Ireland: Surpluses amid steady growth

NTMA Investor Presentation
September 2024

Gníomhaireacht Bainistíochta an Chisteáin Náisiúnta
National Treasury Management Agency

Index

Summary

Irish economic & fiscal strength persists

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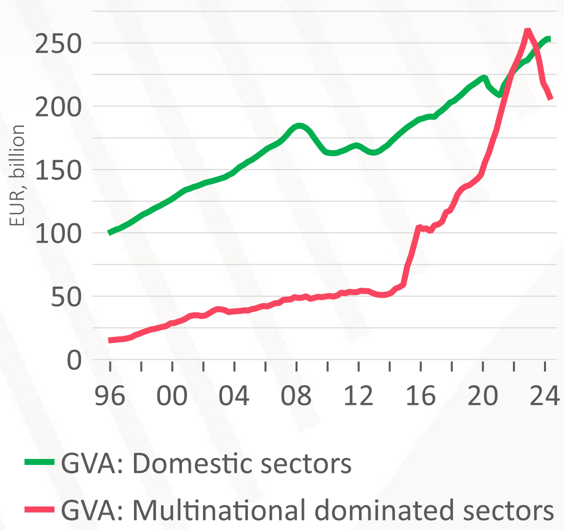
~2% real economic growth expected in 2024

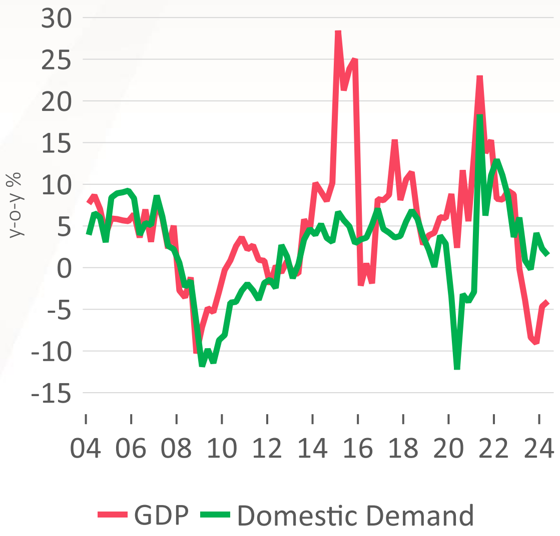
Full employment + inflation easing off + monetary policy will help consumer

Value added from ICT & pharma clear to see – step back in 2023



Source: CSO

MDD gives better picture of growth: Consensus forecasts of c. 2% for 2024



Source: CSO

Unemployment rate is at 4.3% – hovering around full employment for some time now

Source: CSO

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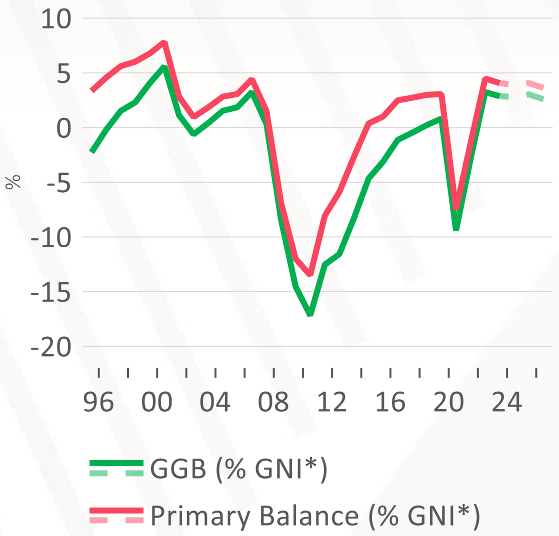
** Modified Domestic Demand series accounts for multinational activity (technically modified final domestic demand (excl. inventories))*

Note: RHS uses the standard unemployment rate during the Covid period. The Covid adjusted unemployment rate was as high as 31.5% at times between March 2020 and Feb 2022.

Large government surplus expected

Debt metrics all improved in 2023; long term funds – FIF/ICNF established

Forecasted 2024 GG surplus (2.8%) with similar level in 2025



Source: CSO, Irish Department of Finance forecasts

Debt metrics expected to improve this year

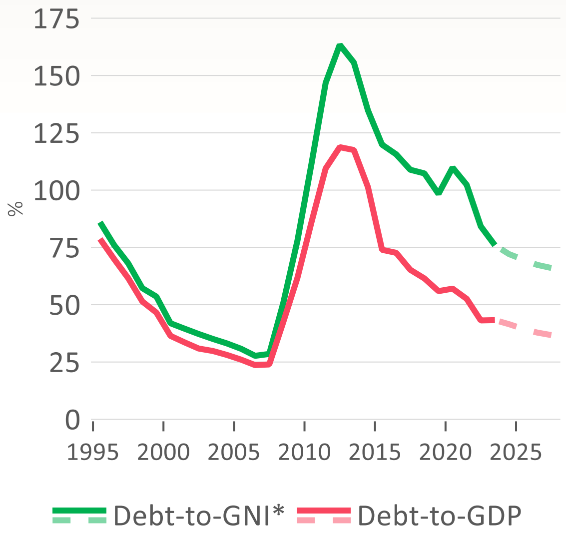
Debt-to-GNI*
(72.1% 2024f; 75.9% in 2023)

Debt-to-GG Revenue
(171% 2024f; 178% in 2023)

Average interest rate
(1.6% 2024f, 1.6% in 2023)

Debt-to-GDP^
(41.5% 2024f; 43% in 2023)

Debt to GNI* expected to fall given surplus and limited issuance



Source: CSO, Irish Department of Finance forecasts

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

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Medium term challenges/opportunities

External environment uncertain but growth continues in US/EU/UK

Growth

Labour market strength remains in 2024. Healthy domestic balance sheets, lower inflation and easing policy to come likely to help consumer in short term.

Slow growth in Europe is a headwind.

FDI

Risks surrounding geo-politics, deglobalisation, aggressive industrial policy and corporate taxation are medium terms concerns for a small open economy like Ireland.

Ireland being adaptive to global events is critical.

Funds

Large surplus (c. 2.8% of GNI*) expected for 2024 via exceptional CT receipts.

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

NTMA funding target set at €6bn for 2024

€5bn has been issued so far

Cash

Fiscal surplus alongside prefunding means Ireland in strong cash position.

The cash balance is expected to remain strong accounting for transfers to new sovereign funds in the coming months

WAM

Weighted average maturity of debt one of longest in Europe.

NTMA issuance since 2022 of €19bn at WAM of 15.2 years and average interest rate of 2.29%.

AA

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

Fitch upgraded to AA in 2024 and S&P at AA. Moody’s and DBRS have Ireland on a positive outlook.

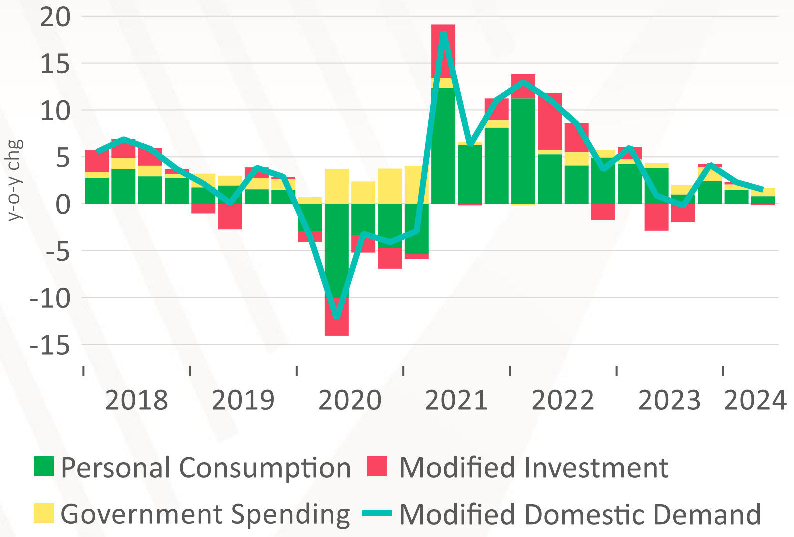
Macro

Economic growth in first half of 2024 just below 2%

Irish economic growth continues in 2024

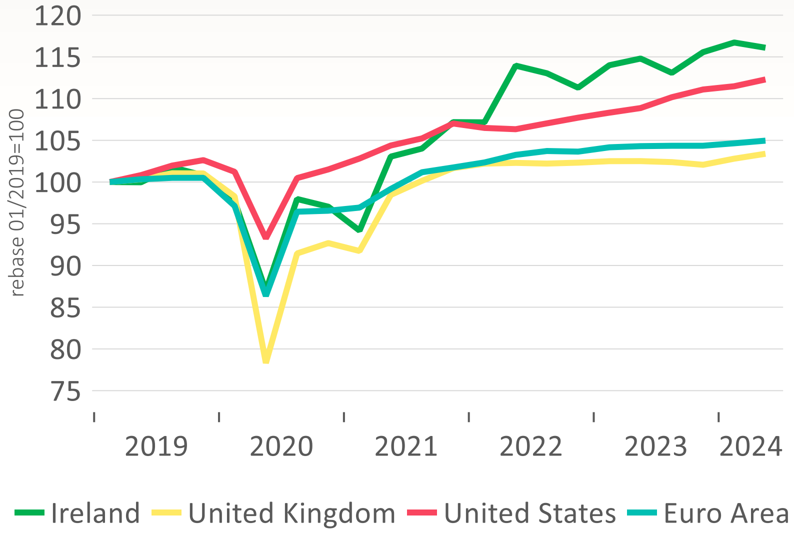
Consumption and employment growth display resilience

Modified Domestic Demand increased by 1.5% annually in Q2 2024, with consumption growing by 1.3% y-o-y



Source: CSO

Irish economic activity* has overperformed in post-pandemic compared to major trade partners'



Source: CSO, BEA, ONS, Eurostat

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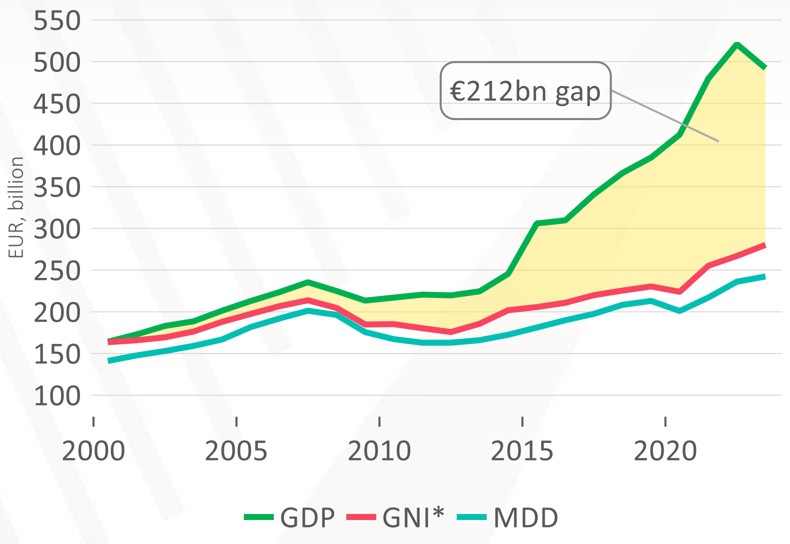
Note: MDD for Ireland is modified for multinational activity by Ireland's Central Statistics Office (CSO). MDD = Consumption + Government (current) spending + Modified Investment. Seasonal adjustment mean contributions do not always add up to MDD growth rate.

** RHS chart uses MDD for Ireland and GDP for all other countries.*

Real GDP weak since early 2023

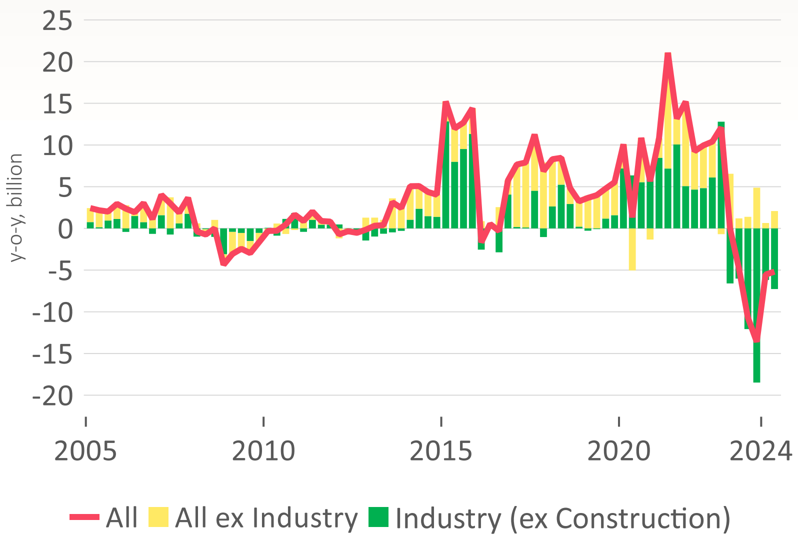
GDP isn't a reliable metric for Ireland, Sharp drop recently due to Industry sector (Pharma)

Real GDP declined in 2023 while measures that strip out MNE activity continued to grow



Source: CSO

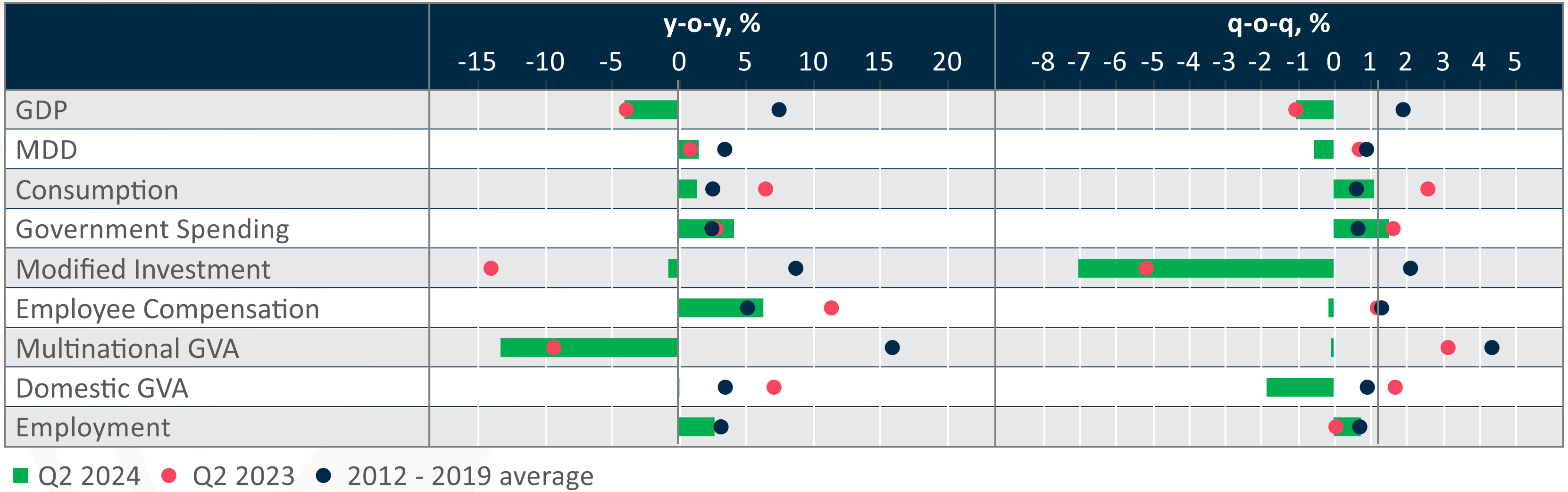
Real GVA data show that drop due largely to a decline in Industry, which includes pharmaceutical manufacturing



Source: CSO

Moderation across activity measures

Consumption and employment strong, investment clearly weak



Source: CSO, Eurostat

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High frequency data waning over summer

Consumer confidence, tax and unemployment giving positive signals

	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	10/23	11/23	12/23	1/24	2/24	3/24	4/24	5/24	6/24	7/24	8/24
Retail sales (ex motor)	0.3	-0.1	0.3	0.6	0.4	0.5	-0.3	0.1	0.3	0.5	1.0	-0.8	-0.3	-0.9	0.2	0.0	0.4	0.5	0.3	0.2	0.1	0.0	-0.2		
Unemployment rate	4.3	4.3	4.5	4.5	4.4	4.3	4.1	4.1	4.1	4.1	4.3	4.3	4.3	4.6	4.6	4.5	4.5	4.5	4.1	4.2	4.3	4.4	4.4	4.7	4.3
Payroll employees	0.1	0.3	0.4	0.5	0.4	0.3	0.2	0.2	0.1	0.0	0.1	0.1	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1		
Headline HICP	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	0.3	-0.2	-0.1	-0.6	0.0	0.0	0.5	0.4	0.4	0.4	0.2
Core HICP	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	0.1	-0.1	0.2	-0.4	0.1	0.1	0.7	0.5	0.4	0.5	
House prices	1.0	0.9	0.6	0.3	0.2	0.0	-0.2	-0.5	-0.4	-0.3	0.1	0.3	0.5	0.6	0.8	1.0	1.1	1.0	0.8	0.5	0.5	0.4	0.5		
Consumer confidence	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	60.4	61.9	62.4	74.2	70.2	69.5	67.8	65.7	70.5	74.9	72.0
Composite PMI	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	49.7	52.3	51.5	50.7	54.4	53.2	50.4	52.5	50.1	52.2	52.6
Income Tax	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	2.6	4.6	2.6	2.9	2.4	2.6	3.2	2.7	2.8	2.9	2.6

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

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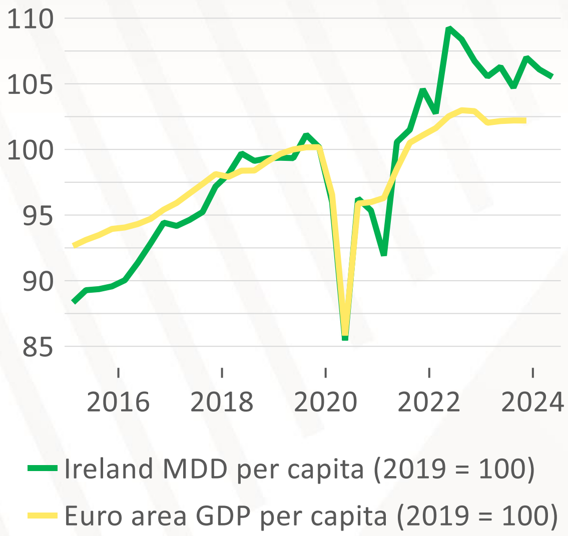
Note: Retail sales, payroll employees, HICP and house prices are calculated as m-o-m % 3mma. Income tax is the monthly tax revenue; November includes income tax for those who are self-employed.

Ireland vs Euro Area performance

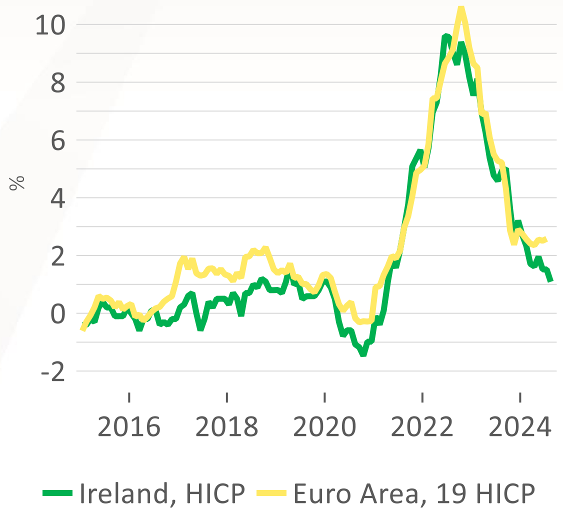
Greater growth in Ireland with a similar inflation path aided by labour force

Ireland has grown on a higher path post Covid than EA average



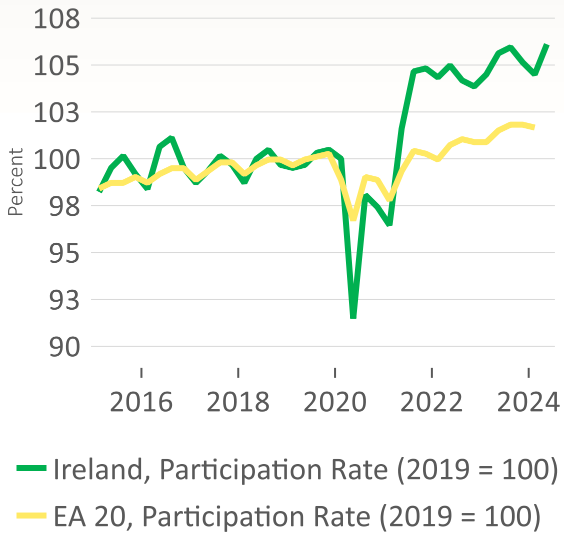
Source: CSO, Eurostat, ECB

Inflation in Ireland has fallen slightly faster than Euro Area HICP



Source: CSO, Eurostat, ECB

Increased labour force, especially female p. rate driven growth with less inflation



Source: CSO, Eurostat, ECB

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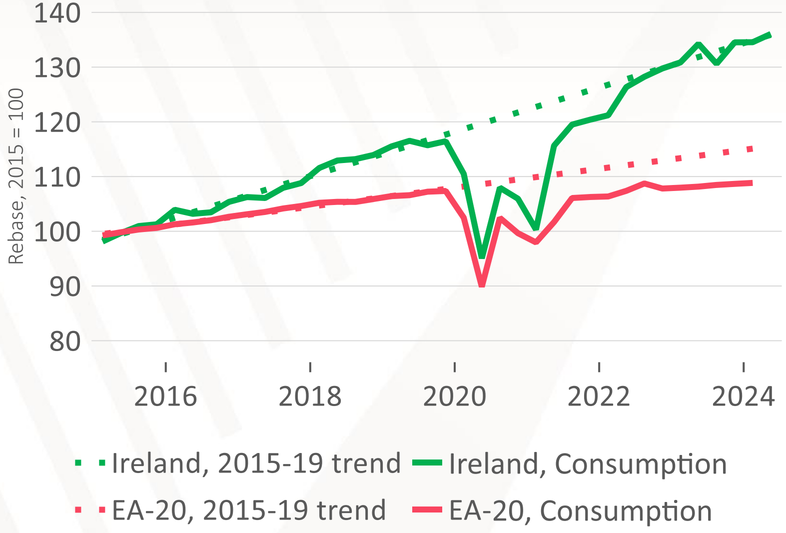
Real spending main driver of economy

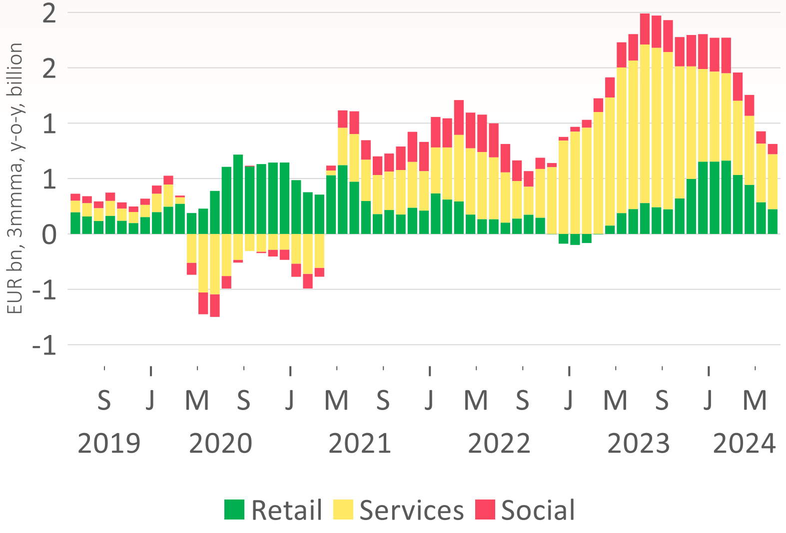
Consumption strong despite inflation, but card spending data suggest some softness

Real personal consumption back at pre-pandemic trend. Performance outstrips euro area average



Source: CSO, Eurostat

Monthly card spending data show a softening in consumption in recent months



Source: Central Bank of Ireland

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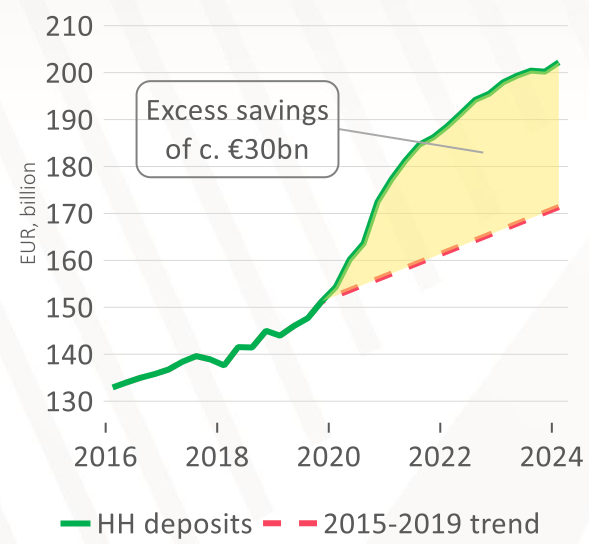
Note: RHS chart plots data which joins discontinued series with CBI's new series. New data starts from October 2022. The Other/Miscellaneous sector is excluded from the chart due to large structural break in the data.

Basis for household consumption growth

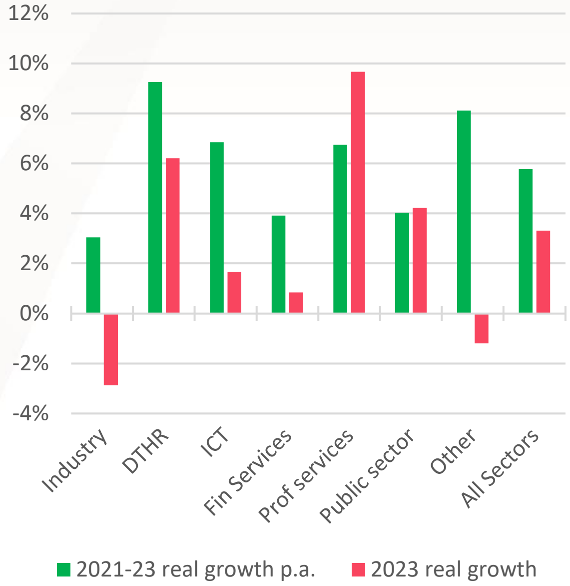
Spending comes from savings, incomes or borrowing; Ireland in good shape across all three

Excess savings: A large amount of pandemic savings remain in HH deposit accounts

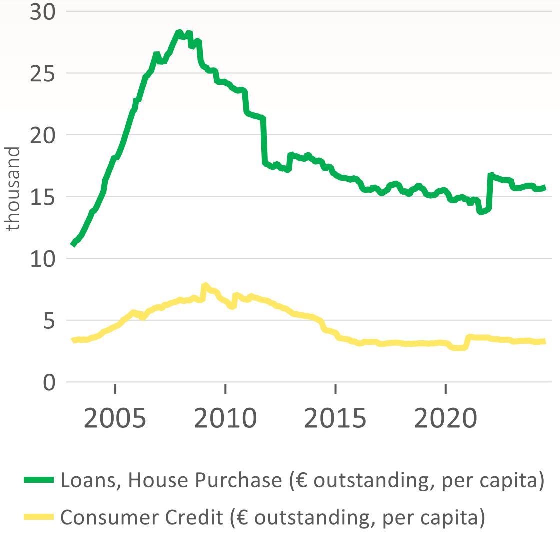


Source: Central Bank of Ireland

Income growth: Real compensation of employee growth still healthy



Borrowing: deleveraged position means current spending growth isn't debt fuelled



Source: Central Bank of Ireland, CSO

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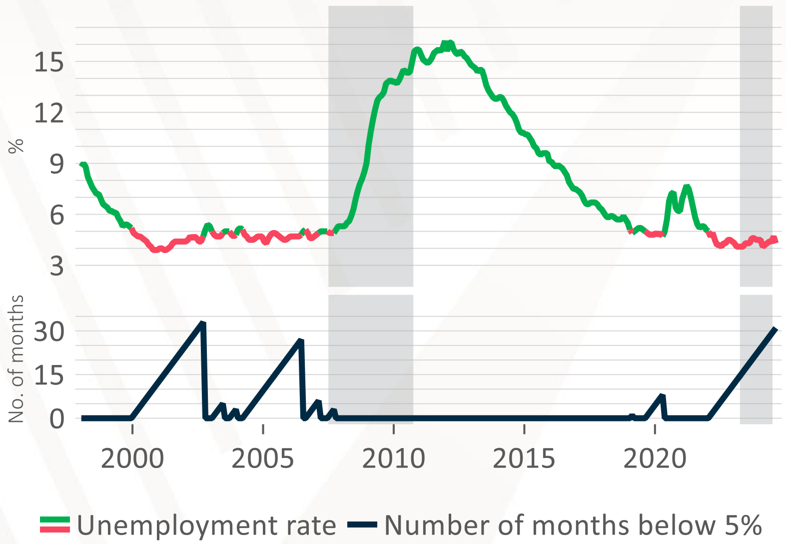
Source: CSO, Central bank of Ireland

Labour market remains strong

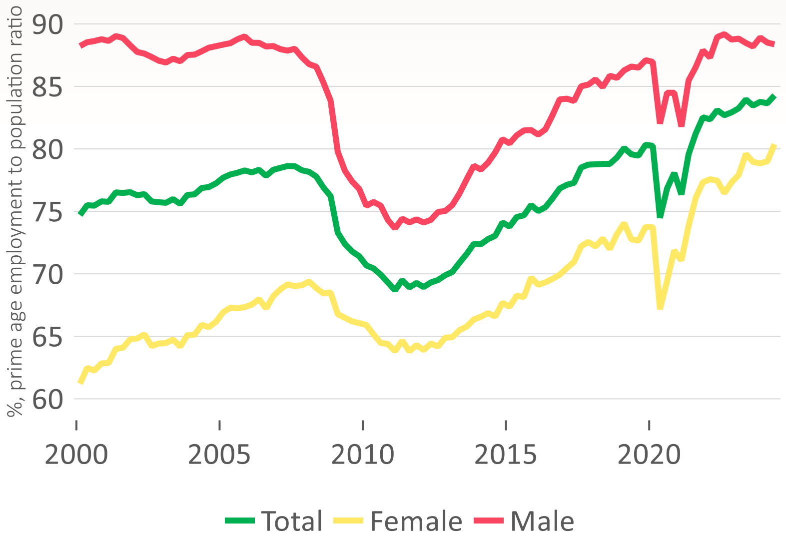
Unemployment rate low despite measurement volatility

Unemployment rate at 4.3% in August – has been below 5% for more than two years



Source: CSO, Macrobond

Prime age employment to population ratio near peak as job growth outstrips population growth



Source: CSO

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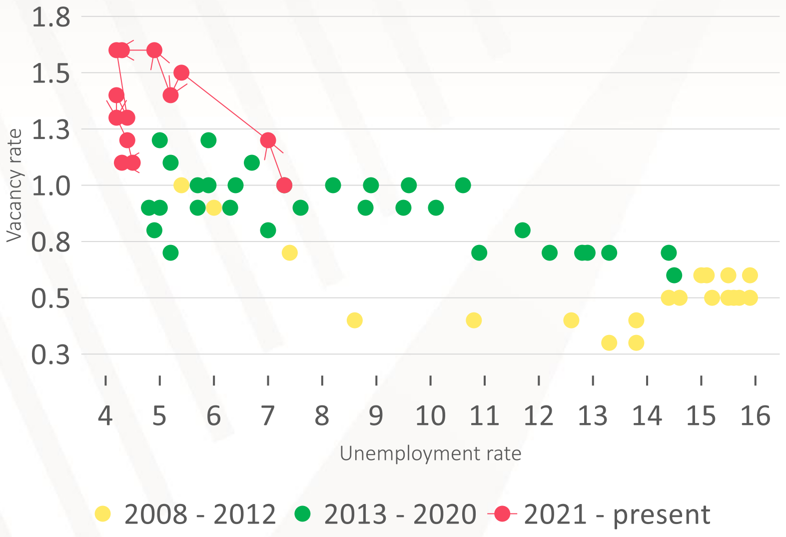
Note: LHS uses the standard unemployment rate during the Covid period and red indicates when below 5%. The Covid adjusted unemployment rate reached a peak of 31.5% between March 2020 and Feb 2022. Prime age refers to those aged between 25 to 54.

Labour market tightness has eased

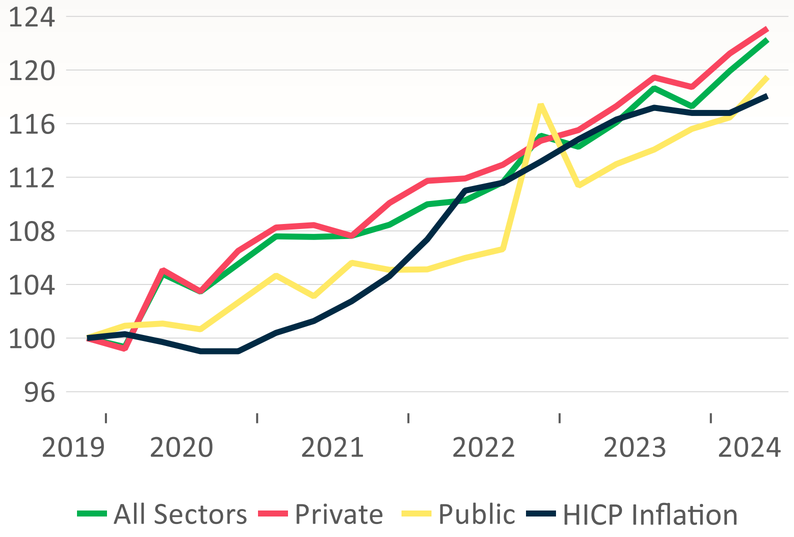
Wages and inflation mostly in sync

Beveridge curve suggests a tight labour market that has been loosening in recent months



Source: Eurostat, CSO

Earnings growth not out of line with inflation in 2019-2023, latest wage data showing real wage growth has returned



Source: CSO, Eurostat

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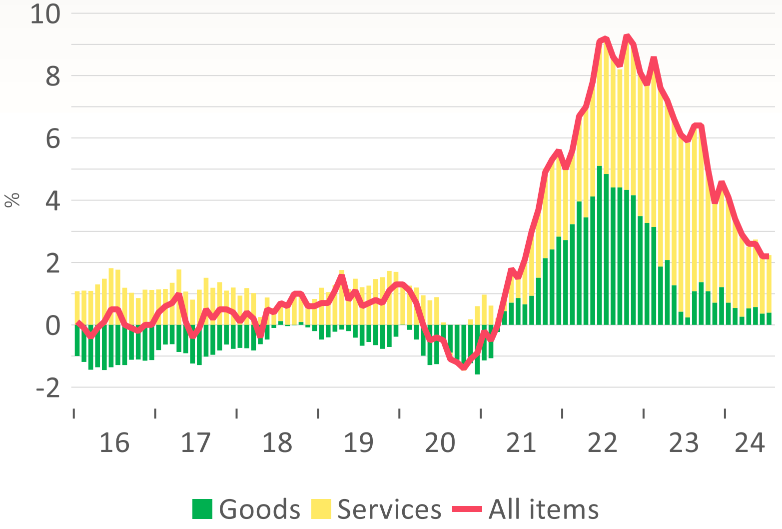
Harmonised inflation at 1.1% (Flash)

Disinflation trend running ahead of EA average

Headline inflation around target, as goods inflation eases. Core inflation at 2.3%

Source: CSO, Eurostat

Goods inflation easing on back of energy but CPI services inflation is stickier at 3%



Source: CSO

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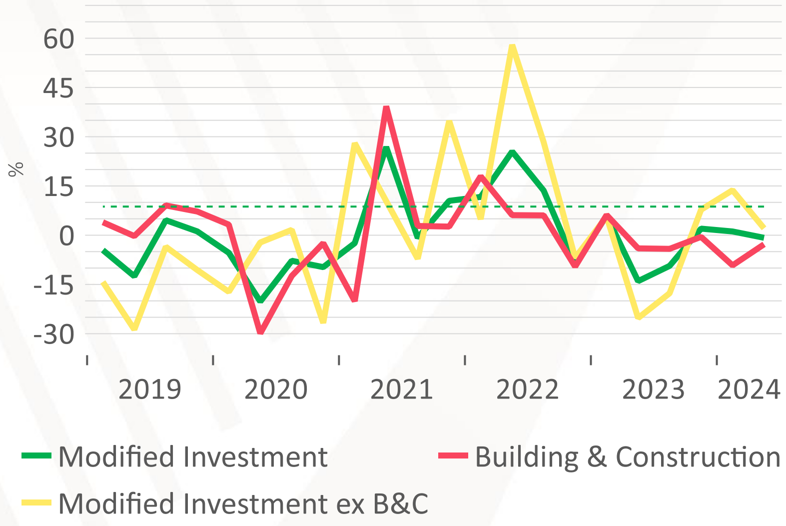
Note: RHS chart plots CPI inflation.

Investment weakness in recent quarters

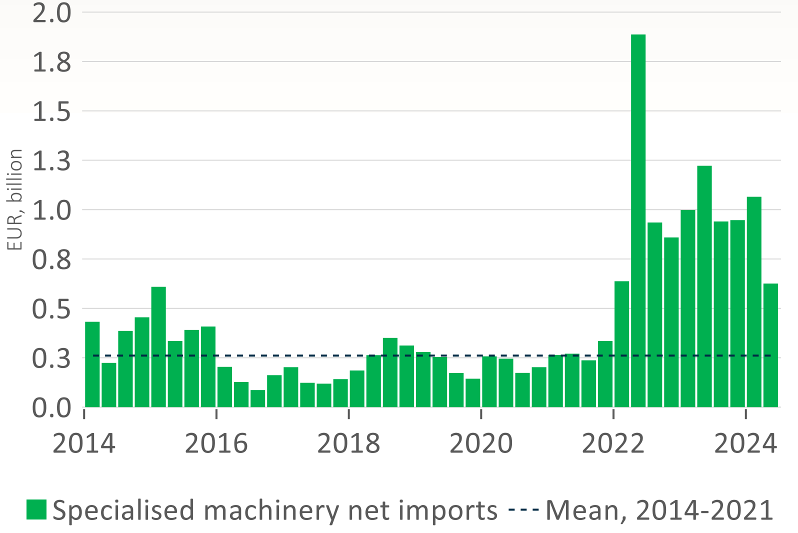
Interest rate environment has slowed investment

Some fallback in 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

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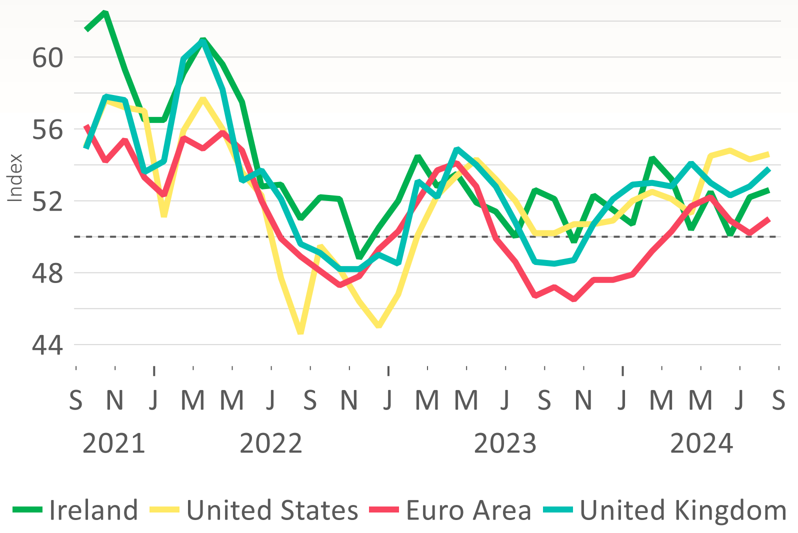
Note: Ireland's metric is modified investment, which strips out multinational activity. LHS chart: dashed line represents 2012 to 2019 average for modified investment.

External environment in 2024

Rate cuts likely in 2024 but modest external growth a headwind for Ireland

	2023	2024
EA Monetary Policy	Higher rates impacting activity thru credit flows	Modest cuts expected to end year
EU Fiscal Policy	Expansionary	Less expansionary
US Monetary Policy	High rates but not overtly slowing activity	Modest 2024 cuts expected
US growth	Modest growth	Trend growth
Energy prices	Prices pressure easing	Higher prices in H1
UK growth	Minimal growth	Modest growth
Euro Growth	0.5%-1% growth at best	Modest growth
Global Inflation	Disinflation trend clear	Modest disinflation

Irish PMI bouncing around above 50 line, services helping to keep PMI above 50 in developed world



Source: S&P Global

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OECD's BEPS process may impact FDI offering

Pillar Two implemented in EU this year, Pillar One progress has been slow

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

- The first pillar seeks to address taxing rights. It reallocates 25% of MNE's excess profit* from jurisdictions where companies reside to the markets where user/consumers are based.
- This is to keep pace with digitalisation of the economy where sales can take place without taxable presence in market jurisdiction.
- Pillar 1 will reduce Ireland's corporation tax base. Some estimates place the hit at c. €2bn per annum by 2026.
- Ireland has always been fully supportive of Pillar One despite the implied cost to the Exchequer.
- Near final text of rules published, open for signature in 2024, ratification could take longer

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 until 2026 however.
- Ireland's rate will remain one of the lowest in EU and will continue to be competitive. The R&D tax credit enhanced in Budget 2024 to maintain net benefit for businesses.
- Ireland can lean on other positives; educated and young workforce, English speaking, EU access, and ease of doing business.

** Excess profit is defined as group profit in excess of 10% of its revenue*

Fiscal

Large surplus in 2024 due to continued corporate tax strength

FIF/ICNF established

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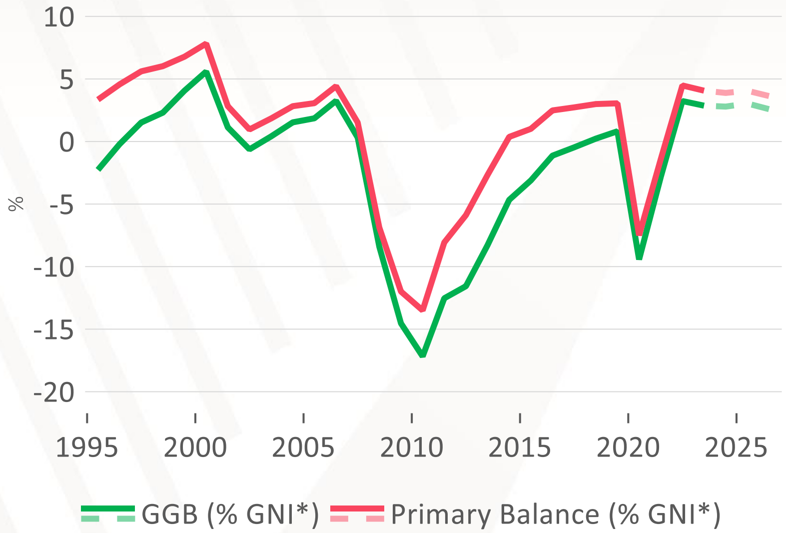
Fiscal surplus in Ireland

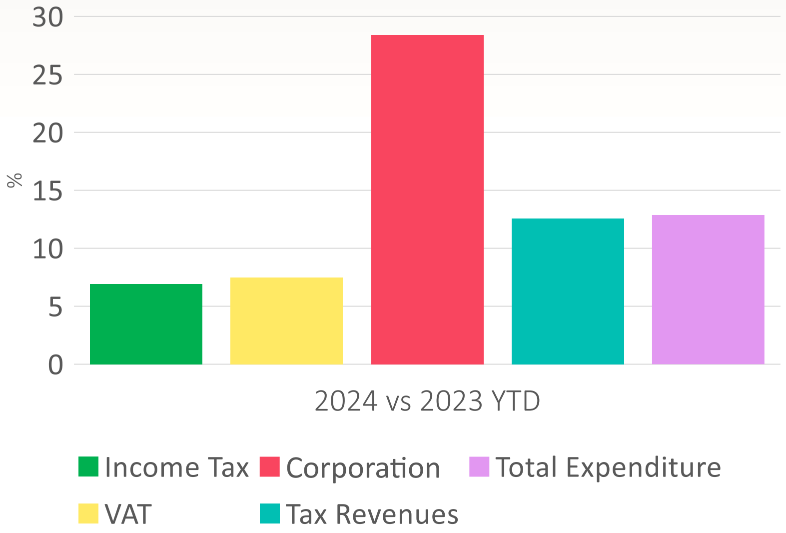
Robust CT revenues mean surpluses expected despite increases in expenditure

2024 General Government surplus expected to be c. 2.8% of GNI*



Source: CSO, Irish Department of Finance forecasts

Income tax and VAT both up c.7-7.5% this year, huge CT growth, large jump in gross voted expenditure (+13%)



Source: Irish Department of Finance

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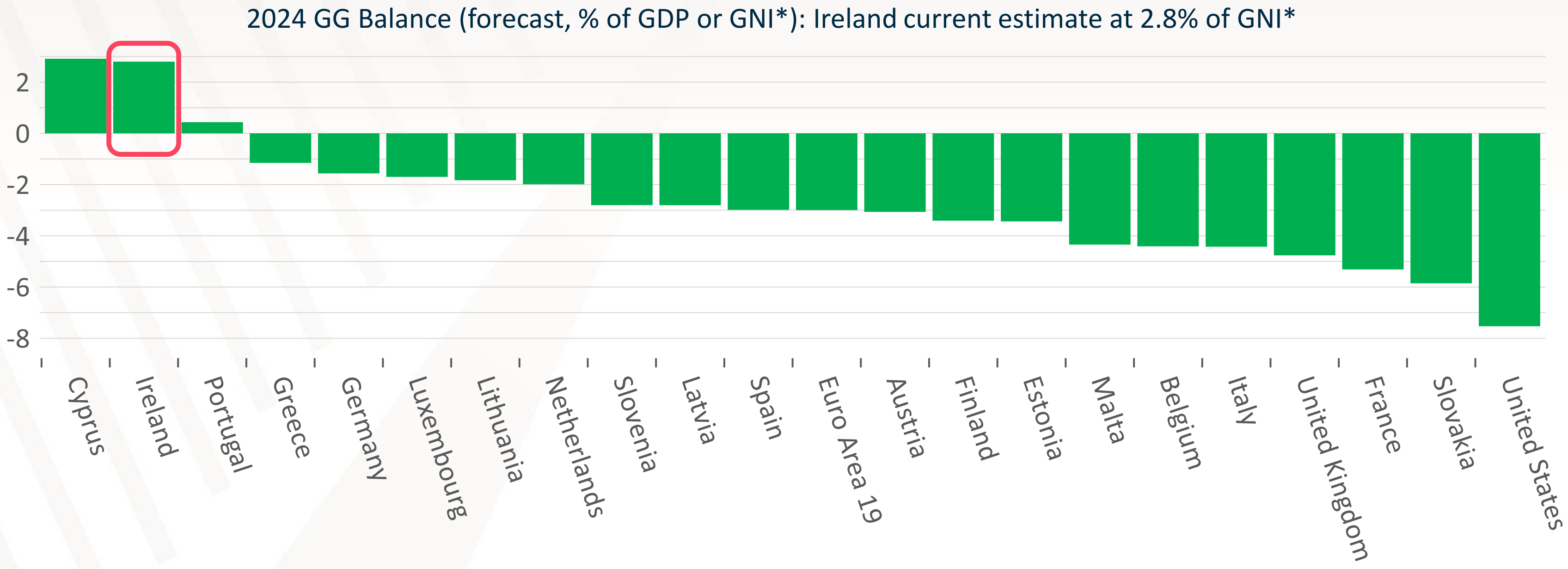
LHS chart: GG and primary balance numbers used exclude banking recapitalisations during GFC

RHS chart: Expenditure is Total Gross Voted Expenditure

Surplus compares well to others

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



Source: DG ECFIN, Irish Department of Finance

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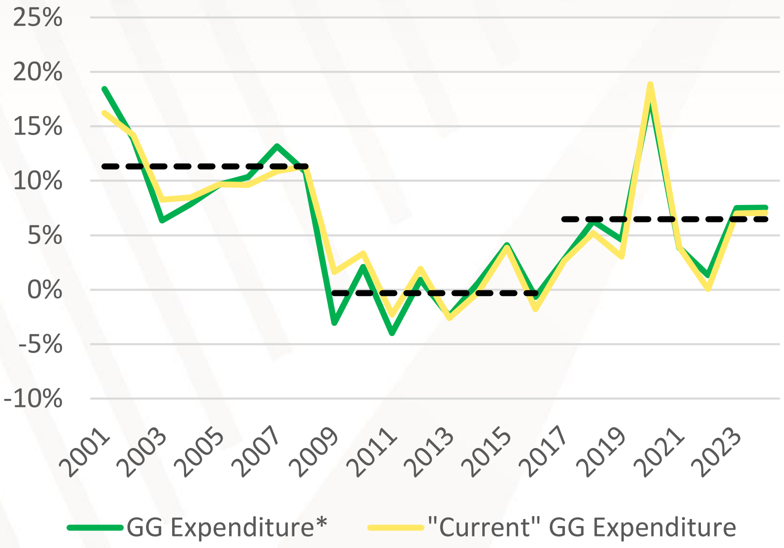
Note: Irish forecast based on Department of Finance SPU 2024 forecasts and most recent Exchequer Returns data. Forecasts for other countries taken from the European Commission's Spring 2024 Forecasts.

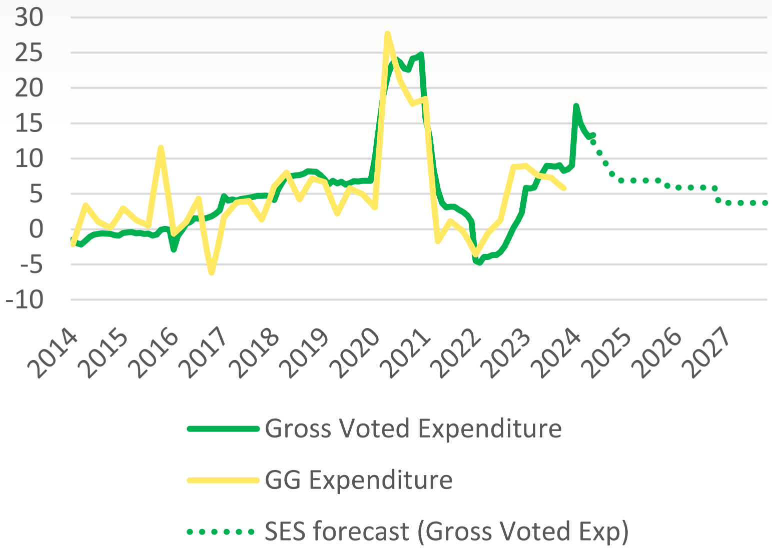
Expenditure has spiked in 2024

Latest forecasts expect growth to remain above 5% spending rule out to 2025

Current trend on expenditure in between loose 2000-2008 period and austere 2009-2017 period



Clear spike in H1 gross voted expenditure



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Source: Department of Finance, CSO

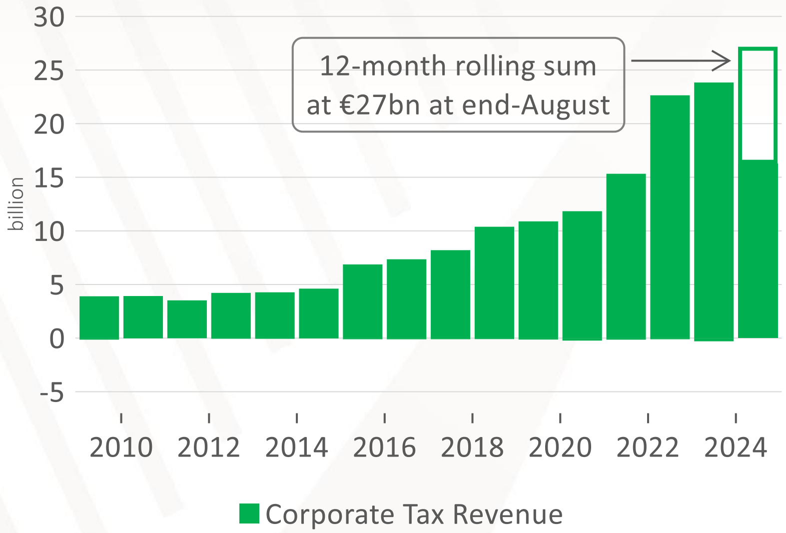
*LHS: * GG expenditure excludes banking recapitalisation costs. "Current" GG exp = GG exp minus govt. GFCF.*

RHS: 3 month-on-3month growth used. Gross voted expenditure is approximately 80% of General Government Expenditure

Corporate tax – strong growth but concerns

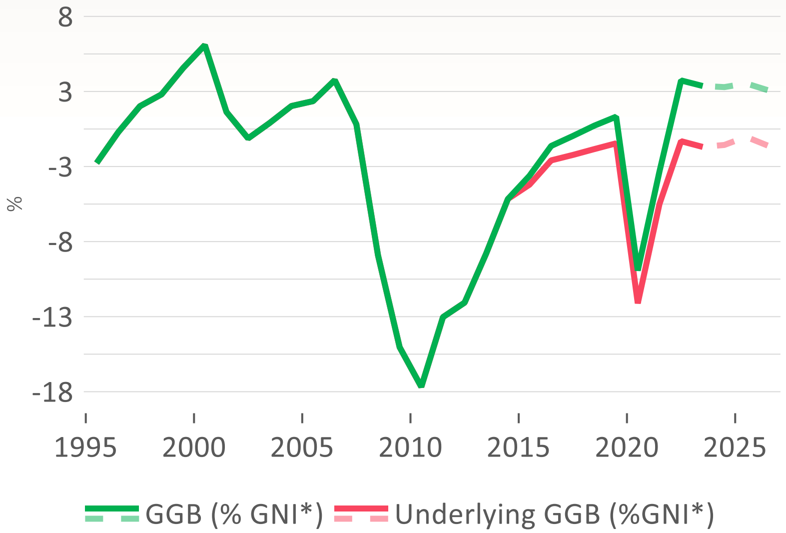
Government to place excess receipts in two new sovereign investment funds (FIF/ICNF)

CT revenue was €23.8bn in 2023 and double 2020 level – 12-month rolling sum suggests another strong year in 2024



Source: Irish Department of Finance, NTMA calculations

Underlying GGB suggests Ireland would be in deficit in 2024 if excess Corporate Tax excluded (-0.9% of GNI*)



Source: CSO, Irish Department of Finance forecasts

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 €11.2bn for 2023 and 2024).

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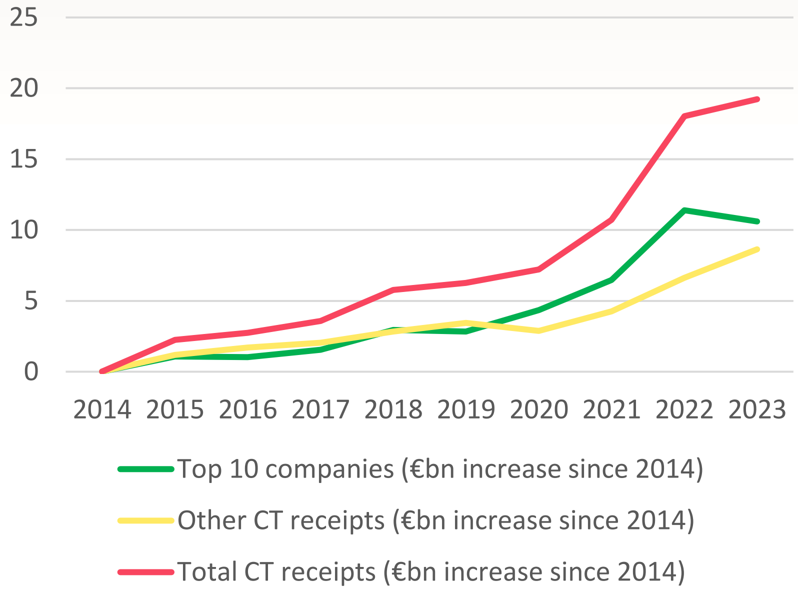
Multinationals at core of CT payments

Manufacturing the top driver in CT but chemical and pharma fell versus 2022

CT paid (€m)	2023	vs. 2022
Manufacturing	9,073*	-1,005
ICT	4,131	-53
Fin and Insurance	3,593	+895
Wholesale, retail	2,700	+408
Admin and Support	1,609	+410
Prof, Sci, Tech	844	+184
Construction	543	+74
Mining, Quarry, Utilities	327	+23
Other	1,021	+261

Top 10 driving recent CT surge until 2023 – likely top 3 companies pay c. 40% of all CT receipts (Fiscal Council analysis)



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National Treasury Management Agency

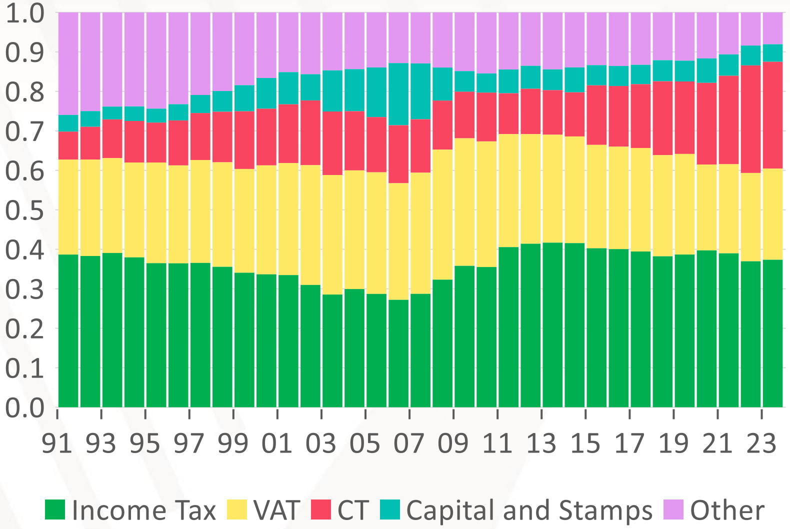
Source: Revenue Report 2024

**€3,884m chemical and pharma manufacture (- €1,651m on 2022), €4,248m ICT manufacture (+ €460m on 2022)*

Corporate tax – critical revenue source

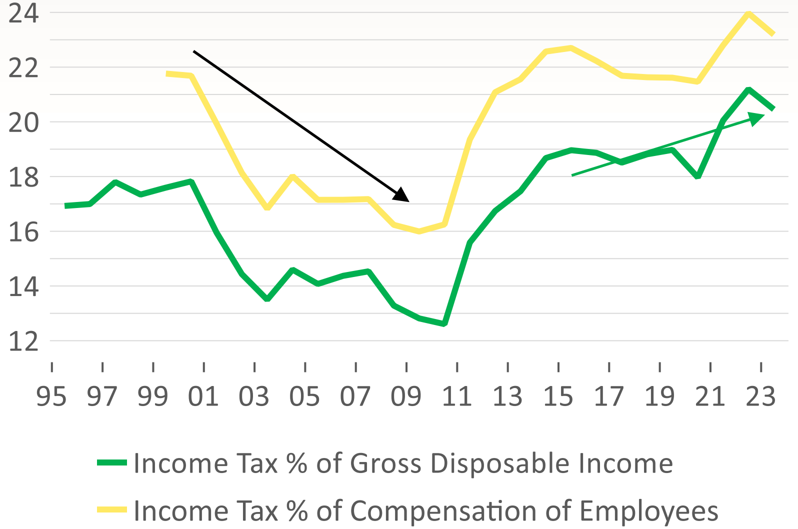
CT accounts for 27% of tax receipts, it was 11% a decade ago

CT accounts for 27% of tax receipts and will grow in 2024; spillover into income tax and VAT from MNC employees



Source: Irish Department of Finance

Income tax base was narrowed massively in early 2000s; In recent years we have seen no such narrowing



Source: CSO, Irish Department of Finance

New funds are a mitigant to excess CT risk

Two new funds established in legislation, awaiting commencement

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.

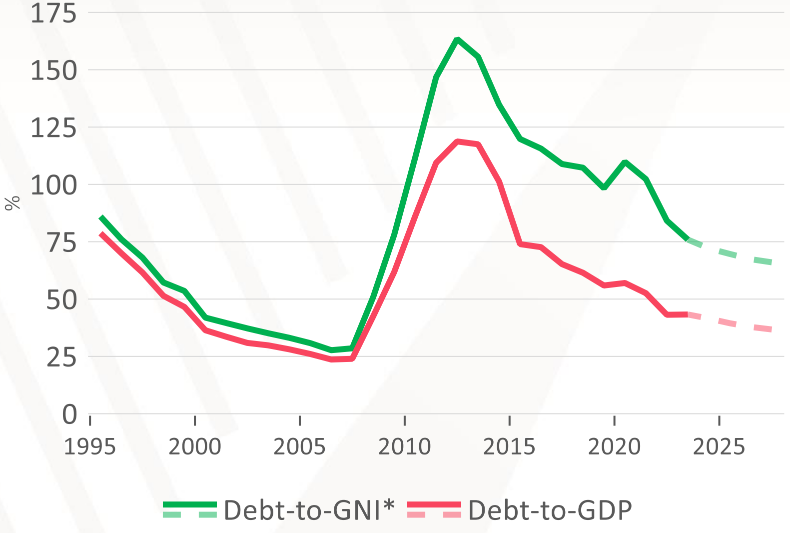
Infrastructure, Climate and Nature Fund (ICNF)

- 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 as a reserve to be drawn on for capital expenditure if a downturn arises.
- To start the fund off, the remaining €2bn in the NRF will be transferred into the ICNF. From 2025 to 2030, €2bn a year will be transferred into the ICNF from the Exchequer.
- There will be clear rules on how money can be drawdown with Irish Fiscal Advisory Council likely to play a role.
- A portion of the ICNF can be drawn down if needed to help meet climate and nature targets.

Debt to GNI* likely falling to low 70s in 2024

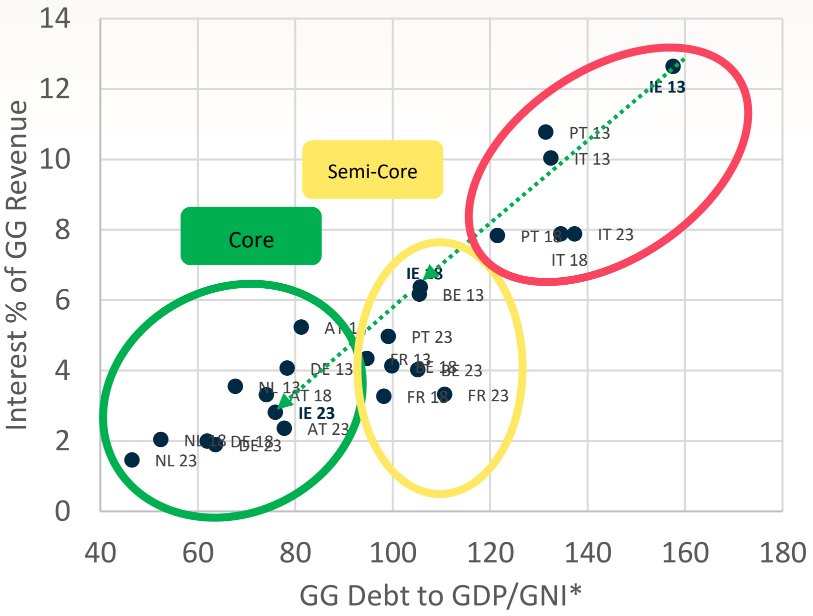
GG debt to GNI* to fall on nominal growth and surplus position

Debt to GNI* currently at 76%; low debt to GDP means proposed EU fiscal rules won't impact Ireland



Source: CSO, Irish Department of Finance forecasts

Ireland's debt fundamentals have moved into "core" space in recent years



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Alternative Debt Metrics

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

2024

	GG debt to GDP %	GG debt to GG revenue %	GG interest to GG revenue %
Greece	154	317	7.1
Italy	139	294	8.4
France	112	217	3.9
Spain	106	242	5.8
Belgium	105	207	4.2
UK	104	247	7.0
Portugal	96	218	4.9
EA 19	90	193	4.0
EU 27	82.9	180	4.0
Austria	78	156	2.7
Ireland	**41 (72 GNI*)**	**172**	**2.8**
Cyprus	71	163	3.2
Slovenia	68	151	3.1
Germany	63	135	2.0
Slovakia	58	141	3.2
Netherlands	47	110	1.6

Source: DG ECFIN, Irish Department of Finance

Source: Forecasts from the SPU 2024 and the European Commission's Spring 2024 Forecasts .

NTMA Funding

2024 funding to be complete with €1bn auction in September

NTMA funding target set at €6bn for 2024

€5bn has been issued so far

Cash

Fiscal surplus alongside prefunding means Ireland in strong cash position.

The cash balance is expected to remain strong accounting for transfers to new sovereign funds in the coming months

WAM

Weighted average maturity of debt one of longest in Europe.

NTMA issuance since 2022 of €19bn at WAM of 15.2 years and average interest rate of 2.29%.

AA

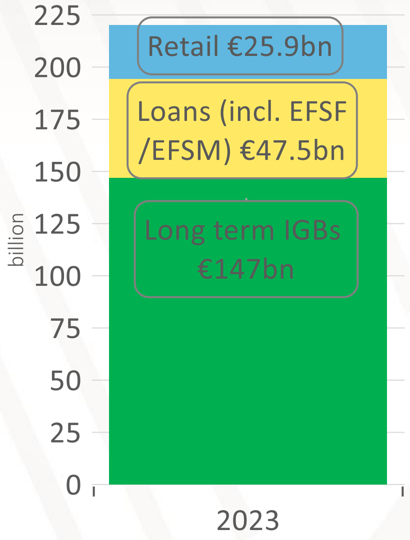
Ireland rated in the AA category with all major rating agencies.

Fitch upgraded to AA in 2024 and S&P at AA. Moody's stable at Aa3 and DBRS have Ireland on a positive outlook.

Smooth maturity profile

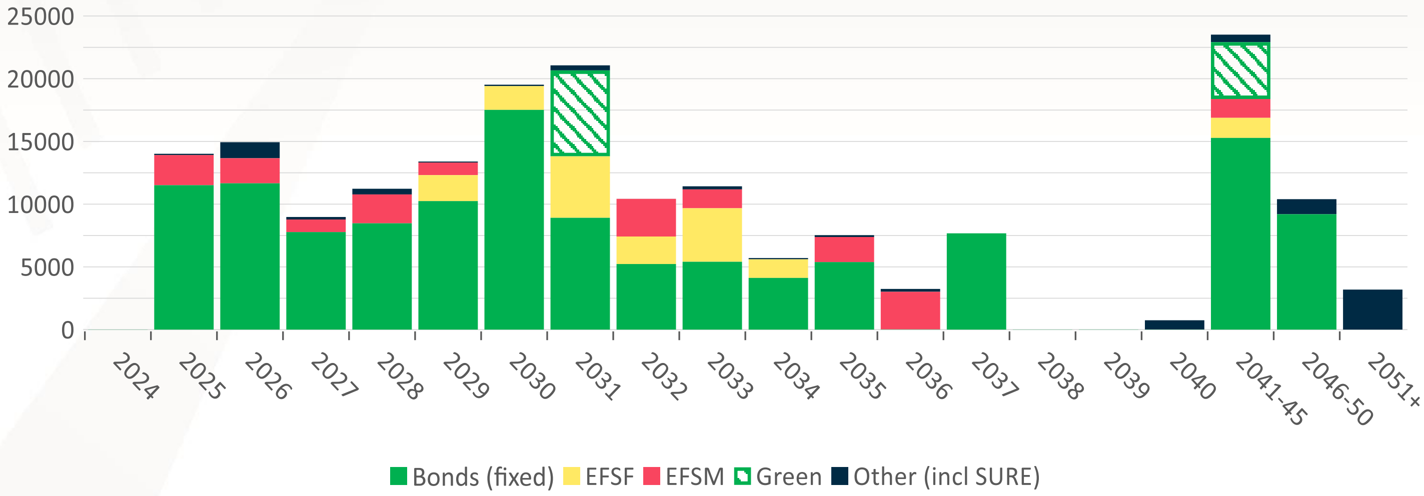
Redemptions are modest in coming years, FRNs fully repaid

GG debt of €220bn



Source: Eurostat

Marketable debt profile



Source:

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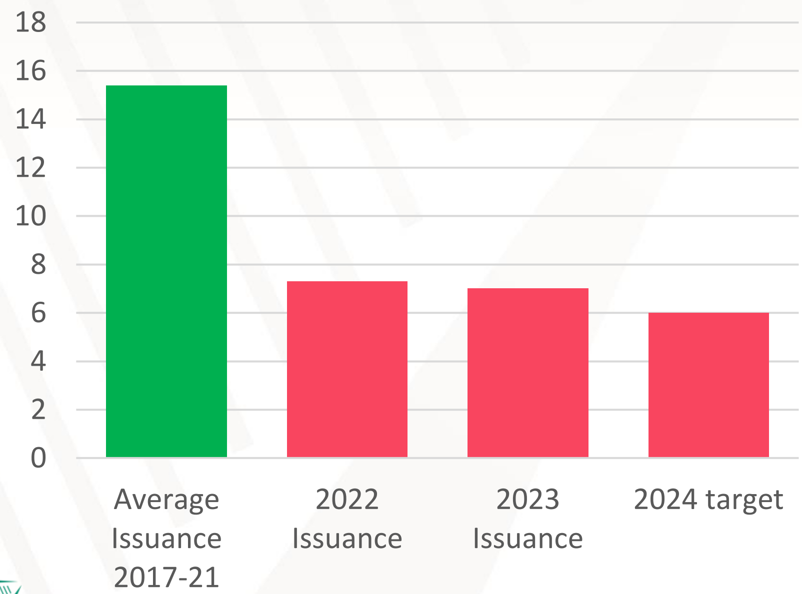
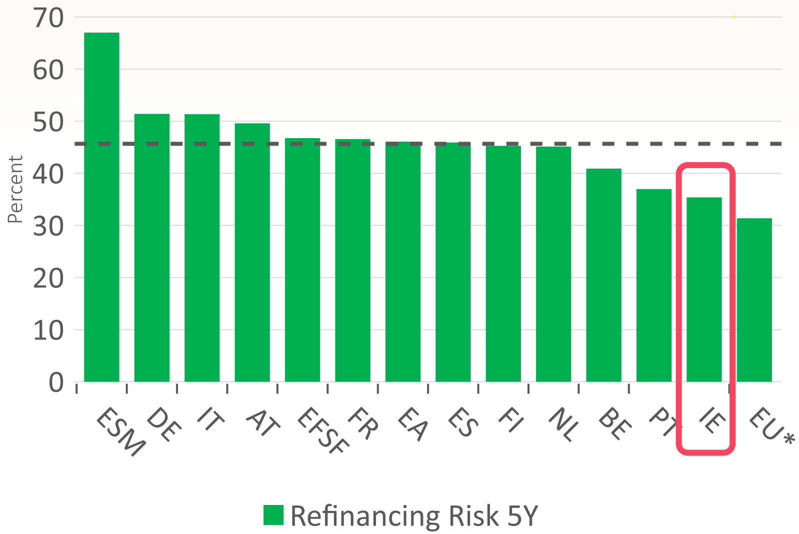
Low supply expected in coming years

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 35% is set to mature in the next five years



Source: ESDM

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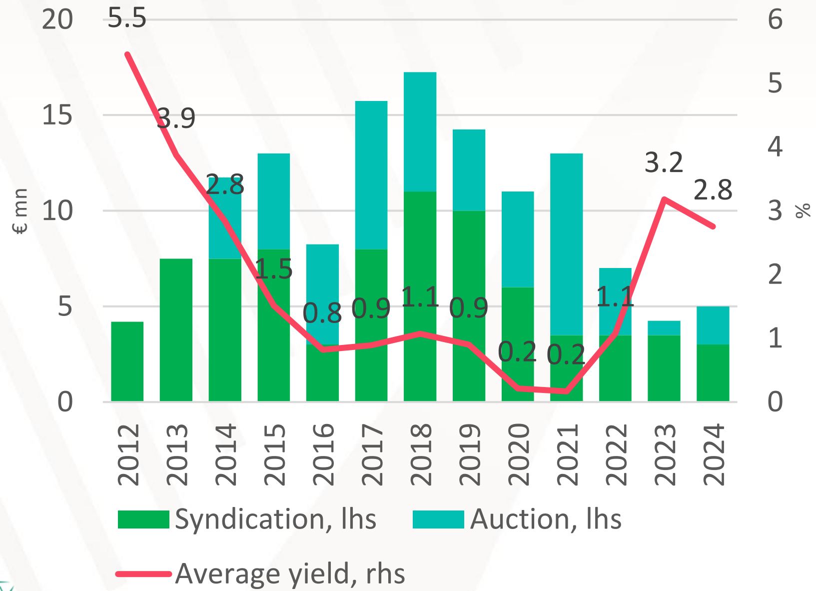
Refinancing rate defined as debt maturing within five years divided by total debt outstanding.

** EU data is EU as an issuer*

Borrowing costs anchored

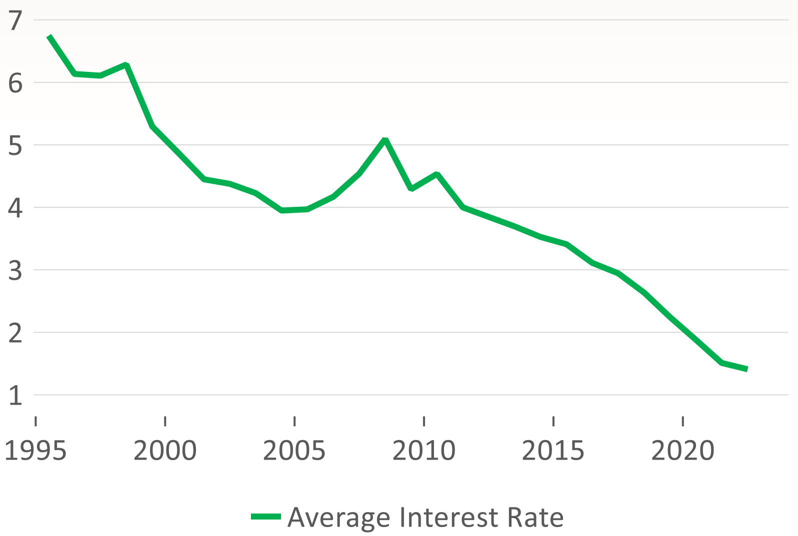
Ultra-low rate era over but Ireland used the period well

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 1.6%



Source: CSO

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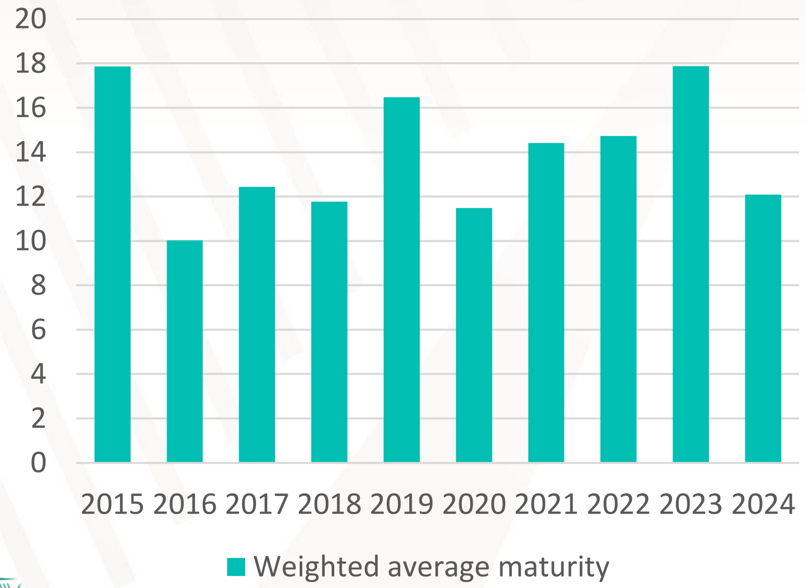
Note: LHS chart includes only auctions and syndication

NTMA has lengthened weighted maturity

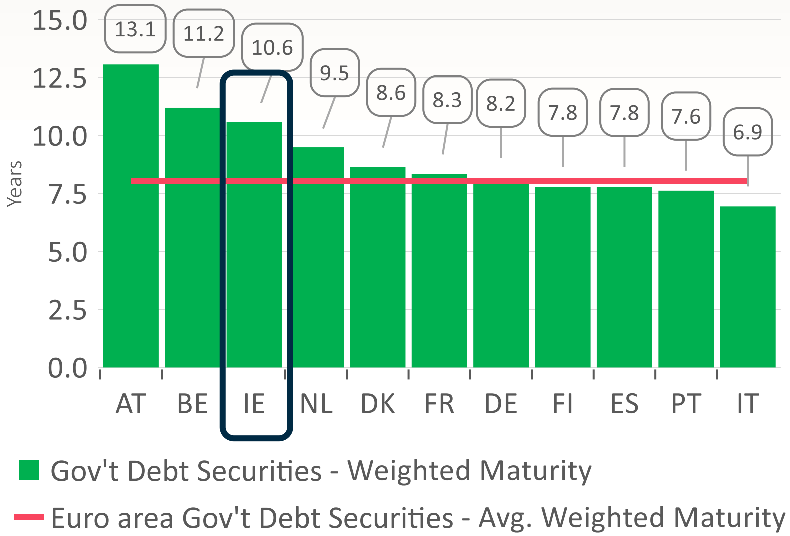
Debt management strategy has extended debt profile since 2015

Benchmark issuance has extended the maturity of Government debt since 2015



Source: NTMA

Ireland's debt securities (in years) compares favourably to other EU countries



Source: ECB

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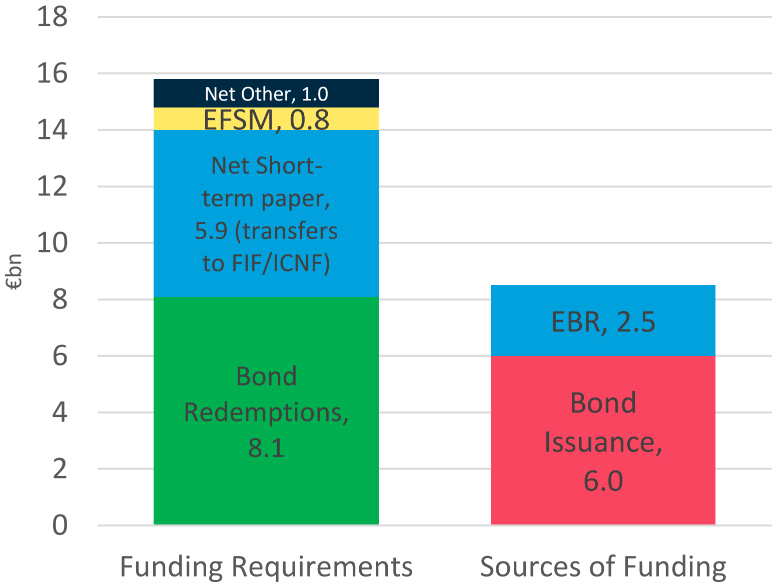
Note: For RHS, weighted maturity for Ireland includes Fixed rate benchmark bonds, Amortising Bonds, Notes issued under EMTN programme, T-Bills and ECP Data. It excludes programme loans and retail.

Funding needs and sources for 2024

Modest borrowing amid expected EBR surplus

- There was one bond redemption in 2024 (€8.1bn in March). There is also a EFSM repayment due this year.
- The Exchequer Borrowing Requirement (EBR) for 2024 is expected to be a surplus (hence shown as funding source).
- The NTMA held significant cash throughout 2023. The balance at year-end 2023 was c. €25bn. This will likely remain elevated even as transfers to the FIF/ICNF occur.



Source: NTMA

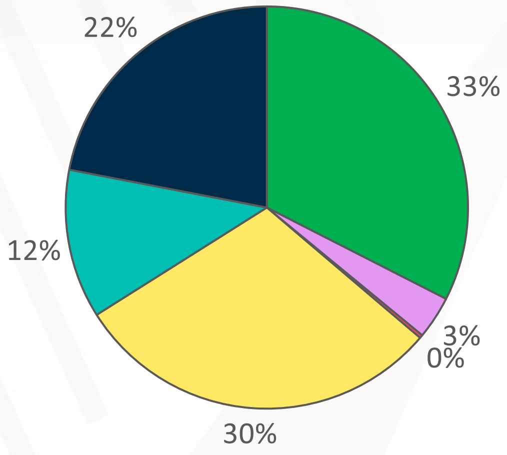
Rounding may affect totals

1. *In the funding sources column, €6bn is reflective of the NTMA's decision that's September's auction will be the last in 2024.*
2. *Net STP (short term paper) outflows are primarily related to the expected dissolution of National Reserve Fund and transfers to the Future Ireland Fund and Infrastructure, Climate and Nature Fund.*
3. *EBR is the Department of Finance's SPU 2024 estimate of the Exchequer Borrowing Requirement*

Diverse holders of Irish debt

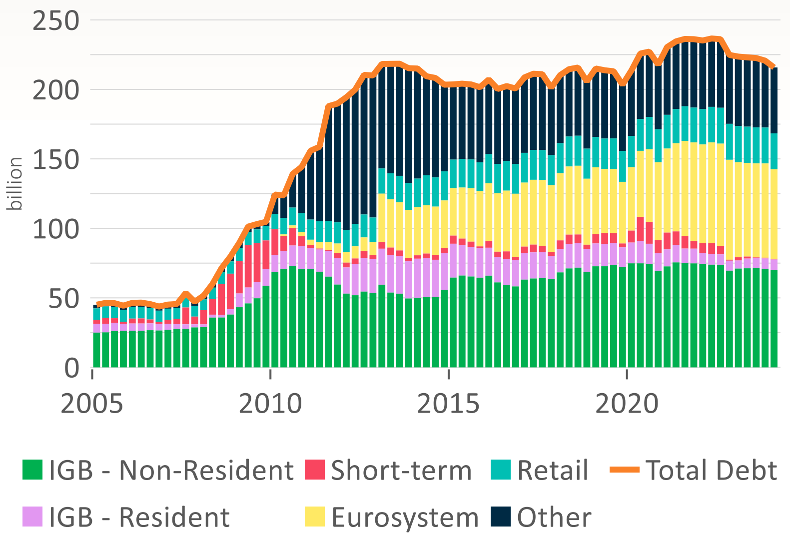
Sticky sources account for greater than 65%

Ireland roughly split 85/15 on non-resident versus resident holdings



Source: Eurostat, ECB, Central Bank of Ireland

“Sticky” sources - official loans, Eurosystem, retail - make up c. 65% of Irish debt



Source: Eurostat, ECB, Central Bank of Ireland

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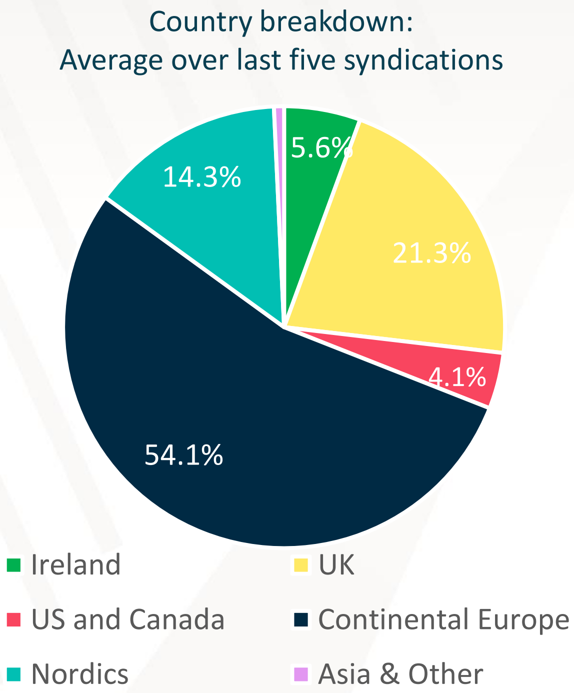
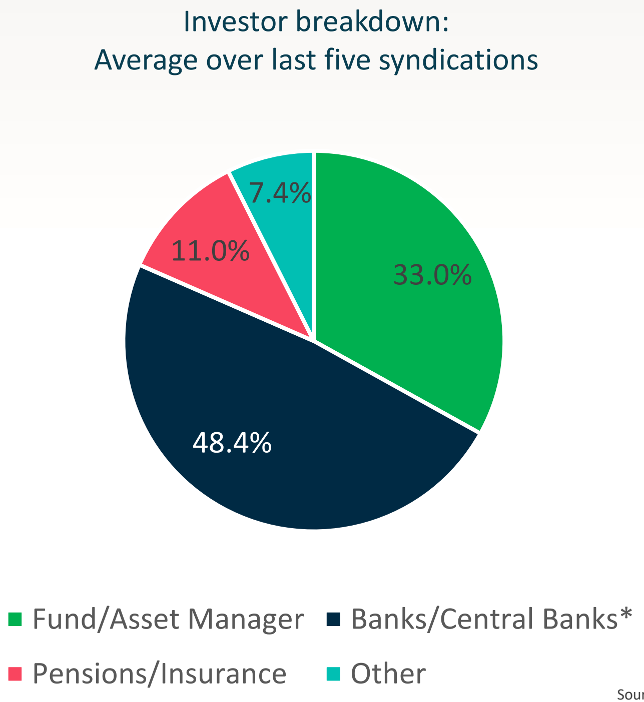
IGBs excludes those held by Eurosystem. Eurosystem holdings include SMP, PSPP, PEPP and CBI holdings of FRNs. Figures do not include ANFA. Other debt has included IMF, EFSF, EFSM, Bilateral as well as IBRC-related liabilities over time. Retail includes State Savings and other currency and deposits. The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

Investor base

Demand for Government bonds is wide and varied



Source: NTMA



Source: NTMA

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

Credit Ratings for Ireland

Three ratings agencies on positive outlook; 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	15 Nov
Fitch Ratings	AA	F1+	Stable	May 2024	15 Nov
Moody's	Aa3	P-1	Positive	Apr 2023	2025
Morningstar DBRS	AA (low)	R-1 (middle)	Positive	Jan 2022	20 Sep
R&I	AA-	a-1+	Positive	Feb 2022	2025
KBRA	AA	K1+	Stable	May 2023	H2 2024
Scope	AA	S-1+	Stable	Aug 2024	2025

Apple: CJEU confirms EC decision

CJEU set aside General Court decision meaning escrow funds to go to Ireland

- In 2016, the European Commission ruled that Ireland illegally provided State aid of up to €13bn, plus interest to Apple. The Irish position has always been that Ireland does not give preferential tax treatment to any companies or taxpayers.

- Apple appealed the ruling, as did the Irish Government. The General Court granted the appeal in July 2020, annulling the EC's ruling. The Commission then appealed to a higher court: the Court of Justice of the European Union (CJEU).

- In September 2024, the CJEU set aside the judgement of the General Court and gave a final judgment in the matter. The CJEU confirmed the Commission's decision that Ireland granted state aid. The case involved an issue that is now of historical relevance only; the Revenue opinions date back to 1991 and 2007 and are no longer in force. This €13bn plus interest figure was based on the tax foregone owing this period. The Irish Government closed this provision in December 2014.

- As outlined by Government, Ireland will respect the findings of the CJEU regarding the tax due in this case. The process of transferring the assets in the Escrow Fund to Ireland will commence in the manner prescribed in the Deed governing the operations of the Escrow Fund.

- As stated previously, the NTMA has not included these funds in any of its issuance plans.

ESG

Issuance & government policy
demonstrate Ireland’s green commitment

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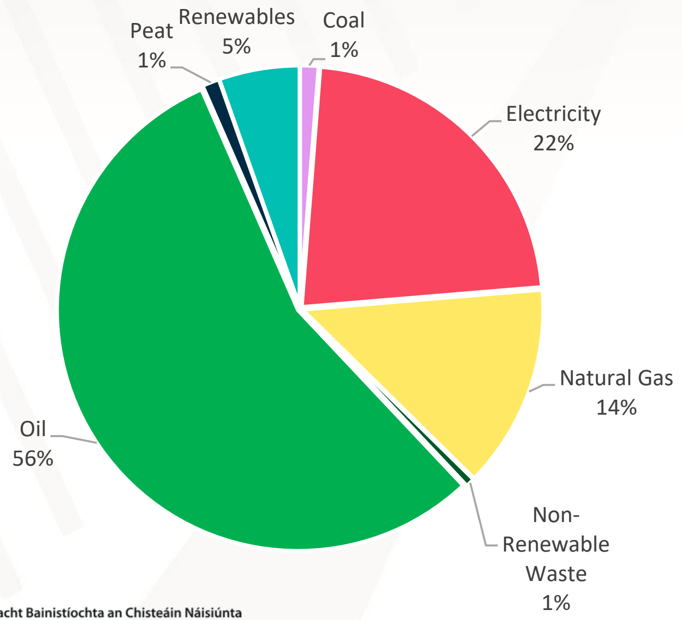
National Treasury Management Agency

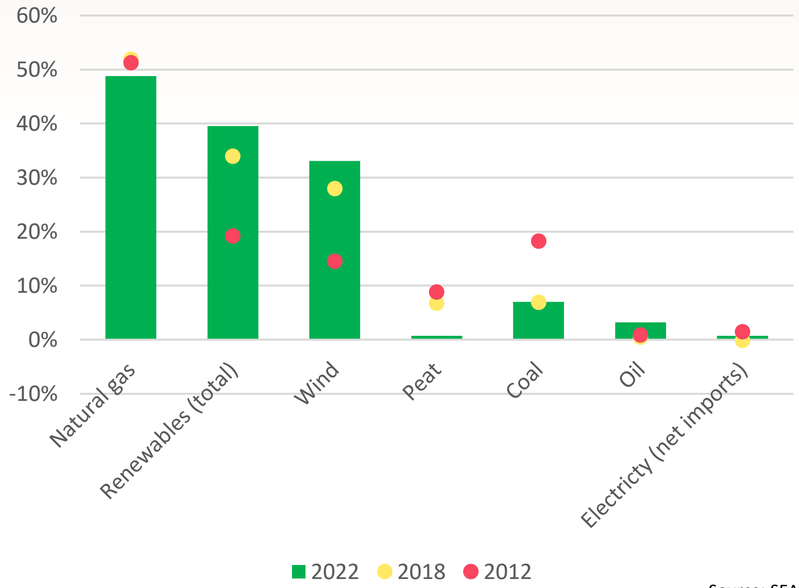
Ireland's energy: fossil fuels prevalent

Ireland's energy mix is reliant on fossil fuels but renewables share to increase by 2030

Oil accounts for the largest share of Ireland's energy mix (2023 data)



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



Source: SEAI

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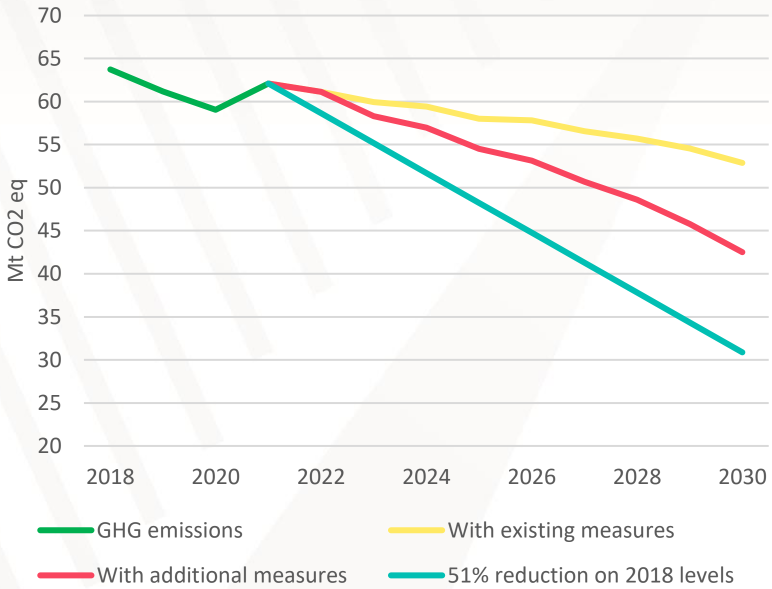
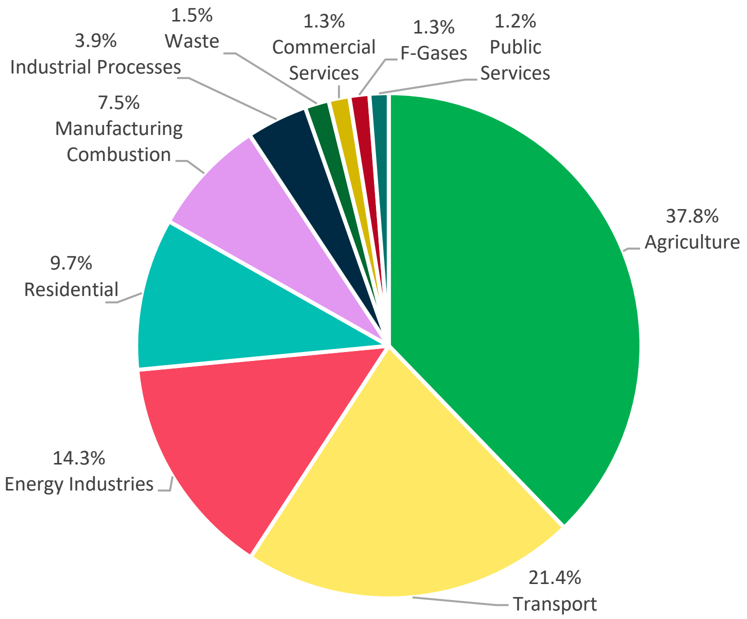
Ireland's greenhouse gas emissions

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



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Source: Environment Protection Agency (Ireland).

Note: Metric used is million tonnes carbon dioxide equivalent (Mt CO2eq). RHS is provisional 2023 data.

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.
- Progress: At the end of 2023, Ireland was exactly 60% through the 2021-2025 carbon budget, and is over-emitting against its CAP targets (SEAI analysis).

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 2024

Pillars to tackle emissions reduction

Powering renewables

· 9GW onshore wind, 8GW solar and at least 5GW offshore wind by 2030

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

·Transform flexibility of electricity system by improving system services and storage capacity

Building Better

· Retrofit 500,000 dwellings by 2030

· Put heat pumps into 680,000 homes by 2030

· Generate 2.7TWh 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 25%

· 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

· 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 33,000 hectares of peatlands

Irish Sovereign Green Bonds (ISGB)

Over €11bn issued in Green and allocated to green projects

- €11.38bn nominal outstanding across two bonds
- Cumulatively €11.3bn 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
- Six annual allocation reports and five annual impact reports now published

Irish Sovereign Green Bond Impact Report 2022: Highlights*

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

  Number of hectares of forest planted: 2,273

  Number of Landfill Remediation sites with funding drawn down: 67

- **Renewable Energy**

  Number of companies (including public sector organisations) benefitting from SEAI Research & Innovation programmes as lead, partner or active collaborators : 23

  SEAI Research & Innovation awards: 41

- **Sustainable water and wastewater management**

  Public side water savings (litres of water per day) : 11 million

  New & upgraded water and wastewater treatment plants: 15

  Length of water main laid (total) : 315km

**For a more detailed break-down please see the ISGB 2022 Impact Report*

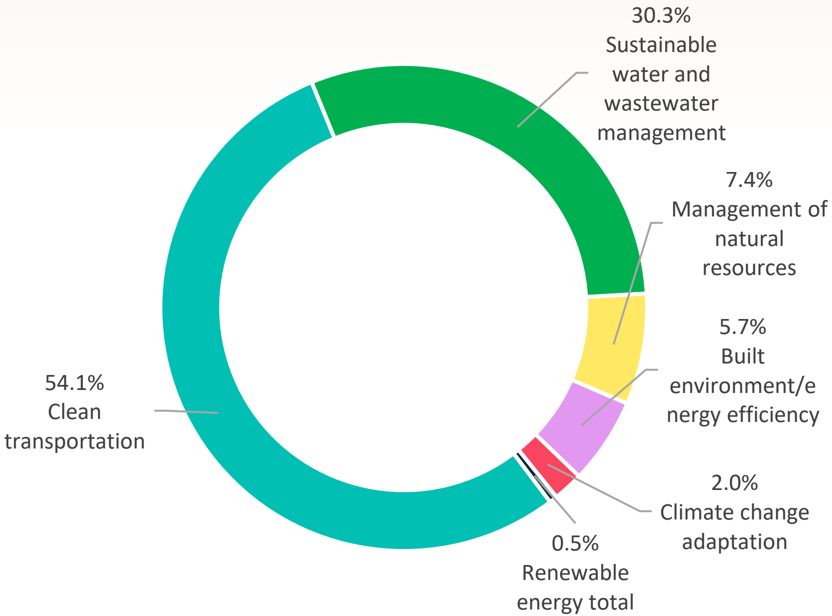
Irish Sovereign Green Bonds (ISGB)

Irish Sovereign Green Bond Impact Report 2022 & Allocation Report 2023: sample impacts

Some highlights from the report*

- **Built Environment/ Energy Efficiency**
  - Non-residential energy saving (Gigawatt Hours) : 151
  - Number of homes renovated : 27,200
- **Clean Transportation**
  - Grant-aided EV home charging points installed: 16,299
  - Number of public transport passenger journeys: 249.7 million
  - Length of regional and national greenways constructed: 54km
  - 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.
  - 8,913 properties protected on completion

Allocation in 2023 of ISGB funding has focused on Water/Waste management and transportation



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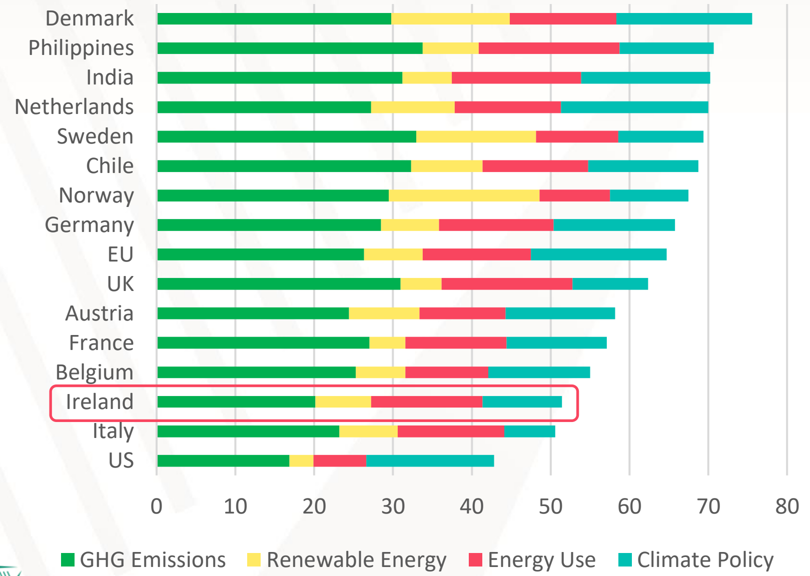
For a more detailed break-down please see the Irish Sovereign Green Bond Allocation Report 2023

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

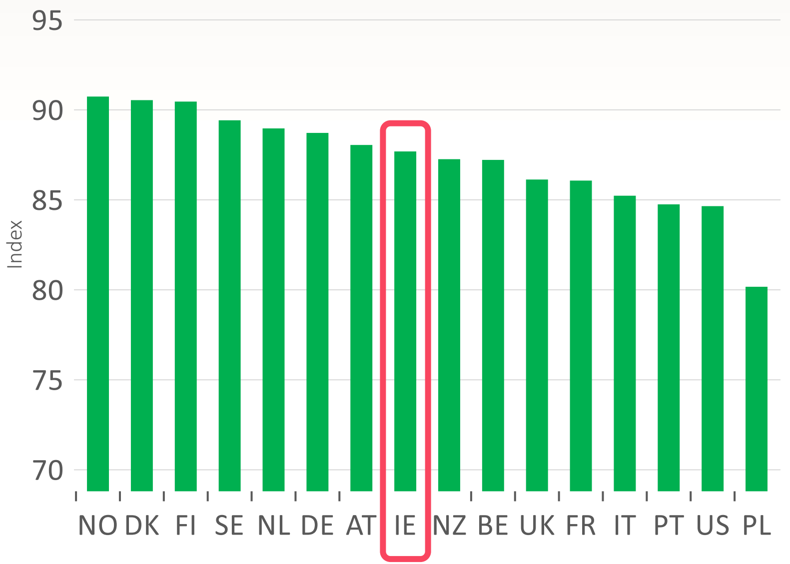
Action needed in sectors like energy and healthcare

Ireland ranks behind leaders like Denmark in current environmental metrics



Source: CCPI

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



Source: SPI

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National Treasury Management Agency

Policy on Just Transition and Biodiversity

All of National Parks and Wildlife Service budget included in Green bond allocation

Just Transition

The importance of ensuring a just transition is explicitly recognised in the Climate Act 2021 and in the Climate Action Plans

- National Just Transition Fund 2020
    - €22.1m in grant funding provided to projects the contribute to the economic, social and environmental sustainability for the Wider Midlands region
- EU Just Transition Fund and Ireland's Territorial Just Transition Plan
    - Includes up to €169m in investment for the economic transition for the Midlands region for 2021-2027
- Green Skills for Further Education and Training 2021-2030 Roadmap
- Skills for Zero Carbon
- Just Transition Commission set up

Biodiversity

Irish policies for biodiversity are primarily set by the National Biodiversity Action Plans

- 4th National Biodiversity Action Plan 2023-2030
    - Backed by legislation, the NBP sets the agenda for biodiversity conservation and supports Ireland's international commitments
- Wildlife Amendment Act 2023
- International Commitments:
    - UN Convention on Biological Diversity
    - EU Nature Restoration Law
    - EU Biodiversity Strategy for 2030
    - Global Biodiversity Framework
- Peatlands Restoration
    - Bord na Móna Peatlands Restoration
    - EU supported The Living Bog Project 2016-2021

4th National Biodiversity Action Plan, *Territorial Just Transition Plan*

Structure of the Irish Economy

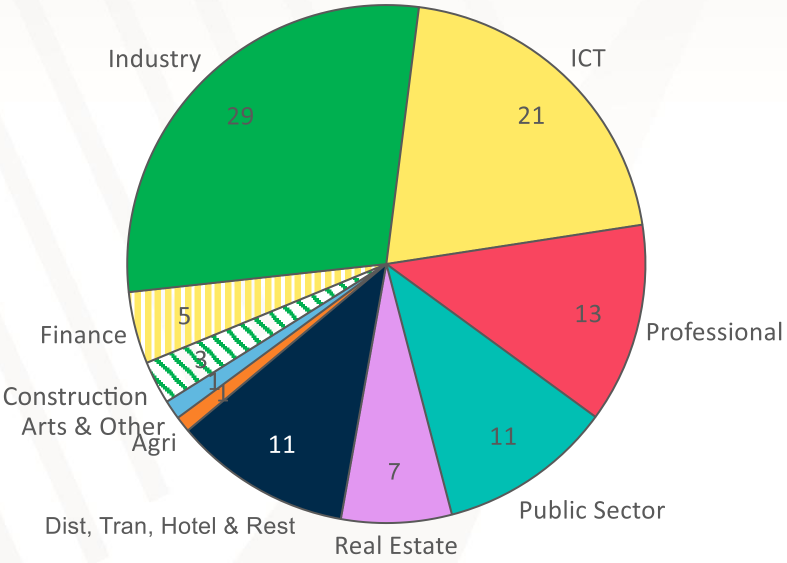
Multinationals overstate economic prosperity but offer clear benefits of jobs, income, taxes

Gníomhaireacht Bainistíochta an Chisteáin Náisiúnta
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)	14	13	29
ICT (Tech)	7	10	21
Professional	11	15	13
Dist, Tran, Hotel & Rest	23	18	11
Public Sector	31	28	11
Real Estate	0	1	7
Financial	5	8	5
Construction	5	5	3
Arts & Other	4	2	1
Agriculture	1	1	1

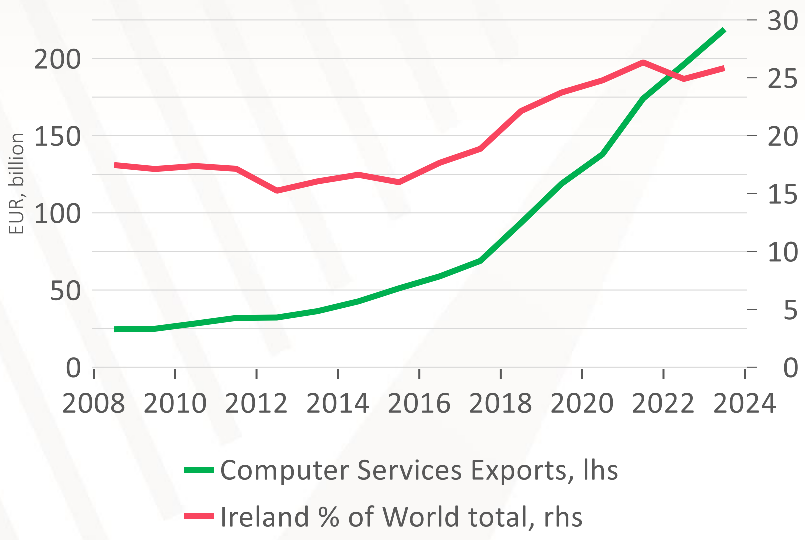
Source: Eurostat

Note: Based on calendar-adjusted seasonally-adjusted data as of 2024 Q2.

€0.8trn of intellectual property into Ireland

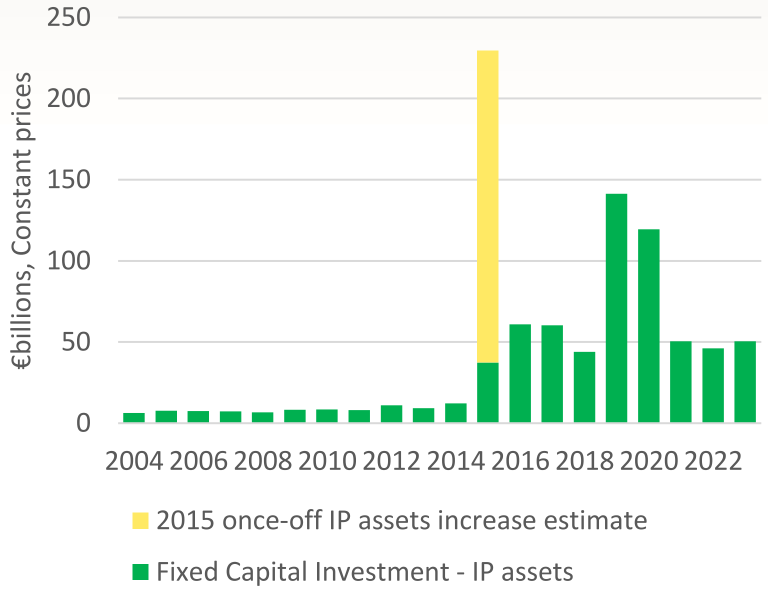
Assets brought here by tech. & pharma. in recent years

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



Source: CSO, WTO

Enormous inflows (c. €0.8trn) of IP assets into Ireland since 2015 on the back of BEPS 1.0 and other tax reforms

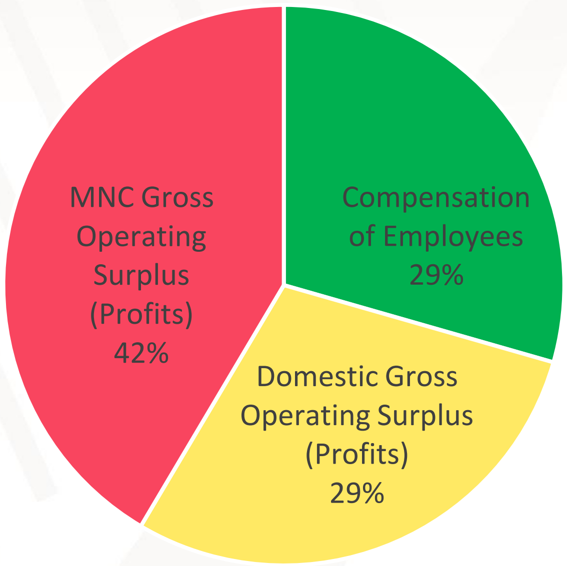


Source: CSO and NTMA analysis – Gross Fixed capital formation and Gross capital stock figures used in RHS chart

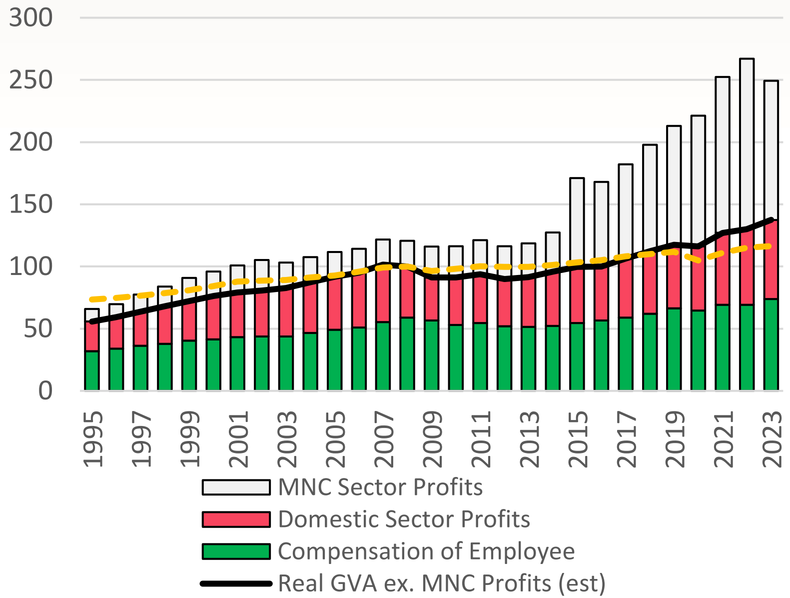
Underlying economy above EA average

MNCs add real substance to Irish 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)

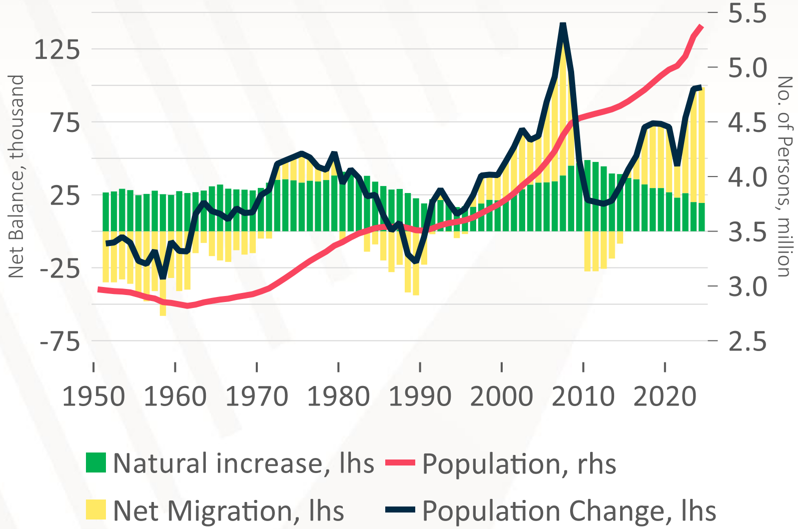


Source: CSO, NTMA calculations. LHS shows nominal 2023 data. Foreign-owned MNE dominated includes Nace sectors 19, 20, 21, 26, 31, 32, 58, 61, 62, 63 and 77. Ireland's GVA data has been adjusted to strip out the distortionary effects of some of the multinational activity that occurs in Ireland. Specifically, a profit proxy is estimated for the sectors in which MNCs dominate.

Ireland's population helps growth potential

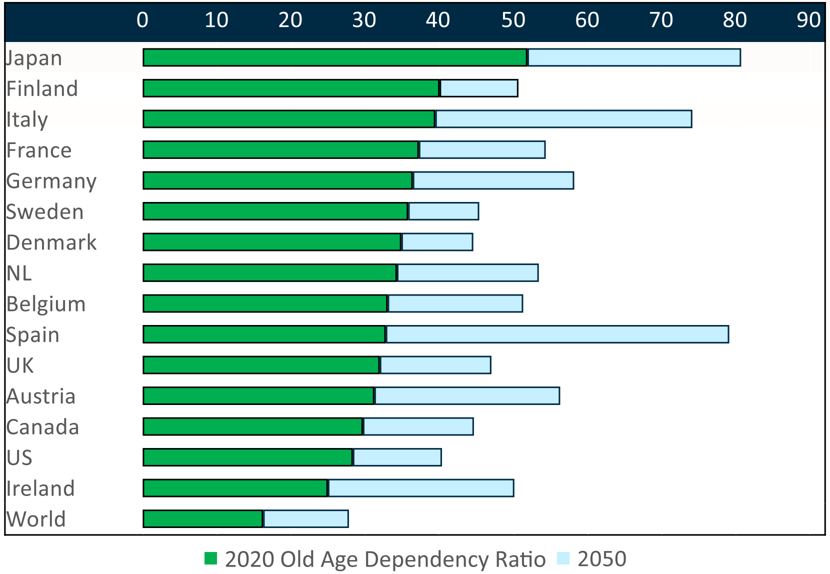
Age profile younger than the EU average but won't outrun aging demographics

Ireland's population at 5.4m in April 2024: Migration driving robust population growth



Source: CSO

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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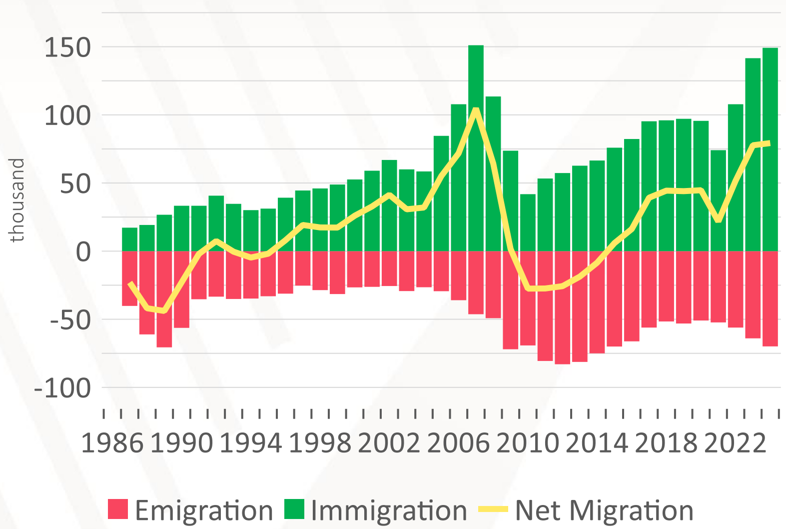
Migration improves Ireland's human capital

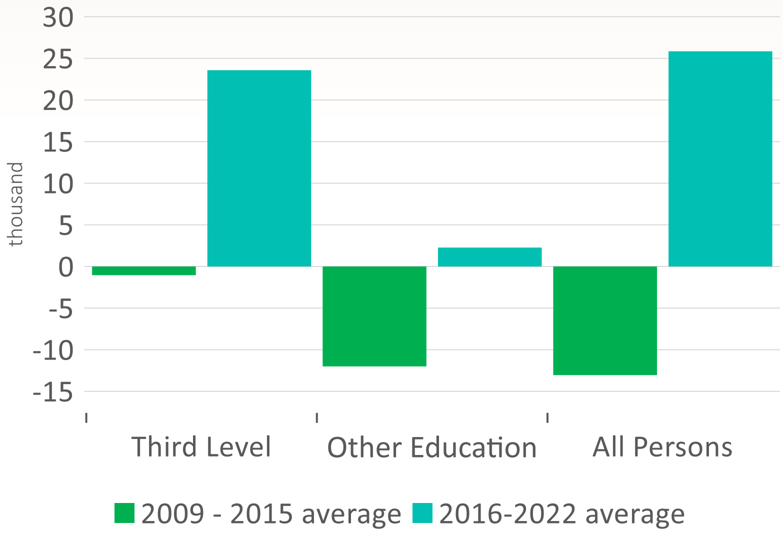
Ireland's net migration has swung back and forth on economic performance

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

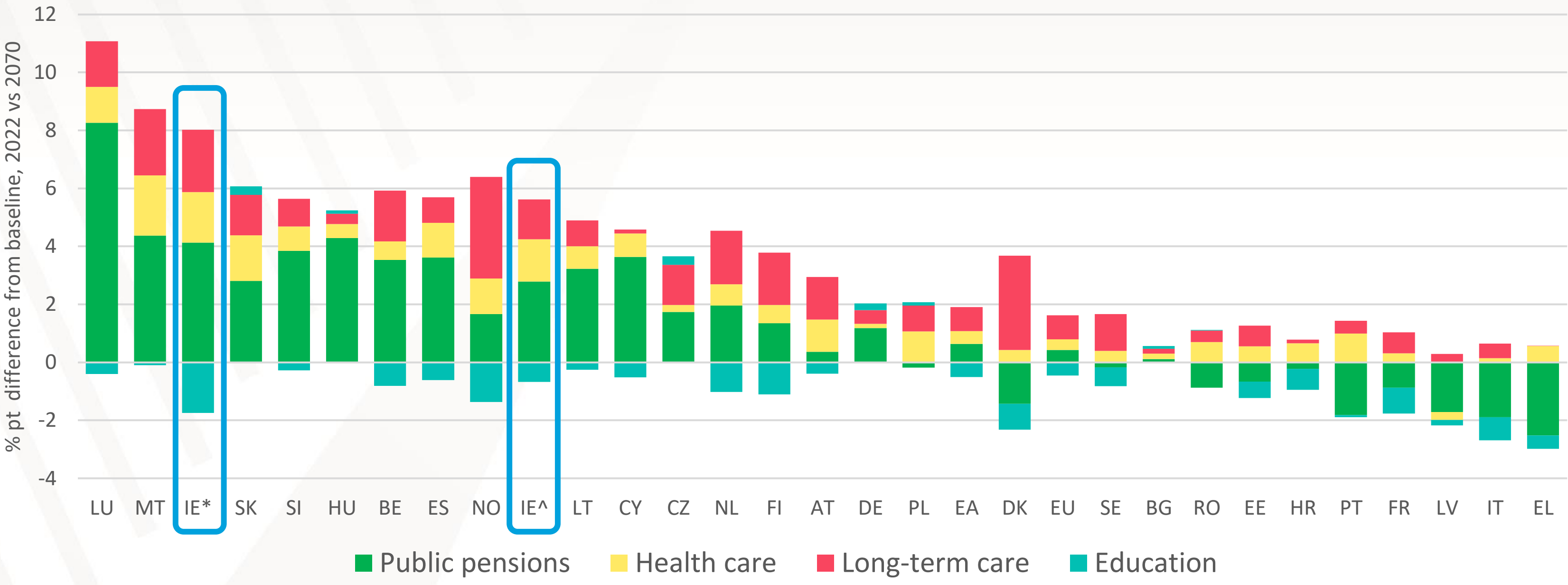


Source: CSO

Migration figures based on year to April

Total cost of aging projected to increase

Increase largely driven by pensions, while education spending expected to decline



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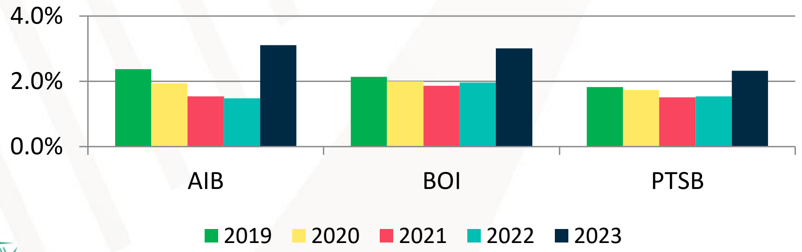
Source: 2024 Ageing Report. Economic and Budgetary Projections for the EU Member States (2022-2070) and NTMA calculations. Chart shows spending as a % of GDP/GNI. * denotes as a percent of GNI*, ^ as a percent of GDP.*

Ireland’s Banking Sector Overview

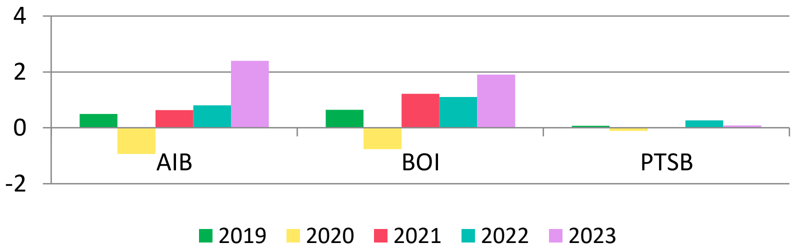
Less competition possible in decade to come

- Banking sector well capitalised with sufficient liquidity buffers
- Banks profitable as net interest margins helped by rising interest rate environment.
- Ulster Bank and KBC - both of which have no govt. ownership have left 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 2024. The Government owned approx. 22% 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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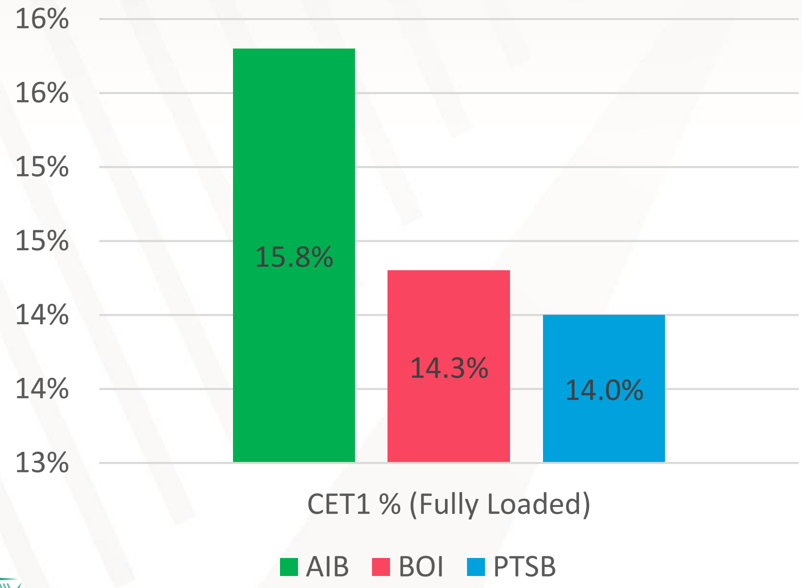
Source: Annual reports of banks - BOI, AIB, PTSB

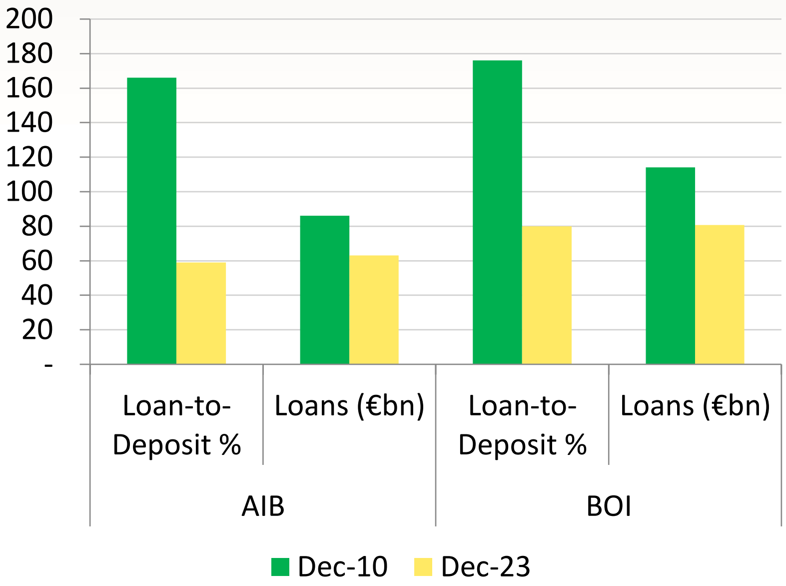
Capital ratios strong

Bank's balance sheets contracted and consolidated since GFC

CET 1 capital ratios allow for ample forbearance in 2024 if needed



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.

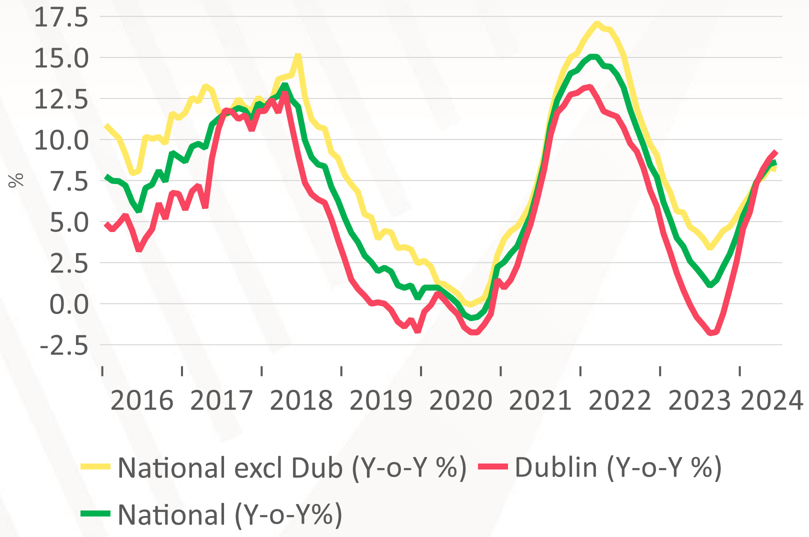
Housing

Demand/prices still elevated despite rate hikes and increased building costs

Prices up strongly in recent years

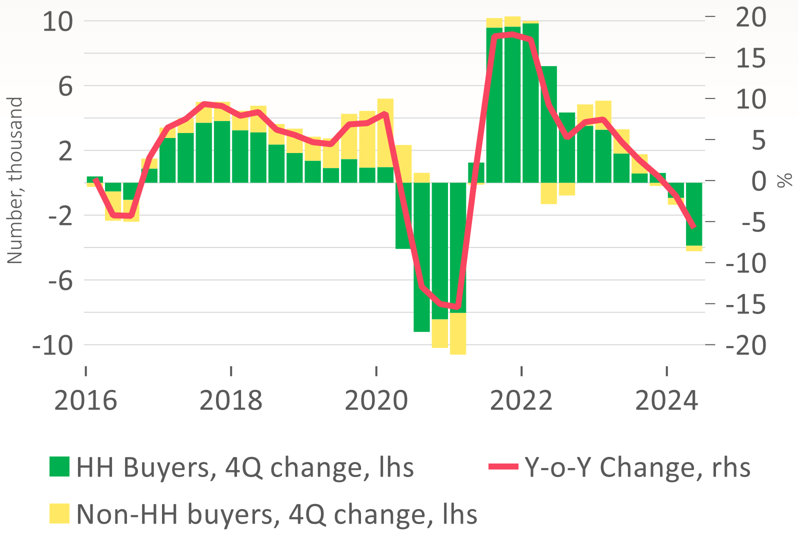
Supply hampered by the pandemic and inflation (c. 50k units needed p.a.)

House prices up 8.6% y-on-y – Dublin seeing prices rebound after stalling



Source: CSO

Transaction volumes have fallen



Source: CSO

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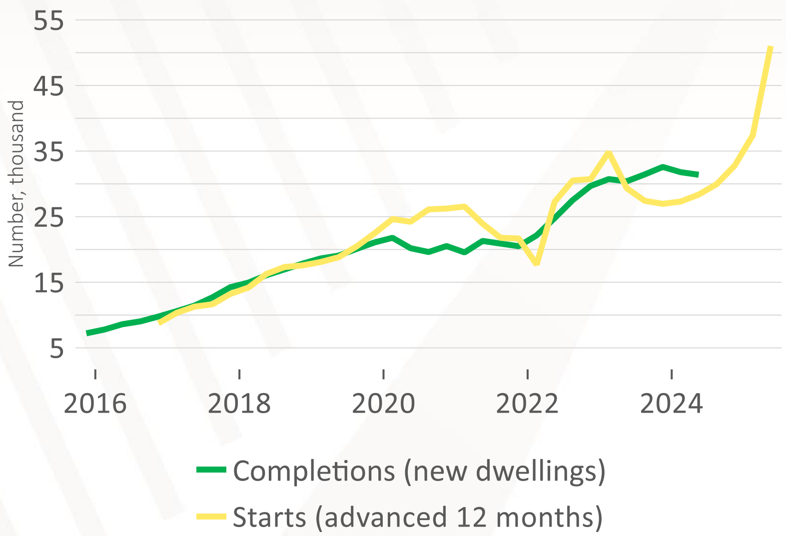
* Some estimates have put housing needs as high as 60,000 a year over the coming decades

Supply continuing to rise

However, supply likely to less than suggested by recent starts data

New Dwellings Completions* exceeded 30,000 units threshold in 2023, pipeline suggest further increase in 2024



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

Pricing of new dwellings vs. existing dwellings impacted by Covid squeeze on new units + govt. action recently

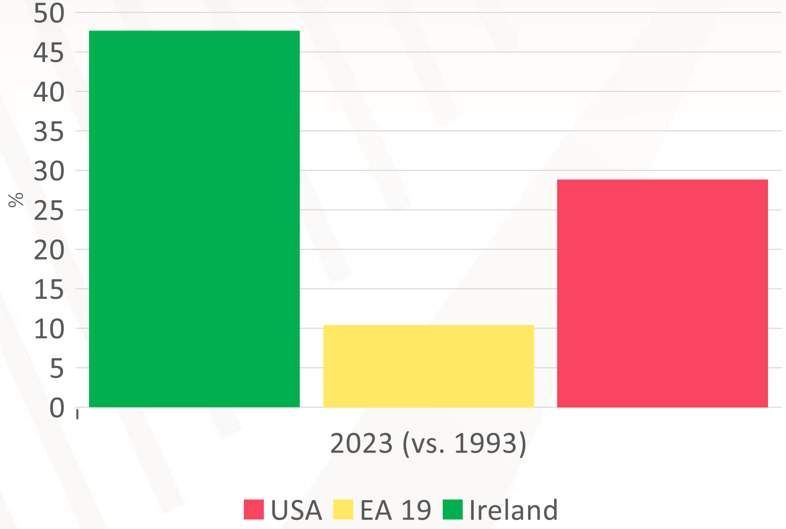
Source: CSO

** 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). Starts data in 2024 impacted by deadline related to waiver on development contributions and rebate on water charges*

Demand is strong

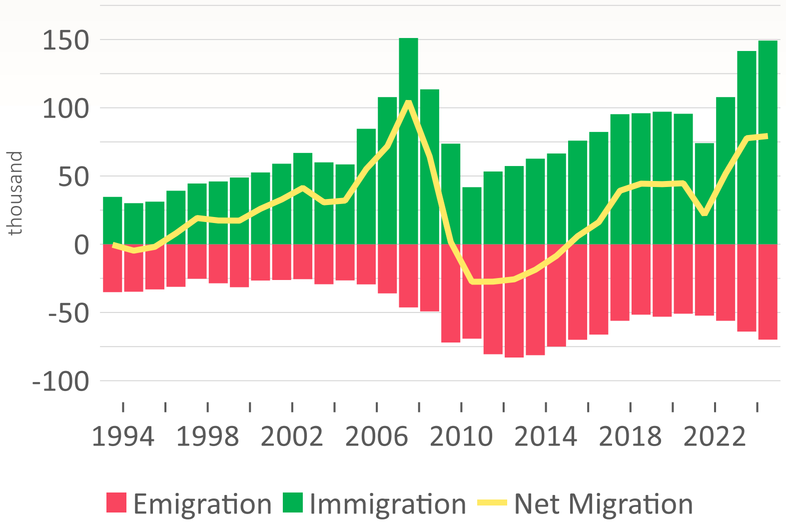
National population increase alongside net migration fuelling demand

Population has grown significantly for 30-40 years



Source: Eurostat, USCB

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



Source: CSO

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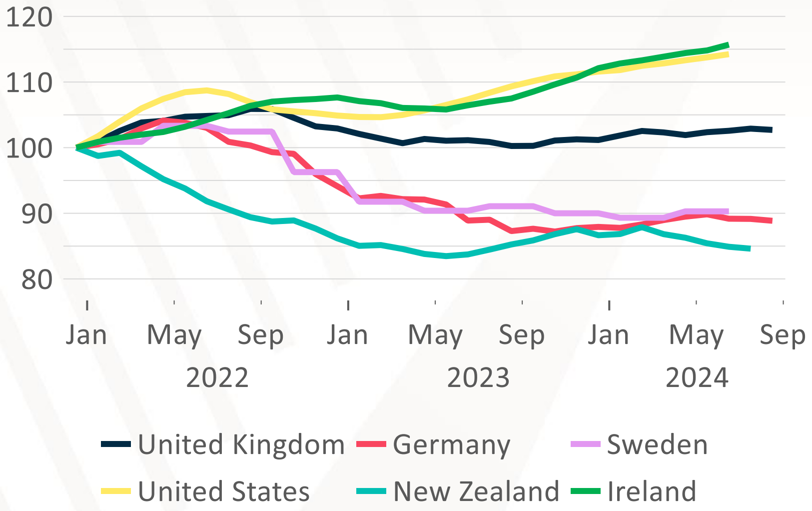
House prices remain resilient amid hikes

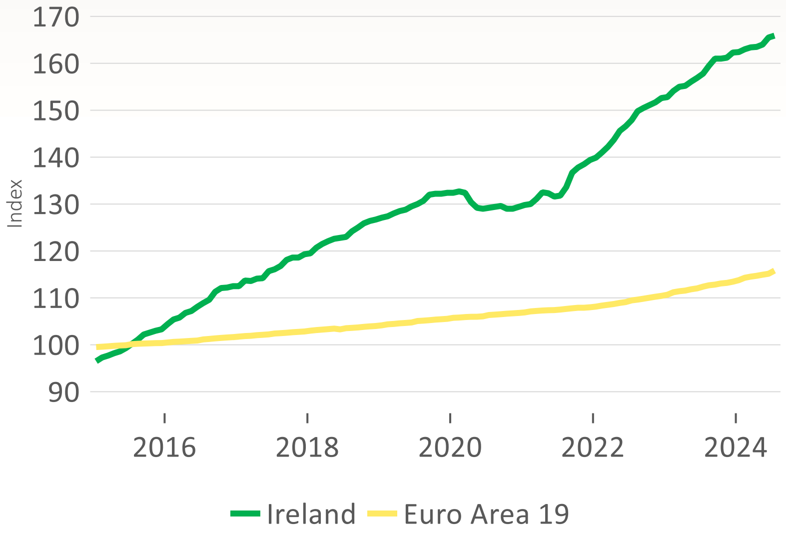
Demand has ensured prices and rents have increased

House prices have fallen in other countries but Irish prices have remained elevated



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

Rents pressures remain strong with a annual rate of increased above 5% in 2024



Source: Eurostat

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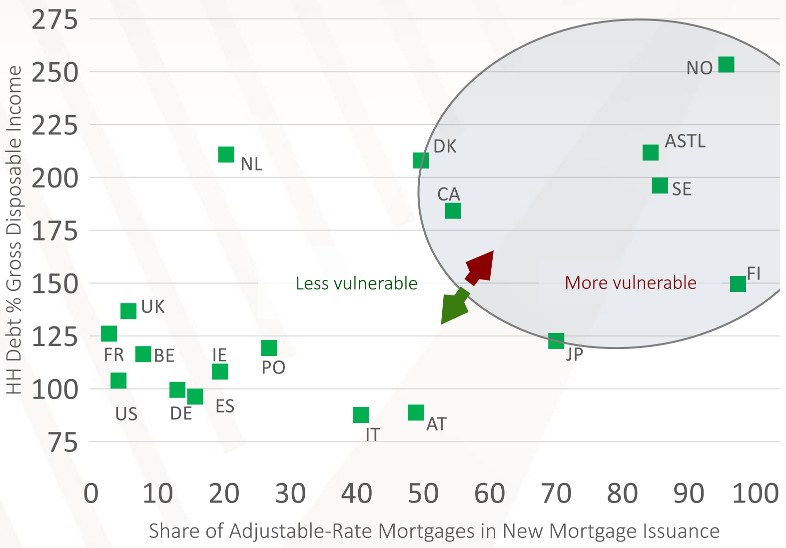
Ireland less vulnerable to higher interest rates

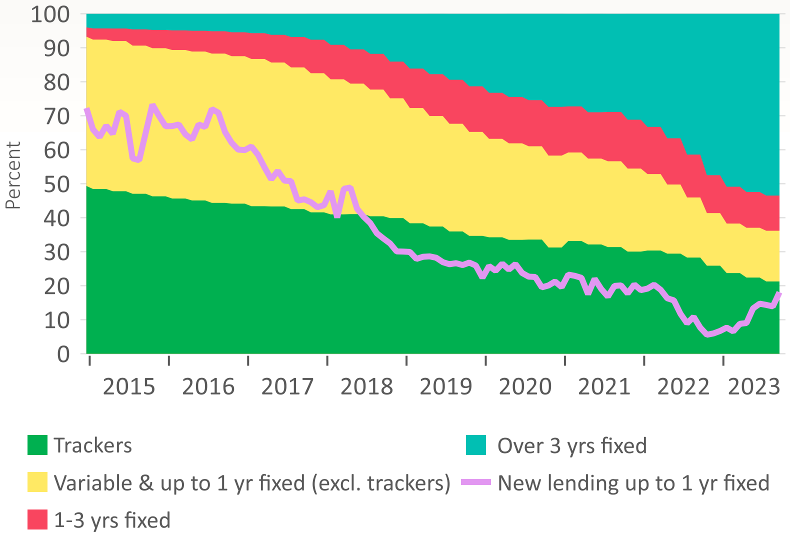
But could pose a greater threat in the medium term

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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