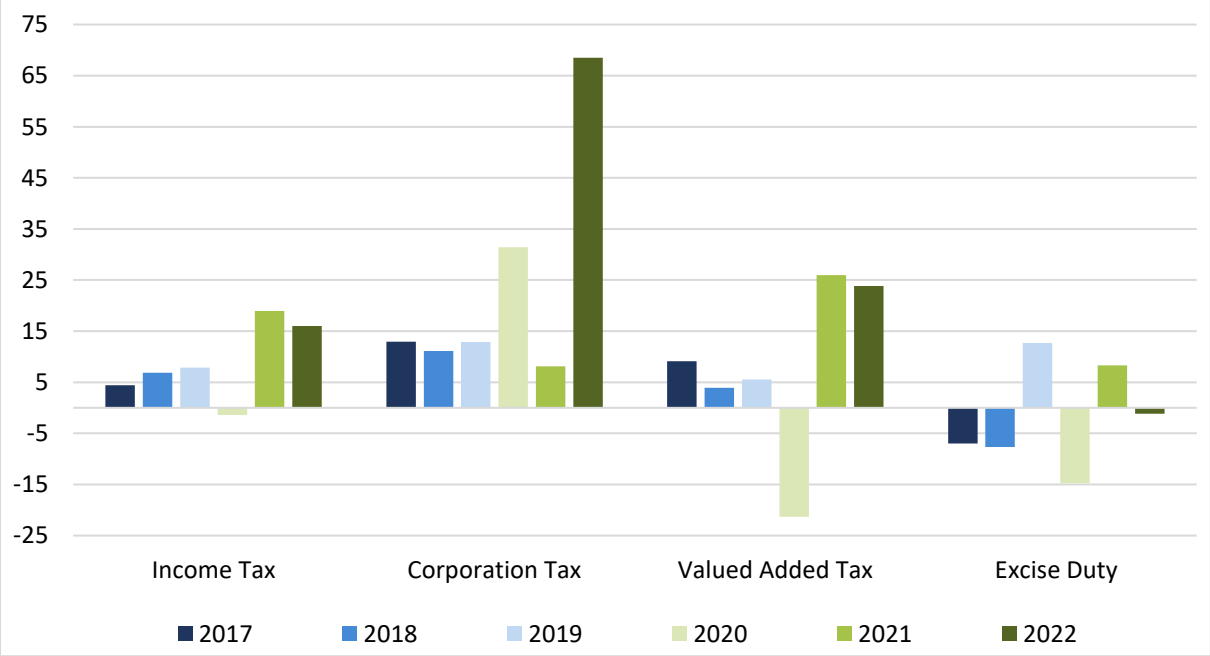
Key Points

- *Tax receipts continue to exhibit strong annual growth across many headings including VAT, income tax, and in particular, corporation tax.*
- *The significant increase in tax revenues will result in a GGB surplus in 2022 and 2023.*
- *Strong growth in tax revenues coupled with inflation will see a continued improvement in Irish debt ratio.*

Taxation revenues have shown substantial growth across the major tax headings in January-August 2022, particularly in corporation tax. The strong performance of the labour market and the recovery of VAT receipts compared to the first eight months of 2021 have been significant contributors to the increased tax revenue in 2022. Income tax collected to date amount to €19.2 billion, which is 16 per cent more than in the same period in 2021.

VAT receipts stand at €12.2 billion as of August 2022. This is an increase of 24 per cent compared to VAT collected in January-August 2021. This increase can be partially explained by base effects as there were public health restrictions and temporary reductions in the VAT rate in response to COVID-19 in the early months of 2021. The development of the main taxation items can be seen in Figure 48.

FIGURE 48 GROWTH RATES OF MAIN TAXATION ITEMS



Source: *QEC* calculations.

As shown, increased tax revenue can be observed across a range of tax headings, however, corporation tax has seen the largest growth. An additional €2.6 billion in corporation tax receipts have been raised compared to January-August 2021, which represents a 68 per cent increase year-on-year. The rise in corporation tax receipts has been subject to much discussion recently, with some suggesting the additional funds could be put towards one-off measures such as a cost-of-living support package, or towards capital expenditure purposes. Other commentators have suggested the diversion of these funds to a 'rainy day' fund or other mechanisms to build up financial buffers. Much of this discussion has centred on the sustainability of corporation taxes. Box C seeks to contribute to this discussion by examining recent trends and incoming global changes to the taxation of multinational enterprises (MNEs).

BOX C CORPORATION TAX AND FUTURE SUSTAINABILITY

Irish corporation tax (CT) receipts have been rising sharply throughout the last decade, making up an increasing share of the total domestic tax intake. It represented 22.6 per cent of total Exchequer receipts in 2021 – this is indicative of the growth in receipts, as CT represented only 11 per cent of total receipts in 2014. The pace of the increase in CT revenue, as well the high proportion of CT paid by a small number of firms (Acheson et al., 2021), has caused many commentators to claim that a sizeable portion of the increase may be temporary in nature and should be treated as windfall receipts.

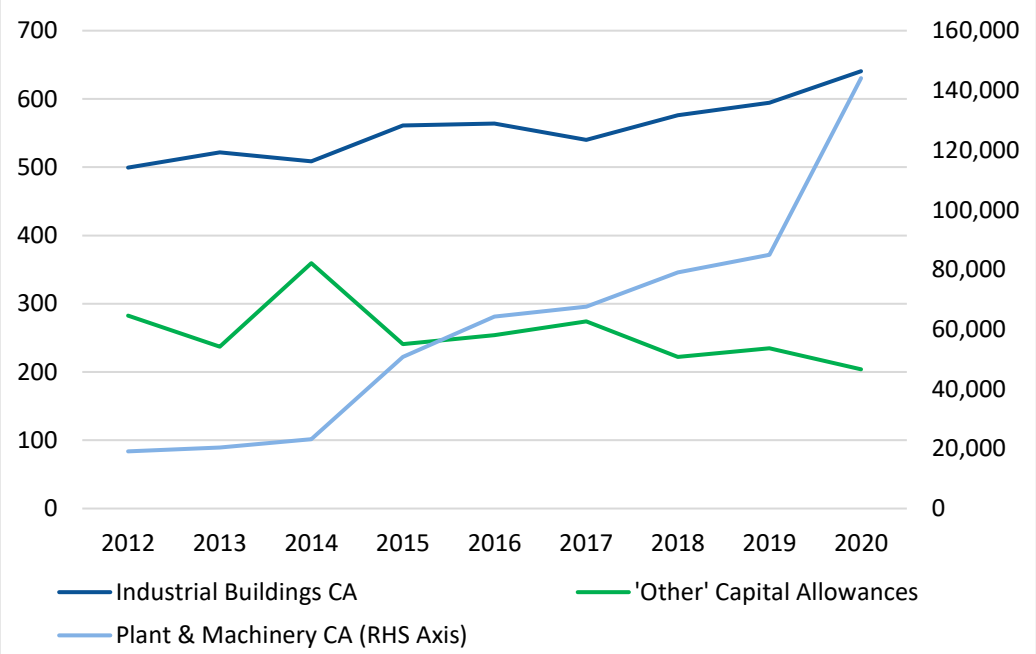
Many of these high-contributing firms are US MNEs. Many of these high earning companies began operations in Ireland due to FDI-focused corporation tax policy but some of these MNEs also did so to establish a base where profits could be shifted from around the world to Offshore Financial Centres (OFCs) – no tax jurisdictions such as Bermuda or the Cayman Islands – through royalty payments for the use of Intellectual Property (IP) (Prueksarungrueang, 2019). These practices contributed to the US government passing the Tax Cuts and Jobs (TCAJ) Act in 2017, which resulted in a number of changes to US tax treatment of IP.

The TCAJ Act (2017) is generally agreed to have caused one of two reactions from Irish-based US MNEs: they began to hold IP assets in the US, which has seen the flow of royalty payments shift from the Netherlands and OFCs to the US (Coffey, 2021); or US MNEs began to hold IP assets in Ireland, meaning royalties remain in Ireland. Coffey (2021) shows that the former has been the reaction of ICT firms whereas many pharmaceutical companies have now begun to house IP in Ireland, given that a lot of their manufacturing activity is conducted in Ireland. This is likely contributing to the large increases in CT receipts which is currently being observed along with a small increase in the effective tax rate (ETR) and greater profitability of these large firms (Revenue, 2022; Department of Finance, 2022). This movement of IP can be seen when one examines the development of capital allowances in recent years. Capital allowances are tax depreciation allowances which allow firms to write off capital expenditure against profits. This leads to large

reductions in taxable income – in 2020 Plant and Machinery capital allowances amounted to over €144 billion.[60]

It seems that this restructuring of IP ownership largely began in 2015, as can be seen by the sharp increase in 'Plant and Machinery' capital allowances (intangible assets are included in this heading), shown in Figure C.1. However, these capital allowances are capped at 80 per cent of profits and can only be claimed for a certain period of time, often eight years (12.5 per cent per year). Therefore, given the large increases in capital allowances throughout the 2010s, as the periods of allowances come to an end for more and more intangible assets, the amount of taxable income could increase significantly.

FIGURE C.1 CAPITAL ALLOWANCES (€ MILLION)



Source: Revenue Commissioners.

Sustainability

Despite the TACJ Act (2017), the OECD has introduced the Global Anti-Base Erosion (GLoBe) rules that will soon come into effect as a result of the OECD Base Erosion and Profit Shifting (BEPS) programme.[61] The OECD GLoBE rules give an insight into the sustainability of Irish corporation tax receipts. These new rules that will be implemented will seek to minimise corporations' ability to shift profits through the payments of royalty payments and also aim to have profits from sales to be reported in the country the sale is made in, to a greater extent than has been the case in the past.

60 The manner by which capital allowances on intangible assets are defined and treated is available in the Revenue Tax and Duty Manual. Part 09-02-05 - Tax Relief Scheme for Capital Expenditure on Intangible Assets (S. 291A) (revenue.ie).

61 See: OECD releases Pillar Two model rules for domestic implementation of 15% global minimum tax – OECD.

There are two pillars to the GLoBE rules. Under Pillar 1, there will be a reallocation of taxing rights on a proportion of corporations' income to the jurisdiction where the good/service was consumed. At the moment, the agreement states that these reallocations will apply to MNEs with revenue of over $20 billion globally and profitability of 10 per cent or greater of revenue. For those MNEs, 25 per cent of residual profit is to be reallocated to market jurisdictions where the product/service is purchased, as long as the company derives at least €1 million in revenue from that jurisdiction. Residual profit is defined as profit in excess of a certain profitability threshold percentage, in this case profit that is in excess of 10 per cent of revenue.

Under Pillar 2 of the GLoBE rules, companies will be subject to a minimum effective tax rate (ETR) of 15 per cent. The GLoBE rules provide a framework for the calculation of net income, covered taxes and ETRs. If the ETR is below 15 per cent in a jurisdiction, a top-up tax will be charged to the parent company of the company group in order to push the overall ETR up to the minimum of 15 per cent.

These rules could see large changes in the way Irish corporation tax (CT) is implemented. Table C.1 presents the results of a scenario exercise designed to examine the possible effect of these new rules. This exercise is based on 2020 data for corporation tax (Revenue, 2022).[62]

There are six scenarios envisaged. They vary, firstly, by the proportion of profits expected to be covered by Pillar One of the GLoBE rules. It seems likely that approximately 60 per cent of the profits of large MNEs will be subject to Pillar One. This is based on calculations of four of the top ten largest contributors to Irish CT. The proportion of these companies' profits which exceeded 10 per cent of revenue/sales was calculated based on data from Forbes Global 2000 List.[63] While 60 per cent is the proportion expected based on these calculations, scenarios where a greater/lesser proportion is covered is also examined. It is assumed that 25 per cent of the covered profits will be redistributed elsewhere per Pillar One rules.

The ETR is also allowed to vary across scenarios. While Pillar Two of the GLoBE rules requires an ETR of 15 per cent, it is expected that Ireland will continue past practices of enticing MNEs to come to the country through tax breaks/incentives. It has been proposed by some that the use of credits such as the R&D Tax Credit may allow the government to reduce corporations' tax due without affecting the calculation of the ETR under the OECD framework, if they can be accepted as 'qualifying refundable tax credits' (Barry, 2022).[64] Therefore, scenarios with a lower ETR of 10 per cent are included. This represents the ETR charged on profits in Ireland.

62 Data are publicly available here: Distribution of Incomes and Tax (revenue.ie).

63 See: The Global 2000 2022 (forbes.com).

64 For more on R&D Tax Credit and KDB: Research and Development (R&D) Tax Credit (revenue.ie); Knowledge Development Box (KDB) (revenue.ie).

TABLE C.1 SCENARIO RESULTS: CHANGES IN CORPORATION TAXES FOLLOWING PROPOSED OECD GLoBE RULES

	Scenario 1	Scenario 2	Scenario 3
Trading Profits (TP) (€m)	156,118.6	156,118.6	156,118.6
% TP covered by Pillar One	60%	50%	70%
Amount TP covered by Pillar One (€m)	93,671.2	78,059.3	109,283.0
Redistribution Amount (Pillar One) (€m)	23,417.8	19,514.8	27,320.8
TP after Rdst. (€m)	132,700.8	136,603.8	128,797.8
Trading Income (TP-Capital Allowances and Losses)[65]	74,910	78,812.9	71,007.1
ETR	15%	15%	15%
Tax Due (€m)	11,236.5	11,821.9	10,651.1
Actual Tax Due (€m)	9,863.5	9,863.5	9,863.5
Actual vs. Alt. (€m)	1,373	1,958.4	787.6

	Scenario 4	Scenario 5 (CA Expiry)	Scenario 6 (TP reduced by 20%)
Trading Profits (TP) (€m)	156,118.6	156,118.6	124,894.9
% TP covered by Pillar One	60%	60%	60%
Amount TP covered by Pillar One (€m)	93,671.2	93,671.2	74,936.9
Redistribution Amount (Pillar One) (€m)	23,417.8	23,417.8	18,734.2
TP after Rdst. (€m)	132,700.8	132,700.8	106,160.6
Trading Income (TP-Capital Allowances and Losses)	74,910	104,910	48,369.9
ETR	10%	10%	10%
Tax Due (€m)	7,491	10,491	4,836.9
Actual Tax Due (€m)	9,863.5	9,863.5	9,863.5
Actual vs. Alt. (€m)	-2372.5	627.5	-5026.5

Source: Authors' estimates.

As can be seen above, the outcome of the GLoBE rules on CT tax receipts will depend on certain factors. It is clear that if an ETR of 15 per cent is indeed implemented, this would see slight increases in CT receipts, even after the loss of 25 per cent of residual profits covered under Pillar One. This is shown in Scenarios 1, 2 and 3. However, as mentioned, it is likely Ireland will continue to provide certain reliefs through capital allowances and tax credits such as the R&D Tax Credit. If the State is able to provide these reliefs, the ETR in Ireland will remain suppressed as it has been over the last number of years. To illustrate this, ETRs of 10 per cent are also used in the exercise.

This lower ETR would likely see a decrease in CT receipts. This is shown in Scenario 4. However, it should also be acknowledged that capital allowances on the depreciation of intangible assets are granted for a fixed time period only. To acknowledge this point, Scenario 5 shows that as these capital allowances expire, the increase in the CT base could offset the decrease shown in Scenario 4.[66]

Finally, Scenario 6 allows for a possible reduction of Trading Profits of 20 per cent for these top-earning companies. This represents a withdrawal of IP by some of those companies that have relocated IP to Ireland in recent years. While some have viewed the establishment of manufacturing facilities in Ireland as well as the housing of IP in the country as a sign that companies are committed to Ireland as a trading base, it has been debated widely what the effect of such a withdrawal would be. This calculation shows that if Trading Profits reported in Ireland dropped by 20 per cent, and the OECD framework was implemented with 60 per cent of remaining profits being subject to Pillar One and an ETR of 10 per cent, CT receipts would see a substantial decrease.

Conclusion

Given the confidential nature of the data, it is very difficult to assess the sustainability or otherwise of recent developments in CT trends at a granular level. Furthermore, it is difficult to predict the exact trajectory of Irish corporation tax given that uncertainty remains around how Pillar One of the GLoBE rules will be implemented, as well as how much space Pillar Two will leave for Ireland to offer capital allowances, R&D deductions, and other tax credits to reduce CT paid by large MNEs.

However, it is clear that ETRs are set to increase and given the continued profitability of large US MNEs, the potential increase in taxable income as capital allowances end, as well as the likelihood that these companies will continue to centre a lot of activity in Ireland (particularly provision of services), then it is likely that corporation tax revenue will remain close to levels seen currently.

Despite this conclusion, it must be recognised that the potential relocation of these large MNEs, while unlikely, exposes the Exchequer to idiosyncratic company-specific risk. The extent of this risk is difficult to assess but policymakers should be aware of the need to remove the concentration risk from the Irish tax take.

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[65] Capital Allowances and Losses are sourced from Revenue Corporation Tax Statistics.

[66] To illustrate this, the Capital Allowances for 2019 was used in the calculation as a substitute for the 2020 figure.

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This Box was prepared by Eoin Kenny.

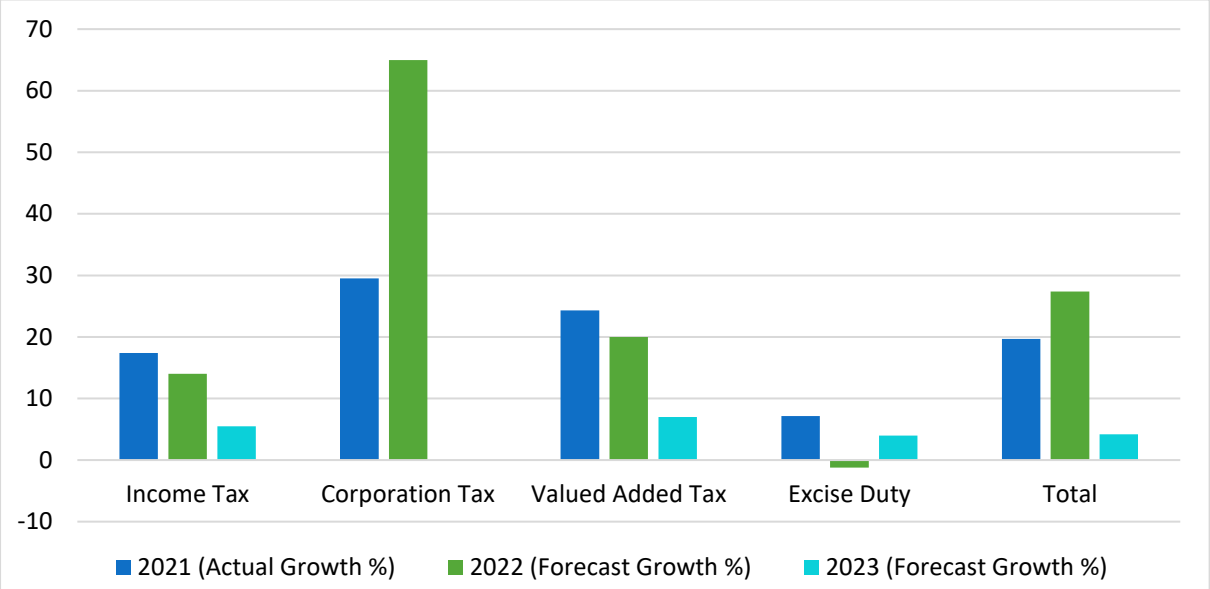
Exchequer expenditure for the year to August stands at €59.8 billion. This level of expenditure is lower than the same period in 2021, with Gross Voted Expenditure totalling €1.9 billion less and Non-Voted Expenditure totalling €3.8 billion less. These lower levels of expenditure are largely due to the elevated spending that was required in 2021 to respond to the COVID-19 pandemic.

Expenditure was largely in line with what was targeted overall, with total Gross Voted Expenditure just 0.4 per cent above profile. However, capital expenditure was 16.9 per cent below profile. This is largely due to lower than targeted capital spending in a range of areas, including rural and community development, housing and transport. Capital spending on housing and transport was €330 million and €219 million lower than profile, respectively. This also represents a 21.1 per cent decrease in spending on housing compared to January-August 2021. However, expected capital spending on housing and transport for the year remain above 2021 levels. Therefore, higher levels of capital spending may materialise in the final quarter of 2022.

Current spending, on the other hand, came in slightly above what had been targeted – 2.2 per cent above profile. This was a result of higher than targeted current spending for health, social protection, education, and children, equality and disability. Current spending on health was €631 million, or 4.6 per cent, above profile in the first eight months of the year. This was 11.4 per cent more than this period in 2021. Social protection spending was 24.5 per cent lower than January-

August 2021, due to the economic recovery and continuous improvements in the labour market. Figure 49 presents the forecasts of the main taxation items for 2022 and 2023.

FIGURE 49 FORECAST OF KEY TAXATION AGGREGATES



Source: Department of Finance and *QEC* calculations.

In the Summer *Commentary*, it was noted that the receipts in 2021 had been driven by the economic recovery as the effects of the pandemic subsided. Therefore, it was predicted that receipts for 2022 would not increase at the same rate as 2021. This has been true across many tax headings, with the exception of corporation taxes, which is now forecast to grow by 65 per cent this year. The forecast for 2023 is currently for no change in corporation tax receipts. This is based on the assumption that these large increases apparent over the last year will not continue but it also unlikely that there will be a large drop-off in corporation tax. Therefore, it is expected there will be no significant change in corporation tax intake in 2023. As discussed in Box C, when the OECD GLoBE rules are implemented, there may be more changes to the level of corporation tax intake.

Tax revenue overall is expected to continue to grow for the rest of 2022 and 2023, and hence public debt ratios are expected to continue to decline. The General Government Balance (GGB) is expected to register a surplus of 0.3 per cent in 2022 and a further surplus of 1.2 per cent in 2023. Both of these forecasts allow for the significant package outlined in Budget 2023 to assist households and businesses with the expected increase in energy costs.

This surplus coupled with rising inflation will lead to further decline in debt-to-output ratios, with debt-to-GDP forecast decline to 49.4 per cent and debt-to-GNI* forecast to decline to 92.0 per cent by the end of 2022. The corresponding ratios are forecast to be 45.8 per cent and 86.1 per cent in 2023. It should be noted, however, that the current global environment is one of high uncertainty and it is difficult to say how long and to what extent cost-of-living supports implemented by the Government will be needed.

General Assessment

International outlook worsens and energy crisis bites

The external environment facing the Irish economy is currently beset by extraordinary uncertainty. The surge in global demand in the aftermath of the pandemic, coupled with the fall-out from the war in the Ukraine and ongoing supply-side frictions, has resulted in a significant and persistent increase in inflation. While the deteriorating geopolitical situation has exacerbated pre-existing inflationary pressures, it has also given rise to concerns about energy security with the prospect of energy rationing across the European Union in the winter of 2023 now a distinct possibility. Box A in the *Commentary* by Lynch and Disch discusses the risks to domestic electricity supply in winter of 2022/2023. Also, as noted in our Risk section, the outlook across all of Ireland's main trading partners (UK, US, and EU) has deteriorated and recession risks are rising. While many Western economies are confronted by significant challenges, it is clear that the prospects for the UK economy are of particular concern. The recent adverse market reaction to the fiscal plans outlined by the new British administration have caused a significant shock in the currency, bond and potentially housing markets there. This comes on top of the fact that macroeconomic shocks associated with the COVID-19 pandemic and the war in Ukraine have had a disproportionate impact on the UK, with British inflation rates set to be somewhat higher than most European economies. While it is still difficult to exactly identify the impact of Brexit on the UK economy, it is clear that the trade disruptions associated with the decision to leave the EU have also exacerbated recent macroeconomic developments for the UK economy.[67]

The recent decline in the value of sterling against most international currencies highlights investor concerns generally about future UK economic prospects. As an increasingly open economy, Ireland has greatly reduced its dependence on the UK economy. However, it is clear that certain sectors of the Irish economy are still quite interlinked with the United Kingdom, both in terms of exports and imports. Therefore, the relatively poor outlook for the UK economy over the short to medium term indicates that those sectors of the Irish economy still reliant on the UK as a main export destination should look, where possible, to diversify both their import and export markets.[68] Given the sizeable shock in financial markets on foot of the UK fiscal plan outlined on 23 September, the relevant Irish authorities will have to closely monitor the potential contagion implications for the domestic financial sector.

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67 See National Institute for Economic and Social Research (2022). National Institute UK Economic Outlook 'Sailing in Treacherous Seas' for an overview of the impact of Brexit on the UK economy.

68 See Lawless (2021) for a recent review of Irish trade with Great Britain and Northern Ireland. Lawless M. (2021). *Cross-border trade in services*. Economic and Social Research Institute Research Series Number 129.

Furthermore, in a broader context, the Chinese economy, one of the main engines for global growth over the past 15 to 20 years, has been experiencing significant difficulties in recent months with the Chinese commercial and residential property markets particularly exposed. Additionally, in light of the Ukraine war, the attitudes of Western authorities to the Chinese regime are likely to change somewhat, possibly with significant implications for global trade between Western economies and China over the coming years.

Irish economy bucking the trend but inflation beginning to have an impact

Notwithstanding the international uncertainty, the domestic economy continues to demonstrate an extraordinary degree of resilience. While the contribution of consumption to growth has moderated through the year and is set to decline further given the heightened rates of inflation, modified investment and exports are continuing to perform strongly in 2022. We now expect modified domestic demand to grow by 7.5 per cent in the present year with broad-based capital formation by firms being the main driver of growth. The estimate from our Nowcasting model, outlined in the Output section of the *Commentary* indicates that modified domestic demand will grow by 4.6 per cent in Q3 2022.

In 2023 we expect a slower pace of growth in MDD at 2.5 per cent. While consumption is still set to increase on foot of a lower, but still relatively high, rate of inflation, we expect investment to drop back from the levels seen in 2022 in line with the slowdown internationally. In terms of external trade, we also expect the contributions from net exports to be lower given the more adverse international conditions.

Labour market continues to perform and tax revenues buoyant

The robust performance of the economy for the year to date is particularly evident in the labour market and the government Exchequer returns. Unemployment is now set to reach 4.1 per cent by the end of the current year, while taxation receipts are increasing across all the main headings. As noted previously an unemployment rate below 4 per cent is unprecedented in an Irish context and will inevitably lead to upward wage pressures in the domestic labour market.

The healthy state of the public finances has enabled the Government to increase spending quite substantially in seeking to insulate the most vulnerable in society from the heightened cost of living pressures currently being experienced. Overall, the Government has to tread a fine line in terms of protecting the most vulnerable in society from elevated rates of inflation while ensuring that Government policy

itself does not additionally fuel the inflationary pressures. This is particularly the case with unemployment falling to historically low rates. The recent budgetary package was substantial in nature at €11 billion. While it will provide households and businesses with some relief as far as rising cost of living pressures are concerned, the scale of the package may well add to some of the inflationary pressures in the domestic economy. The targeting of measures towards one-off payments help to ensure the ongoing sustainability of the fiscal position.

Energy costs set to rise with lower income households at most risk

Over the winter months, there is a distinct possibility that energy costs are likely to increase further. This would put significant pressure on many households as they confront this and other sizeable increases in the cost of living. Consequently, the Government may decide to provide further additional support to those households most affected. This could result in a significantly greater expenditure being incurred by the Government in 2023 than is now officially forecast. Based on the significant increases in tax receipts and likely trends in expenditure observed for the year to date, we now believe the public finances will witness a surplus in the General Government Balance (GGB) of 0.3 per cent of GDP in 2022. In 2023, we believe the Government will run a surplus of 1.2 per cent.

Much of the recent increase in government taxation receipts is due to the substantial surge in corporation taxation receipts, which are up over 50 per cent for the year to date on equivalent levels in 2021. The persistent increases in the source of taxation, particularly given the relatively concentrated nature of the firms contributing the receipts, has given rise to concerns about the sustainability, or otherwise, of this source of revenue over the medium term. It is important that a sizeable component of this surge in receipts is used by the Government for capital, one-off purposes, or to build up financial buffers. It should not all be used to fund day-to-day current expenditure; the more these funds are used for the aforementioned long-term purposes the better. The commitments in the recent budget for the allocation of substantial sums (€6 billion over the course of two years) into a reserve fund are extremely welcome. In Box C to the *Commentary*, Kenny, using publicly available data, assesses the impact of the proposed OECD Base Erosion and Profit Shifting (BEPS) reform on Irish corporation tax receipts. The analysis indicates that, at worst, Irish taxation receipts will only be marginally impacted.

A related point noted in the Output and Trade sections of the *Commentary* is the increasing importance to the Irish economy of the ICT and pharmaceutical sectors. It is clear that these sectors lie behind a lot of the resurgence in the economy post the great financial crisis (GFC). While this has been a welcome development, it does indicate that the domestic economy is particularly vulnerable to significant

slowdowns in either sector. Such a contraction would negatively impact across value added in the economy, trade, employment levels and government taxation receipts.

Broad-based inflation pressures dictating monetary policy response

Inflationary pressures are still at an elevated rate both globally and in the domestic economy. The most recent Irish inflation rate is 9.1 per cent with the euro area rate at 8.9 per cent. While energy and food prices are continuing to play a central role in inflation developments, it is also clear that higher inflation rates generally have become more broadly-based. As noted by Schnabel (2022),[69] at a euro area level, higher inflation rates are now observed in services and for non-energy industrial goods. Schnabel (2022) also acknowledges that it will take some time until inflation returns to the target rate of 2 per cent. In terms of the Irish inflation rate, we now expect that the domestic rate will be greater this year than we had previously forecast. In 2022, we forecast that inflation will be at 8.1 per cent in 2022 and grow at a reduced, but still elevated rate of 6.8 per cent in 2023. It is evident that this higher rate of inflation is now adversely impacting domestic demand with retail sales, in particular, experiencing significant year-on-year declines in volume terms. While the inflation rate will be less in 2023, this does mean that the elevated cost of living experienced in 2022 will persist into the new year.

The high and persistent inflation rates in the Eurozone have set the ECB on a path towards a normalisation of monetary policy rates. While many global central banks had begun to tighten key benchmark rates earlier this year, the ECB began its rate rising process in summer 2022 and have, to date, increased rates by 125 basis points. Key ECB policymakers have signalled that rates will continue to rise until inflation begins to come back towards the target 2 per cent rate. This is likely to have an impact on many aspects of the Irish economy; higher rates are likely to subdue credit demand thus lowering investment and consumption while it may have some impact on the financial sustainability of mortgage and other debt facilities through higher repayments for those with limited financial capacity to cater for rising debt repayments, as well as increased general price pressures.

Countervailing forces at play in housing market

One market where the rising interest rates are likely to be impactful is the housing market which is set to face a number of countervailing trends over the next 12 months. Growing uncertainty as to the international economic outlook along with elevated inflation rates and the aforementioned increase in interest rates are set to have an adverse impact on housing demand. However, higher rates of inflation

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69 Schnabel I. (2022). 'Interview with European Central Bank (ECB) board member'. Available at: https://www.ecb.europa.eu/press/inter/date/2022/html/ecb.in220818~a2a774e937.en.html.

have had a negative impact on construction costs, and recent data from the building sector indicate that housing supply levels are not likely to grow as significantly in 2023 as had been previously thought. Therefore, as a result, actual supply levels are set to remain stubbornly below underlying demand, suggesting it is unlikely that the market is going to witness a significant fall in prices. This is underscored by the significant increases still being observed in rental rates, which highlights the underlying need for accommodation in the Irish economy right now. A Box in the *Commentary* assesses recent developments in the housing market and concludes that house price developments in the past 18 months have been significantly impacted by the surge in household savings which accompanied the COVID-19 pandemic. This suggests that the rate of price increases should subside quite significantly as these savings levels unwind.

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