# Ireland: Growth leading to surplus & new investment funds

## NTMA Investor Presentation

## October 2023


Gníomhaireacht Bainistíochta an Chisteáin Náisiúnta
National Treasury Management Agency

# Index

# Summary

Irish economic & fiscal strength but risks from global backdrop remain

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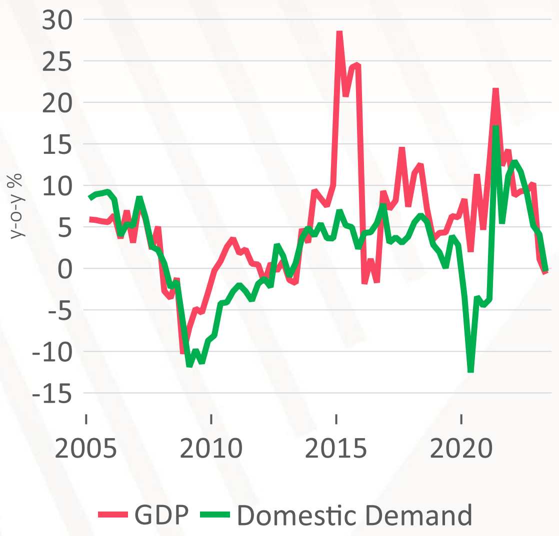
# Economic growth of c. 2% expected in 2023

## Inflation/monetary policy has slowed growth versus 2022

MDD gives better picture of growth: Gov't forecasts 2.2% for 2023 after +9% in 2022

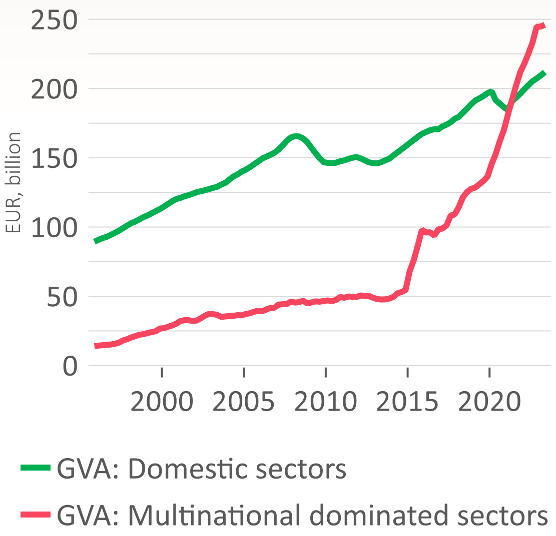



Source: CSO

Unemployment rate is at 4.2% – labour market at full employment


Source: CSO

Value added from ICT & pharma clear to see – sectors give jobs, income and tax




Source: CSO

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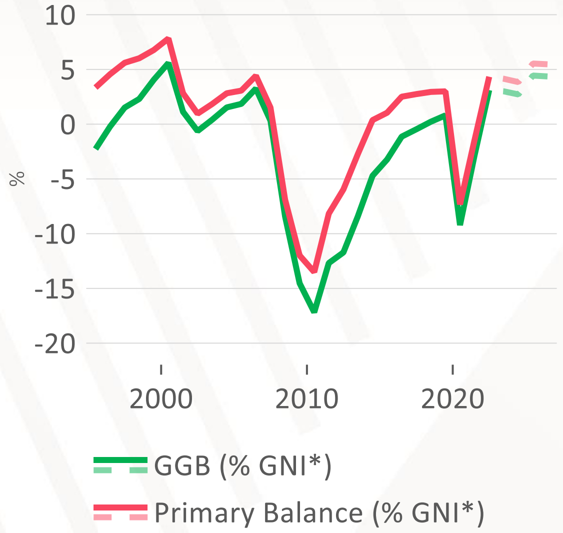
** Modified Domestic Demand series accounts for multinational activity (technically modified final domestic demand (excl. inventories))*

*Note: Unemployment rate series shown uses the Covid adjusted unemployment rate between March 2020 and February 2022 and the standard unemployment rate elsewhere.*

# Large government surpluses expected

## Debt metrics all expected to improved again in 2023

### Forecasted 2023 GG surplus (3.0%) despite slowing growth




Source: CSO, Irish Department of Finance forecasts

### Debt metrics set to improve this year again

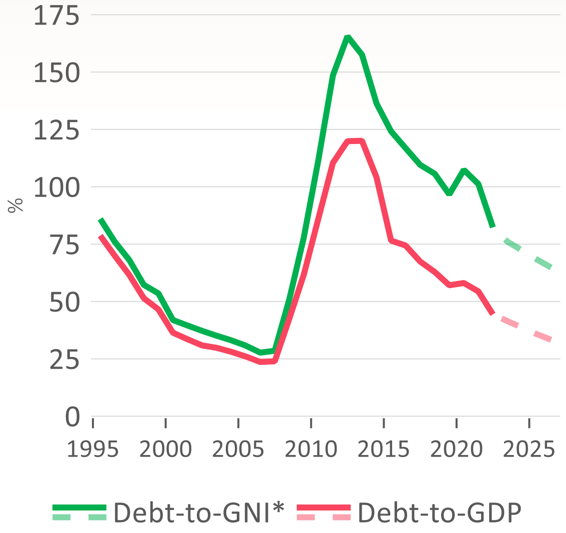
Debt-to-GNI*
(76.1% 2023f; 97% in 2019)

Debt-to-GG Revenue
(178% 2023f; 230% in 2019)

Average interest rate
(1.5% 2023f, from 2.2% in 2019)

Debt-to-GDP^
(41.4% 2023f, from 57% in 2019)

### Debt to GNI* expected to fall rapidly




Source: CSO, Irish Department of Finance forecasts

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*^ Debt to GDP is not an appropriate metric to use for Ireland*

# Medium term challenges/opportunities

External environment is challenging – inflation abating but global slowdown more likely

## Inflation

Inflation beginning to moderate in Ireland similar to other European economies.

Core inflation remains elevated but economic resilience in face of interest rate hikes

## Growth

Labour market strength remains in H1 2023. MDD growth of c. 2% expected for 2023.

Multinationals and healthy domestic balance sheets helping to offset impact from monetary policy

## Fiscal

Large surplus (3.0% of GNI*) expected for 2023 via exceptional CT receipts.

Two new investment funds to be established. Intention to save windfall tax receipts and partially alleviate future fiscal/climate challenges.

# NTMA has issued €7bn for 2023

Funding came in at lower end of range of €7-11bn, with no more auctions scheduled in 2023

## Cash

Fiscal surplus alongside NTMA's strategy of prefunding means Ireland has a strong cash position.

This affords the NTMA a large degree of flexibility around issuance.

## >10 years

Weighted average maturity of debt one of longest in Europe.

NTMA issuance since 2022 of €14bn at WAM of 16.4 years and average interest rate of 2.13%.

## AA

Ireland rated in the AA category with all major rating agencies.

S&P upgraded to AA and Moody's upgraded to Aa3 in 2023. Fitch has Ireland on a positive outlook.

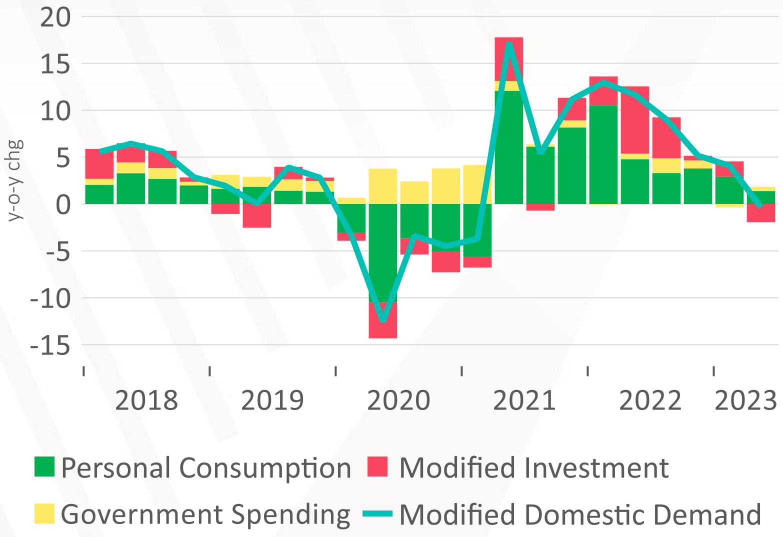
# Macro

Economic strength in 2023 but growth has moderated

# Irish economy growing modestly in 2023

## Consumption and employment growth still display resilience

Modified Domestic Demand down 0.3% y-o-y in Q2 2023, but up 1.8% in H1 2023 versus H1 2022 (Q1 MDD was strong)




Source: CSO

Irish measures of activity are mixed, pointing to slowing but still positive growth for the Irish economy

| | 2022 vs. 2021 | Q2 2023 y-on-y | Q2 2023 q-on-q |
|---|---|---|---|
| GDP | 9.4 | -0.7 | 0.5 |
| MDD | 9.5 | -0.3 | 1.0 |
| Consumption | 9.4 | 2.4 | 0.9 |
| Gov't Spending | 3.5 | 2.1 | 4.3 |
| Mod Investment | 15.9 | -9.1 | -1.7 |
| Employee Compensation | 9.6 | 7.4 | 2.3 |
| MNE GVA | 15.6 | 1.7 | 6.2 |
| Domestic GVA | 5.6 | 4.8 | 1.5 |
| Employment | 6.6 | 3.5 | 0.3 |

% change from indicated period

Source: CSO, Eurostat

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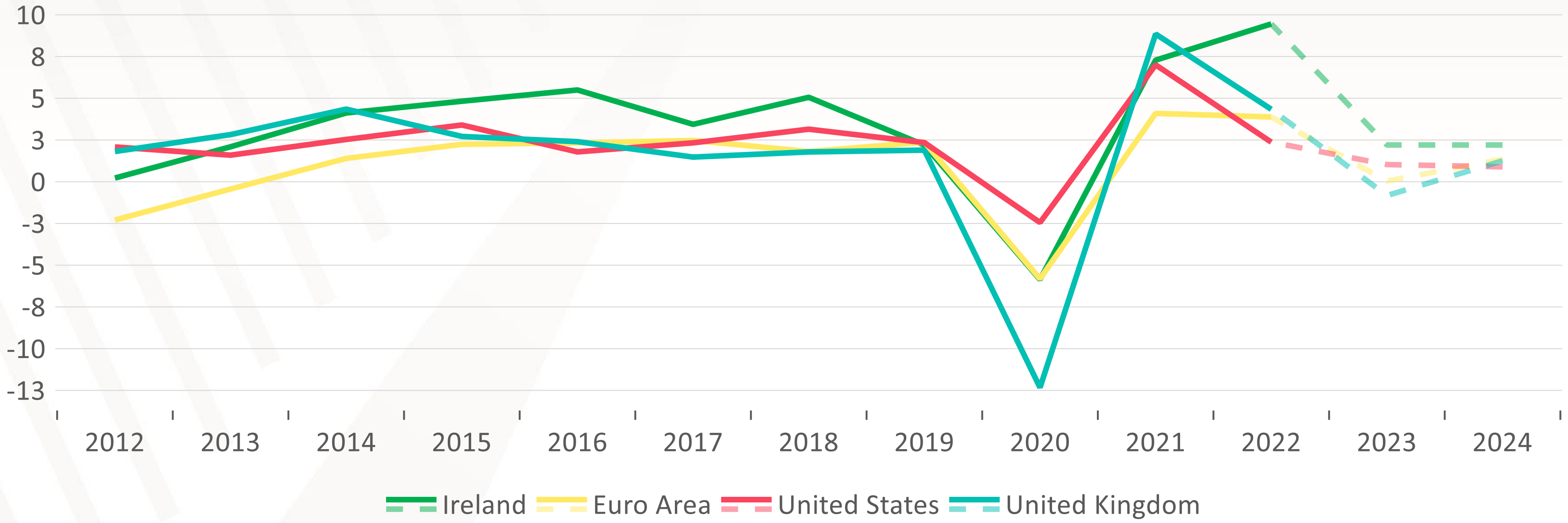
*Note: MDD for Ireland is modified for multinational activity by Ireland's Central Statistics Office (CSO). MDD = Consumption + Government (current) spending + Modified Investment. Seasonal adjustment mean contributions do not always add up to MDD growth rate.*

# Economic activity normalising in 2023

Domestic demand projected to grow 2.2% in 2023 after growing by 9.5% in 2022




Source: CSO, OECD, Irish Department of Finance

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*Note: For Ireland we use modified domestic demand. For Euro Area we use Euro Area 17 per OECD data, which excludes Latvia, Lithuania and Croatia.*

# High frequency data somewhat mixed

## Recent data tilting to the downside (PMIs, retail sales)

| | 2/22 | 3/22 | 4/22 | 5/22 | 6/22 | 7/22 | 8/22 | 9/22 | 10/22 | 11/22 | 12/22 | 1/23 | 2/23 | 3/23 | 4/23 | 5/23 | 6/23 | 7/23 | 8/23 | 9/23 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Retail sales (ex motor)** | -1.1 | 0.2 | 0.6 | -0.1 | -0.3 | -1.1 | 0.3 | -0.1 | 0.2 | 0.3 | 0.4 | 0.5 | -0.2 | 0.3 | 0.5 | 0.5 | 0.6 | -0.9 | -0.2 | n/a |
| **Unemployment rate** | 4.7 | 5.0 | 4.5 | 4.2 | 4.2 | 4.3 | 4.4 | 4.4 | 4.5 | 4.5 | 4.4 | 4.2 | 4.1 | 4.1 | 4.1 | 4.1 | 4.3 | 4.2 | 4.1 | 4.2 |
| **Payroll employees** | 0.9 | 0.9 | 0.8 | 0.5 | 0.2 | 0.1 | 0.2 | 0.4 | 0.5 | 0.5 | 0.4 | 0.3 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | n/a |
| **Headline HICP** | 0.3 | 0.9 | 1.3 | 1.4 | 1.1 | 0.9 | 0.6 | 0.2 | 0.6 | 0.6 | 0.5 | -0.4 | 0.1 | 0.5 | 0.9 | 0.5 | 0.5 | 0.4 | 0.5 | 0.3 |
| **Core HICP** | 0.3 | 0.3 | 1.0 | 0.8 | 0.8 | 0.6 | 0.6 | 0.4 | 0.2 | 0.1 | 0.2 | -0.1 | 0.4 | 0.6 | 1.1 | 0.8 | 0.6 | 0.5 | 0.4 | 0.0 |
| **House prices** | 0.8 | 0.7 | 0.5 | 0.5 | 0.7 | 0.9 | 1.0 | 0.9 | 0.6 | 0.3 | 0.2 | 0.0 | -0.2 | -0.5 | -0.4 | -0.3 | 0.1 | 0.3 | n/a | n/a |
| **Consumer confidence** | 77.0 | 67.0 | 57.7 | 55.5 | 57.7 | 53.7 | 53.4 | 42.1 | 46.1 | 45.3 | 48.7 | 55.2 | 55.6 | 53.9 | 59.2 | 62.4 | 63.7 | 64.5 | 62.2 | 58.8 |
| **Composite PMI** | 59.1 | 61.0 | 59.6 | 57.5 | 52.8 | 52.9 | 51.0 | 52.2 | 52.1 | 48.8 | 50.5 | 52.0 | 54.5 | 52.8 | 53.5 | 51.9 | 51.4 | 50.0 | 52.6 | 52.1 |
| **Income Tax** | 2.1 | 2.1 | 2.7 | 2.4 | 2.4 | 2.5 | 2.4 | 2.2 | 2.5 | 4.4 | 2.5 | 2.8 | 2.2 | 2.3 | 3.1 | 2.6 | 2.5 | 2.7 | 2.5 | 2.4 |

Source: CSO, Eurostat, ILCU, SPDJI, Irish Department of Finance

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*Note: Retail sales, payroll employees, HICP and house prices are calculated as m-o-m % 3mma. Income tax is the monthly tax revenue; November includes income tax for those who are self-employed.*

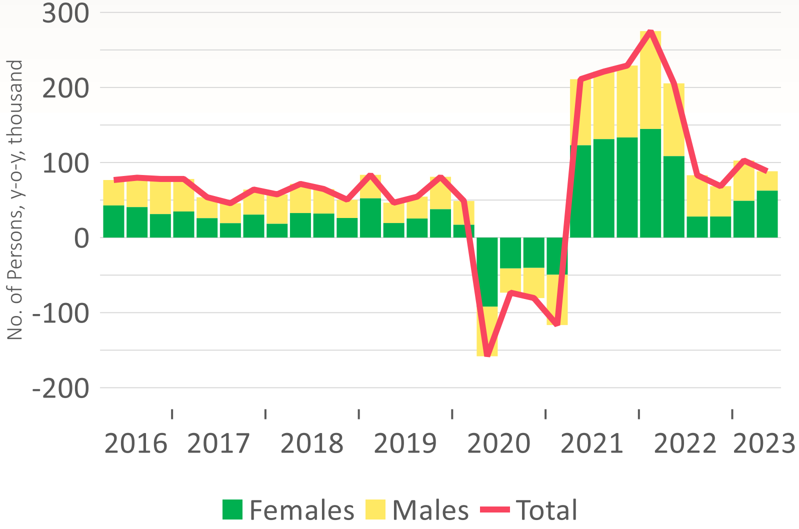
# Labour market strength remains

## Unemployment rate below pre-pandemic levels

Unemployment rate at 4.2% in August – a record low in recent decades


Source: CSO

Employment up 12% on pre-pandemic as female employment surges, but growth moderating




Source: CSO

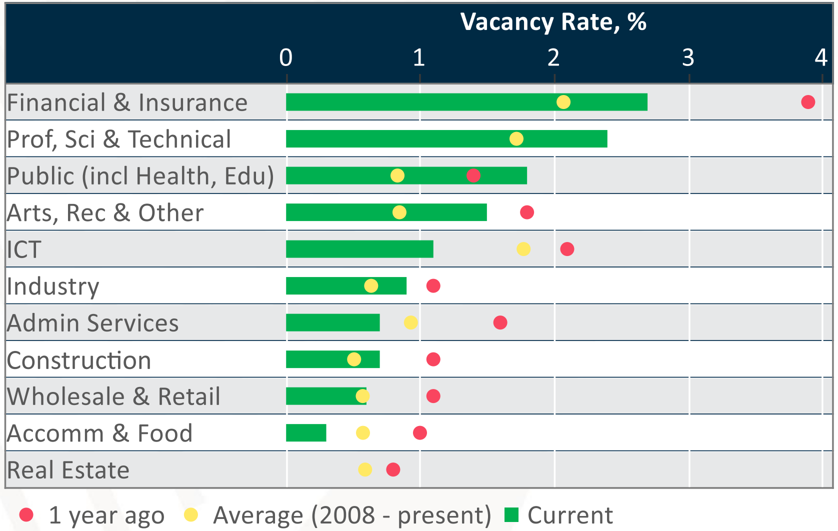


*Note: Unemployment rate series shown uses the Covid adjusted unemployment rate between March 2020 and Feb 2022 and the standard unemployment rate elsewhere.*

# Some signs of labour market tightness

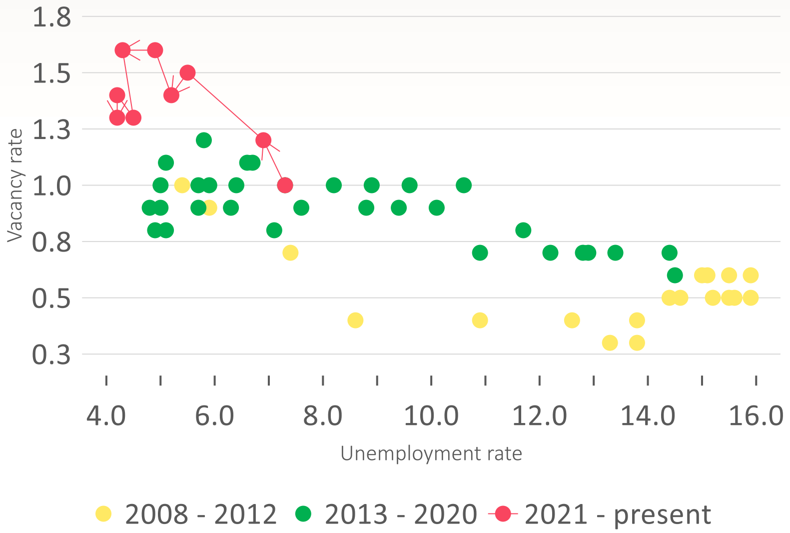
## Vacancy rates across sectors falling but still elevated

### Vacancy rates falling compared to a year ago but still elevated from historical averages




Source: Eurostat

### Beveridge curve suggests a tight labour market in recent quarters

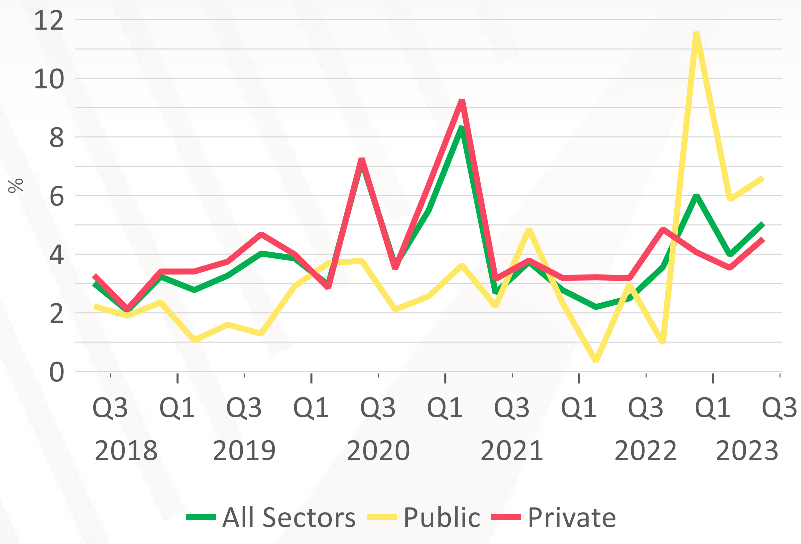



Source: Eurostat, CSO

# Wages are growing, but not spiralling

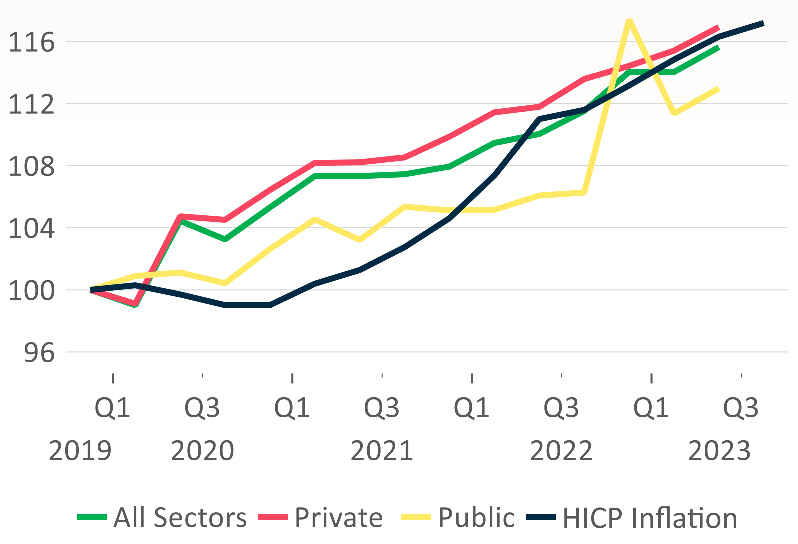
## Earnings have increased, averaging c. 4.25% in last year

Outside public pay deal*, private sector earnings growth is not spiralling upwards yet




Source: CSO

Earnings growth not out of line with inflation since 2019




Source: CSO, Eurostat

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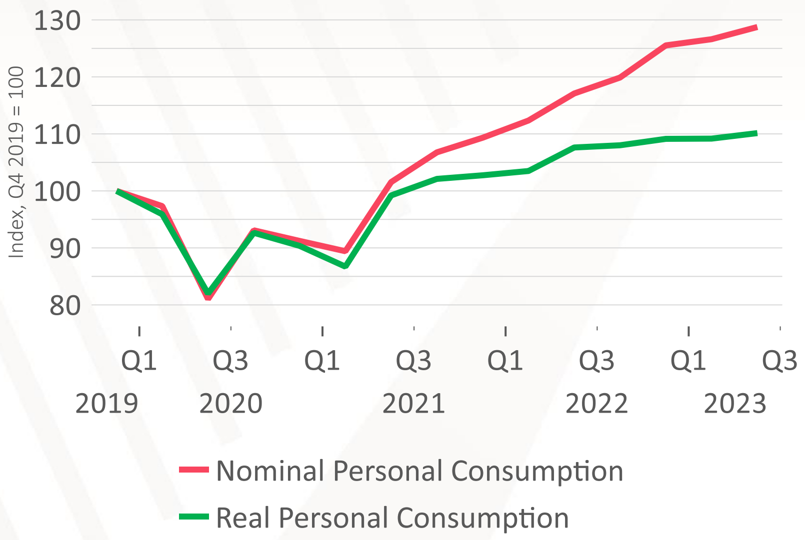
** Q4 2022 average hourly earnings distorted by backdated aspect of public sector pay deal*

# Real spending growing better than expected

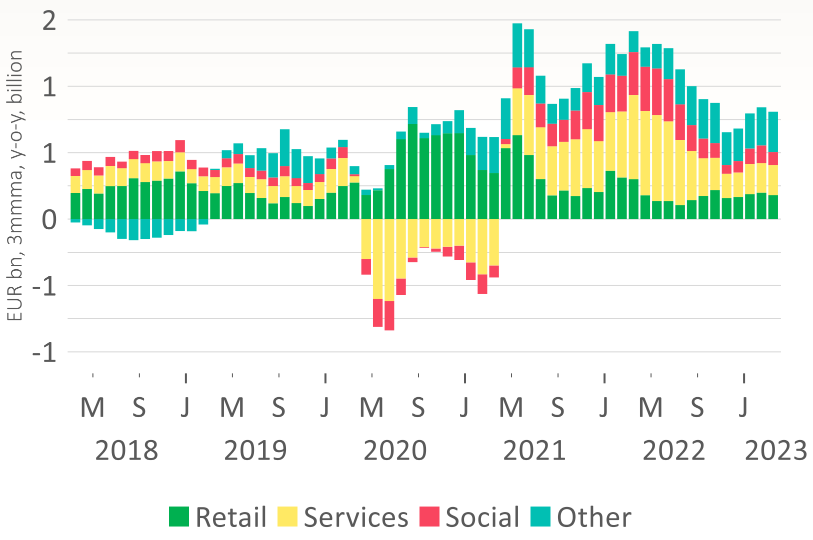
Consumption revised upwards significantly in 2021 and 2022

High-inflation environment hampering real consumption but still up 10% on pre-pandemic levels




Source: CSO

Higher frequency data still show elevated nominal spending growth partly due to impact of inflation*




Source: Central Bank of Ireland

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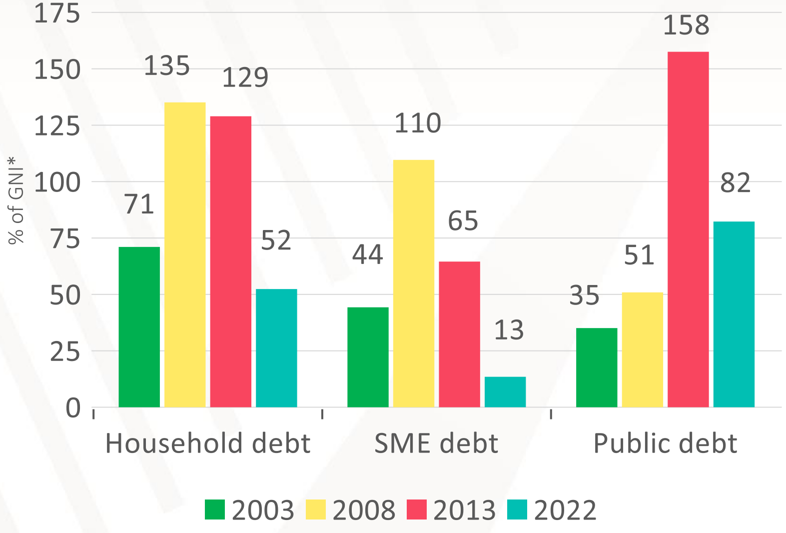
** CBI spending data is nominal data and not seasonally adjusted. RHS chart shows card data. Growth of card spending is influenced by increased digitalisation of spending habits over last decade.*

# Households balance sheet strength

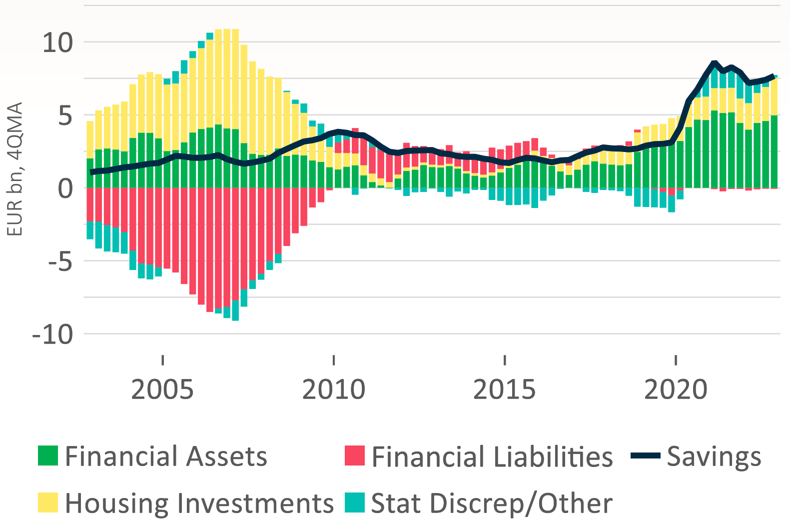
## Debt levels much lower coming into pandemic + Covid savings

Private sector balance sheets are not over leveraged – healthy position will insulate against tighter monetary policy




Source: Central Bank of Ireland, Eurostat, CSO

Household savings rate has been volatile but clear households saving into financial assets since 2019




Source: Central Bank of Ireland

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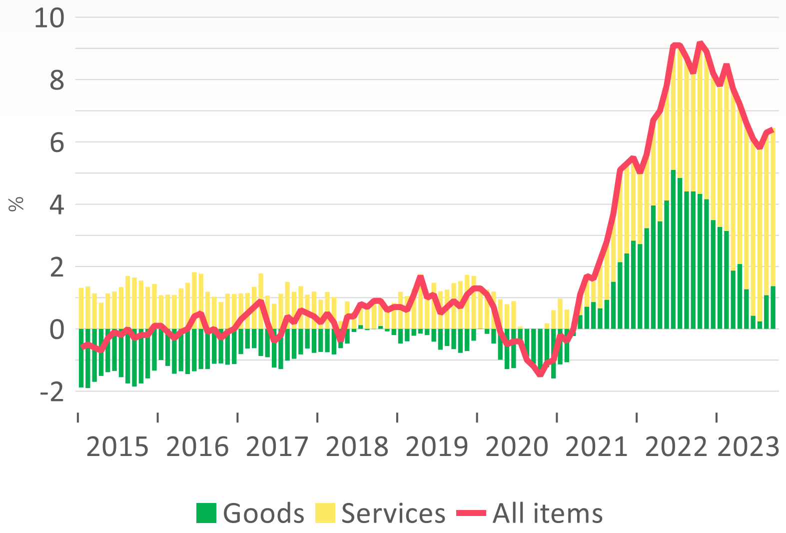
# Flash harmonised inflation at 5.0%

## Energy and pandemic concerns easing but core inflation also elevated

Energy prices driving headline inflation but element is easing; core remaining elevated


Source: CSO, Eurostat

Goods inflation easing strongly on back of energy prices – services inflation could be stickier




Source: CSO

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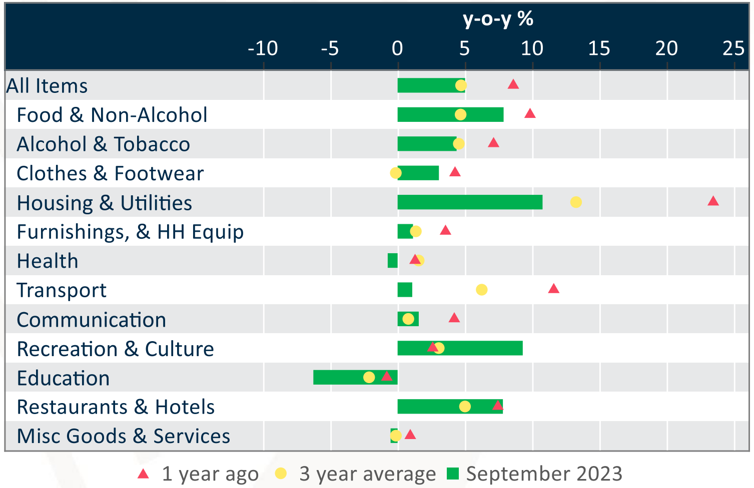
*Note: RHS chart plots CPI inflation.*

# Inflationary pressure broad across index

## Services sectors alongside utilities costs seeing price pressure

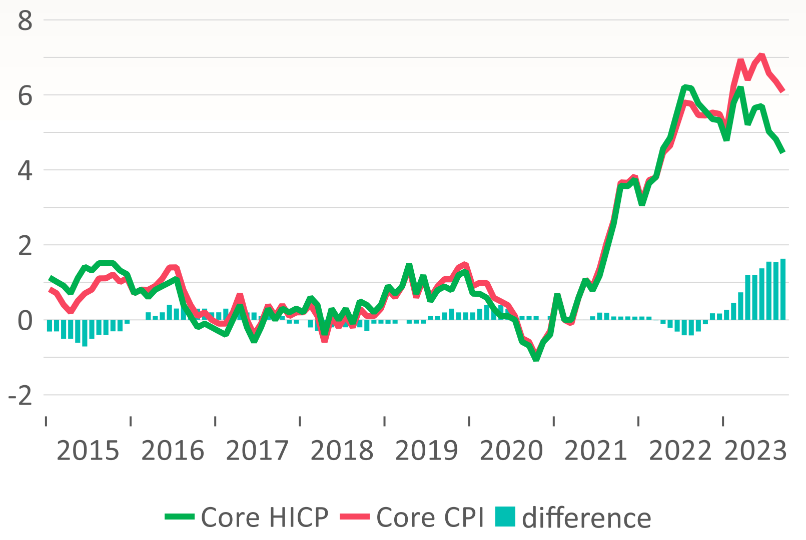
Inflation has eased from a year ago in nearly all sectors

**HICP inflation by COICOP divisions**




Source: CSO

Core HICP levelling off but core CPI elevated largely due to mortgage interest (which is excluded from HICP basket)




Source: CSO, Eurostat

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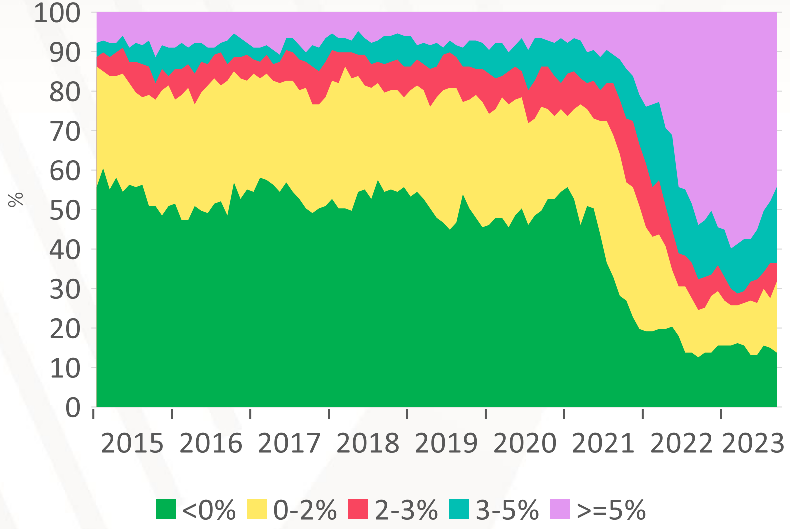
*Note: RHS shows distribution of annual inflation rates across all CPI items (unweighted).*

# Sustained inflation an obvious risk

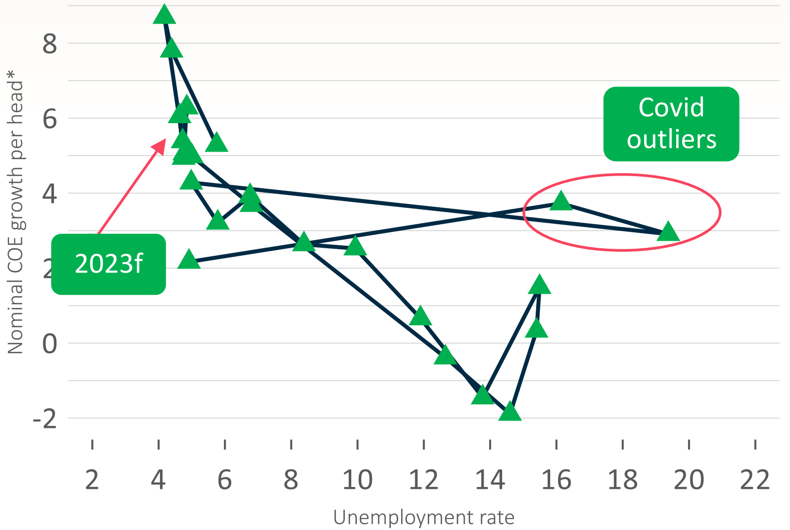
## Phillips curve historically has held in Ireland

Inflation is broad but slowly diminishing: 32% of products in CPI basket are seeing <2% annual inflation vs 24% a year ago




Source: CSO

Multiple years in early 2000s with unemployment below 5% and strong wage growth




Source: CSO, Eurostat

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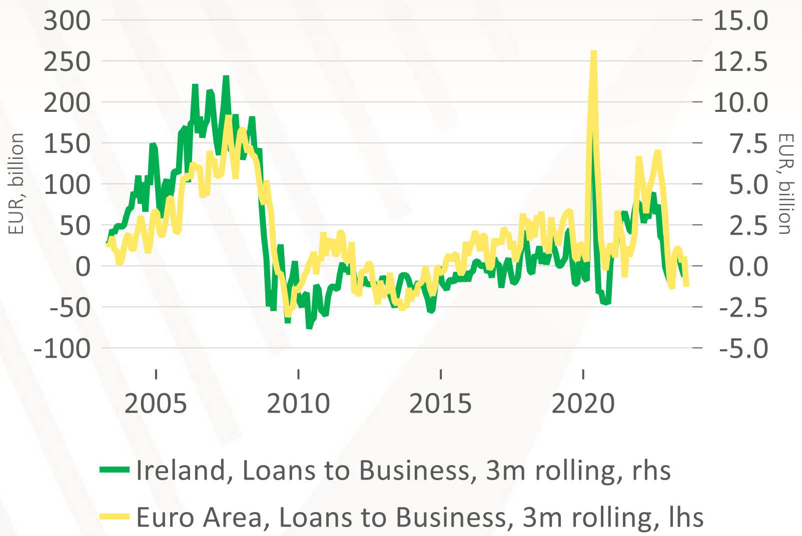
* Excludes agriculture incomes

# Monetary tightening starting to bite

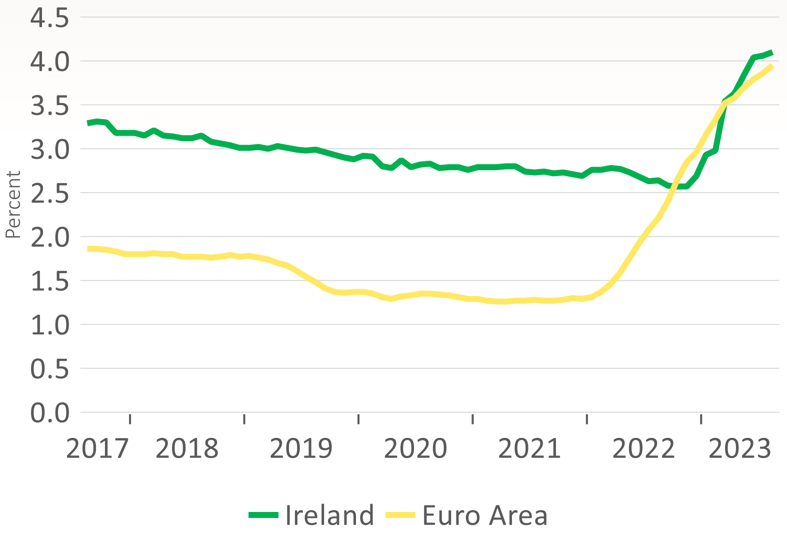
## NFC lending slowed around turn of the year, housing impact more on rates

Lending to Irish NFCs similar to EA-wide loans, slowed since November 2022




Source: ECB

After slow initial pass-through, Irish mortgage rates rose above EA average in March

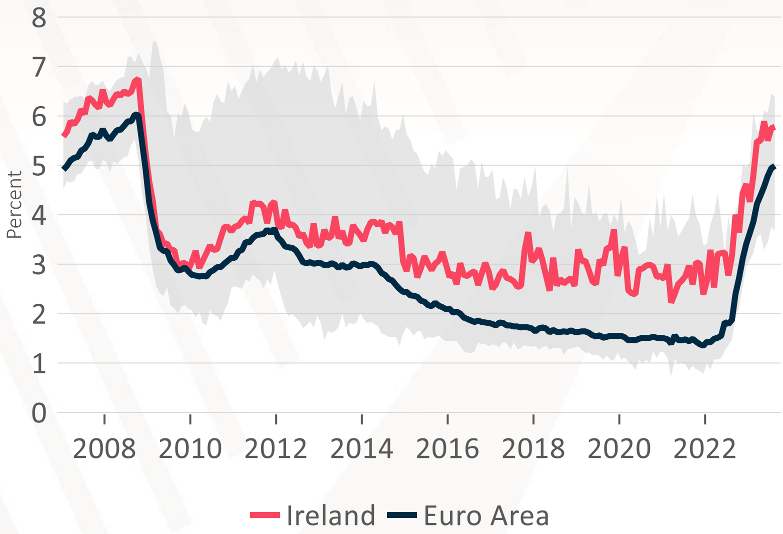



Source: ECB

# Banks passing on rate hikes to businesses

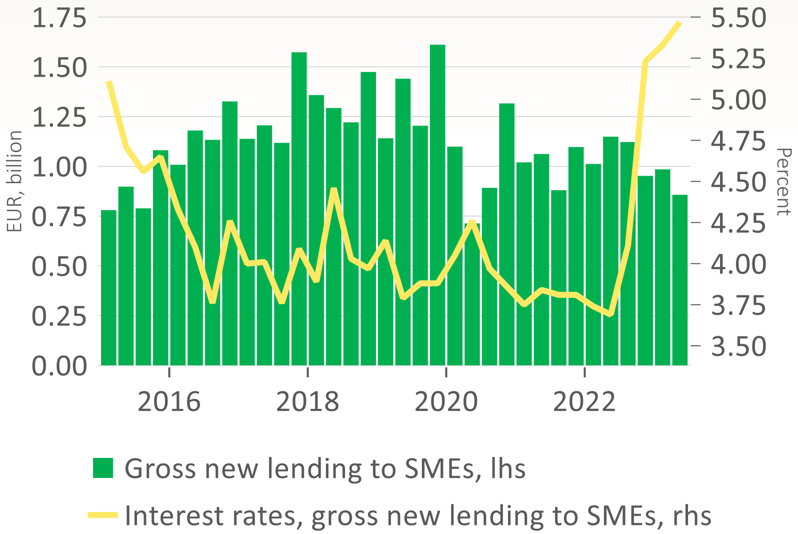
## Rates on new lending to corporates moved earlier than mortgage rates

Lending rates to NFCs among highest in Euro Area and have been increasing (grey equals min/max range)




Source: ECB

Lending volume to SMEs down modestly but rates have jumped in latest data




Source: Central Bank of Ireland

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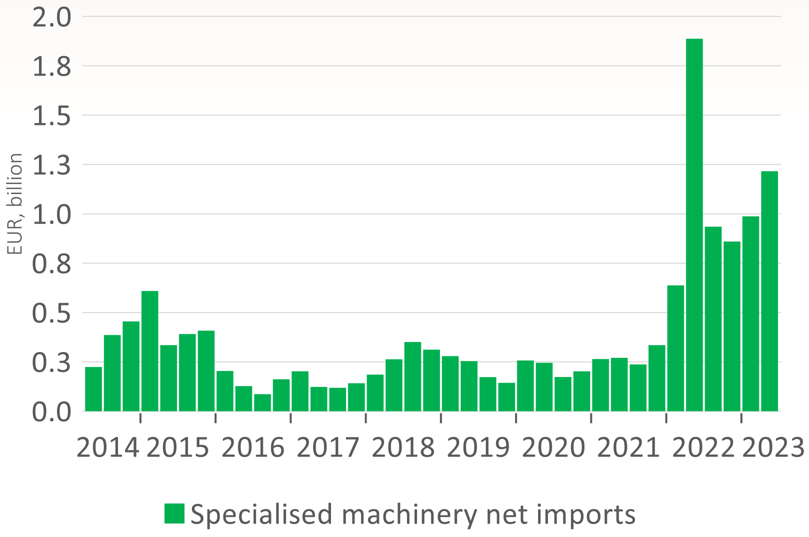
# Investment strength fallen off

## Machinery and Equipment had outsized increase in 2022

Recent strength due to computer hardware, production facilities/data centres & new dwellings


Source: CSO

Net imports of specialised machinery for particular industries saw huge bump in Q2 2022, led to jump in mod. investment




Source: CSO

*Note: Ireland's metric is modified investment, which strips out multinational activity.*

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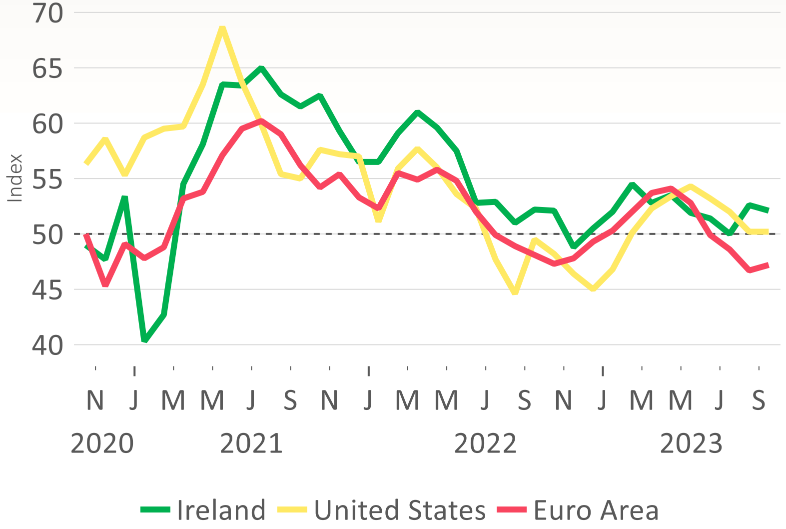
# External environment in 2023

## Recent data leaning towards global slowdown

| | 2022 | 2023 |
|---|---|---|
| EA Monetary Policy | Purchases ended; Rate normalisation | Higher rates impacting activity thru credit flows |
| EU Fiscal Policy | Expansionary | Expansionary |
| US Monetary Policy | Sharp increase in rates | High rates but not overtly slowing activity |
| US growth | Decelerating growth | Modest growth |
| Energy prices | Severe crisis | Prices pressure easing |
| UK growth | Decelerating growth | Minimal growth at best |
| Euro Growth | Slow growth | 0.5%-1% growth at best |
| Global Inflation | Elevated in 2022 | Core measures elevated |
| Financial Stability | Little concern | Steady after initial concerns |

Irish PMI has slipped like other economies, but services optimism helping to keep PMI above 50




Source: S&P Global

# OECD's BEPS process may impact FDI offering

## Pillar Two due for EU implementation in 2024, Pillar One still to be ironed out

Pillar One: proposal to re-allocate taxing rights on non-routine profits

- Over 130 countries have signed on for the BEPS 2.0 two-pillar set of reforms.
- The first pillar focuses on proposals that would re-allocate some taxing rights between jurisdictions where companies reside and the markets where user/consumers are based.
- Under such a proposal, a proportion of profits would be re-allocated from small countries to large countries.
- Pillar 1 will reduce Ireland's corporation tax base. Some estimates place the hit at c. €2bn per annum by the middle of the decade.
- Ireland has always been fully supportive of Pillar One despite the implied cost to the Exchequer.

Pillar Two: 15% minimum effective global tax rate

- Countries will introduce a minimum effective tax rate with the aim of reducing incentives to shift profits.
- Where income is not taxed to the minimum level, there will be a 'top-up' to achieve the minimum rate of tax.
- The EU have agreed a directive to implement the 15% rate in 2024. The impact on tax will not be seen next year however.
- The minimum rate is greater than the 12.5% rate that Ireland levies and thus some of Ireland's comparative advantage in attracting FDI will be lost. However Ireland's rate will remain one of the lowest in EU.
- Ireland can lean on other positives; educated and young workforce, English speaking, EU access, and ease of doing business.

# Fiscal

Large surplus in 2023 expected on back of continued excess corporate tax

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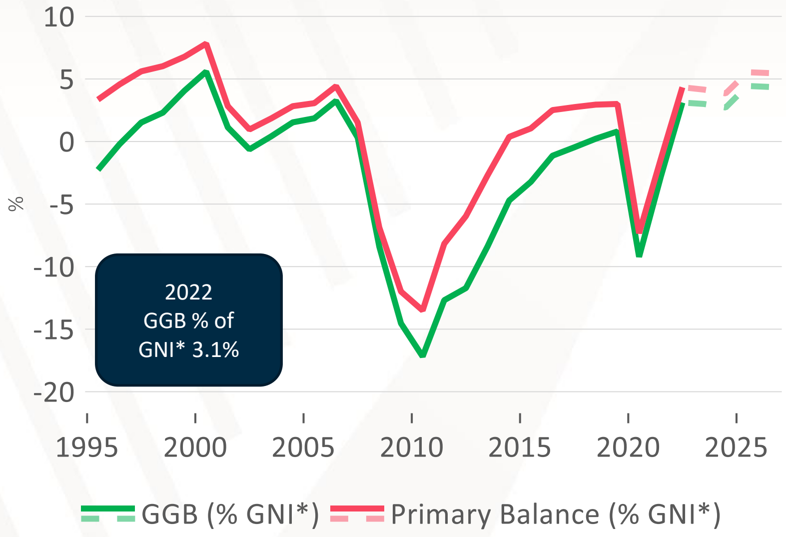
# Expected fiscal surpluses in Ireland

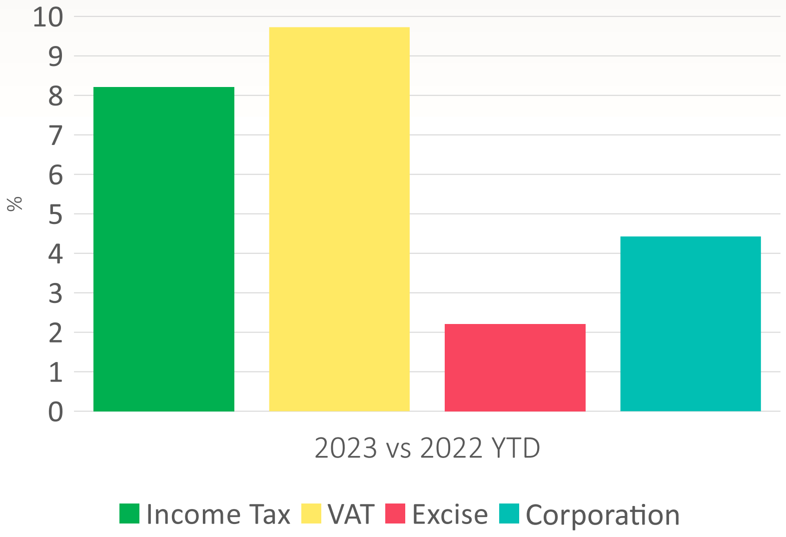
## Robust revenues mean surpluses expected in short term

2023 General Government surplus expected to be c. €8.8bn, or 3.0% of GNI*




Source: CSO, Irish Department of Finance forecasts

Revenues strong in 2023 but have normalised vs 2022; Income tax (+8%), VAT (+10%), corporate tax (+4%)




Source: Irish Department of Finance

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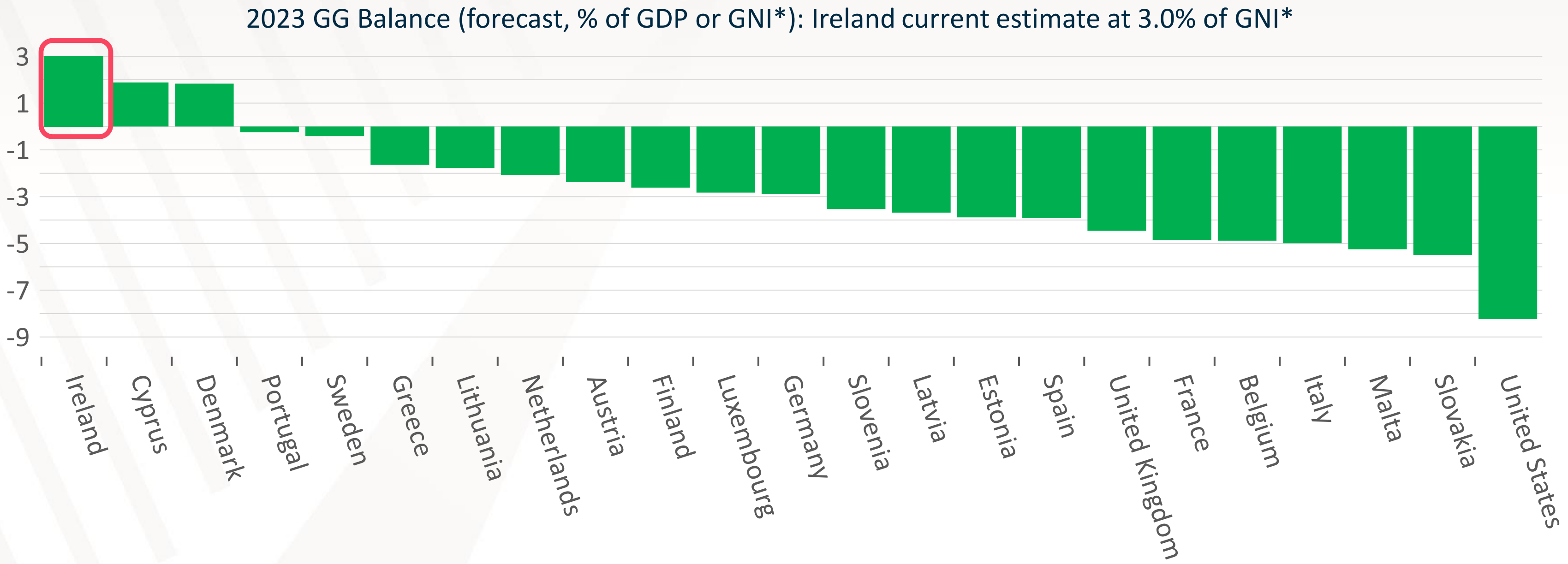
*LHS chart: GG and primary balance numbers used exclude banking recapitalisations during GFC*

# Surplus compares well to others

## Recovery in fiscal position evident, question arises to how to manage such surpluses




Source: IMF, Irish Department of Finance

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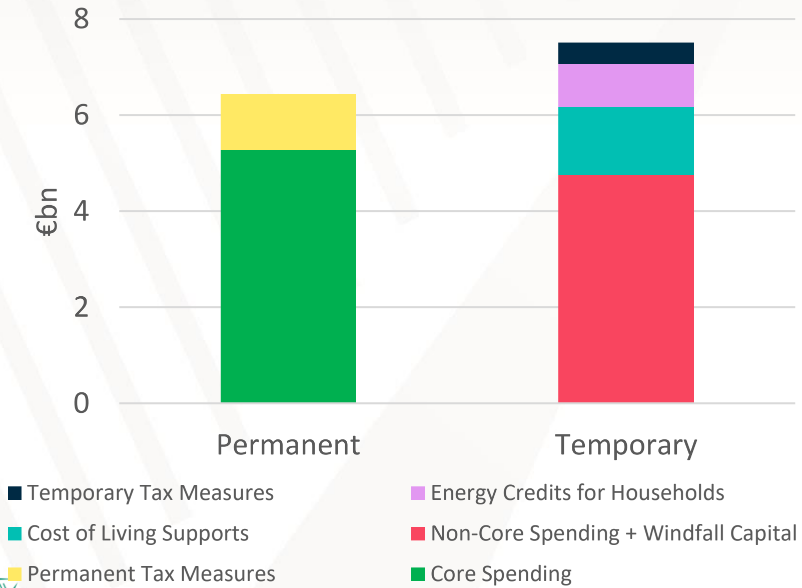
*Note: Irish forecast based on Department of Finance Stability Programme Update 2023 forecasts. Forecasts for other countries taken from IMF World Economic Outlook April 2023 Forecasts*

# Budget 2024 measures amount to €14bn

## Most measures temporary but core spending up 7.4% in 2023 & 6.1% in 2024

Budget 2024 measures a mix of increased spending and tax cuts




Overview of Budget 2024 measures

Permanent

- Core spending: €5.3bn
- Permanent tax cuts and credits: €1.2bn

Temporary

- Non-core spending (including Ukraine and Covid) and Windfall Capital: €4.8bn
- Cost of Living Household and Business Supports: €1.4bn
- Energy Credits for Households: €0.9bn
- Temporary tax measures, including relief for mortgage interest, renters and landlords: €0.4bn

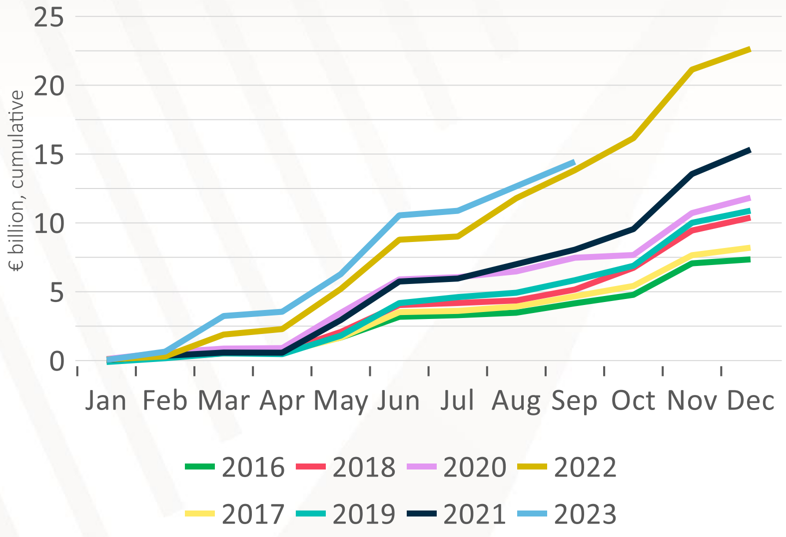
Source: Budget 2024

*Note: The Government have a 5% spending rule as a self-imposed rule which aims to tie "core" spending to the estimated nominal growth rate of the Irish economy.*

# Corporate tax growing more modestly in 2023

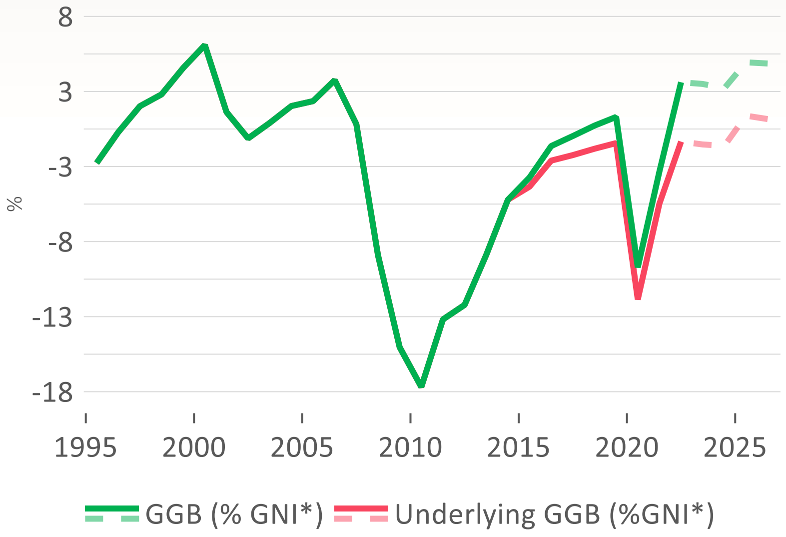
## Government plans to places excess receipts in two investment funds (FIF/ICNF)

Corporation tax tracking towards €23.6bn in 2023, double 2020 level – legitimate concern receipts are transitory




Source: Irish Department of Finance

Underlying GGB suggests Ireland would be in small deficit in 2023 if excess Corporate Tax excluded (-0.7% of GNI*)




Source: CSO, Irish Department of Finance forecasts

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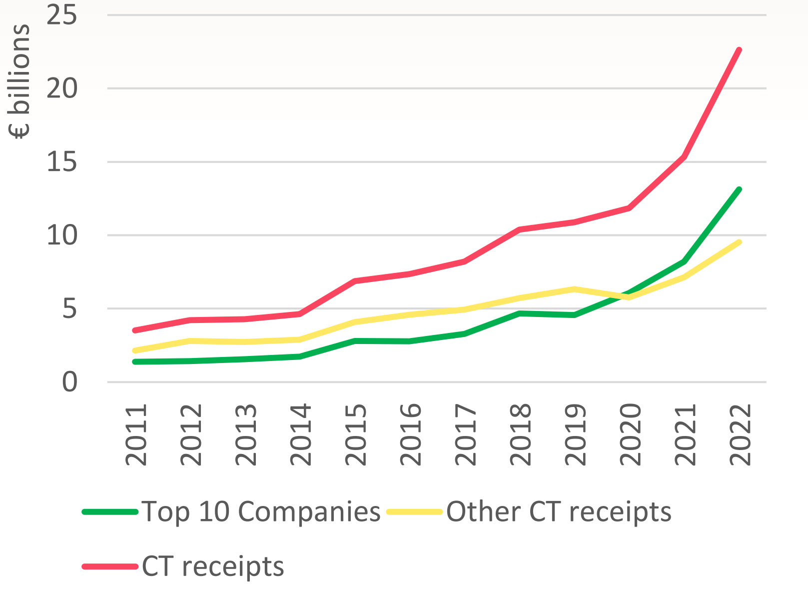
*Note: The Department of Finance's underlying general government balance is the GGB excluding the Government's estimated windfall corporation tax receipts (windfall estimated at €10.8bn for 2022 and €11.8bn for 2023).*

# Multinationals at core of CT payments

## Manufacturing the driver in last year's CT surge

| CT paid (€m) | 2022 | vs. 2021 |
|---|---|---|
| Manufacturing | 10,078* | +5,660 |
| ICT | 4,184 | +922 |
| Fin and Insurance | 2,698 | +334 |
| Wholesale, retail | 2,292 | -49 |
| Admin and Support | 1,199 | -86 |
| Prof, Sci, Tech | 660 | +4 |
| Construction | 469 | +105 |
| Mining, Quarry, Utilities | 304 | +127 |
| Other | 760 | +304 |

Top 10 driving recent CT surge – likely that even top 3 companies pay c. 30% of all CT receipts (Fiscal Council analysis)






*Source: Revenue Report, Macrobond*

**€5,536m chemical and pharma manufacture (+ €2,645m on 2021), €3,788m ICT manufacture (+ €2,855m on 2021)*

# New funds are a mitigant to excess CT risk

## Government intends to establish two new funds in the new year

### Future Ireland Fund (FIF)

- The FIF will be a long-term savings fund which intends to contribute to exchequer expenditures in the decades to come (e.g., population ageing, the digital and climate transitions).
- The intention is for 0.8% of GDP (c. €4-6bn per annum) to be transferred to the FIF each year out to 2035.
- To start, €4bn of €6bn in the National Reserve Fund (NRF, or Rainy Day Fund) will be transferred into FIF.
- In time, the Government suggest as much as €100bn could reside in the FIF.
- The Funds are to be managed and controlled within the NTMA.

### Infrastructure, Climate and Nature Fund (ICNF)

- The ICNF's mandate is to help the state meet its considerable infrastructure and green climate needs.
- In the past, Ireland has fallen into the trap of cutting capital investment in downturns. This fund will act a reserve to drawn on for capital expenditure when a downturn arises.
- To start the fund off, the remaining €2bn in the NRF will be transferred into the ICNF. From 2025 onwards, €2bn a year will be transferred into the ICNF from the Exchequer until it reaches its maximum size of €14bn.
- There will be clear rules in place on how the money can be accessed.
- A portion of the ICNF (c. €3bn) can be drawn down if needed to help meet climate and nature targets.

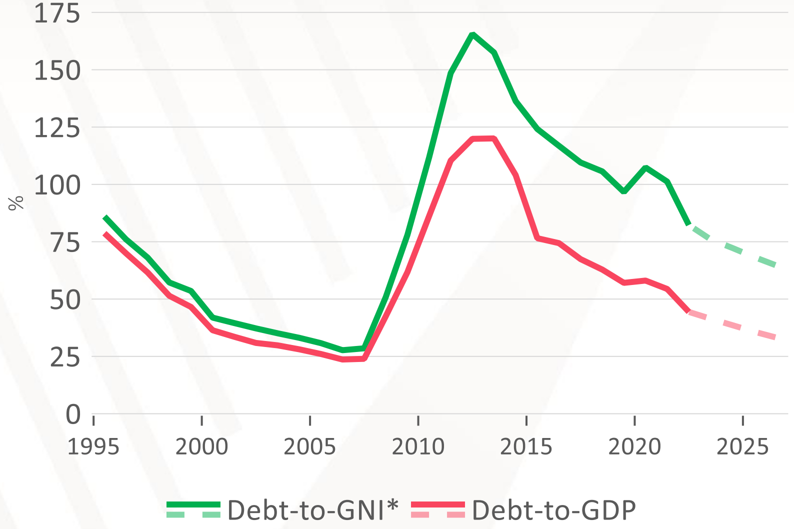


*Source: Budget 2024*

# Debt to GNI* expected to fall to 76% in 2023

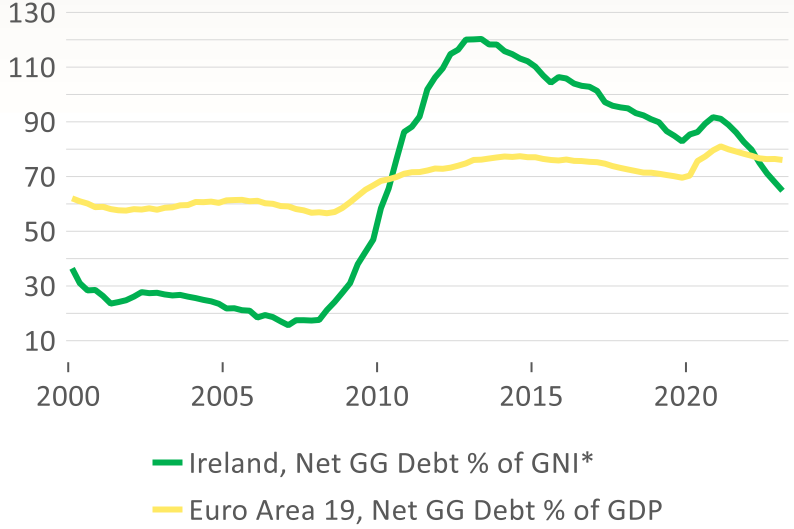
GG debt to GNI* to fall on nominal growth and surplus position

Debt to GNI* likely on downward trajectory; low debt to GDP means proposed EU fiscal rules won't impact Ireland




Source: CSO, Irish Department of Finance forecasts

Net debt position is back below EA average, completing a more than decade long journey




Source: Eurostat, CSO

# Alternative Debt Metrics

## Need to assess other metrics apart from debt to GDP when analysing debt sustainability

**2023**

| | GG debt to GDP % | GG debt to GG revenue % | GG interest to GG revenue % |
|---|---|---|---|
| Greece | 160 | 336 | 6.7 |
| Italy | 140 | 292 | 8.3 |
| Spain | 111 | 254 | 5.7 |
| France | 110 | 209 | 3.7 |
| Portugal | 106 | 239 | 4.9 |
| Belgium | 106 | 211 | 3.5 |
| UK | 99 | 241 | 10.4 |
| EA 19 | 91 | 196 | 3.8 |
| EU 27 | 83.4 | 182 | 3.7 |
| Cyprus | 80 | 191 | 3.2 |
| **Ireland** | **41 (76 GNI*)** | **183** | **2.7** |
| Austria | 75 | 153 | 2.3 |
| Slovenia | 69 | 162 | 2.7 |
| Germany | 65 | 142 | 1.8 |
| Slovakia | 58 | 140 | 2.5 |
| Netherlands | 49 | 113 | 1.6 |

Source: DG ECFIN, Irish Department of Finance

# NTMA Funding

2023 funding complete at €7bn

Continued flexibility in strategy due to cash balances and long average life

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National Treasury Management Agency

# NTMA has issued €7bn for 2023

Funding came in at lower end of range of €7-11bn, with no more auctions scheduled in 2023

## Cash

Fiscal surplus alongside NTMA's strategy of prefunding means Ireland has a strong cash position.

This affords the NTMA a large degree of flexibility around issuance.

## >10 years

Weighted average maturity of debt one of longest in Europe.

NTMA issuance in 2022/23 of €14bn at WAM of 16.4 years and average interest rate of 2.13%.

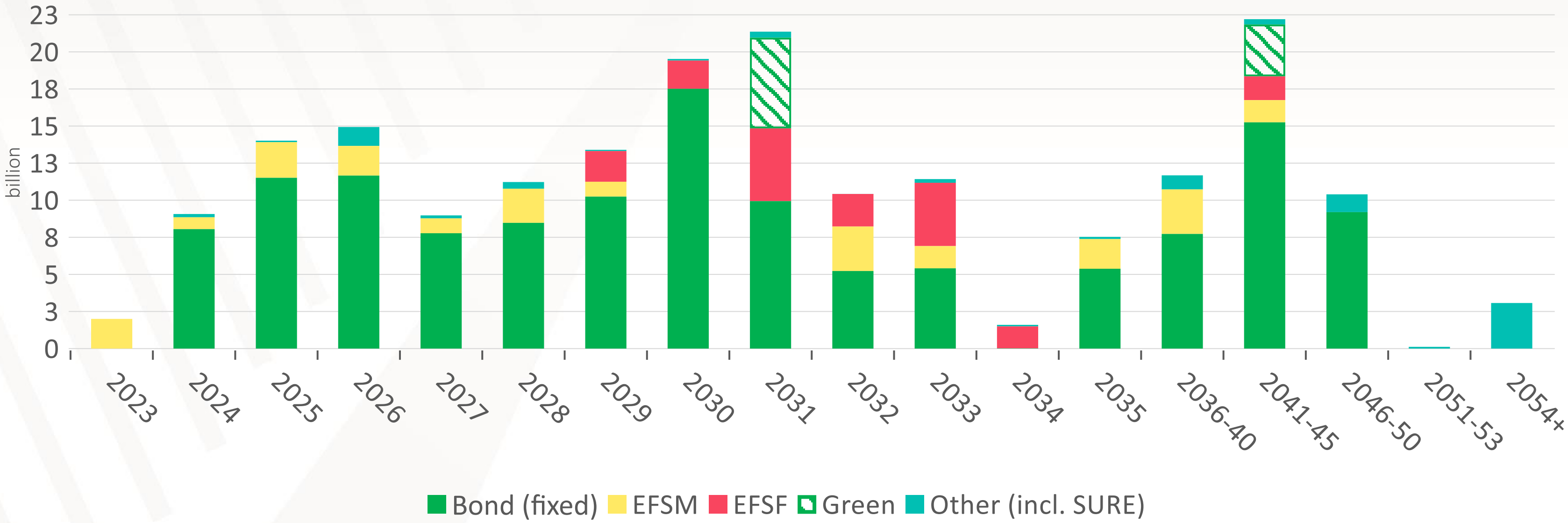
## AA

Ireland rated in the AA category with all major rating agencies.

S&P upgraded to AA and Moody's upgraded to Aa3 in 2023. Fitch has Ireland on a positive outlook.

# Smooth maturity profile

## Redemptions are modest in coming years, FRNs fully repaid




Source: NTMA

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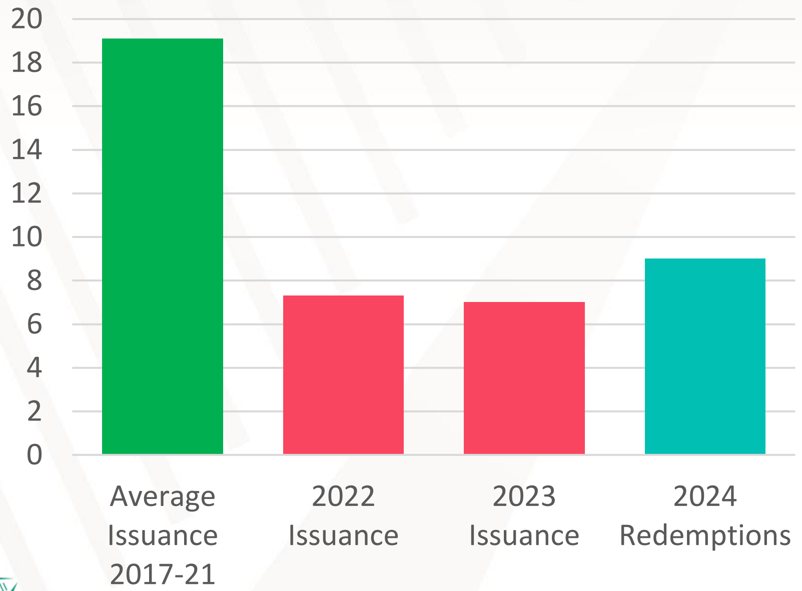
National Treasury Management Agency

*NTMA redeemed at maturity €7bn in IGBs in March 2023*

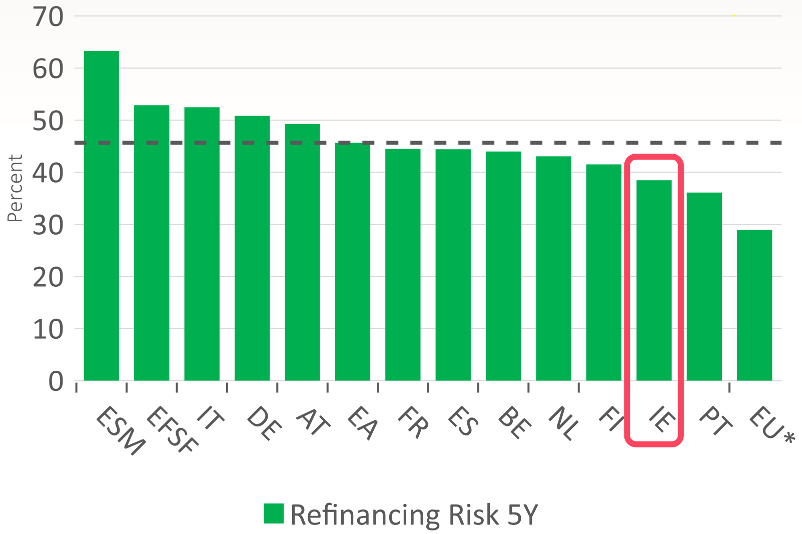
# Low supply expected in coming years

## Redemptions are modest compared to rest of Europe

Current borrowing requirements suggest NTMA issuance will be similar to last two years (€bns)




Ireland's refinancing risk is low - only a third of debt is set to mature in the next five years




Source: ESDM

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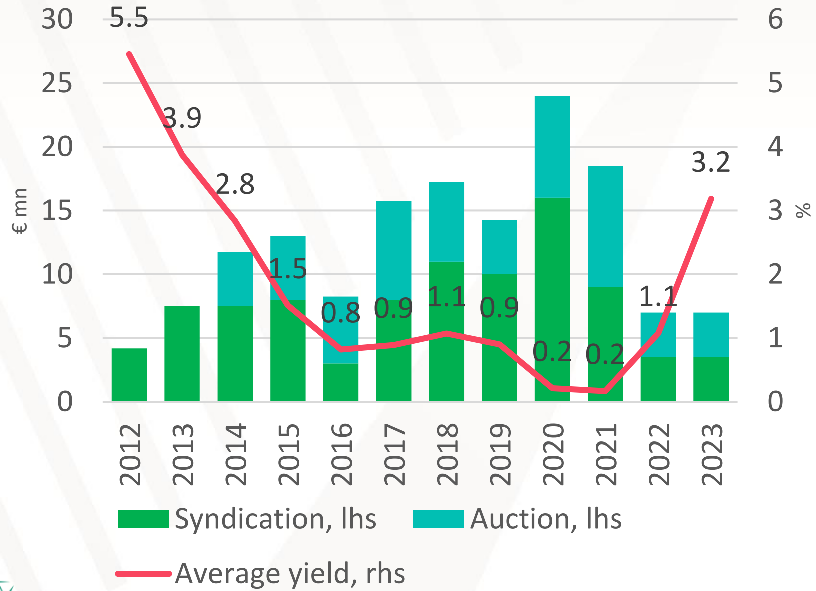
*Refinancing rate defined as debt maturing within five years divided by total debt outstanding.*

** EU data is EU as an issuer*

# Borrowing costs anchored

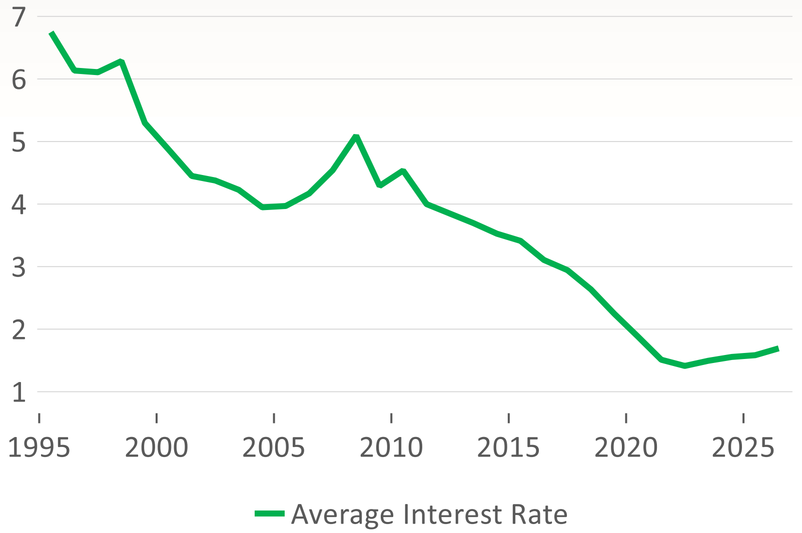
## Ultra-low rate era over but Ireland used the period well

NTMA issued €42.5bn MLT debt in 2020/21 at 12.8 yr. weighted maturity and avg. rate 0.19%




Source: NTMA

Vast majority of Irish debt is fixed rate at average cost of 1.5%




Source: CSO

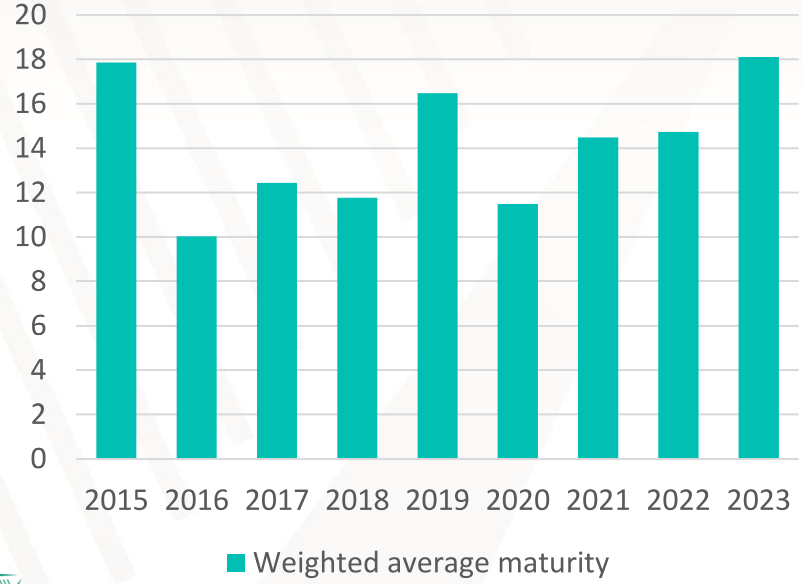
*Note only auctions and syndication*

** EU data is EU as an issuer*

# NTMA has lengthened weighted maturity

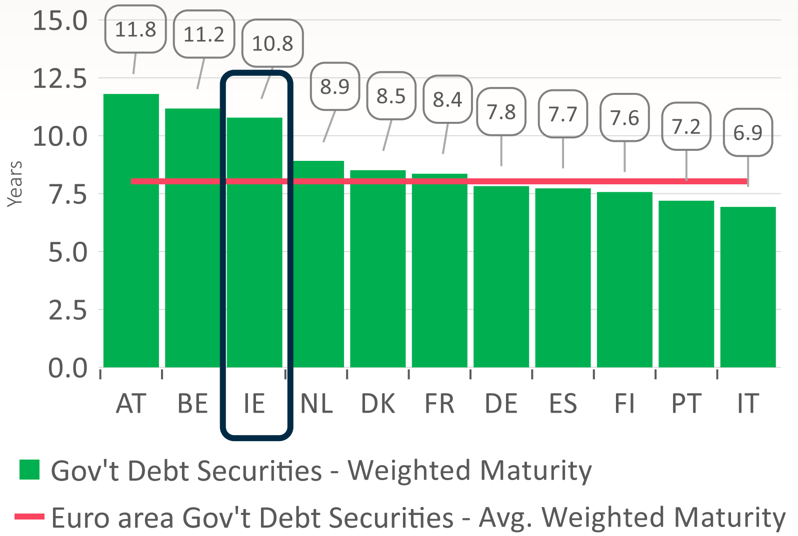
## Debt management strategy has extended debt profile since 2015

Benchmark issuance has extended the maturity of Government debt since 2015




Source: NTMA

Ireland (in years) compares favourably to other EU countries




Source: ECB

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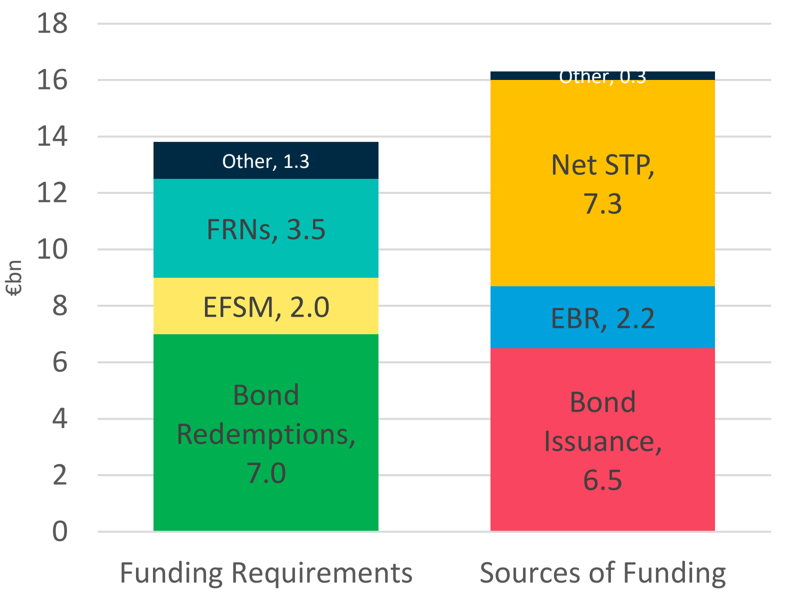
*Note: Weighted maturity for Ireland includes Fixed rate benchmark bonds, FRNs, Amortising Bonds, Notes issued under EMTN programme, T-Bills and ECP Data. It excludes programme loans and retail.*

# Funding needs and sources for 2023

## Lower borrowing amid expected EBR surplus

- There was one bond redemption in 2023 (€7.0bn in March). There is also a EFSM repayment due this year. Lastly, the remaining FRNs were bought back from the CBI was in September (included in other funding requirements).
- The Exchequer Borrowing Requirement (EBR) for 2023 is expected to be a surplus (hence shown as funding source).
- The NTMA is likely to continue to hold significant cash throughout 2023. The balance at year-end 2022 was c. €25bn.




Source: NTMA

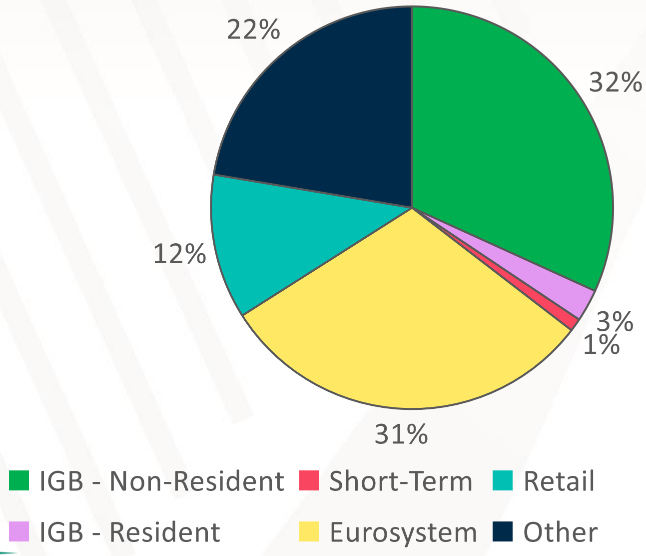
*Rounding may affect totals*

1. *In September 2023,the NTMA completed its 2023 bond funding at €7bn. €6.5bn is the cash proceeds from this nominal issuance (including non-comp).*
2. *Net STP (short term paper) primarily includes investments by other public sector bodies, including the NRF*
3. *Other funding needs includes general contingencies.*
4. *EBR is the Department of Finance's Budget 2024 estimate of the Exchequer Borrowing Requirement*

# Diverse holders of Irish debt

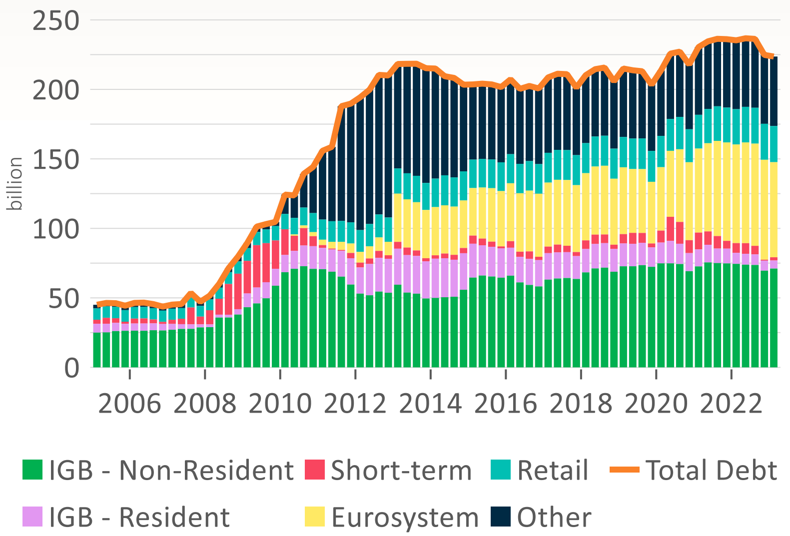
## Sticky sources account for greater than 60%

Ireland roughly split 85/15 on non-resident versus resident holdings (Q1 2023)




Source: Eurostat, ECB, Central Bank of Ireland

"Sticky" sources - official loans, Eurosystem, retail - make up c. 60% of Irish debt




Source: Eurostat, ECB, Central Bank of Ireland

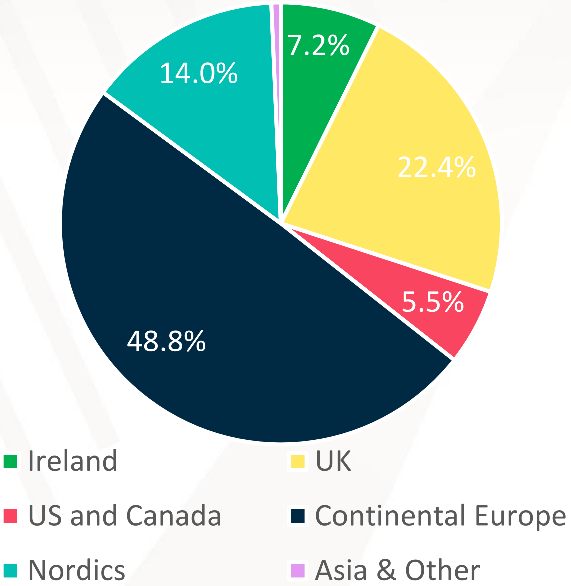


*IGBs excludes those held by Eurosystem. Eurosystem holdings include SMP, PSPP, PEPP and CBI holdings of FRNs. Figures do not include ANFA. Other debt has included IMF, EFSF, EFSM, Bilateral as well as IBRC-related liabilities over time. Retail includes State Savings and other currency and deposits. The CSO series has been altered to exclude the impact of IBRC.*

# Investor base

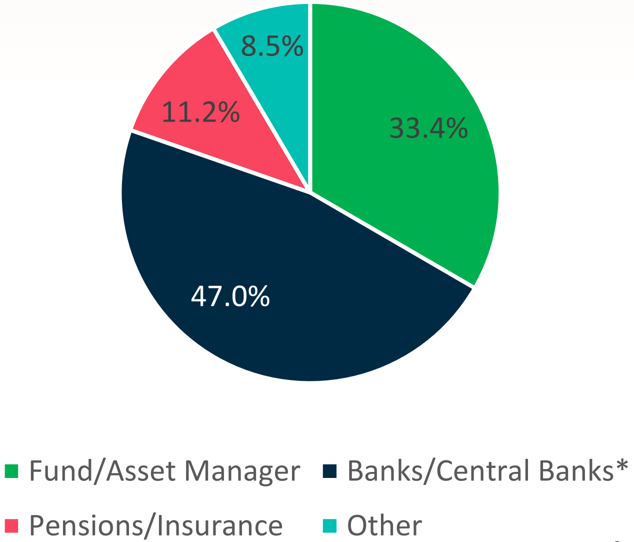
## Demand for Government bonds is wide and varied

Country breakdown:
Average over last five syndications




Source: NTMA

Investor breakdown:
Average over last five syndications




Source: NTMA

** Does not include ECB. ECB does not participate on primary market under its various asset purchasing programmes*

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# Credit Ratings for Ireland

## S&P upgrade in May 2023; Ireland rated in AA category by all

| Rating Agency | Long-term | Short-term | Outlook/ Trend | Date of last rating change | Date of next review |
|---|---|---|---|---|---|
| Standard & Poor's | AA | A-1+ | Stable | May 2023 | 17th Nov 2023 |
| Fitch Ratings | AA- | F1+ | Positive | Jan 2022 | 1st Dec 2023 |
| Moody's | Aa3 | P-1 | Stable | Apr 2023 | 20th Oct 2023 |
| DBRS Morningstar | AA(low) | R-1 (middle) | Stable | Jan 2022 | 3rd Nov 2023 |
| R&I | AA- | a-1 | Stable | Feb 2022 | Q1 2024 |
| KBRA | AA | K1+ | Stable | May 2023 | 27th Oct 2023 |
| Scope | AA- | S-1+ | Positive | May 2021 | 2024 |

# Commission's ruling on Apple annulled

## Further appeal by EC means case continues

- In 2016, the European Commission ruled that Ireland illegally provided State aid of up to €13bn, plus interest to Apple. This figure was based on the tax foregone as a result of a historic provision in Ireland's tax code. The Irish Government closed this provision on December 31st 2014.

- Apple appealed the ruling, as did the Irish Government. **The General Court granted the appeal in July 2020, annulling the EC's ruling.**

- This case had nothing to do with Ireland's corporate tax rate. It related to whether Ireland gave unfair advantage to Apple with its tax dealings. **The General Court has judged no such advantage occurred.**

- The Commission have appealed to a higher court: the European Court of Justice. The advocate general, an official adviser to the court, is expected to deliver his opinion on the case in November. A final judgement is expected within 12 months. Pending the outcome of the second appeal, the €13bn plus EU interest will remain in an escrow fund.

- **The NTMA has not included these funds in any of its issuance plans in the past or currently.** The funds are seen as separate and will be returned to Apple if the General Court's decision is upheld.

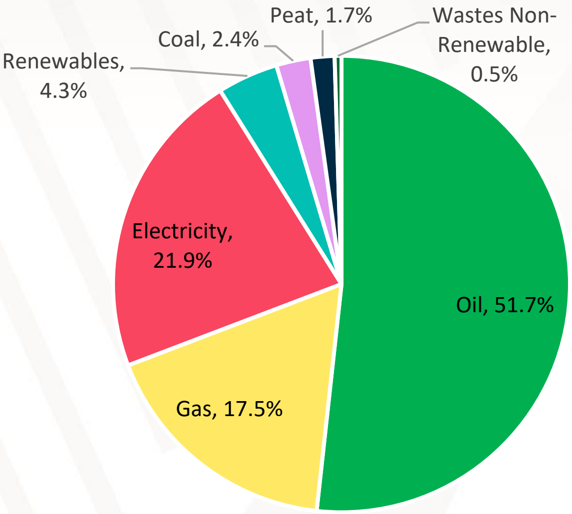
# ESG

Issuance & government policy
demonstrate Ireland’s green commitment

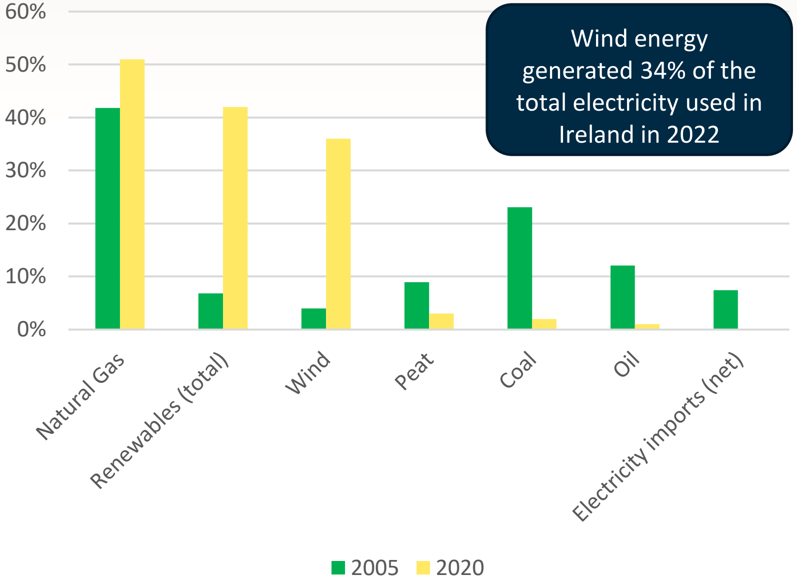
# Ireland Energy: Fossil fuels prevalent

Irelands energy mix is reliant on fossil fuels but renewables share to increase by 2030

Oil accounts for the largest share of Irelands energy mix. Transport accounted for 63% of oil use in 2021




Electricity production has become more renewables based but still far from Climate Action Plan aim of 80% by 2030




Wind energy generated 34% of the total electricity used in Ireland in 2022



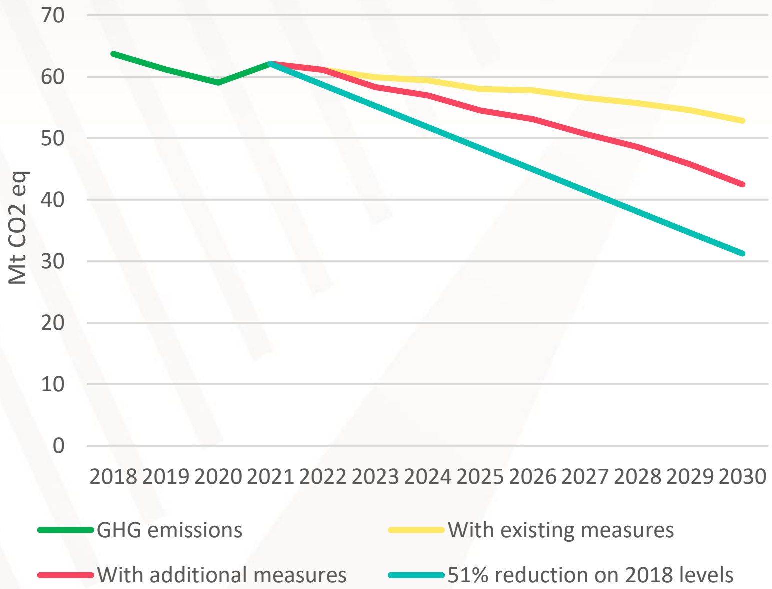
*Source: SEAI, Climate Action Plan, EU Renewable Energy Directive, Gas Networks Ireland*

*Waste (non-renewables) accounted for 0% (2005) and <1% (2019) of electricity production*

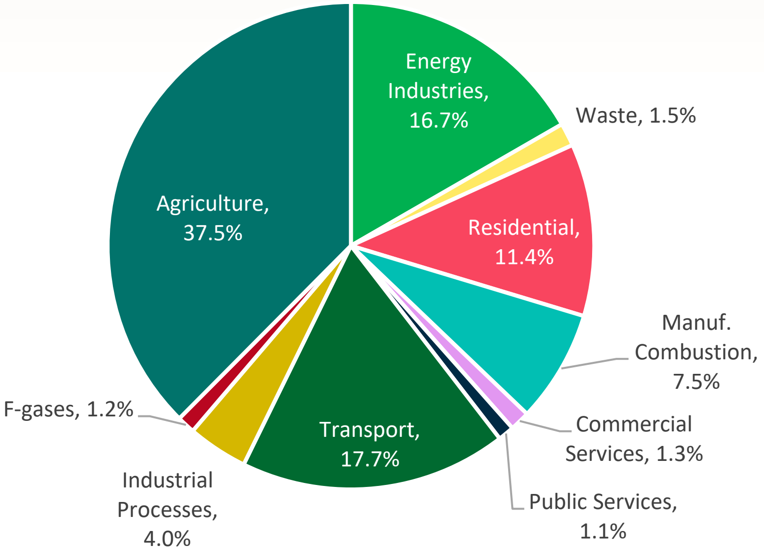
# Ireland's Greenhouse Gas emissions

## EPA report notes further measures needed to achieve emissions reduction target

EPA projections indicate Ireland will fall short of the 2030 51% reduction target




Emissions from agriculture make up a significant portion of the total In Ireland (c. 10% in EU and US)

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*Source: Environment Protection Agency (Ireland)*

*Note: Metric used is million tonnes carbon dioxide equivalent (Mt CO2eq)*

# Climate Action Legislation

## The Climate Action & Low Carbon Development Act 2021 aims for Net Zero by 2050

**Climate Action & Low Carbon Act:**

- Carbon Budgeting: The Act embeds the process of carbon budgeting into law. It requires Government to adopt a series of economy-wide-five-year carbon budgets.
- National Climate Objective: First carbon budgets will aim for a reduction of 51% of emissions by 2030.
- Climate Action Strategy: A national plan will be prepared every five years and actions for each sector will be updated annually.
- All of Government approach: Local authorities are required to prepare a Climate Action Plan and public bodies obliged to conduct their functions in line with the national plan.

**Carbon Budgets & Sectoral Ceilings**

| Budget Period | 2021-2025 | 2026-2030 | 2031-2035 (provisional) |
|---|---|---|---|
| MtCO2eq | 295 | 200 | 151 |
| Average Annual Reduction | 4.8% | 8.3% | 3.5% |

| Sector | Target reduction by 2030 vs.2018 | Projected** reduction 2030 vs. 2018 |
|---|---|---|
| Electricity | 75% | 62% |
| Transport | 50% | 41% |
| Buildings (Commercial and Public) | 45% | 50% |
| Buildings (Residential) | 40% | 48% |
| Industry | 25% | 11% |
| Agriculture | 25% | 19% |
| Other* | 50% | 21% |

**F-gases, Petroleum Refining and Waste*

*** EPA Projections under the With Additional Measures scenario*

# Climate Action Plan 2023

## Pillars to tackle emissions reduction

### Powering renewables

· 9GW onshore wind, 8GW solar and at least 7GW offshore wind by 2030

· Phase out and end use of coal and peat in electrical generation

· Green Electricity Tariff to incentivise lower cost renewable electricity at times of high wind and solar generation

### Building Better

· Retrofit 500,000 dwellings by 2030

· Put heat pumps into 680,000 homes by 2030

· Generate 2.5TWh of district heating by 2030

· Improve carbon sequestration and reduce management intensity of drained soils on grasslands

### Transport

· Reduce distance driven across all car journeys by 20%

· Walking, cycling, public transport will account for 50% of journeys

· 1 in 3 private cars will be EV's

· Increase rural bus routes and frequency

### Agriculture

· Reduce use of chemical nitrogen as fertiliser

· Increase organic farming to 450,000 hectares

· Expand indigenous biomethane sector

· Contribute to delivery of land use targets for afforestation, reduce mgmt. intensity of organic soils

· Increase uptake on protected urea on farms to 90-100%

### Enterprise

· Reduce clinker content in cement and substitute products with lower carbon content for construction materials

· Reduce fossil fuel share of final consumption

· Increase total share of heating to 70-75% by 2030

· Grow the circular and bio economy

### Land Use

· Increase annual afforestation rates to 8,000 hectares p/a from 2023 on

· Promote forest management initiatives in forests to increase carbon sinks and stores

· Improve carbon sequestration and reduce management intensity of drained soils on grasslands

· Rehabilitate 77,760 hectares of peatlands

# Irish Sovereign Green Bonds (ISGB)

## Over €10bn issued in Green; allocated to green projects following fourth year

- €10.35bn nominal outstanding across two bonds (€10.8bn cash equivalent)
- Cumulatively €10.8bn allocated
- Issuance through both syndicated sales and auctions
- Pipeline for eligible green expenditure remains strong
- Launched 2018 and based on ICMA Green Bond Principles – Use of proceeds model
- Governed by a Working Group of government departments chaired by the Department of Finance
- Compliance reviews by Sustainalytics
- Five annual allocation reports and four annual impact reports now published

**Irish Sovereign Green Bond Impact Report 2021: Highlights***

- **Environmentally Sustainable Management of Living Natural Resources and Land Use**

  Number of hectares of forest planted: 2,016

  Number of Landfill Remediation projects being funded: 70
- **Renewable Energy**

  Number of companies (including public sector organisations) benefitting from SEAI Research & Innovation programmes as lead, partner or active collaborators : 143

  SEAI Research & Innovation awards: 48
- **Sustainable water and wastewater management**

  Water savings (litres of water per day) : 222.1 million

  New & upgraded water and wastewater treatment plants: 12

  Length of water main laid (total) : 202km

**For a more detailed break-down please see the ISGB 2021 Impact Report*

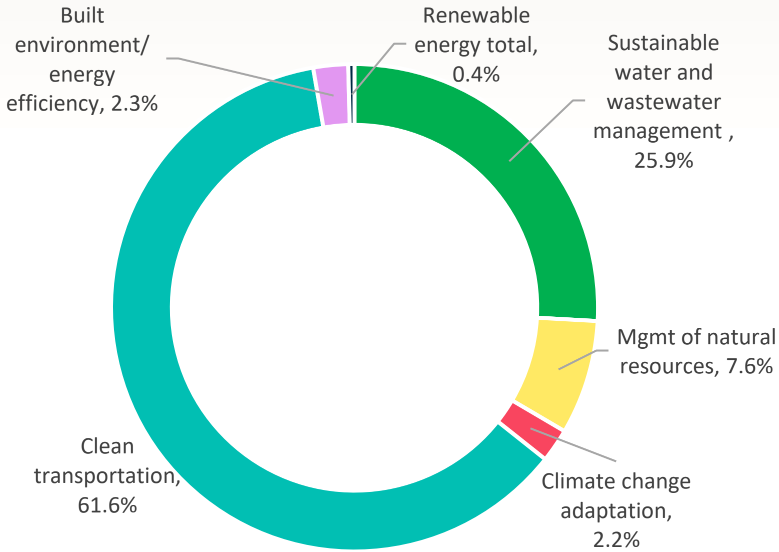
# Irish Sovereign Green Bonds (ISGB)

## Irish Sovereign Green Bond Impact Report 2021 & Allocation Report 2022: sample impacts

Some highlights from the report*

- **Built Environment/ Energy Efficiency**
  - Energy saving (GigaWattHours) : 458
  - Number of homes renovated : 17,187
  - EV home charger grants provided: 15,547
- **Clean Transportation**
  - Number of public transport passenger journeys: 139.8 million
  - Length of regional and national greenways constructed: 70km
  - Take-up of Grant Schemes/ Tax foregone provided (number of vehicles) : 33,020
- **Climate Change Adaptation**
  - 16 major Flood relief projects at planning, development or construction phase.
  - 8,296 properties protected on completion

Allocation in 2022 of ISGB funding has focused on Water/Waste management and transportation



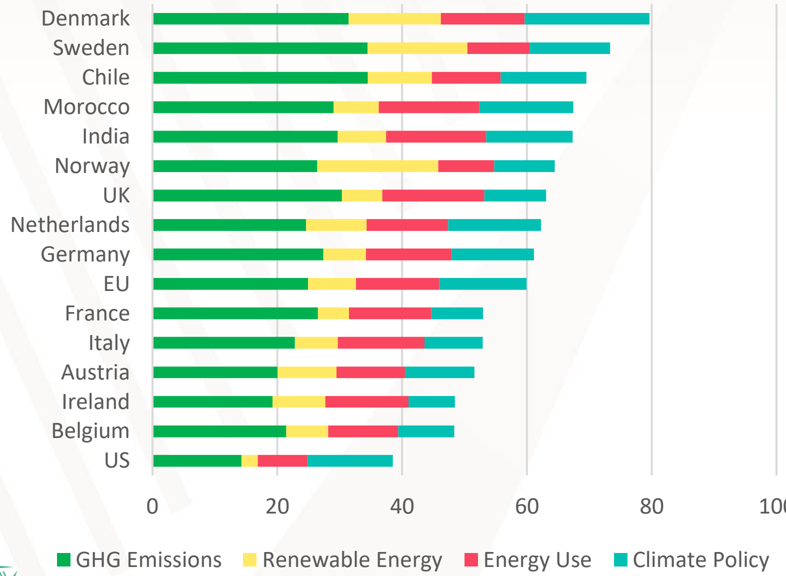



*For a more detailed break-down please see the Irish Sovereign Green Bond Allocation Report 2022*

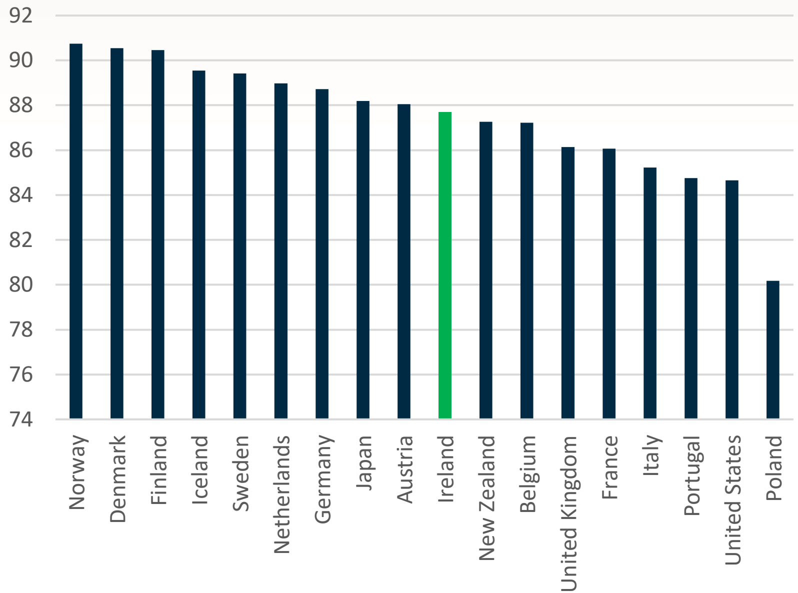
# Further progress on ‘E’ and ‘S’ to be made

## Action needed in sectors like energy and healthcare

Ireland ranks behind leaders like Denmark in current environmental metrics




Ranked 13th out of 160 countries in the Social Progress Index but scores lower on healthcare and housing affordability

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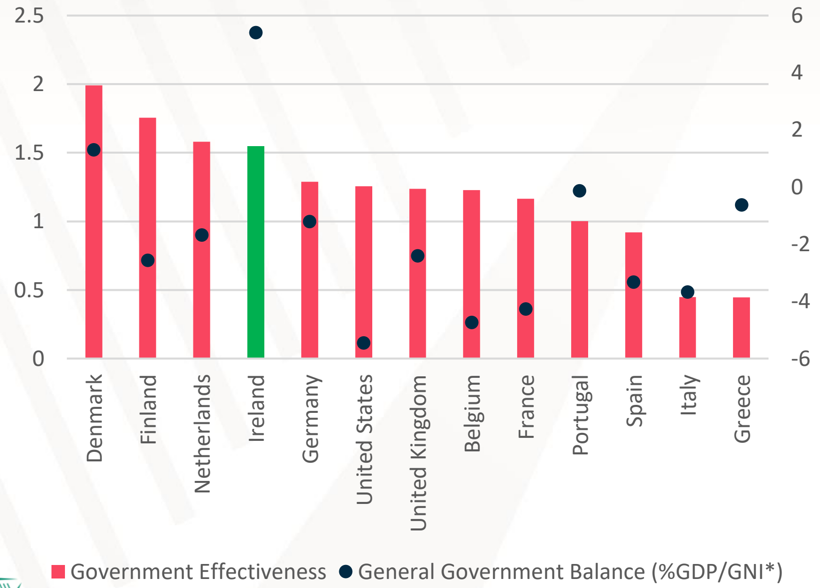
*Source: Climate Change Performance Index; Social Progress Index*

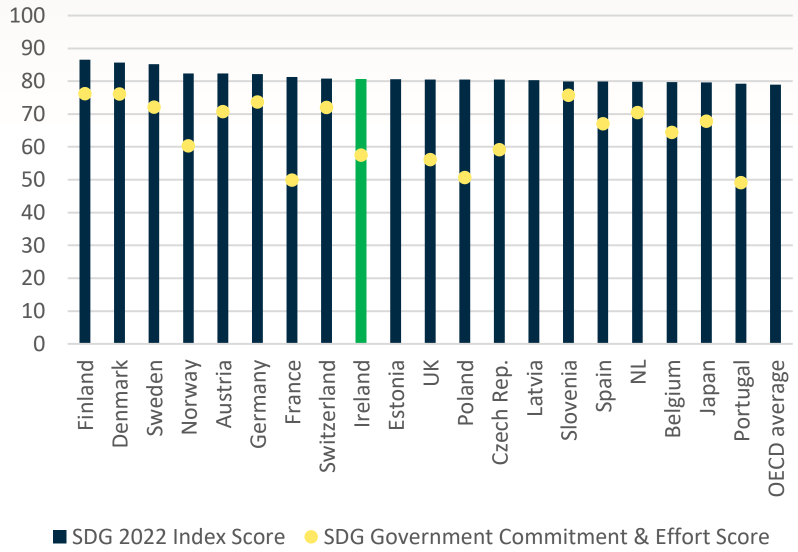
# Governance typically been Ireland’s strength

## Viewed well on many indicators focusing on sound governance and institutional strength

### Ireland is well positioned to tackle ESG challenges with strong government effectiveness and large fiscal surplus




### Ireland ranked 9th globally on progress towards achieving the Sustainable Development Goals

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*Source: Freedom House Index, OECD Sustainable development report 2022*

# Structure of the Irish Economy

Multinationals overstate economic prosperity but offer clear benefits of jobs, income, taxes

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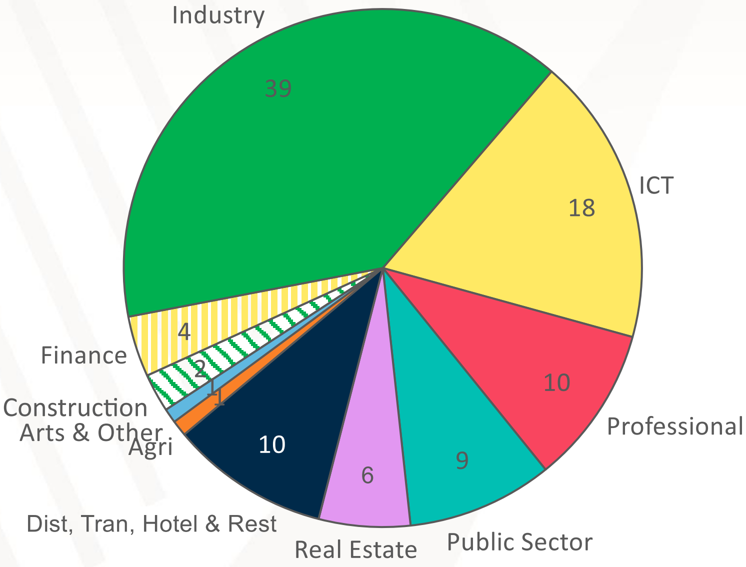
National Treasury Management Agency

# Multinational activity distorts Ireland's data

## Notwithstanding those issues, MNCs have real positive impact

### Multinationals dominate GVA: profits are booked here but overstate Irish wealth generation




Source: Eurostat

### Domestic side of economy adds jobs; MNCs add GVA/high wages

**Percentage of Total**

| | Employment | Compensation of Employees | Real GVA |
|---|---|---|---|
| Industry (incl Pharma) | 13 | 14 | 39 |
| ICT (Tech) | 7 | 10 | 18 |
| Professional | 10 | 14 | 10 |
| Dist, Tran, Hotel & Rest | 24 | 18 | 10 |
| Public Sector | 30 | 29 | 9 |
| Real Estate | 0 | 1 | 6 |
| Financial | 5 | 7 | 4 |
| Construction | 6 | 4 | 2 |
| Agriculture | 1 | 1 | 1 |
| Arts & Other | 4 | 2 | 1 |

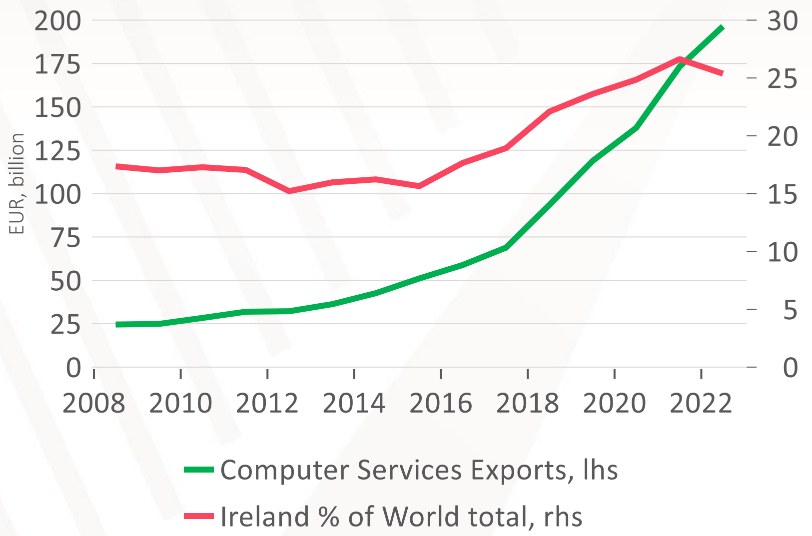
Source: Eurostat

*Note: RHS based on calendar-adjusted seasonally-adjusted data as of 2023 Q1.*

# €0.68trn of intellectual property into Ireland

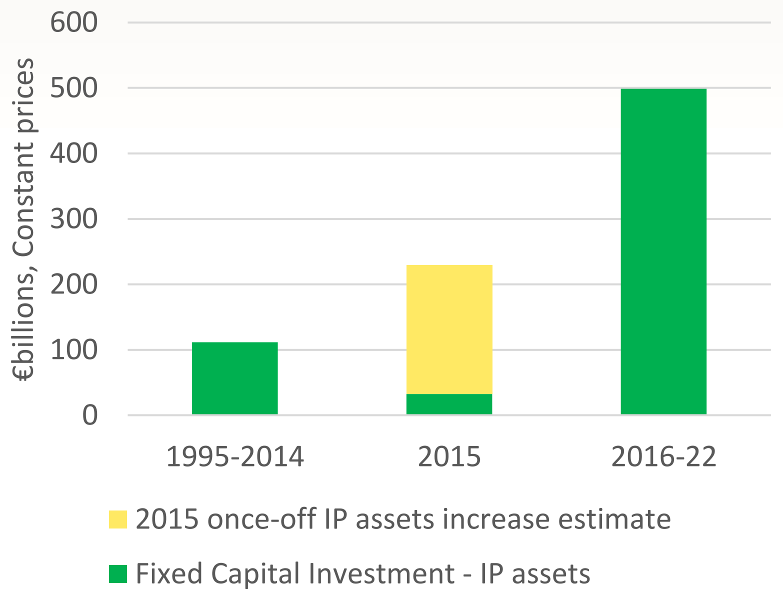
## Assets brought here by tech. & pharma. in recent years

Ireland is now a leader in Computer Services; Exports have up from €50bn to c. €170bn since 2015




Source: CSO, WTO

Enormous inflows (c. €0.68trn) of IP assets into Ireland since 2015 on the back of BEPS 1.0 and other tax reforms

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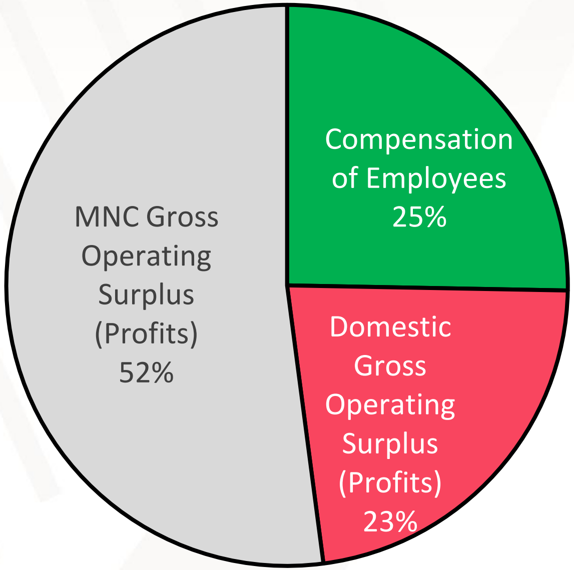
*Source: CSO and NTMA analysis – Gross Fixed capital formation and Gross capital stock figures used in RHS chart*

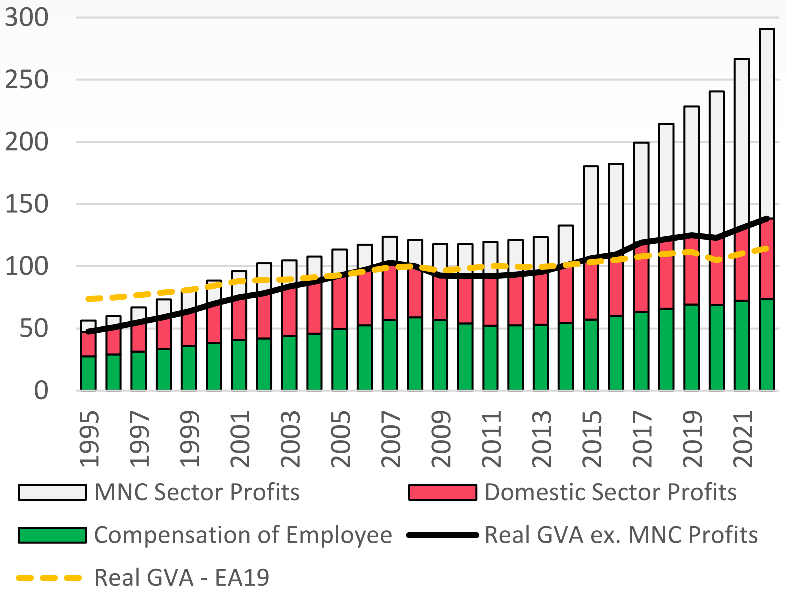
# Underlying economy above EA average

## MNCs add real substance to IE economy as wage bill filters out to domestic sectors

Ireland's income = wages (all sectors) + domestic sectors profits + tax on MNC profits




Ireland, on an underlying basis, growing faster than euro area average in recent years (2008 = 100)





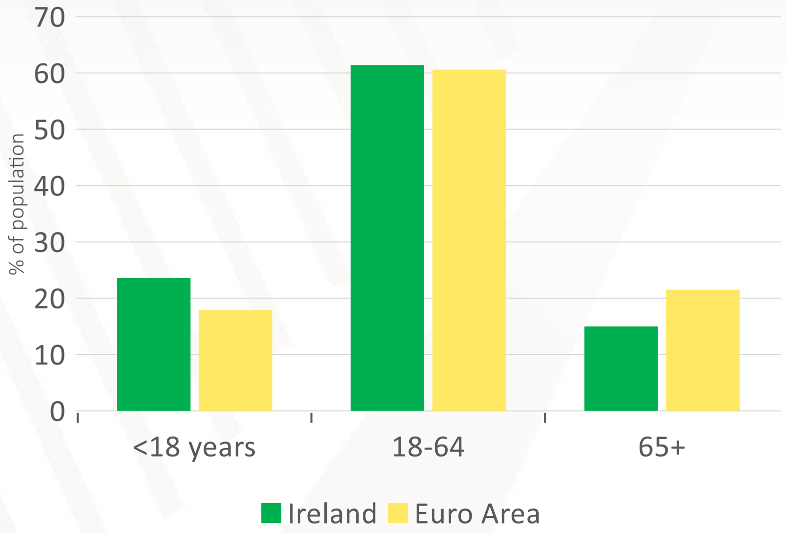

*Source: CSO, NTMA calculations (Nominal 2022 data used in left chart)*

*Ireland's GVA data has been adjusted to strip out the distortionary effects of some of the multinational activity that occurs in Ireland. Specifically a profit proxy is estimated for the sectors in which MNCs dominate.*

# Ireland's population helps growth potential

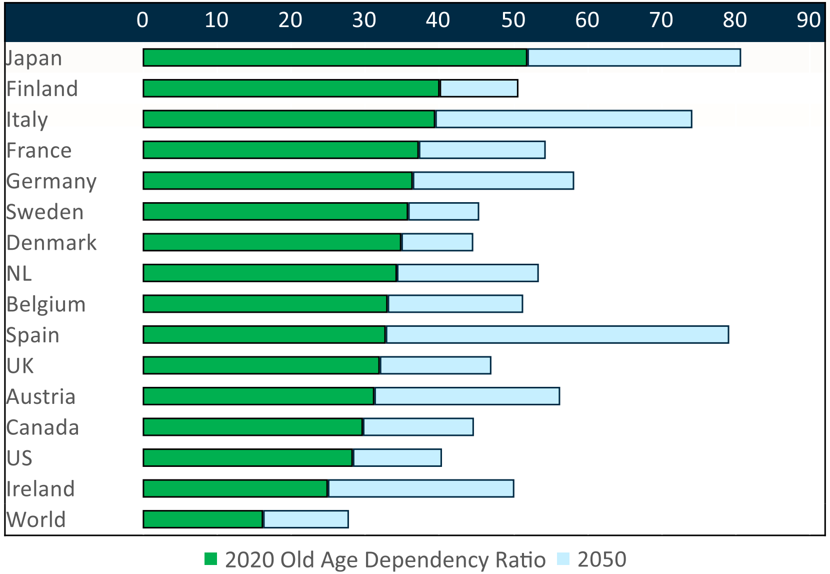
## Age profile younger than the EU average but won't outrun aging demographics

### Ireland's population at 5.28m in April 2023: younger population than EU




Source: Eurostat

### Ireland's population will age rapidly in decades to come; to remain younger than most of its EA counterparts




Source: UNDESA

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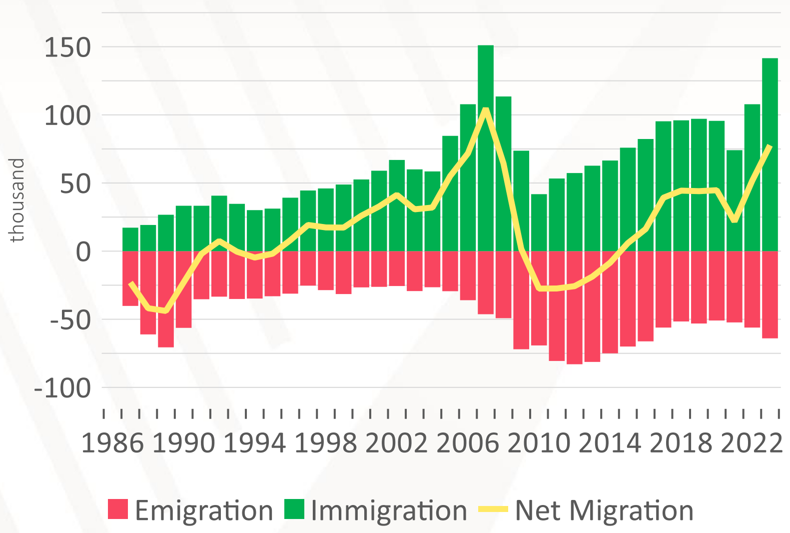
# Migration improves Ireland's human capital

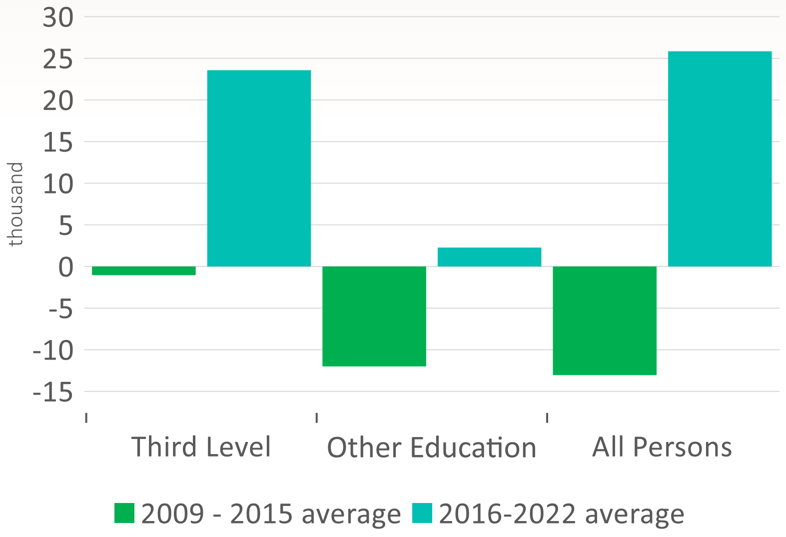
## Ireland's net migration has swung back and forth on economic performance

Continued inward migration led to 98k increase (c. 2%) in last year - due to strong economy & UKR refugee efforts




Source: CSO

Migration inflow particularly strong in highly educated cohort – work in MNCs attractive




Source: CSO

*Migration figures based on year to April*

# Brexit: Free Trade Agreement in place

## Allows for tariff free trade but non-tariff barriers have increased

Main points of FTA

- From January 1 2021, the UK became a "third country" outside the EU's single market and customs union. As such without a free trade agreement, trade would have been subject to tariffs and quotas.
- Under the deal, goods trade between the two blocs remain free of tariffs.
  - However, goods moving between the UK and the EU will be subject to customs and other controls.
  - Due to these non-tariff barriers, Brexit will likely result in less trade.
- Under the deal, services trade between the two blocs will continue but again could be hampered.
  - The Agreement provides for a significant level of openness for trade in services and investment.
  - But providing services could be hampered. For example, UK service suppliers no longer have a "passporting" right, something crucial for financial services. They may need to establish themselves in the EU to continue operating.
- The deal means less cooperation in certain areas compared to before Brexit. Financial and business services are only included to a small extent. Cooperation on foreign policy, security and defence will be lower also.
- Brexit is likely to result in less trade in the long run between the EU and the UK but the deal does avoid the worst case scenarios: Hard Brexit was averted and the economic impact to Ireland will be more modest.

# Windsor Framework + NI Protocol

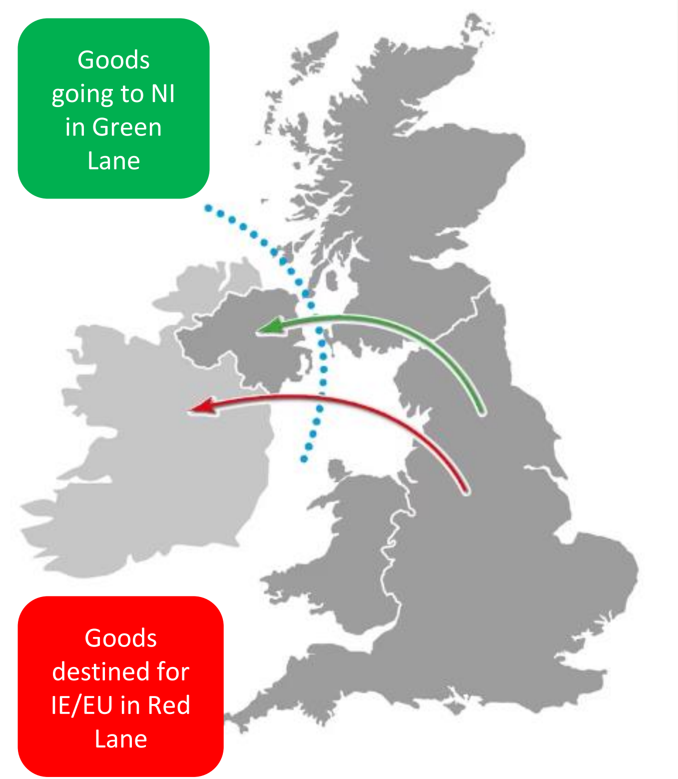
Windsor Framework expands on NI Protocol agreement; NI parliament remains suspended

**Northern Ireland Protocol (signed in 2019)**

- The withdrawal agreement (and the Northern Ireland Protocol within it) is a legally binding international treaty which works in tandem with the FTA.
- Northern Ireland remains within the UK Customs Union but will abide by EU Customs Union rules – dual membership for NI.
- No hard border on the island of Ireland: customs border is “in the Irish Sea”.

**Windsor Framework (signed in 2023)**

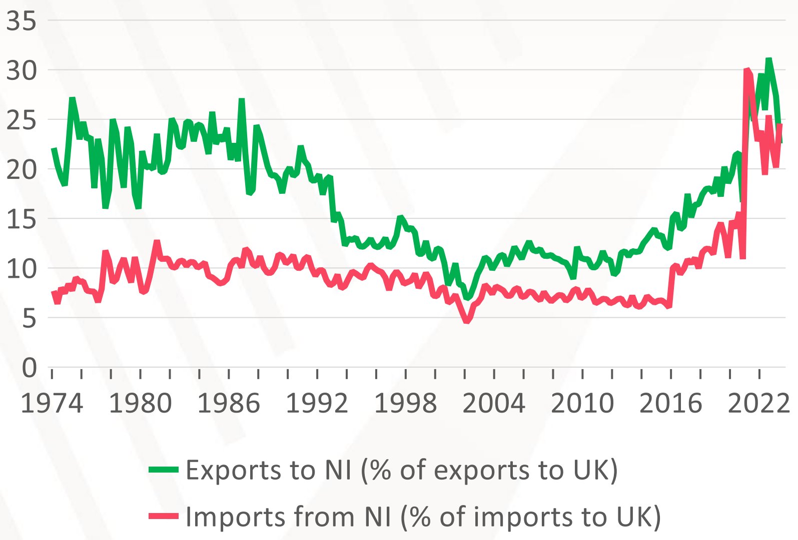
- Green lane/Red Lane: goods from the UK for NI will travel through new green lane, with a separate red lane for goods that might travel on to the EU. Border “in the Irish Sea” effectively ended for goods destined for NI market.
- VAT: EU VAT rules could be applied in NI whilst the UK can make “critical VAT” changes which include NI. Concerns on food/medicines/parcels have been addressed.
- Stormont Brake: Agreement gives the NI Assembly (at least 30 MLAs from two parties) the ability to pull an “emergency brake” if it disagrees with an EU goods law which would have significant and lasting effects. If the brake is pulled, the UK government could veto new EU laws but an arbitration process has been established also.



# Trading flows are changing after FTA

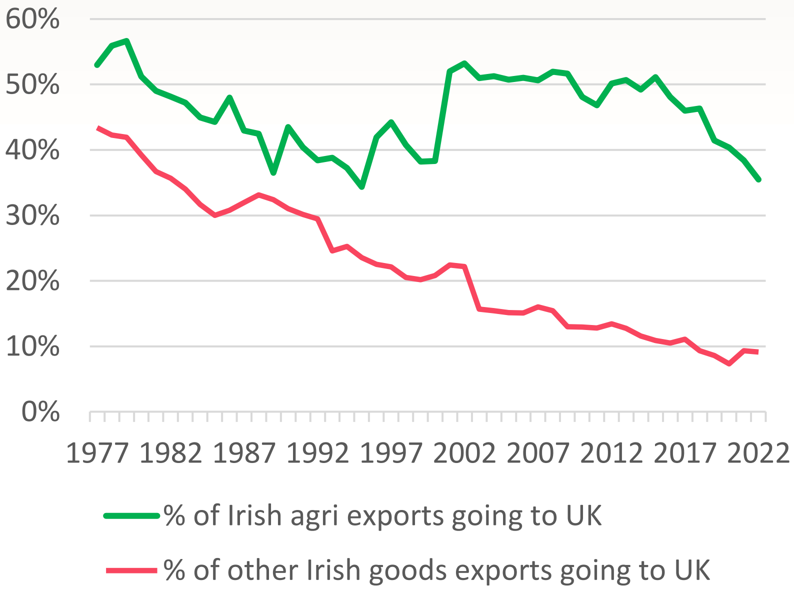
## ROI-NI trade jumped in 2021, both imports and exports

NI trade at highest level compared to overall IE-UK trade for many decades – special trade status of NI a factor




Source: CSO

UK exit from single market will continue trend of lower goods trade between IE & UK




Source: CSO

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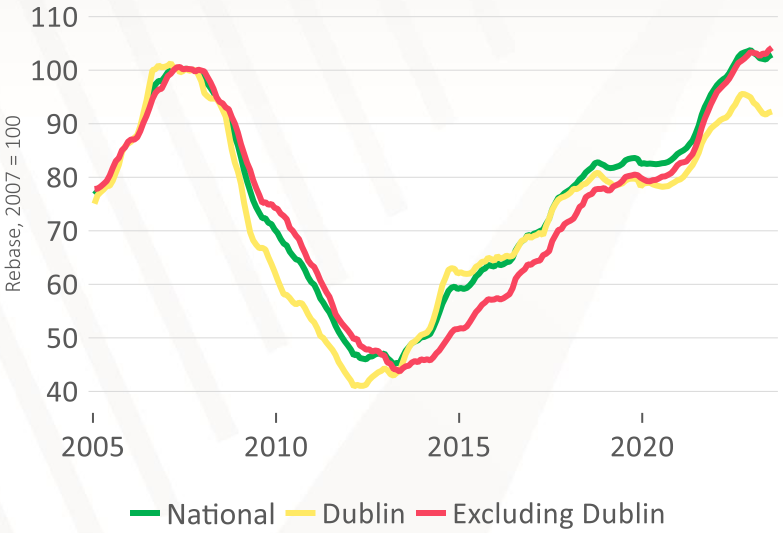
# Property & Banks

Prices cooling in recent quarters after upward pressures in recent years – monetary policy having an effect

# Prices up in recent years but stalling

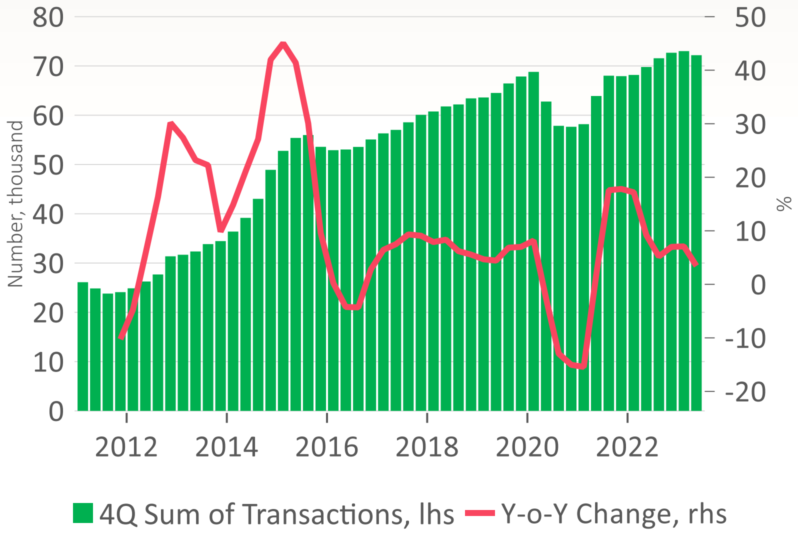
## Supply hampered by the pandemic and inflation (c.33-40k units needed p.a.)

House prices up 1.5% y-on-y, above previous peak in 2007 – Dublin seeing prices recede in last year




Source: CSO

Transaction volumes have started to slow following ECB rate hikes




Source: CSO

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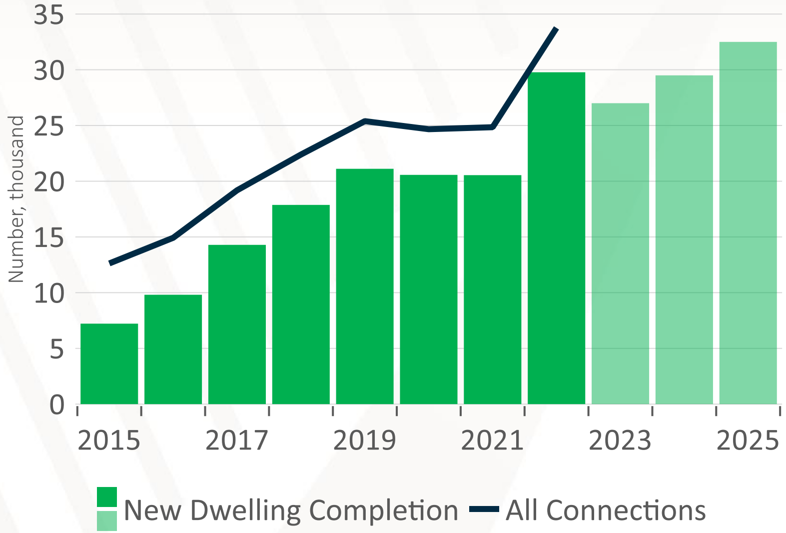
* Some estimates have put housing needs as high as 60,000 a year over the coming decades

# Supply outlook uncertain

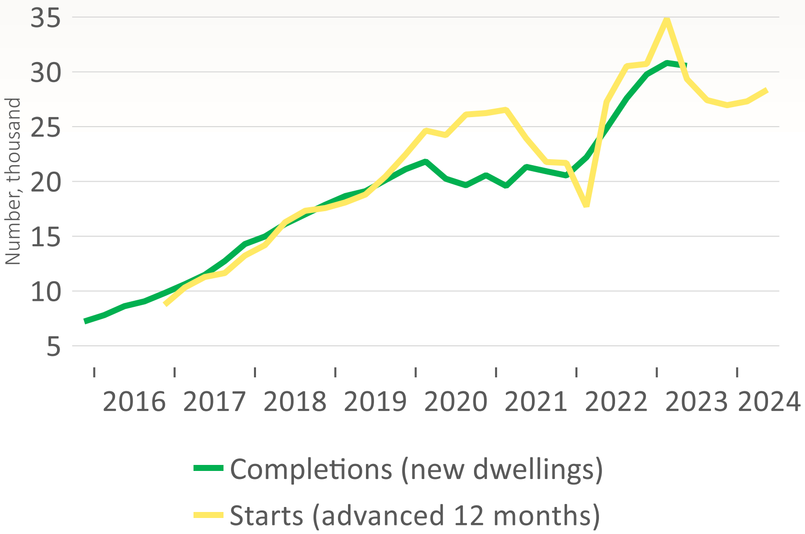
## Stronger supply in 2022 but 2023 supply could be impacted by costs/interest rates

New Dwellings Completions* estimated to be less than 30,000** in 2023, below 2022 level




Source: CSO

Housing starts show supply chain issues and inflation has started to weigh on development




Source: CSO, Irish Department of Housing, Planning & Local Government



* Housing completions derived from electrical grid connection data for a property. Reconnections of old houses overstate the annual run rate of new building (all connections in graph).
**CBI Forecast

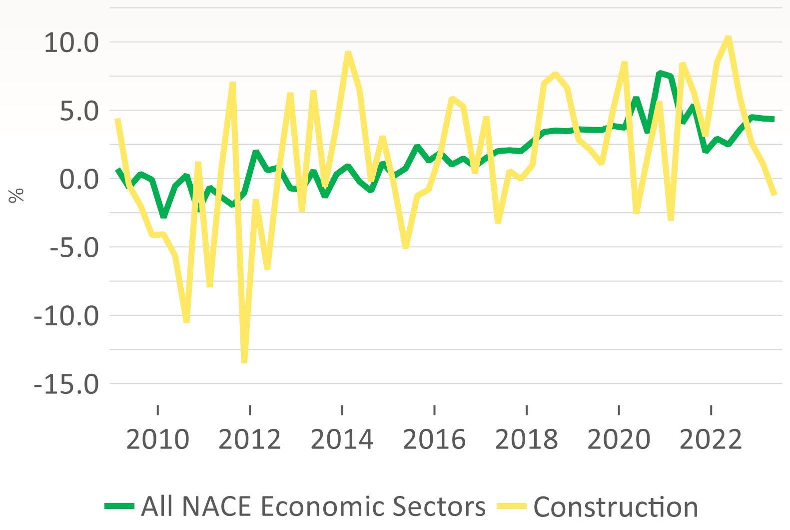
# Inflation normalising in construction sector

## Growth in material and labour costs has softened in recent months

Materials up 2.2% year-on-year in July but inflation in the sector is past its peak


Source: CSO

Labour costs in construction have eased, down 1.2% y-on-y in Q2




Source: CSO

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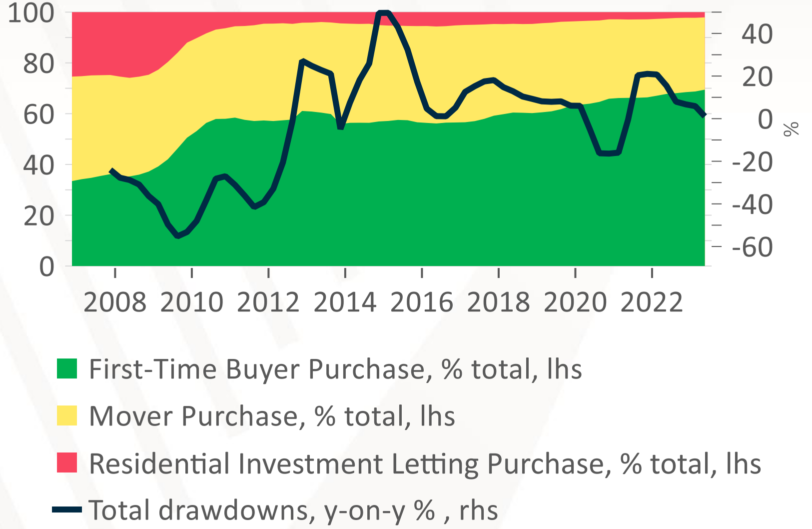
*RHS = weekly earnings on a 4Q yearly growth rate*

# Demand is strong, but drawdowns slowing

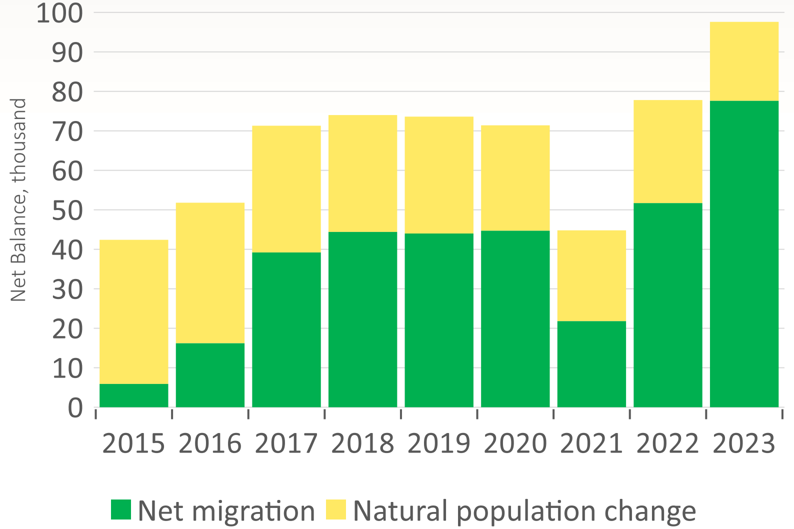
## Increased net migration further fuelling tight demand in the housing market

### Mortgage drawdowns* increase starting to slow, fuelled by a fall in residential investment drawdowns




Source: BPFI

### Increased net migration given economy and refugees from Ukraine add demand for housing




Source: CSO

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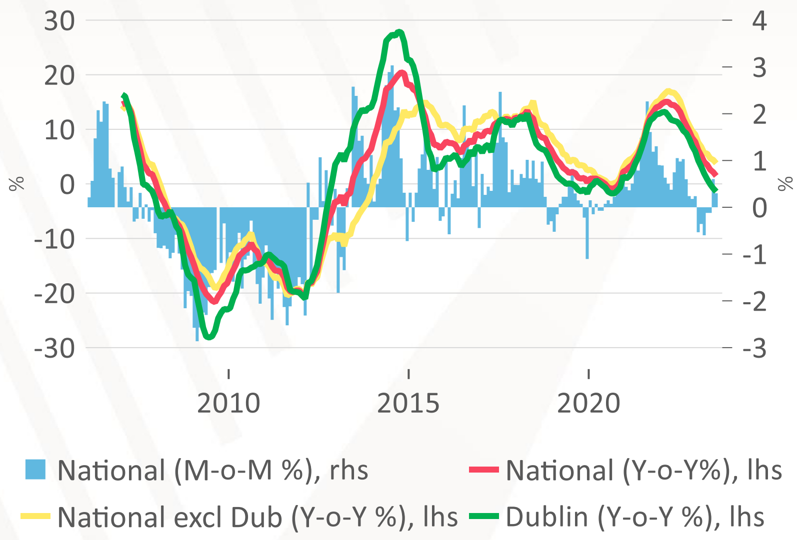
**4 quarter sum used (LHS)*

# House prices continue to rise

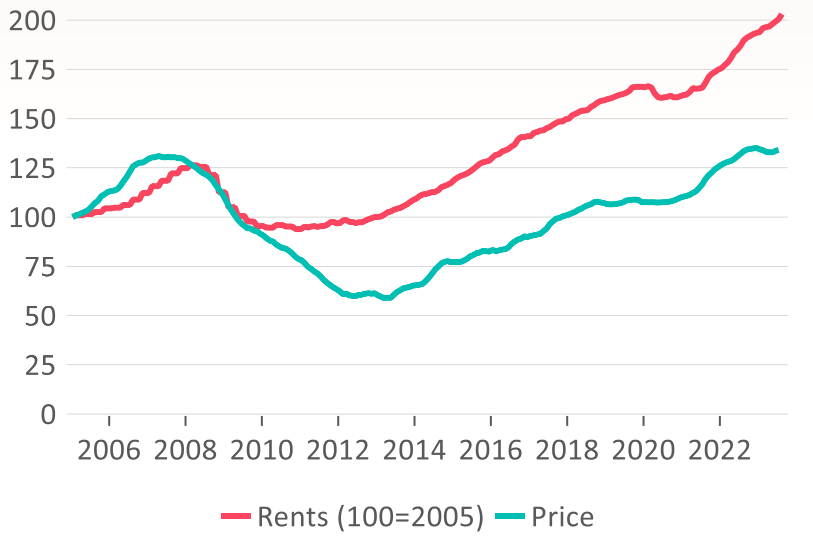
Inflation driven by strong demand, labour shortages and increased supply prices

House prices up 1.5% in the year to June 2023, the lowest level of price growth recorded in almost three years




Source: CSO

Rents pressures remain strong with a y-on-y increase of 7.1% in August

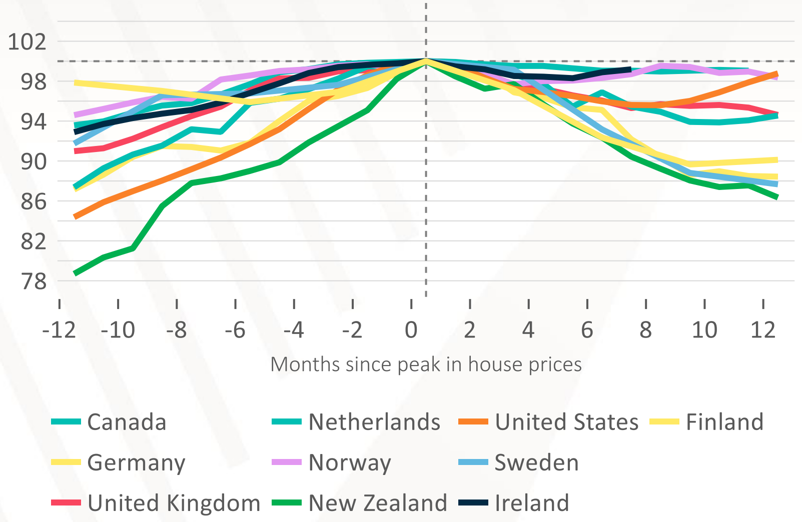



Source: CSO

# House price increases slowing

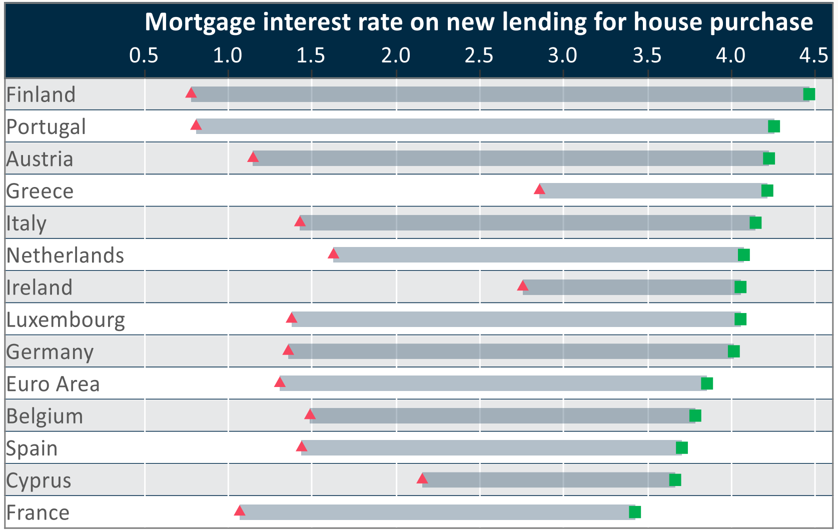
## Irish mortgage rates moving slower than other countries

House prices have peaked in most countries but Irish prices declining at slower rate




Source: StatCan, CBS, Nationwide, S&P Global, EUROPACE, Real Estate Norway (Eiendom Norge), REINZ, SCB, CSO, StatFin

Pass-through from ECB hikes to mortgage rates less than seen in other countries. Interest rates still above EA average




*excludes revolving loans and others*

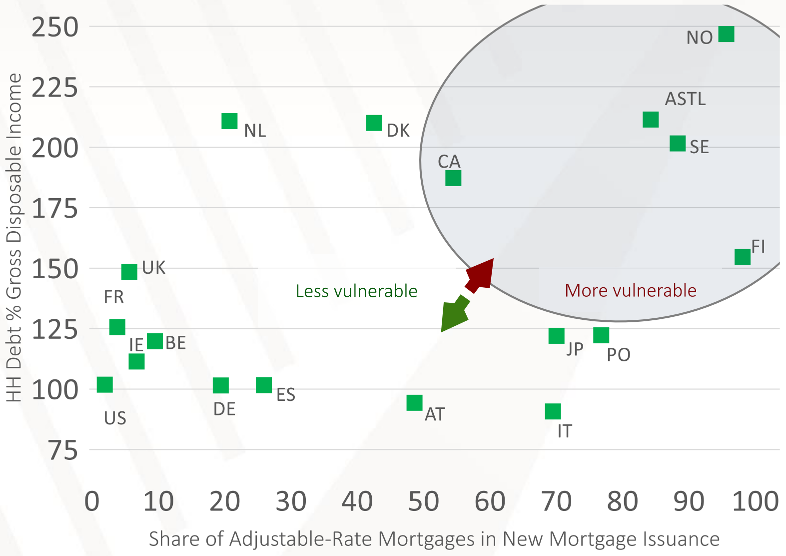
▲ 1/2022 ■ 7/2023

Source: ECB

# Ireland less vulnerable to rising interest rates

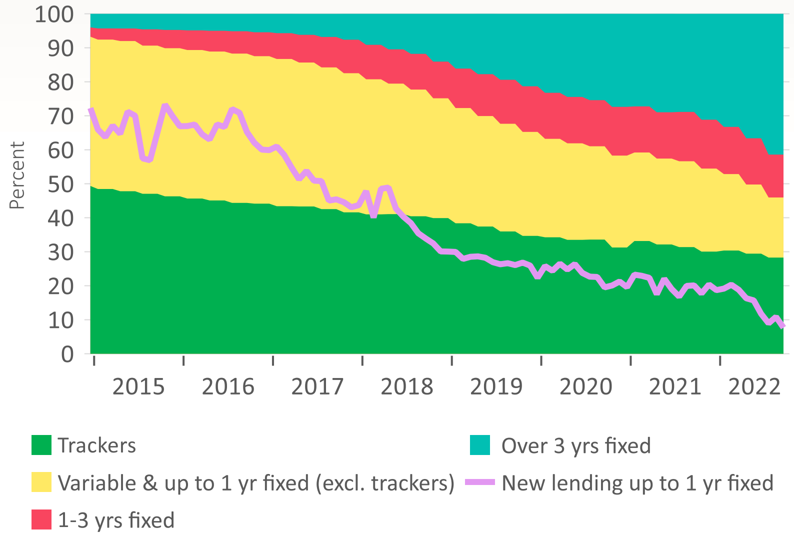
## But could pose a greater threat in the medium term

Low share of adjustable rate mortgage and low HH debt to income ratios- Ireland less exposed to rising interest rates




Source: OECD, ECB, FHFA

…but most mortgages in Ireland exposed to higher interest rates over the medium term




Source: Central Bank of Ireland

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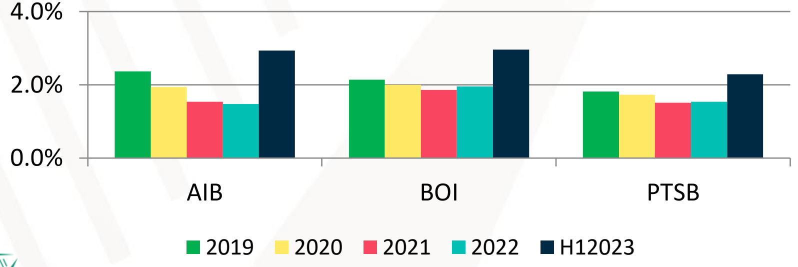
# Ireland’s Banking Sector Overview

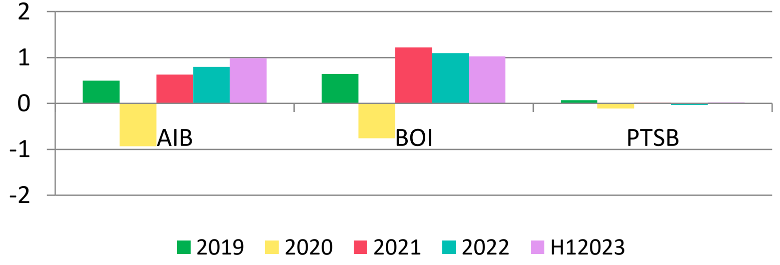
## Less competition possible in decade to come

- Banking sector well capitalised with sufficient liquidity buffers
- Banks profitable as net interest margins will be helped by rising interest rate environment.
- Ulster Bank and KBC  - both of which have no govt. ownership have decided to leave Irish banking market. Reduced competition is main impact.
- The Irish Government has sold its share in BOI. This leaves just AIB and PTSB with government involvement.
- Further tranches of AIB and PTSB shares were sold in 2023. The Government owned approx. 47% of AIB and 57% of PTSB. Sales are likely to be ongoing as government divests from sector.

Net Interest Margin




Profit before Tax (€bns)

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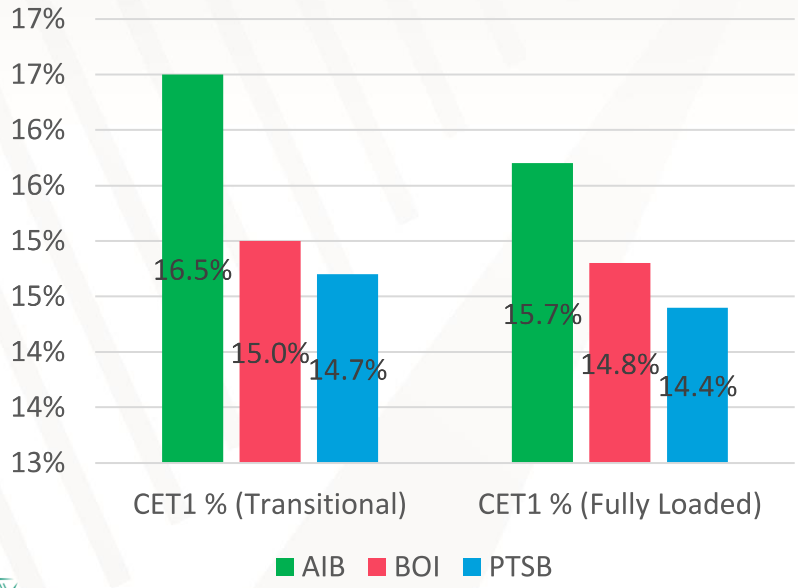
*Source: Annual reports of banks - BOI, AIB, PTSB*

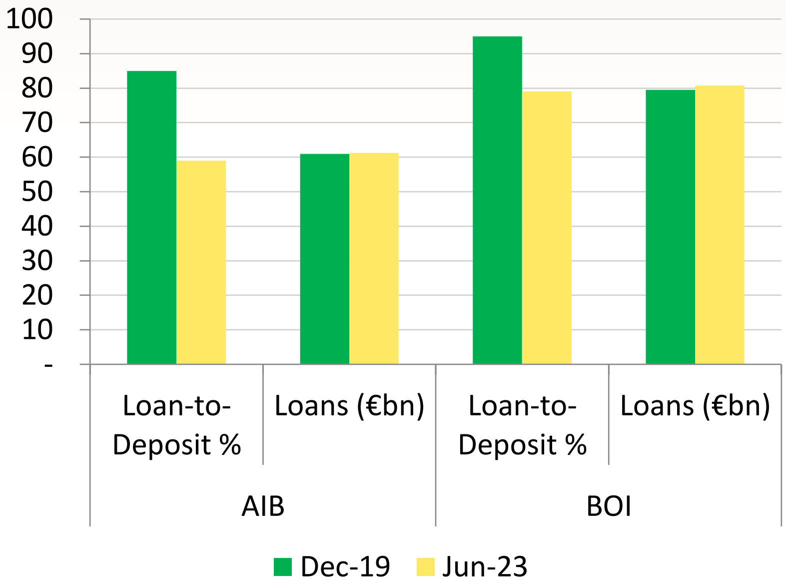
# Capital ratios strengthened in last 10 years

## Bank's balance sheets contracted and consolidated since GFC

CET 1 capital ratios allow for ample forbearance in 2023




Loan-to-deposit ratios have fallen in recent years as deposits have increased on back of HH savings, banks leaving

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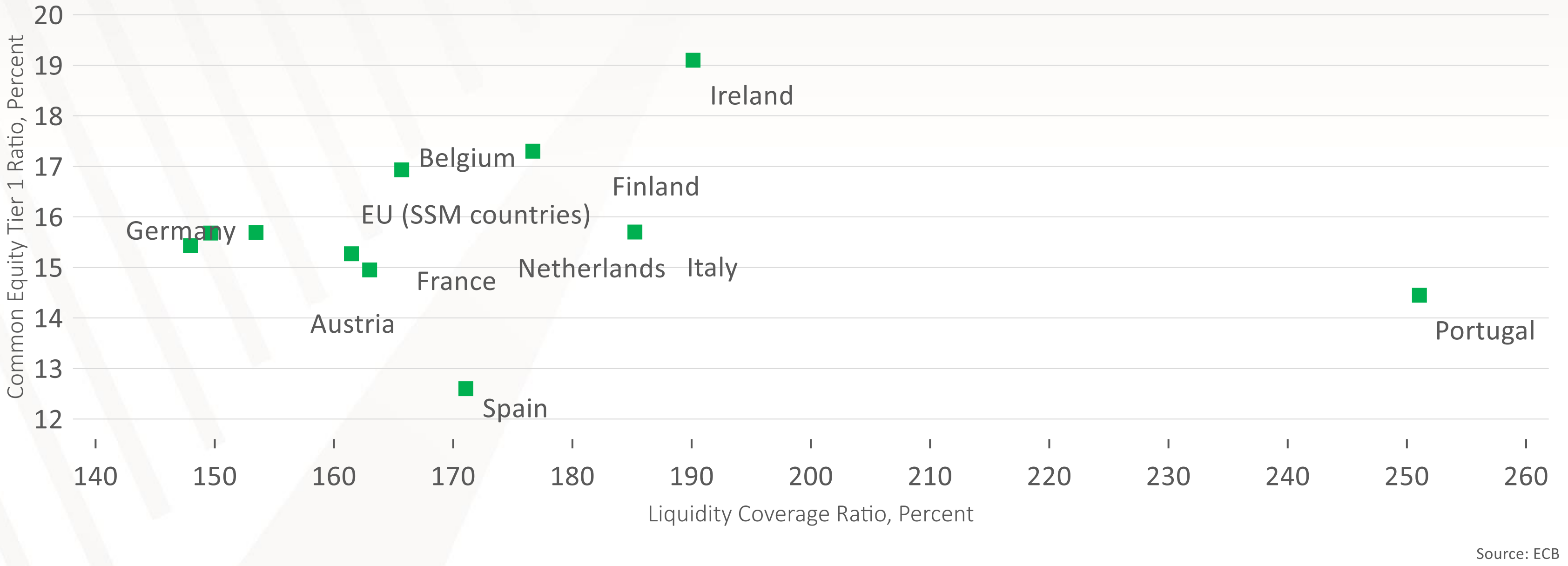
*Source: Published bank accounts*

*Note: "Fully loaded" CET1 ratios used. Refers to the actual Basel III basis for CET1 ratios.*

# Ireland's banking sector well positioned

## CET1 ratios are high and liquidity coverage ratio is better than EU average

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*Source: ECB (Q3 2023 data)*

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