Ireland: Multinational firms supportive amid Covid shock

Economic structure and ECB have allowed for large fiscal policy response

November 2020

Gníomhaireacht Bainistíochta an Chisteáin Náisiúnta
National Treasury Management Agency

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Summary

Economy’s structural advantages come to the fore

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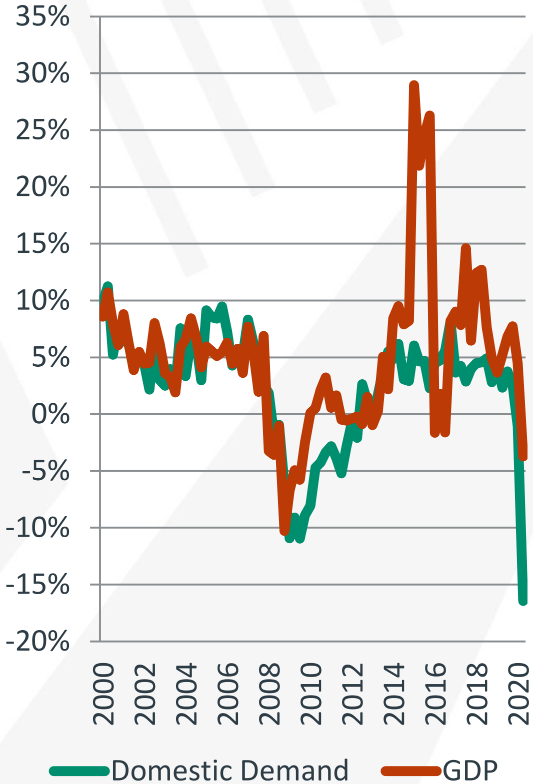
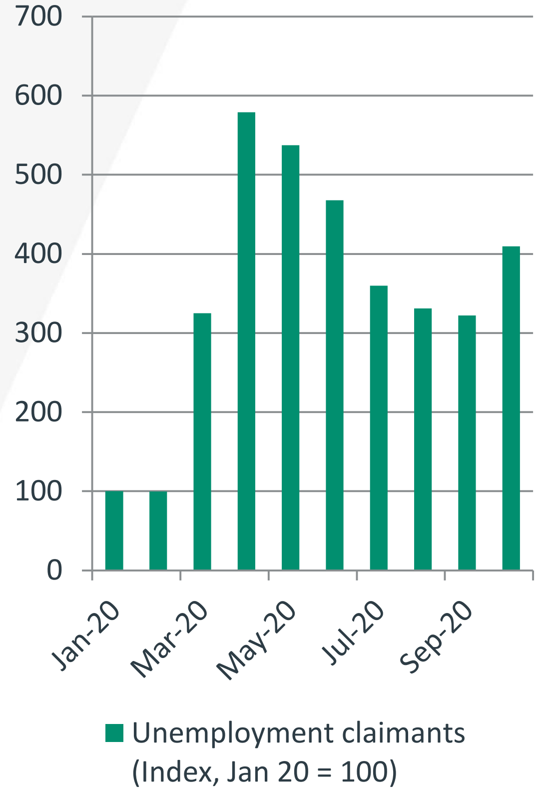
Recovery in Q3 as workers and spending returned but second lockdown impacts in Q4

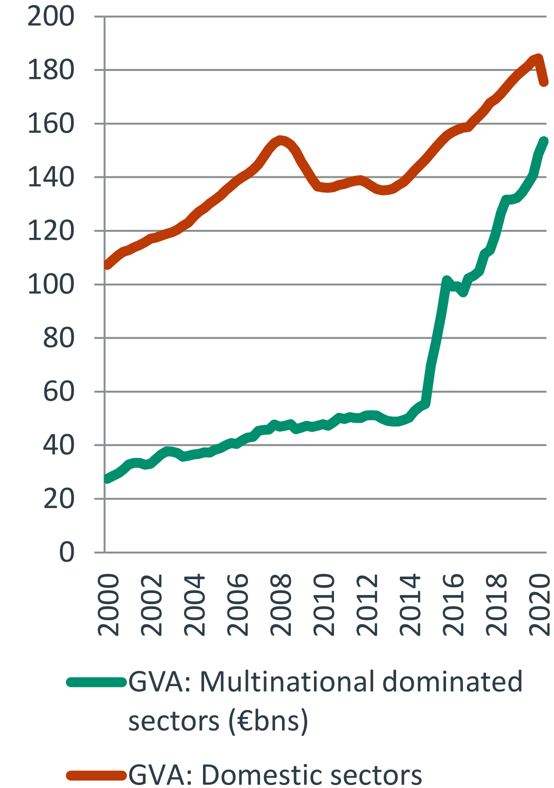
GDP holds up while domestic sectors struggle



U rate uncertain**; Lockdown impacted Oct



Value added from ICT & pharma has given Ireland resilience



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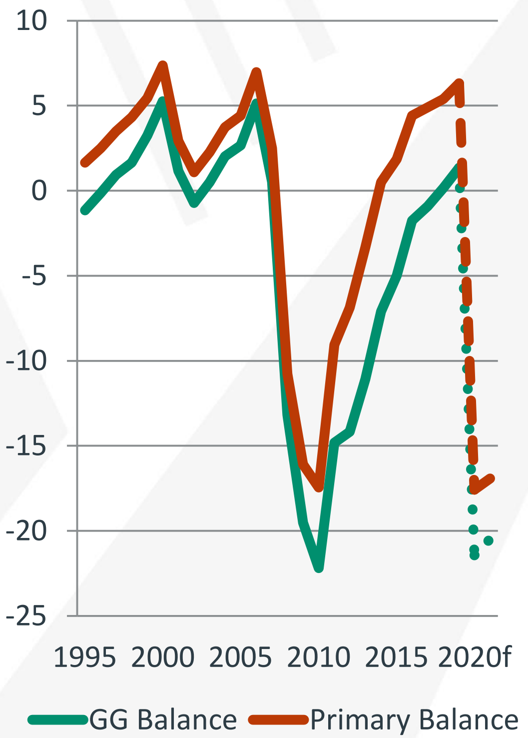
Source: CSO

** Domestic demand series accounts for multinational activity and known as modified final domestic demand (excludes inventories)*

*** Whether those on government income supports are unemployed is statistically debatable. Some will have left the labour force, others are just temporarily furloughed.*

Ireland used 2014-19 growth to improve debt sustainability; added fiscal room that will now be needed to fight Covid

Primary surpluses to end; GG deficit forecast €21.6bn



Improved debt position created room for fiscal response

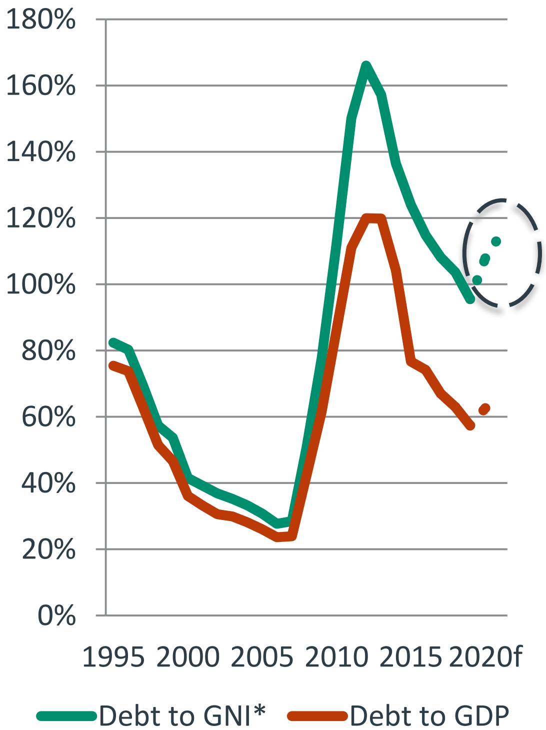
Debt-to-GNI*
(95% 2019, from 166% peak)

Debt-to-GG Revenue
(230% 2019, from 353%)

Average interest rate
(2.1% 2019, from 5.1%)

Debt-to-GDP^
(57% 2019, from 120%)

Debt fell to 95% of national income, but will rise again



Source: CSO, Department of Finance
^ due to GDP distortions, Debt to GDP is not representative for Ireland, we suggest using other measures listed.

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Covid-19 and Ireland: significant hit to economy followed by powerful policy response

Recession

Ireland is in recession. Key question is for how long?

So far the most extreme outcomes have been avoided. Economy has begun first steps to recovery along uneven road.

Exposure

Ireland's domestic economy hit hard like others but internationally-traded sectors (Pharma and ICT) have been less impacted

Brexit risk in background

Policy

Significant stimulus announced equivalent to 21% of GNI* over 2020 and 2021

ECB and Fed actions should cap interest costs and allow necessary fiscal room

NTMA has funded €22.75bn of revised funding plan of €20-€24bn; NTMA expects to hit upper end of range

Flexibility

Ireland has large cash balances and a year free of maturing bonds in 2021

Funding will come from several sources. Bonds, short-term paper and private placements.

10 years

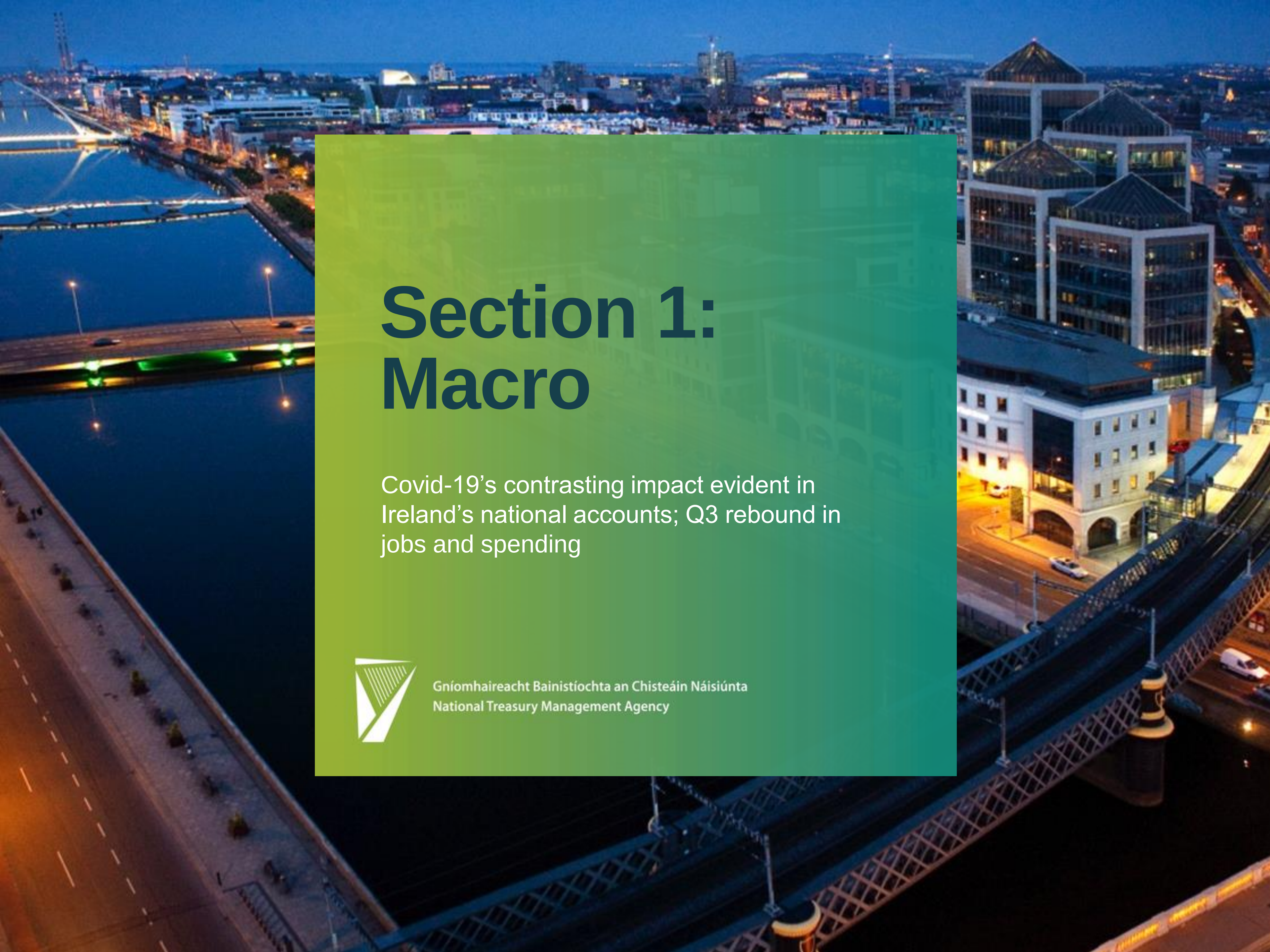
Weighted average maturity of debt one of longest in Europe

The ECB's QE enabled NTMA to extend debt maturities, reduce interest cost and repay the IMF. Now ECB is buying aggressively again with few limitations

AA-

Ireland has been affirmed in AA space by S&P

On relative basis, hit to Ireland may be less than other countries given multinationals, relatively smaller domestic share of economy and tourism



Section 1: Macro

Covid-19's contrasting impact evident in Ireland's national accounts; Q3 rebound in jobs and spending

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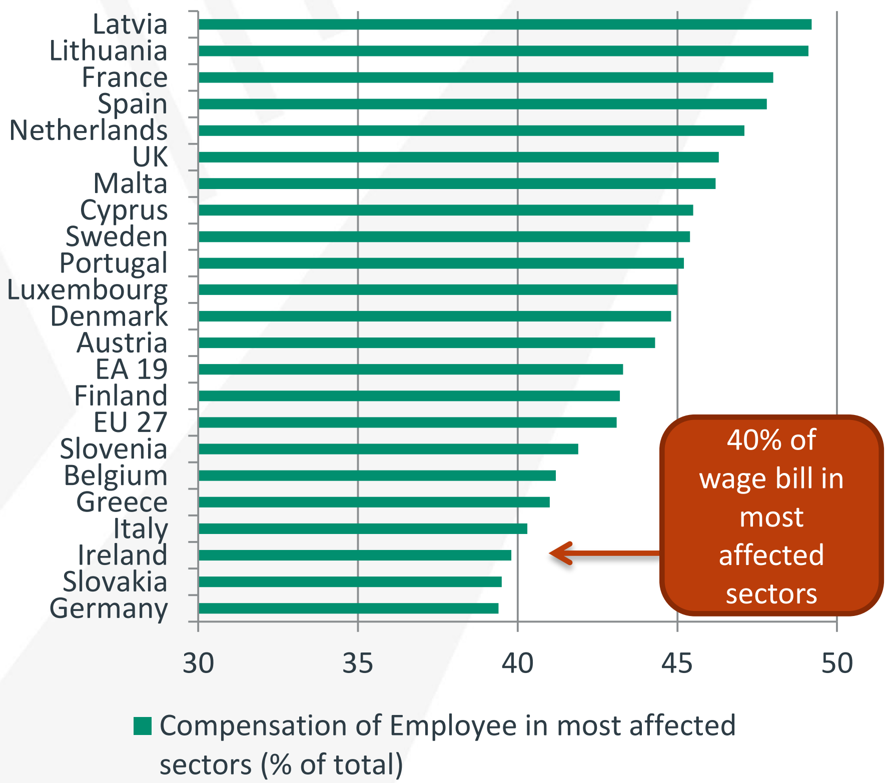
On a relative basis Ireland could perform better than most EU peers – thanks to big technology and pharma firms

The Irish wage bill is not going to be as impacted as other countries



ICT sector has acted as a bulwark in protecting incomes in Ireland

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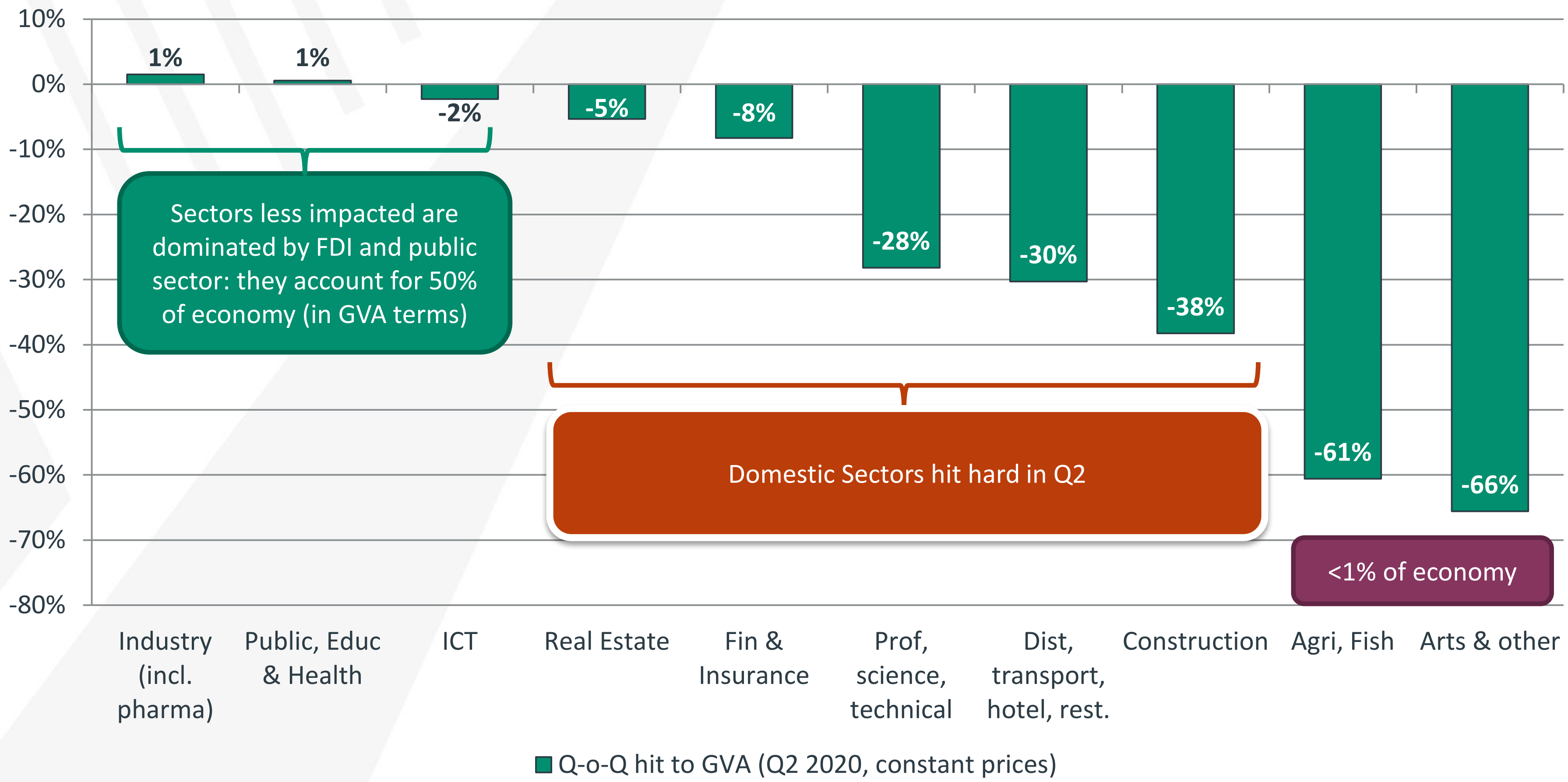
Source: Eurostat (2019)
Note: Most affected sectors include construction, wholesale and retail trade, transport, accommodation and food service activities, real estate activities, professional, scientific and technical activities; administrative and support service activities, arts, entertainment and recreation

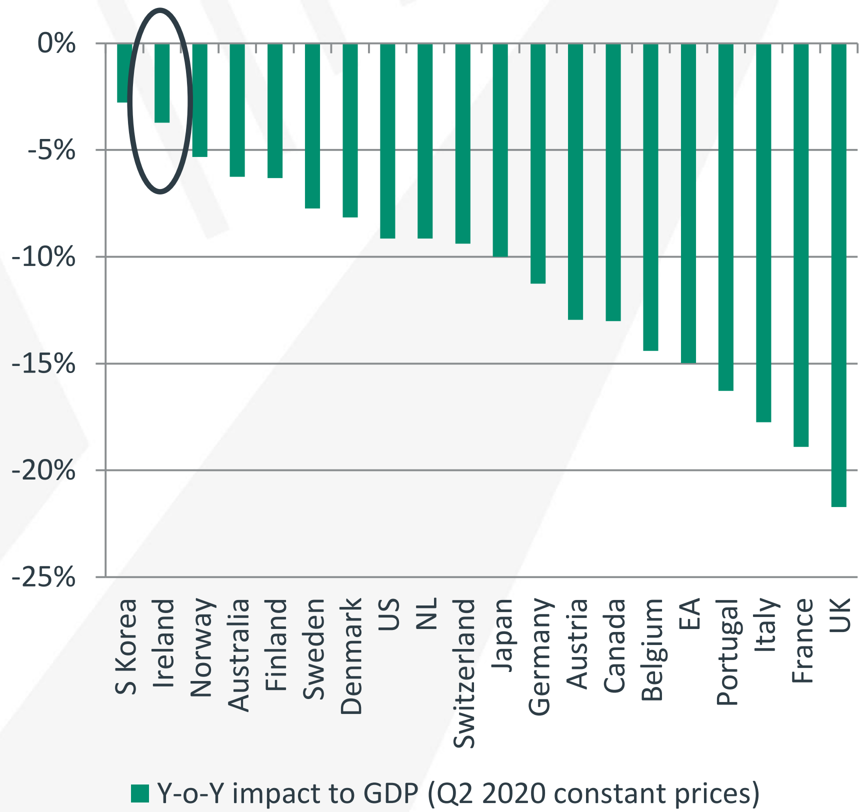
Sector breakdown in Q2 – Multinationals holding up well, domestic side hit hard



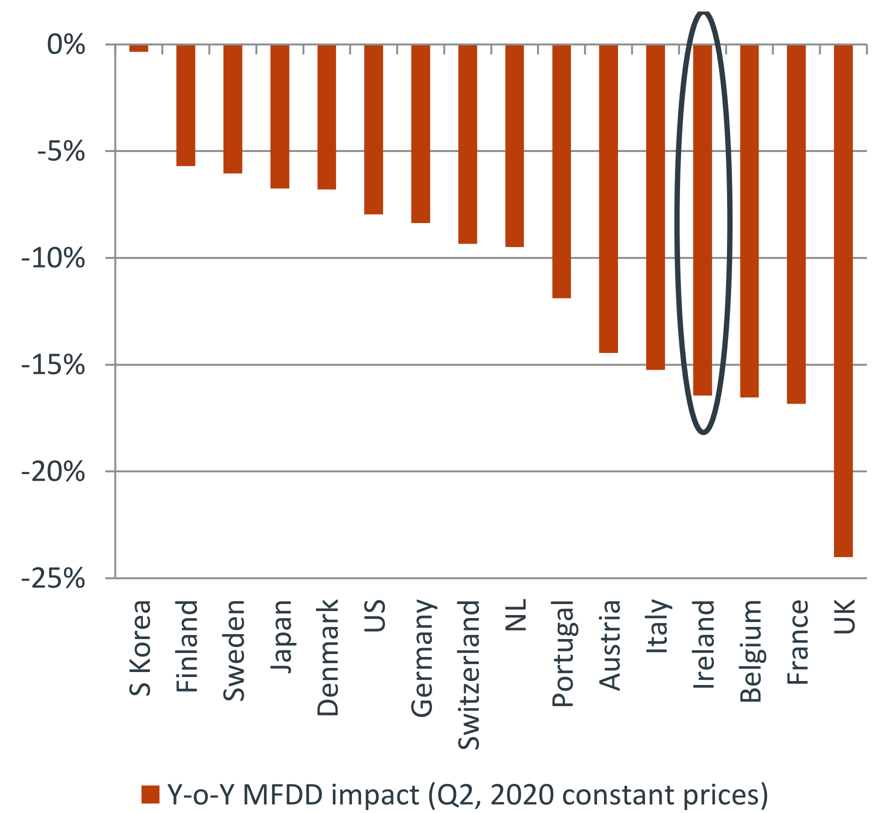
Source: CSO

True Irish economy picture perhaps halfway between change in GDP and domestic demand because of FDI

Real GDP down 3.7% Y-o-Y in Q2 for Ireland: GDP *overstates* impact of multinationals



Real MFDD down 16.4% Y-o-Y in Q2: MFDD *understates* impact of multinationals



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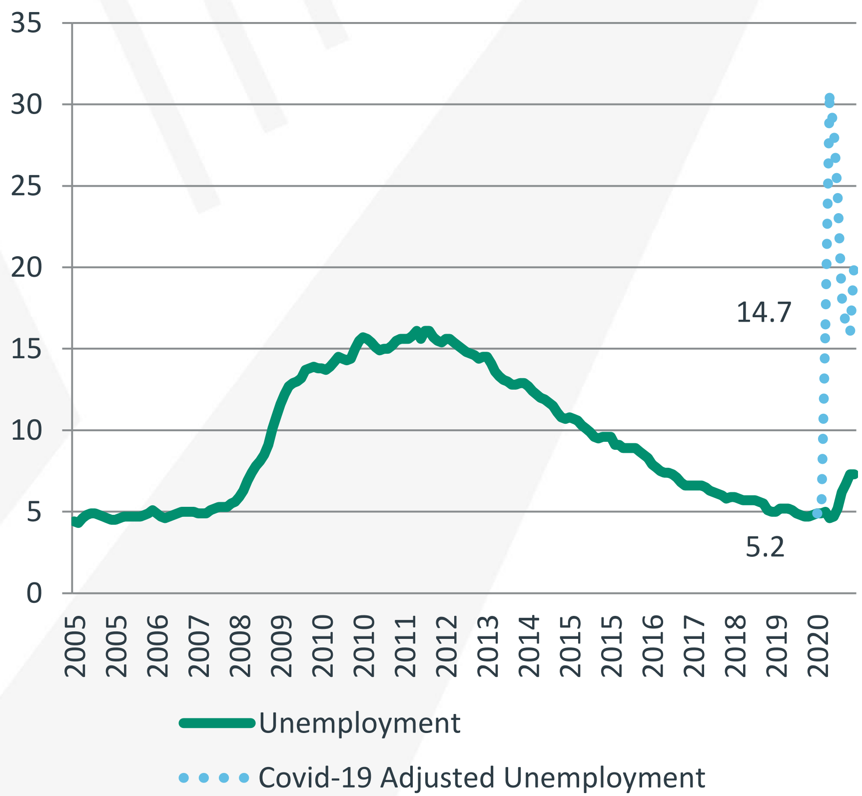
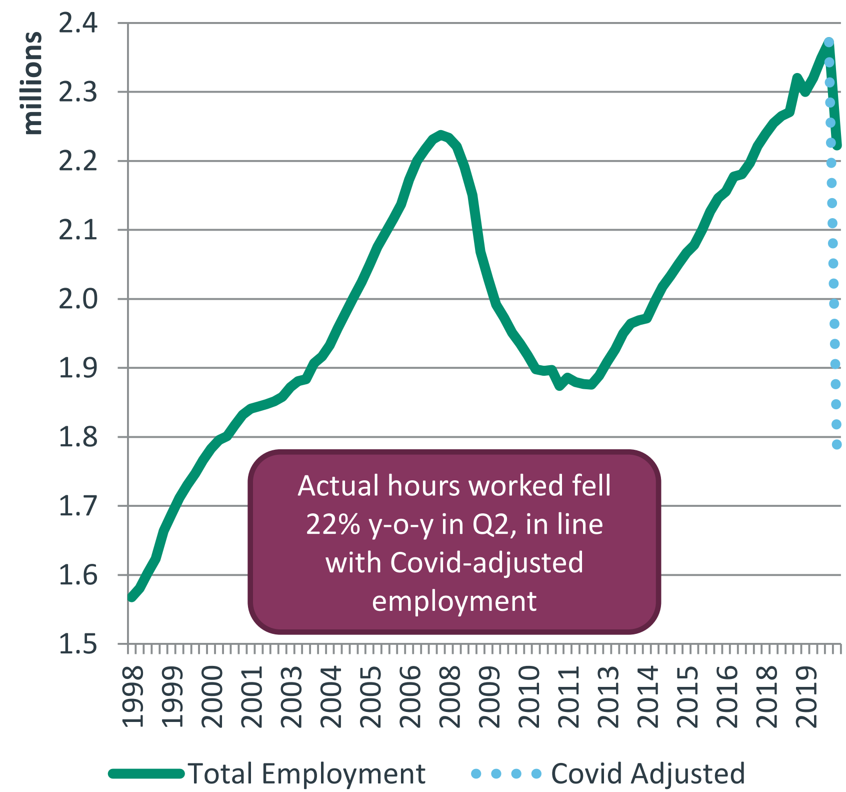
Source: CSO, DataStream
Note: MFDD for Ireland is modified for multinational activity by Ireland's Central Statistics Office (CSO). For other countries MFDD = Domestic demand = Consumption + Government (current) spending + Investment

Labour market data shows stark Covid-19 impact; October lockdown has seen a reversal in unemployment rate

True unemployment rate is uncertain: Covid-19 adjusted rate 20.2%* in October



At end-Q2, adjusted employment was estimated at 1.8m



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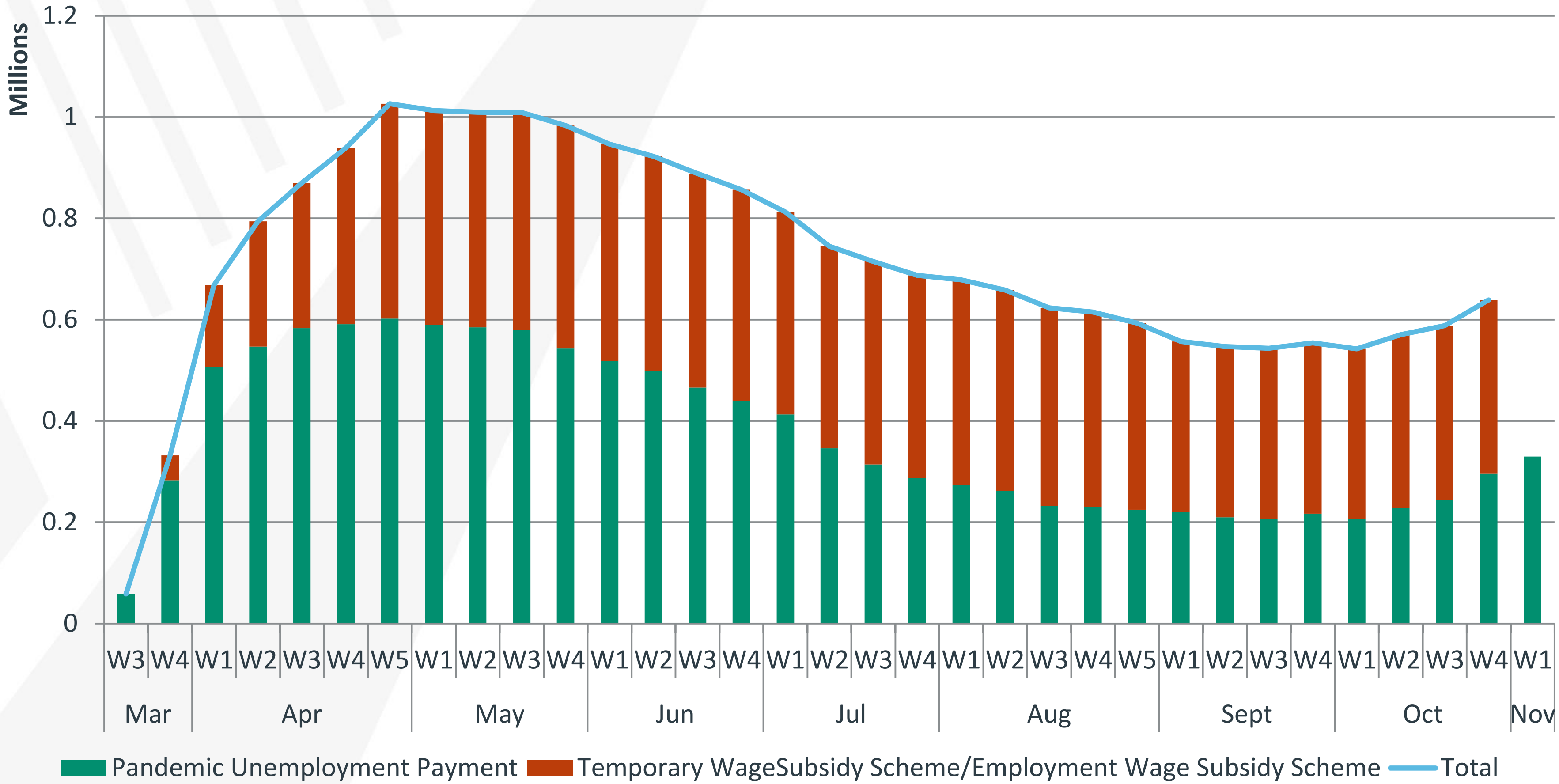
Source: CSO

** The CSO have estimated the upper bound of the unemployment rate at 20.2% in October. The CSO have urged caution around labour market data given the likelihood of revisions and the unique nature of employment status for some people in the pandemic.*

Government income supports are extended into 2021; October numbers increasing as lockdown re-instated



Source: Revenue, DEASP

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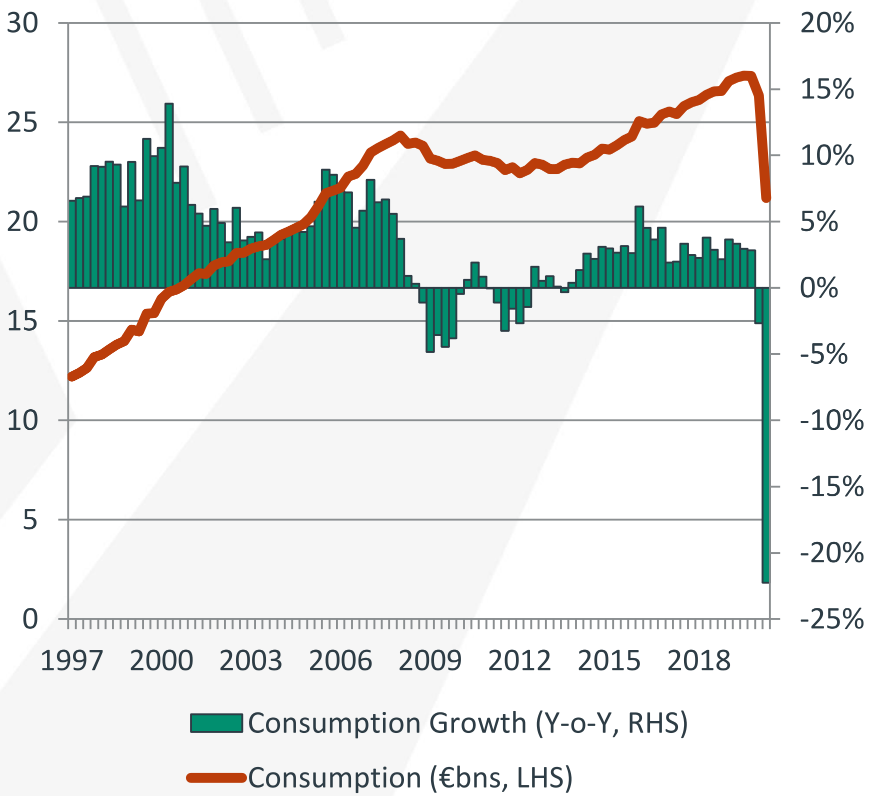
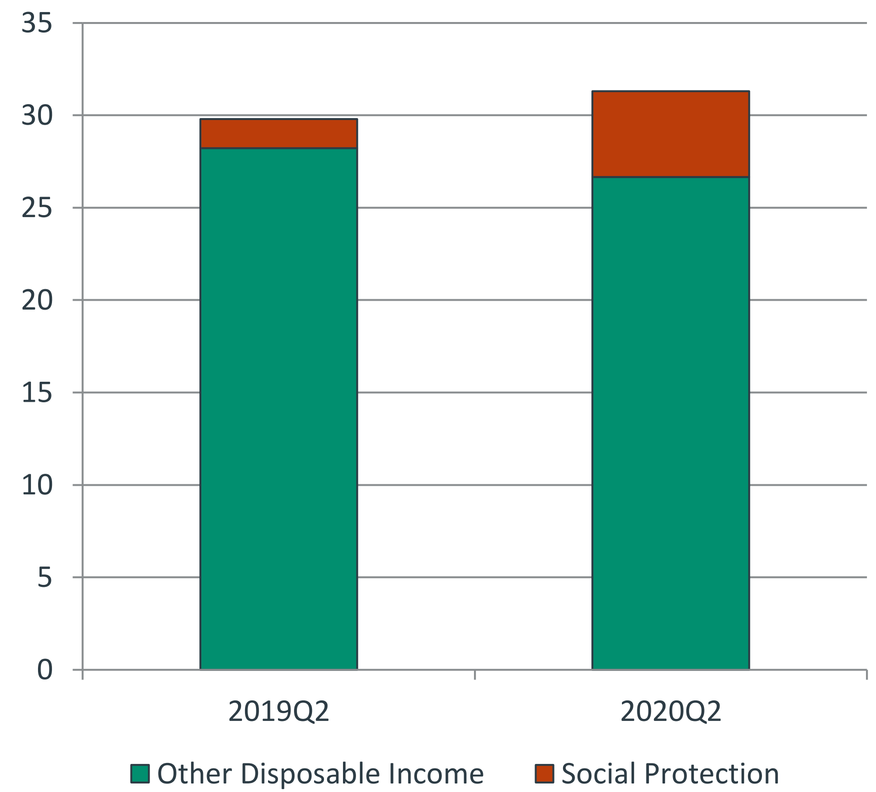
Consumption fell sharply in Q2 despite incomes being maintained; the result is record savings rates

Consumption sharply hit in Q2 – down 20% q-o-q



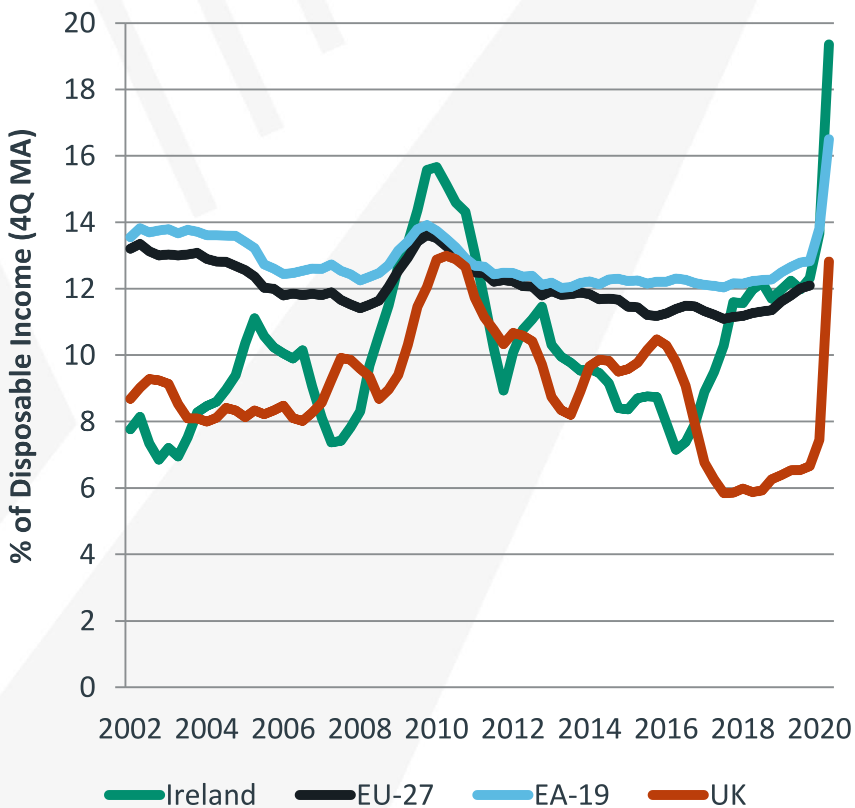
But income supports have meant aggregate income was maintained



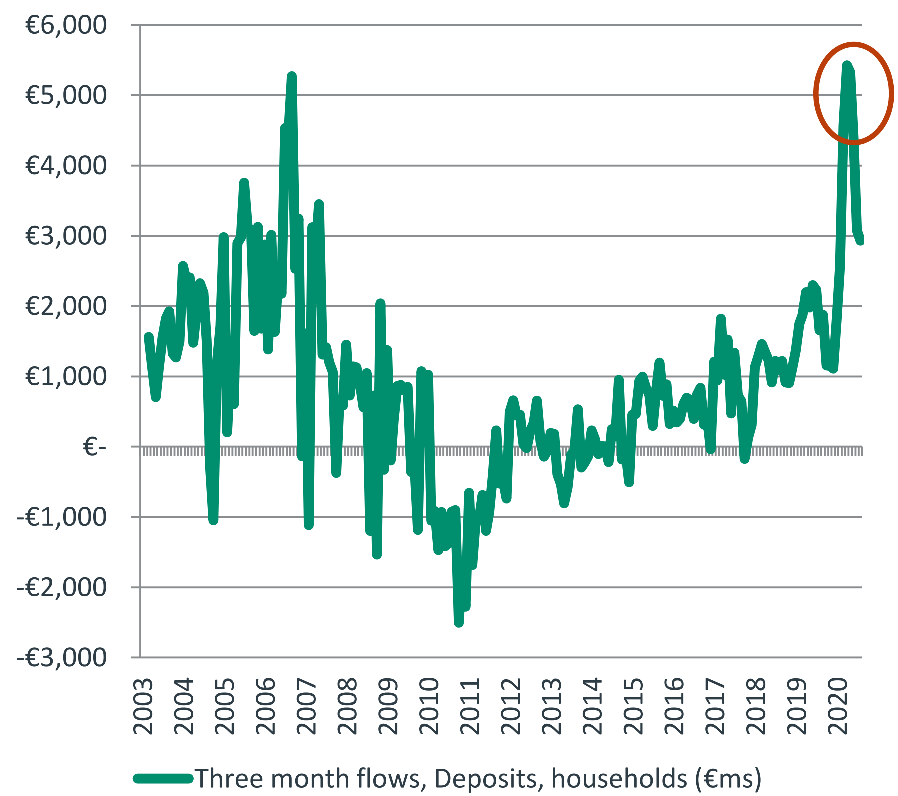
Source: CSO

Savings rate increased sharply in Q2 due to forced savings

Gross household saving rates jump in Q2 – Ireland larger than most



Bank deposits shows increased saving as h'holds couldn't consume in recent months



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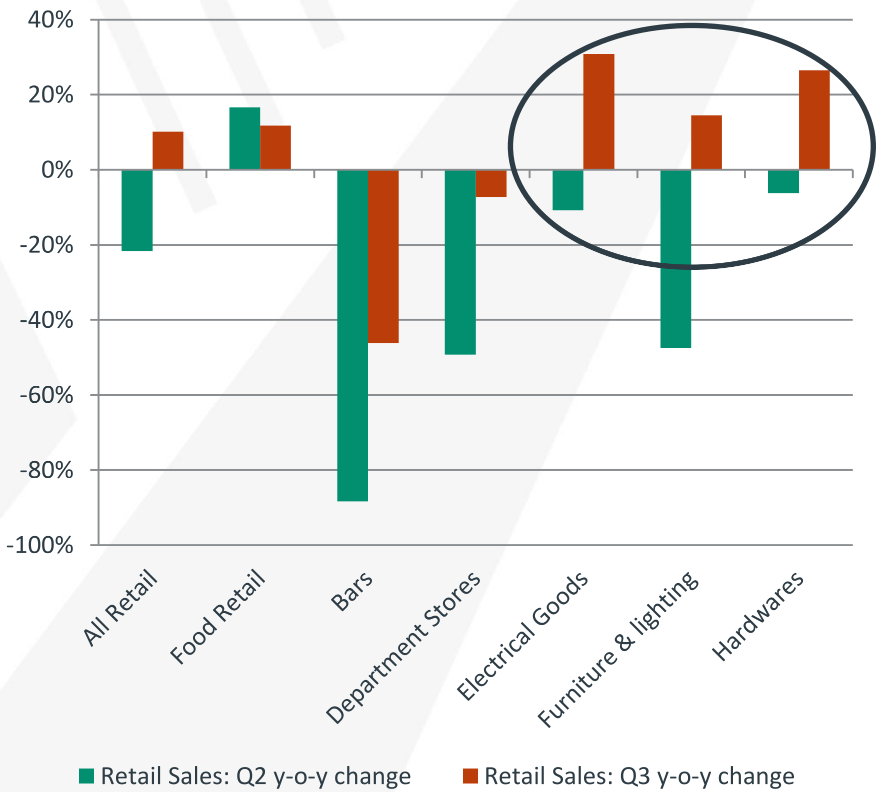
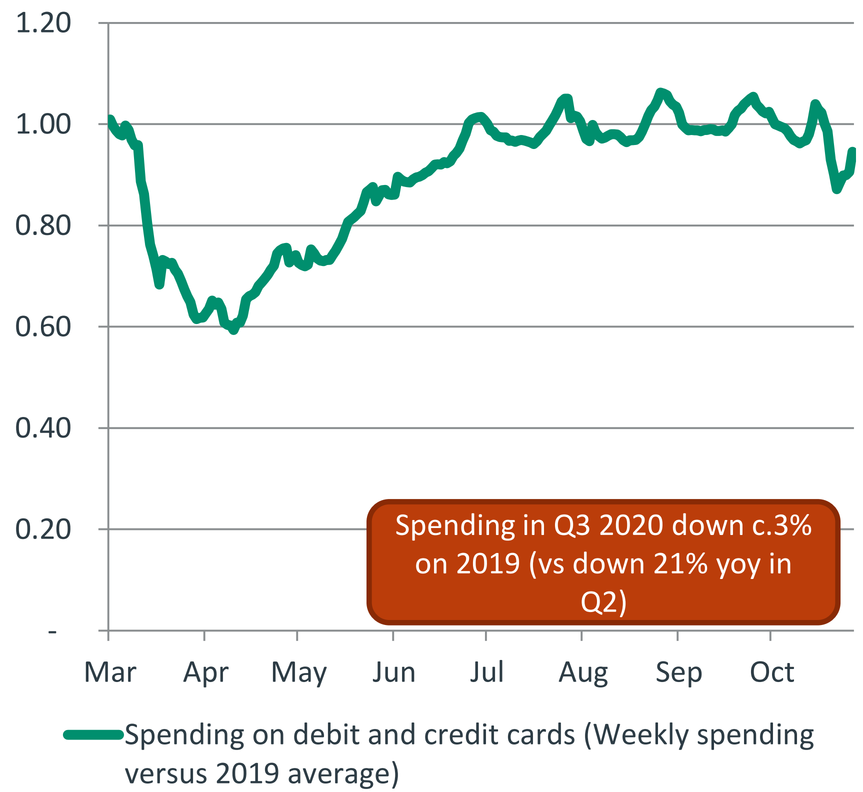
Source: Eurostat, ONS, CSO ; CBI, Eurostat; ECB NTMA calculations
Note: Gross Savings as calculated by the CSO has tended to be a volatile series in the past, some caution is warranted when interpreting this data

High frequency indicators suggest consumption rebounded in Q3

Retail sales rebounded on back of housing improvements; some sectors struggling



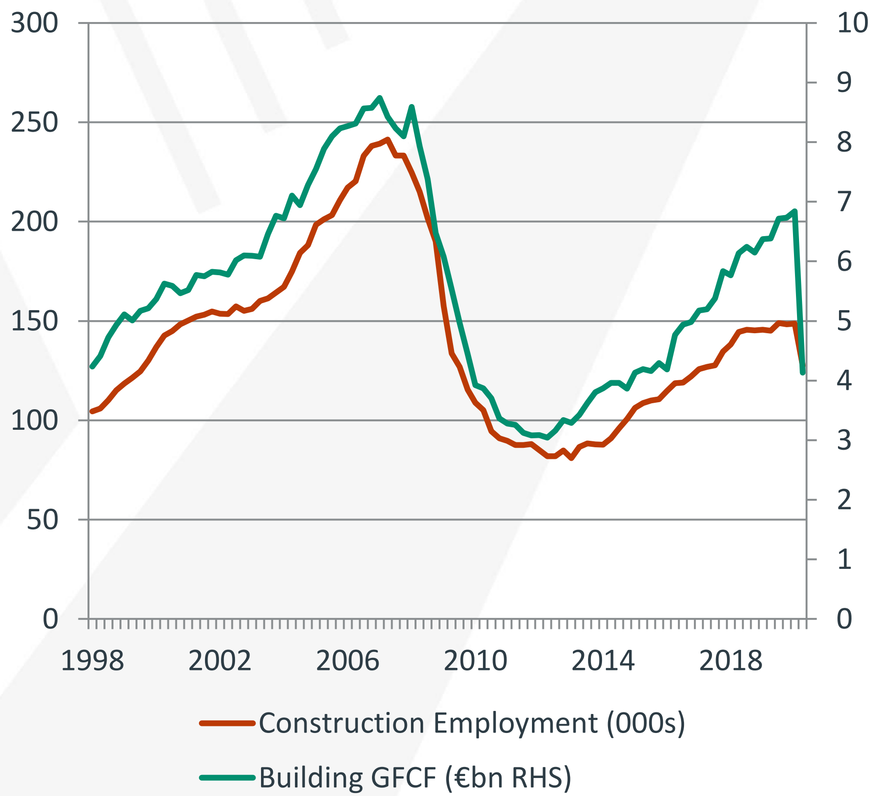
Card data shows Q3 consumption rebound; lockdown impacted October but not like Q2



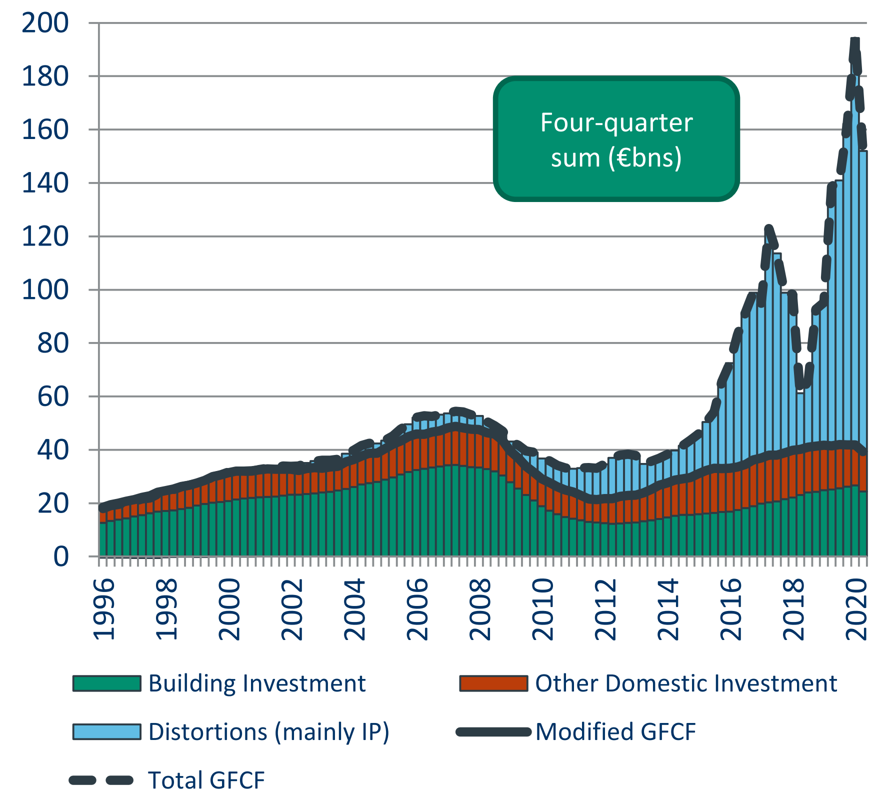
Source: CSO; CBI

Investment falls 28% as construction sector was shuttered for six weeks before restart in mid-May

Building and construction investment by 40% hit in Q2 but can rebound quickly



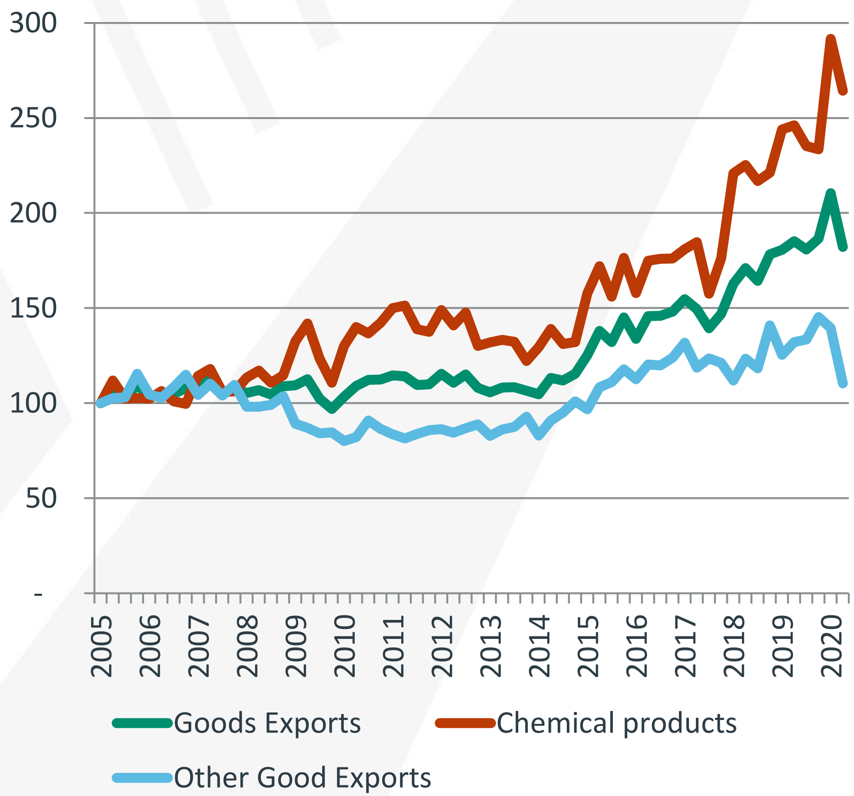
Another surge of IP into Ireland in 2019-2020 – helps ICT but distorts investment picture



Source: CSO; NTMA calculations

Exports have held up due to multinationals and tourism being a smaller sector for Irish economy

Goods exports were flat y-o-y in Q2 - chemical exports offset other products



Covid-19 tourism impact on CA (% of GDP) estimated as plus for Ireland unlike others

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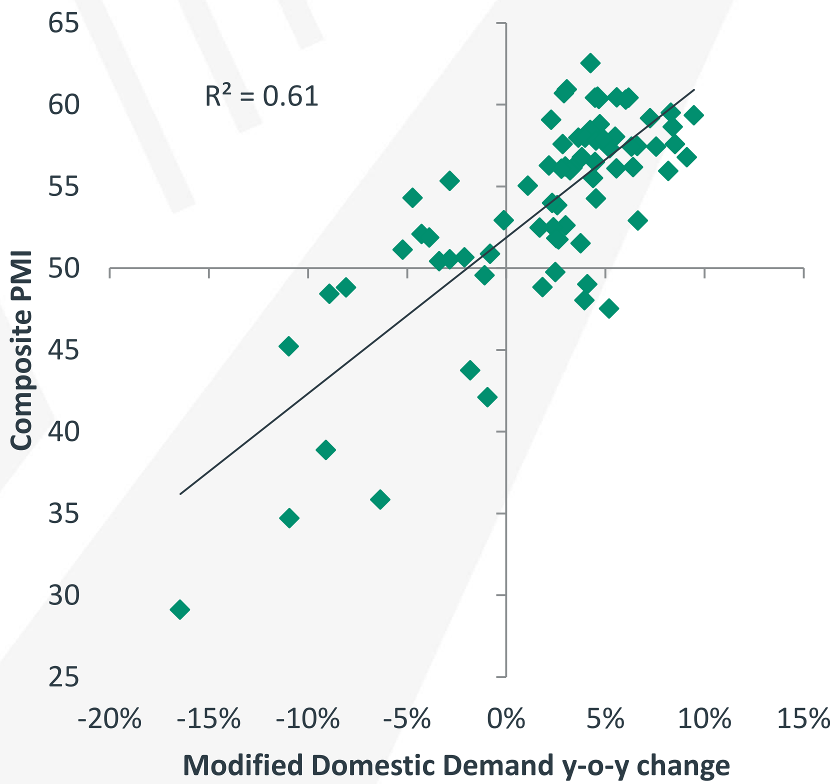
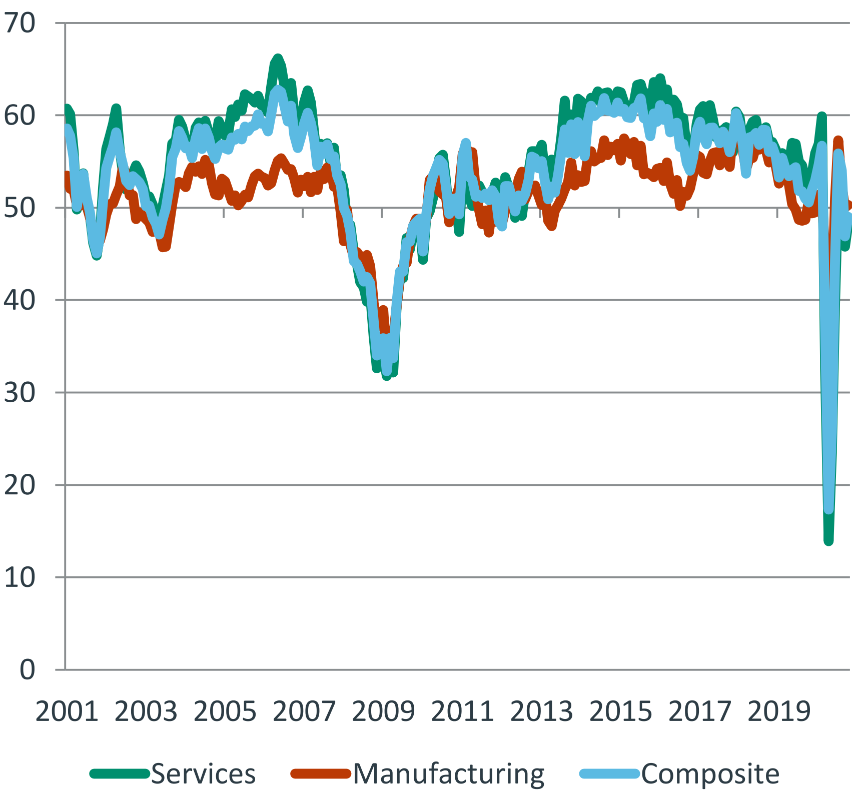
Source: CSO; IMF External Sector Report
Exports exclude contract manufacturing

PMI - All indicators rebounded over summer but have softened recently

Ireland's Composite PMI averaged 52.3 in Q3; projects rebound in MDD in Q3



All three PMIs dipped in September – Composite 49.0, Manu 50.3, Services 48.3

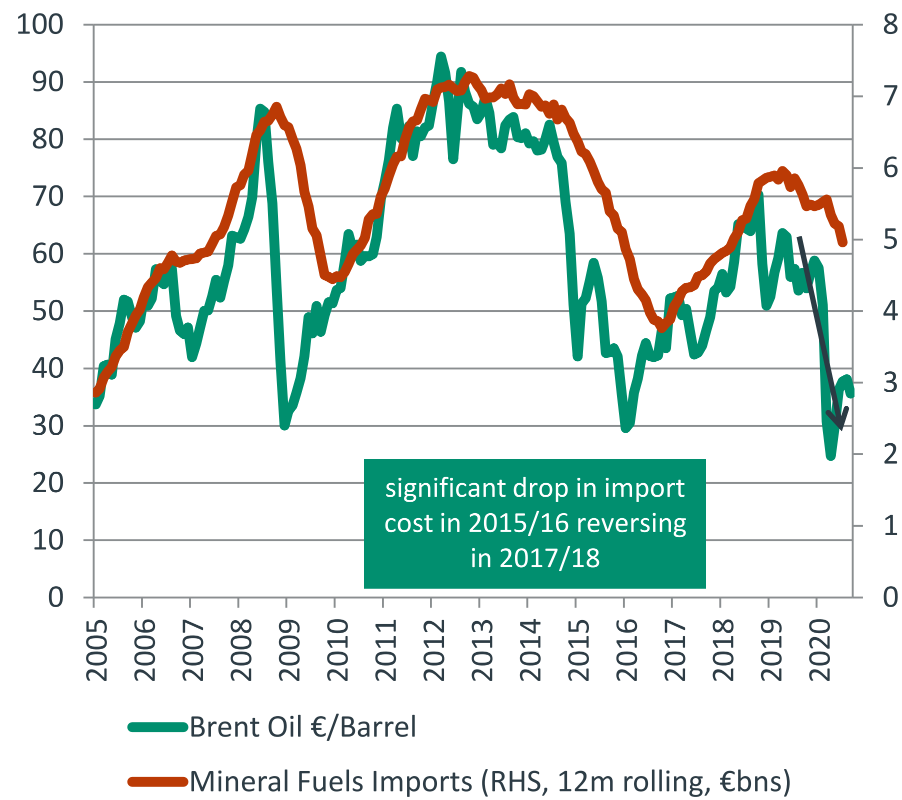


Source: Markit, NTMA analysis

External environment – monetary policy and oil positives will partially offset exogenous shock that Ireland faced

	2019	2020
EA Monetary Policy	Accommodative in Q4	Maximum accommodative
EU Fiscal Policy	Minimal	Expansionary
US Monetary Policy	Easing	Maximum accommodative
US growth	YC inversion, but still growing	Covid-19 shock
Oil price	Flat y-o-y	Significantly down despite rebound
UK growth	Brexit uncertainty headwind	Covid-19 shock; Brexit unresolved
Euro Growth	Sluggish	Covid-19 shock
Euro currency	No change y-o-y v. £; weaker v $	Strengthening vs. Dollar

Oil price drop might boost the economy by 0.5-1% of GNI*



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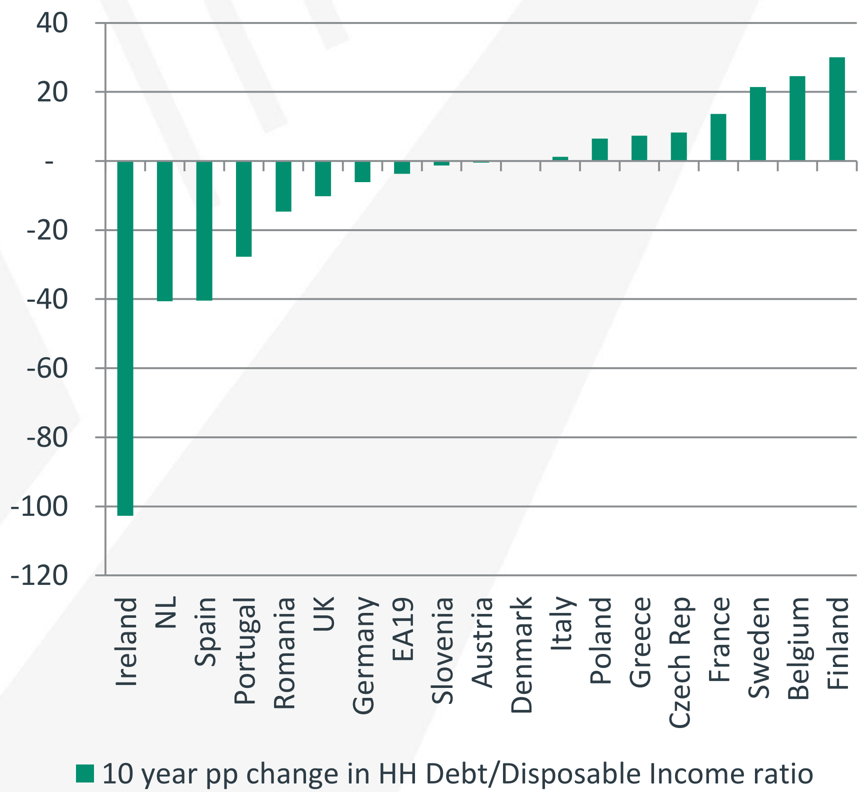
Source: NTMA analysis, DataStream, CSO

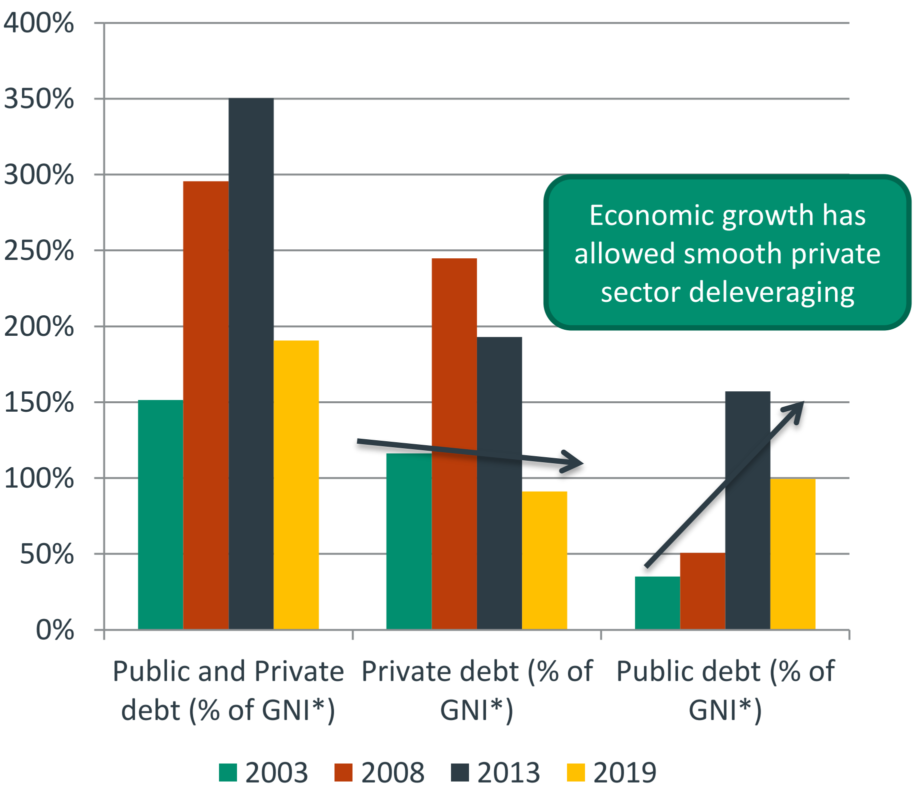
Ireland has used recovery period to repair private sector balance sheets – especially households

Household debt ratio has decreased due to deleveraging and increasing incomes



Source: Eurostat (2019 versus 2009)

Legacy of crisis is on the Government balance sheet not the private sector's



Source: CBI data, CSO

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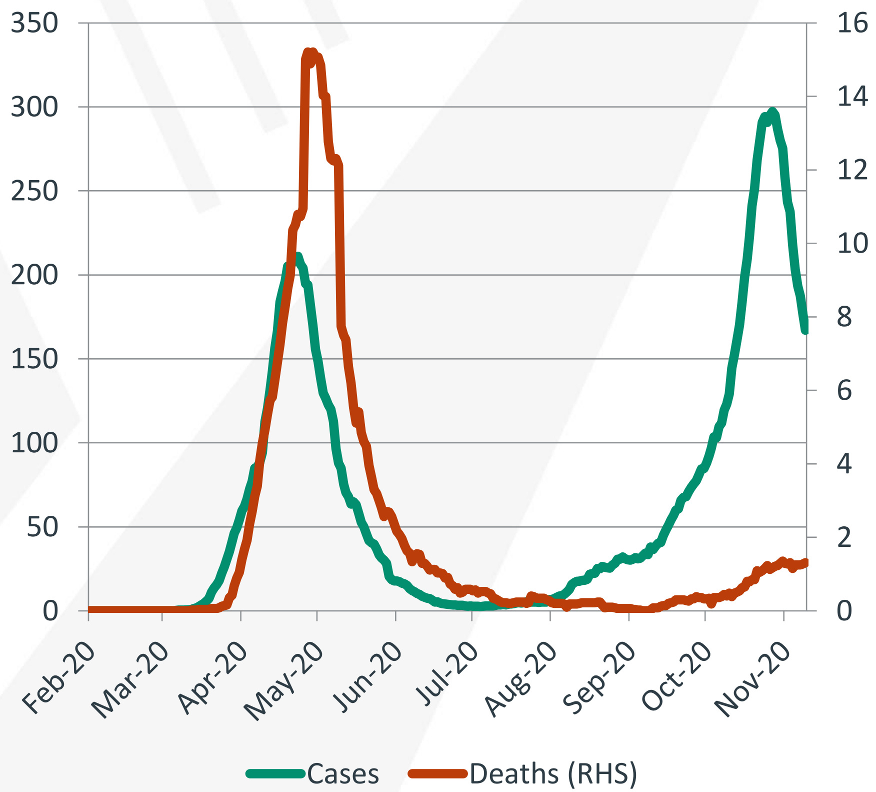
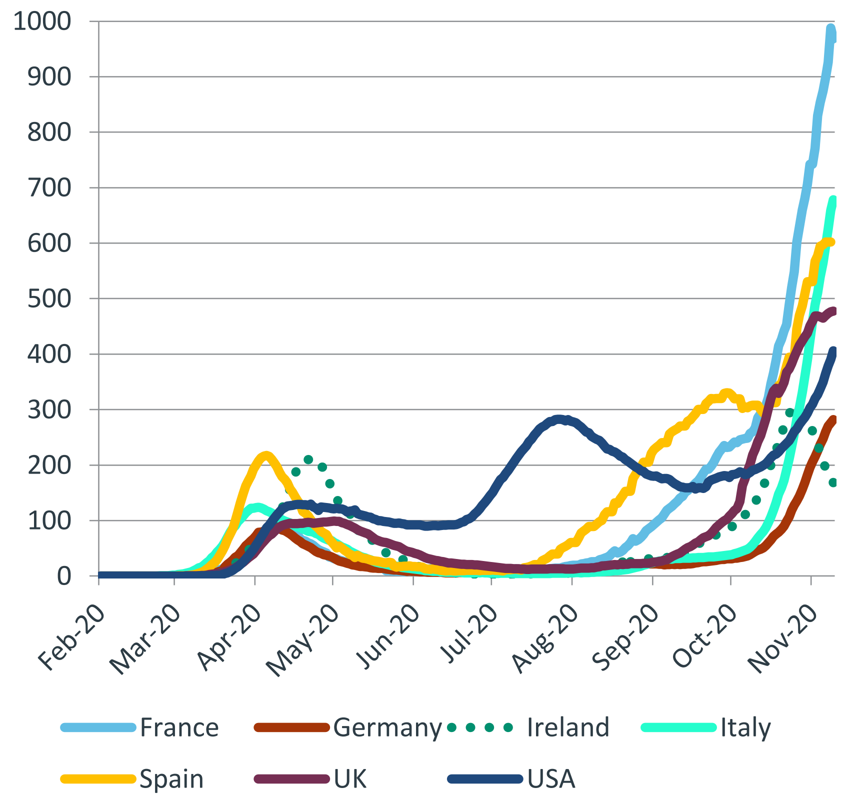
Note: Private debt includes household and Irish-resident enterprises (ex. financial intermediation) CBI quarterly financial accounts data used for household and CSO data for nominal government liabilities.

Thankfully, second wave of cases in Ireland has not led to same uptick in deaths; Cases in Ireland have fallen

14 day cumulative Covid-19 cases/deaths per 100k of population



Ireland have turned case trajectory in recent data (per 100k of population)



Source: ECDC

Section 2: Fiscal & NTMA funding

Ireland’s economic structure has meant revenues have held up despite Covid-19

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NTMA has funded €22.75bn of revised funding plan of €20-€24bn; NTMA expects to hit upper end of range

Flexibility

Ireland has large cash balances and a year free of maturing bonds in 2021

Funding will come from several sources. Bonds, Short Term paper and the Rainy Day Fund

10 years

One of the longest weighted average maturities in Europe

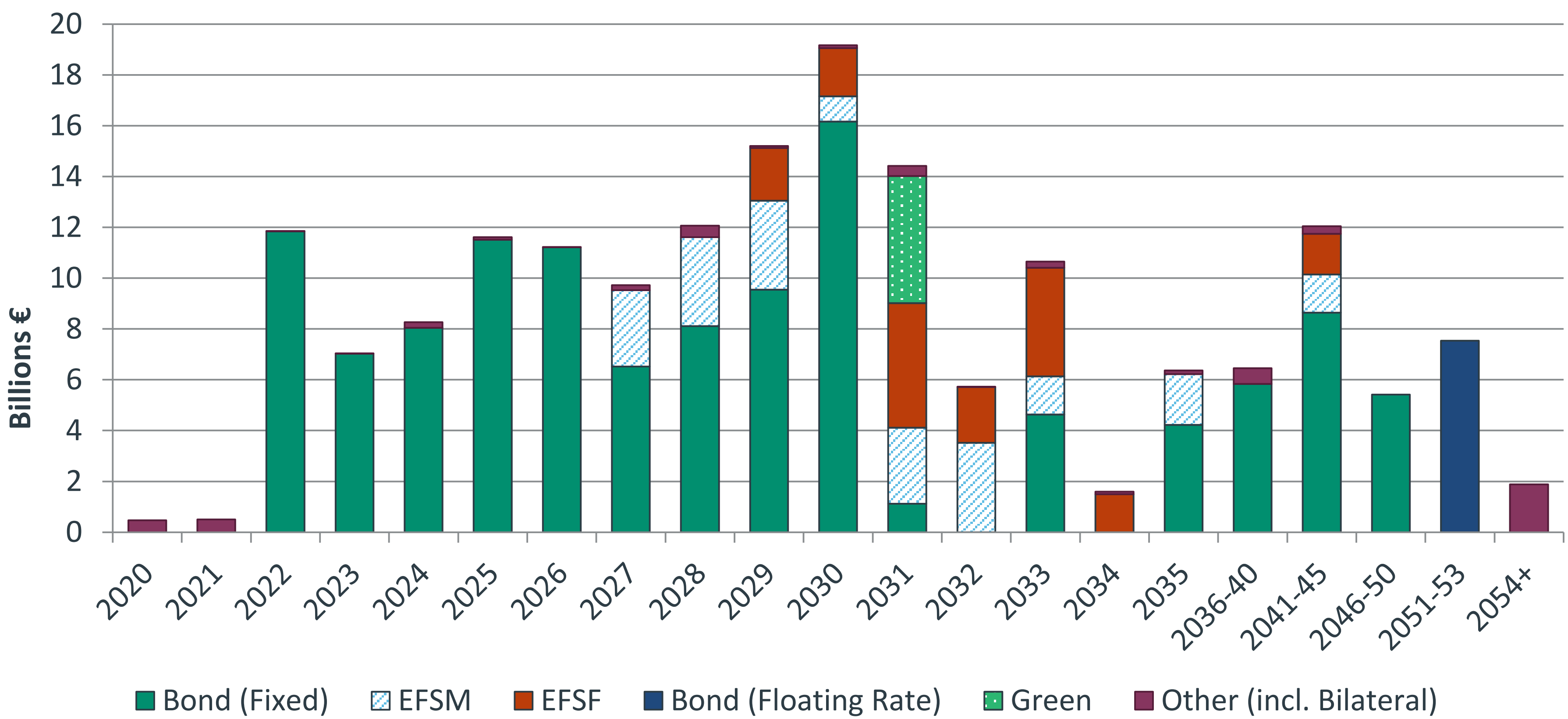
The ECB's QE enabled NTMA to extend debt maturities, reduce interest cost and repay the IMF. Now ECB is buying aggressively again with few limitations

AA-

Ireland has been affirmed in AA space by S&P

On relative basis, hit to Ireland may be less than other countries given multinationals, relatively smaller domestic share of economy and tourism

Flexibility helped by smoother maturity profile and no bond redemptions in 2021



Source: NTMA

Note: EFSM loans are subject to a 7-year extensions. It is not expected that Ireland will refinance any of its EFSM loans before 2027. As such we have placed the pre-2027 EFSM loan maturity dates in the 2027-32 range although these may be subject to change.

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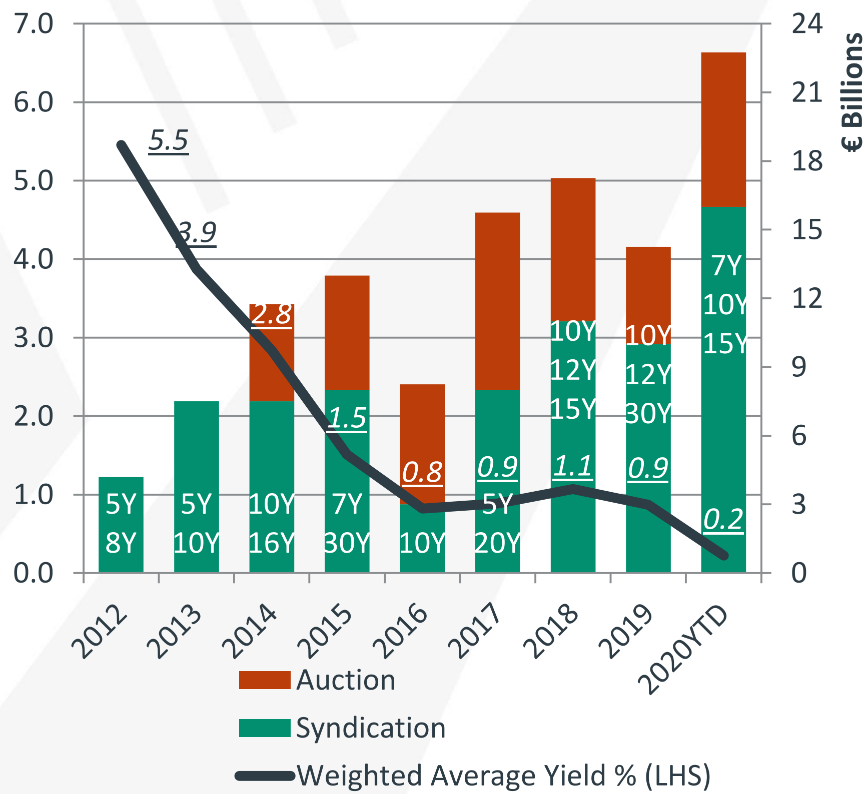
Near-term redemptions much lower than last four years; lower borrowing costs also provides NTMA with flexibility

NTMA issued €91.25bn MLT debt since 2015; 13.2 yr. weighted maturity; avg. rate 0.84%



Even with extra Covid-19 borrowings, NTMA might not match supply in 2015-19 period

Source: NTMA
Only showing marketable MLT debt (auctions and syndications). Other issuance such as inflation linked bonds, private placement and amortising bonds occurred but not shown.

The NTMA took advantage of QE to extend debt profile

Various operations have extended the maturity of Government debt …

…Ireland (in years) now compares favourably to other EU countries

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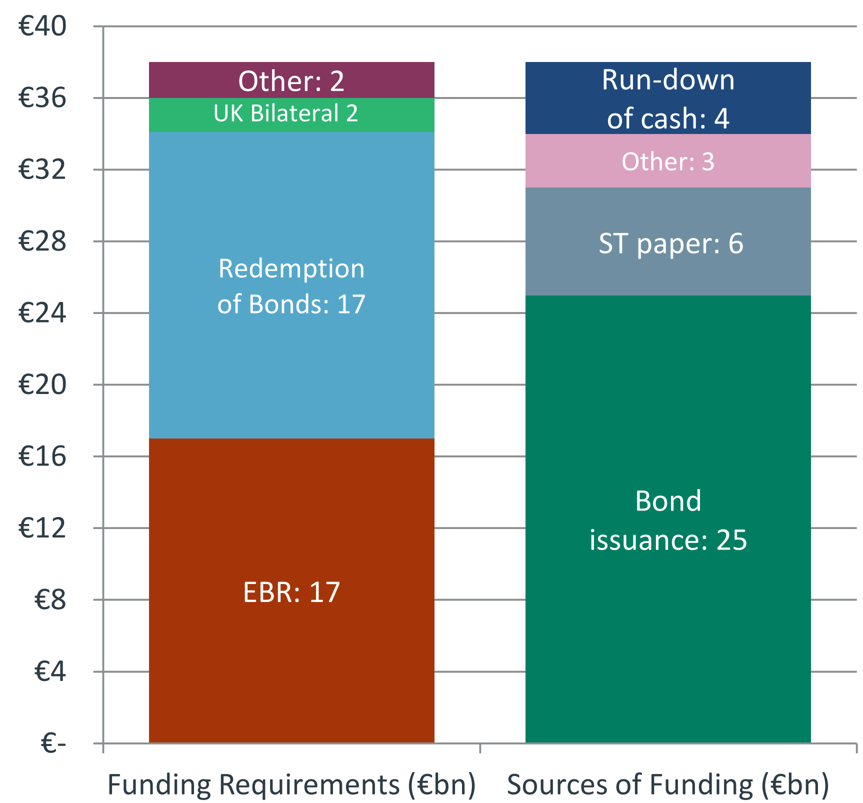
Source: NTMA; ECB

Note: Data excludes programme loans. Ireland's maturity including these loans is still similar

Various sources of funding will be used to meet Covid-19 borrowing requirements: cash balance and flexibility key

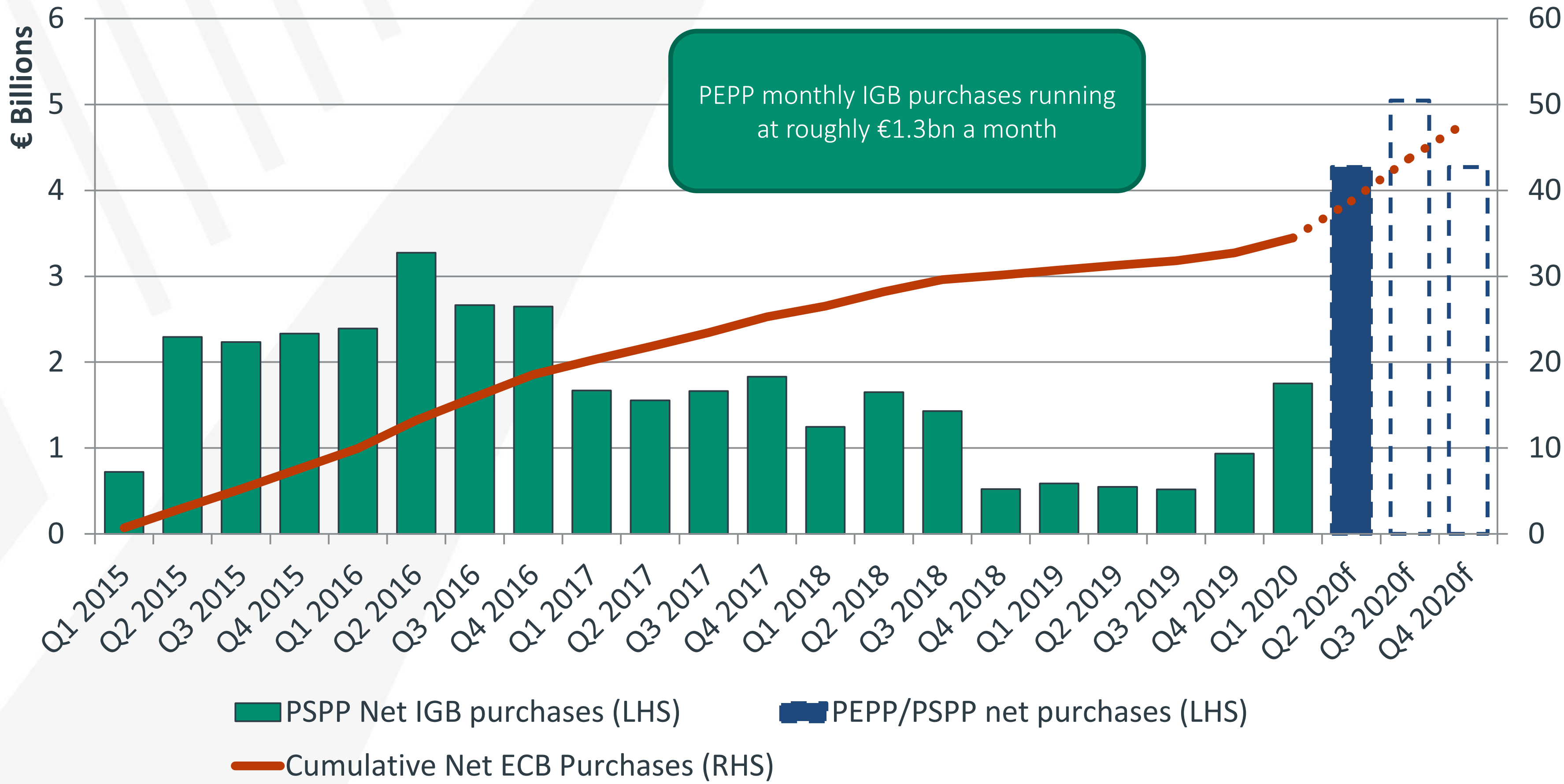
- Two bonds matured in 2020: the first matured in April and the second matured in mid-October.
- Four of the remaining five tranches of the UK bilateral loan mature in 2020.
- The Exchequer Borrowing Requirement (EBR) has been revised to €16.7bn.
- Cash balances will be run down to meet part of the 2020 funding requirement.
- Short term paper will also be an important funding source – one Ireland has not tapped much in recent years.



Source: NTMA

Notes:
Other funding requirement: Includes FRN purchases
Bond issuance: In July the NTMA advised that it would issue to the top end of the revised €20-€24bn funding range announced in April. The figure in this chart - while consistent with that volume of nominal issuance - shows the cash proceeds of syndications & auctions, including non-competitive auctions. It also reflects one further auction, in November.
ST paper: Forecast net growth in short-term paper.
Other funding sources: Includes retail (State Savings), private placements and EIB loan drawdowns.

In addition to PSPP, ECB's PEPP with its flexibility (no limits) & size (€1.35trn) will underpin Irish bond market



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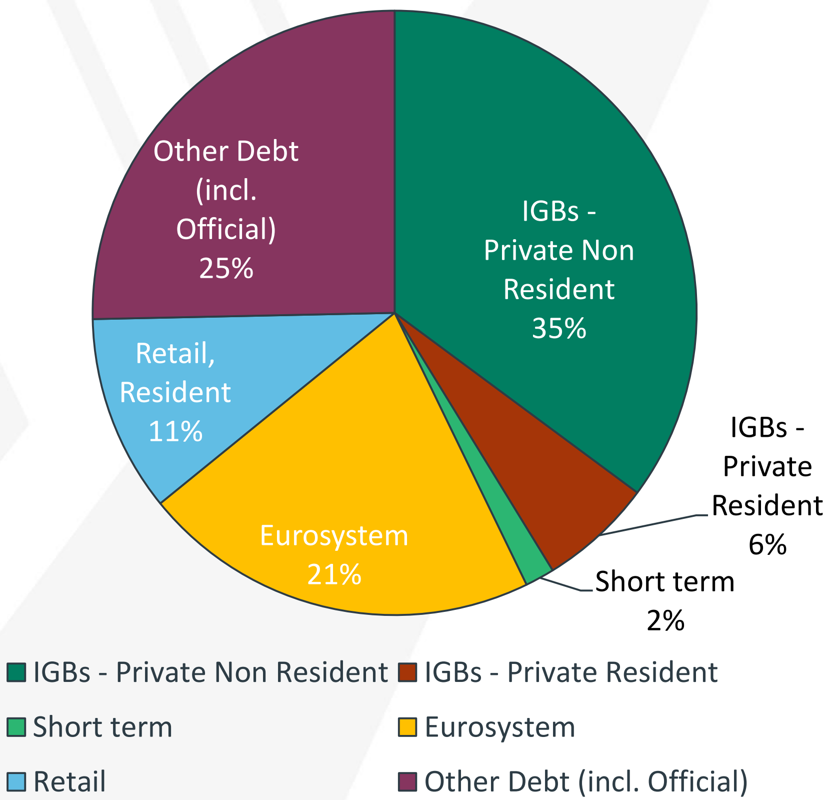
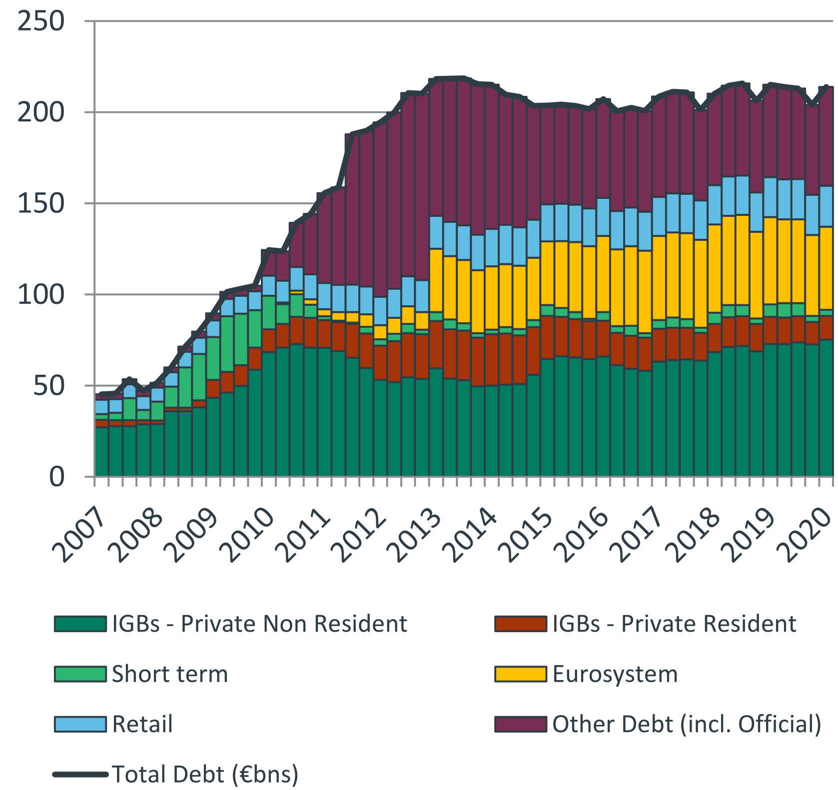
Source: ECB, NTMA Calculations
Notes:
Forecasts sees Ireland's capital key of 1.69% and assumes 90% of new purchases will be for public sector assets with 7% of public sectors assets being supranational issuers.

Diverse holders of Irish debt – sticky sources account for over 50%; will increase further with Eurosystem's PEPP

Ireland roughly split 80/20 on non-resident versus resident holdings (Q1 2020)



"Sticky" sources - official loans, Eurosystem, retail - make up over 50% of Irish debt



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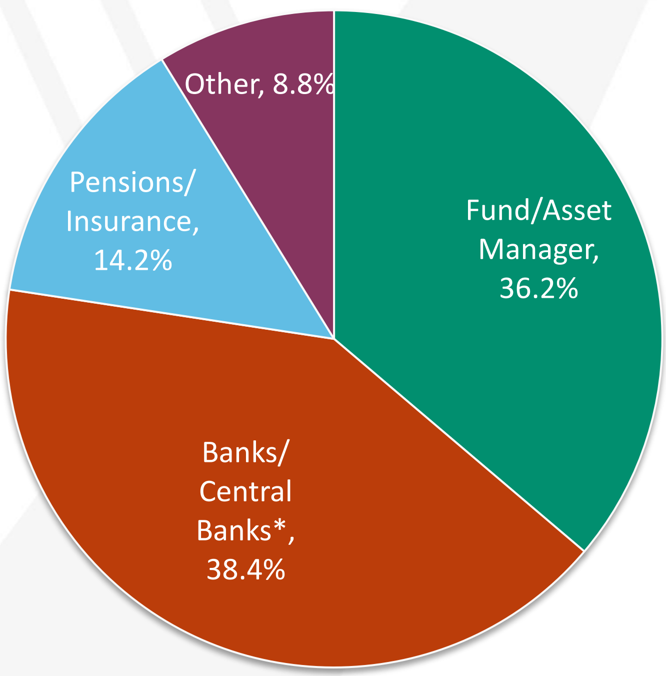
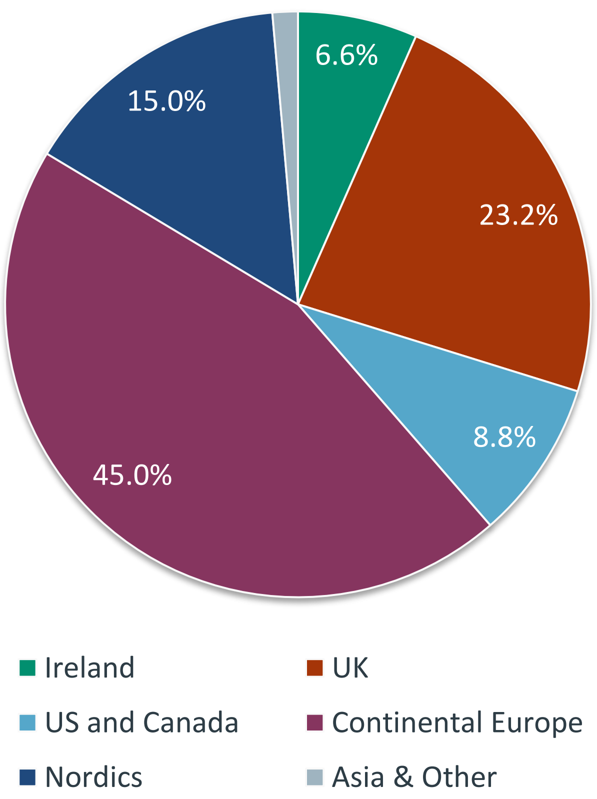
Source: CSO, Eurostat, CBI, ECB, NTMA Analysis
IGBs excludes those held by Eurosystem. Eurosystem holdings include SMP, PSPP and CBI holdings of FRNs. Figures do not include ANFA. Other debt Includes IMF, EFSF, EFSM, Bilateral as well as IBRC-related liabilities. Retail includes State Savings and other currency and deposits. The CSO series has been altered to exclude the impact of IBRC on the data.

Investor base for Government bonds is wide and varied

Investor breakdown: Average over last five syndications



Country 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*

Ireland rated in "AA" category by Standard & Poor's

Rating Agency	Long-term	Short-term	Outlook/Trend	Date of last change
Standard & Poor's	AA-	A-1+	Stable	Nov 2019
Fitch Ratings	A+	F1+	Stable	Dec 2017
Moody's	A2	P-1	Stable	Sept 2017
DBRS Morningstar	A(high)	R-1 (middle)	Stable	May 2020
R&I	A	a-1	Stable	Jan. 2017

Source: NTMA

Fiscal Policy response has been swift in 2020

Response

Total fiscal response of €42bn over 2020 and 2021 (21% of GNI*) is large and needed

Ireland has responded to Covid with first attempt at counter-cyclical fiscal policy in its 100 year history

Revenues

Ireland's economic structure has meant revenues have held up despite Covid-19

Strength of both Corporate and Income tax revenues from Multinational sectors has helped sustain government coffers

Debt

Debt ratios will reverse due to Covid.

Gross Government debt 57% of GDP at end-2019 but close to 95% of GNI*. Ireland will give back some hard won gains in the short term

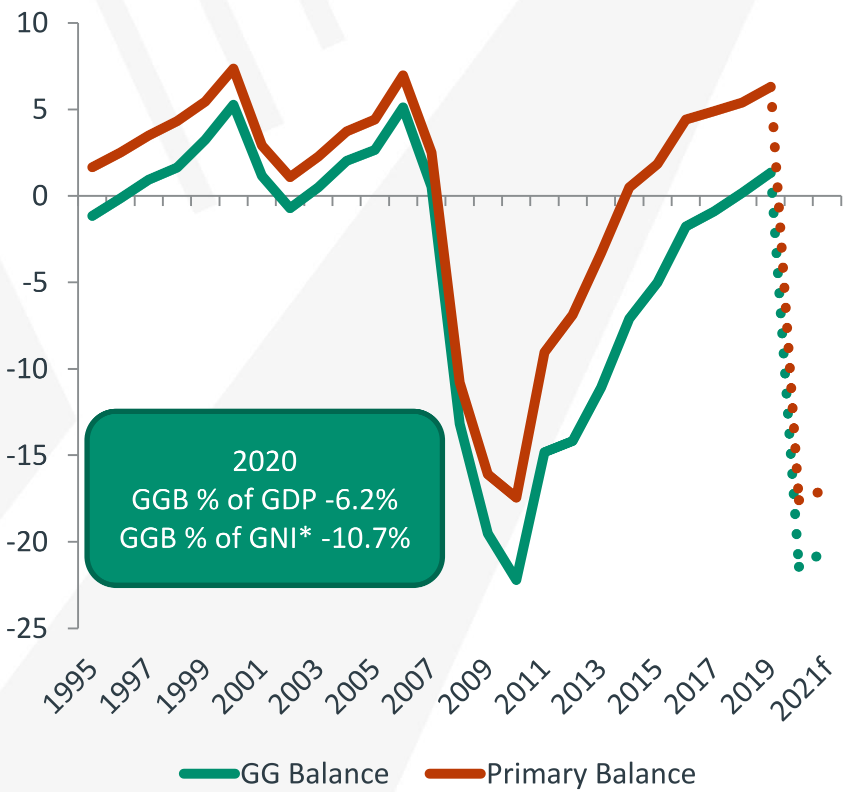
Total fiscal response of €42bn over 2020 and 2021 (20% of GNI*) is large and needed

	€bn	2020	2021	% GNI*	Description
Taxation Measures	**3.2**	**2.9**	**0.3**	**1.6**	
• Warehousing/Deferrals	2.0	2.0	0.0	1.0	Corporate Tax, VAT, Stamp duty tax deferrals
• Other	1.2	0.9	0.3	0.6	Temporary VAT decrease; hospitality VAT decrease
Expenditure Measures	**35.0**	**17.6**	**17.4**	**17.3**	
• Social Protection (income supports)	15.4	11.4	4.0	7.6	PUP/TWSS extended into 2021; TWSS transforming into EWSS
• Health	5.8	2.0	3.8	2.9	Covid-19 capacity expenditure
• Other Covid Supports	2.9	1.6	1.3	1.4	Business supports, Commercial Rates waivers, Grants, Education, Arts, Tourism and Transport
• Capital Expenditure	2.1	0.5	1.6	1.0	Capital works accelerated; social housing
• Other	8.9	2.2	6.7	4.4	Help-to-Buy, other grants and aids, Recovery Fund, Covid/Brexit contingency response
Total Direct Supports	**38.2**	**20.5**	**17.7**	**19.8**	
Indirect supports	4.0	4.0	0.0	2.0	Credit Guarantee Scheme, Pandemic Stabilisation and Recovery Fund
Total Supports	**42.3**	**24.5**	**17.7**	**20.8**	

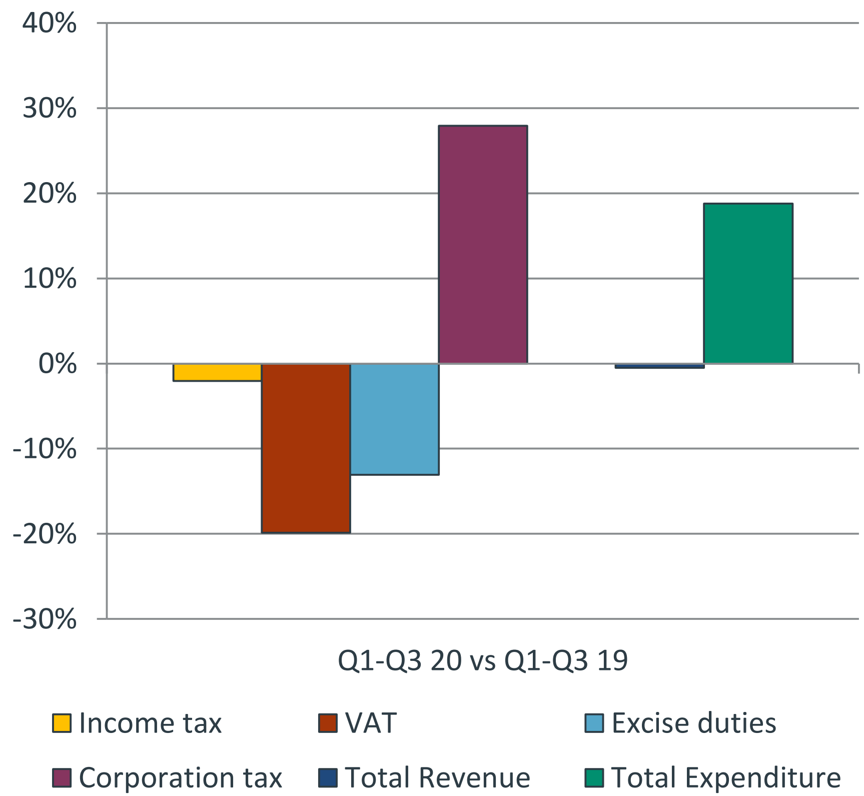
Source: Department of Finance, NTMA Analysis

Fiscal discipline in evidence in last decade – after Covid-19 stimulus ends Ireland plans to narrow its deficit again

Gen. Govt. Balance (€bn) will be in significant deficit in 2020/21



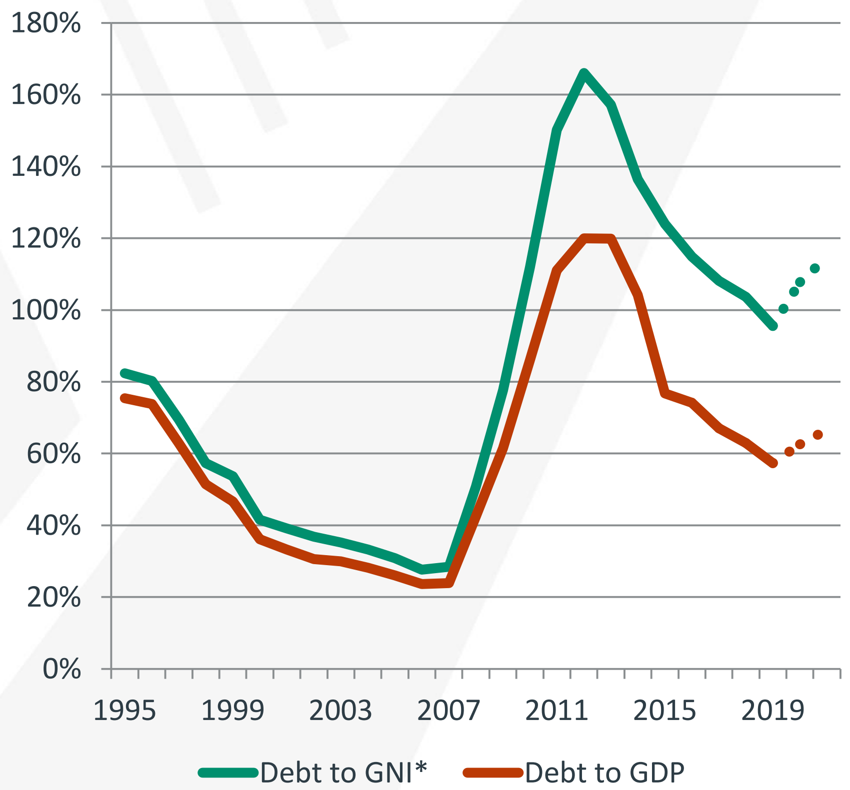
Revenues holding up despite pandemic; expenditure is increasing (Central Govt.)



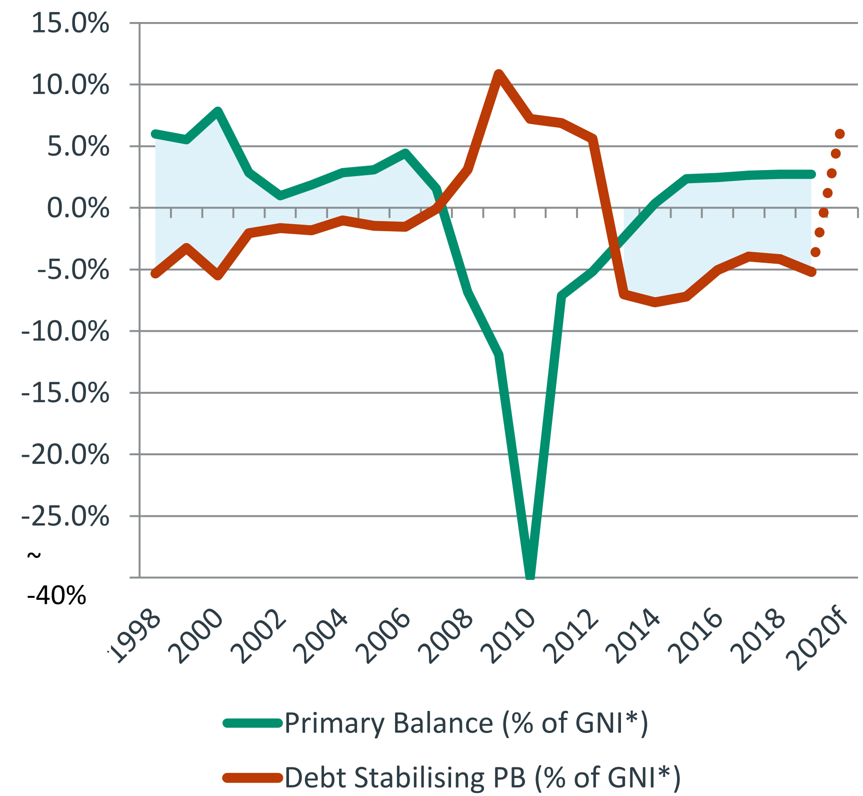
Source: CSO; Department of Finance

Gross Government debt 57% of GDP at end-2019 but close to 95% of GNI*; will give back some gains in the short term

Debt-to-GNI* had dropped since last crisis; could increase 20pp in coming years



No country will be running primary surplus necessary to keep debt ratio in check



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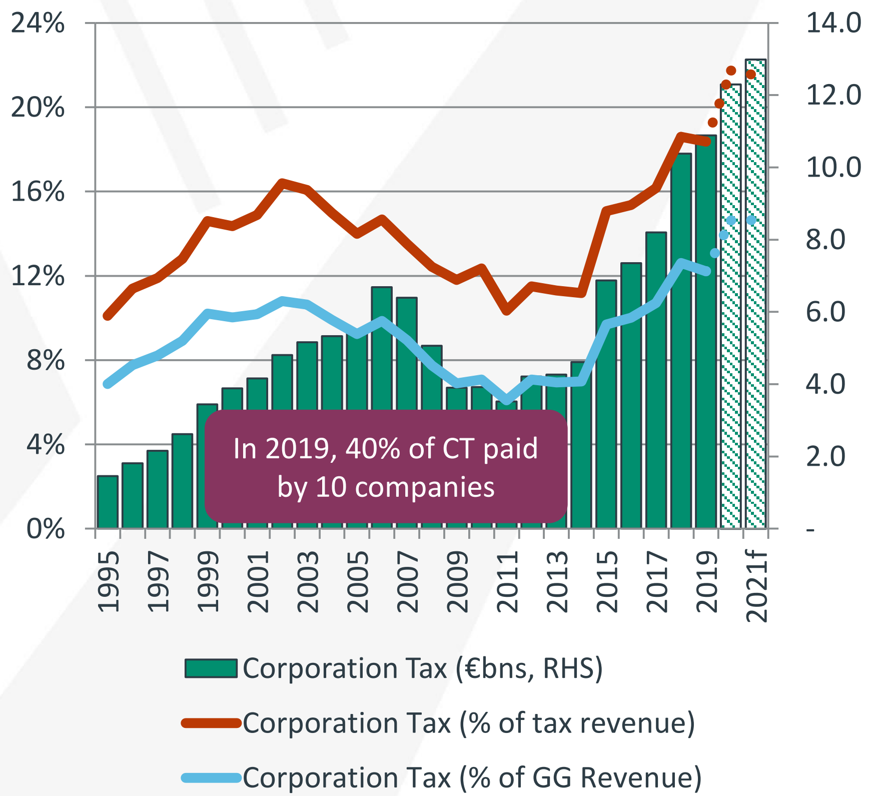
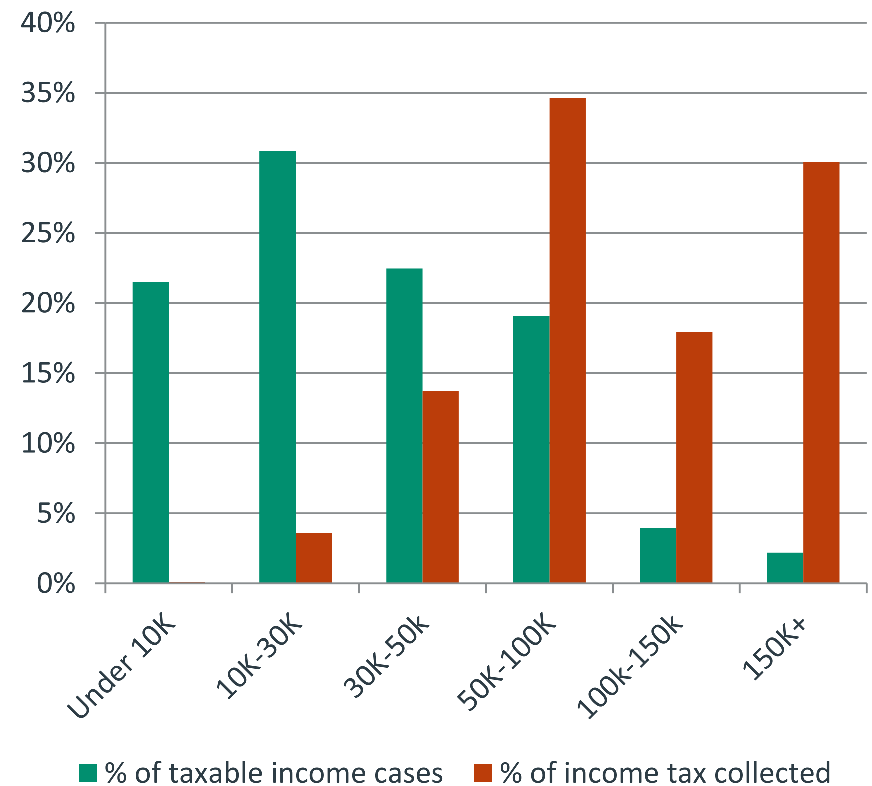
Source: CSO; Department of Finance, NTMA analysis

CT revenue cushioned by 2019 payments and defensive nature of Pharma and ICT; income tax protected also

Corporation tax (CT) receipts continue to rise – have nearly tripled in 6 years



Progressiveness of income tax system and sector mix limits hit to overall receipts

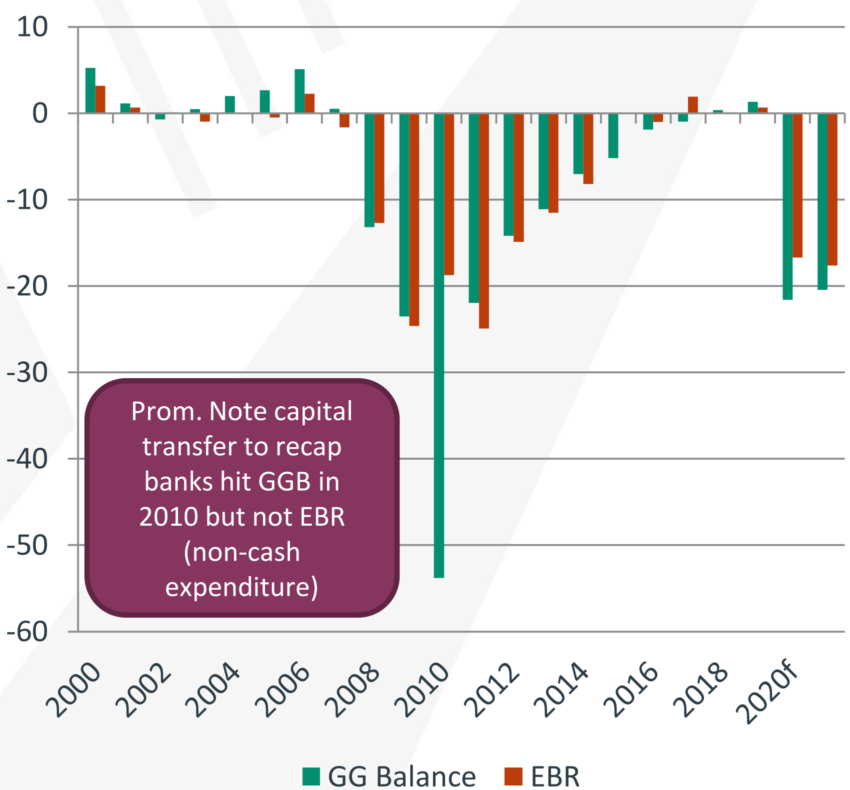


Source: Department of Finance, Revenue, NTMA analysis

Note: Most affected sectors include construction, wholesale and retail trade, transport, accommodation and food service activities, real estate activities, professional, scientific and technical activities; administrative and support service activities, arts, entertainment and recreation

NTMA's job is to finance the cash deficit (EBR) but it's best to use accruals-based GGB for comparison to peers

EBR and GGB (€bns) usually minor – gap is larger currently



Methodological Differences	EBR	GGB
Accounting basis	Cash (exchequer)	Accrual
Financial transactions	Included	Excluded
Scope	Subset of Central Govt.	Includes all of Central & Local
Intra-Government Consolidation	No	Yes

	2020	2021		Comments
EBR	**-16.7**	**-17.6**		This is the deficit in cash terms that the NTMA must finance each year
Adjust for Accruals	3.1	0.4		Accruals can relate to interest, taxes, other expenditures
Exclude Equity & Loan Transactions	-4.6	-1.5		Transactions between the Exchequer and NAMA, CBI and other govt. entities: **this benefits funding req.**
Social Insurance Fund	-2.2	-0.6		Archaic funding structure of social insurance in Ireland is outside Exchequer. Consolidated in GGB
Semi State, ISIF, other funds	-0.2	-0.2		Dividends and profits from government entities
Local Govt.	-1.0	-0.9		Local governments fund themselves
GGB	-21.6	-20.5		Most complete metric for fiscal position. Use this for deficit comparison with other nations

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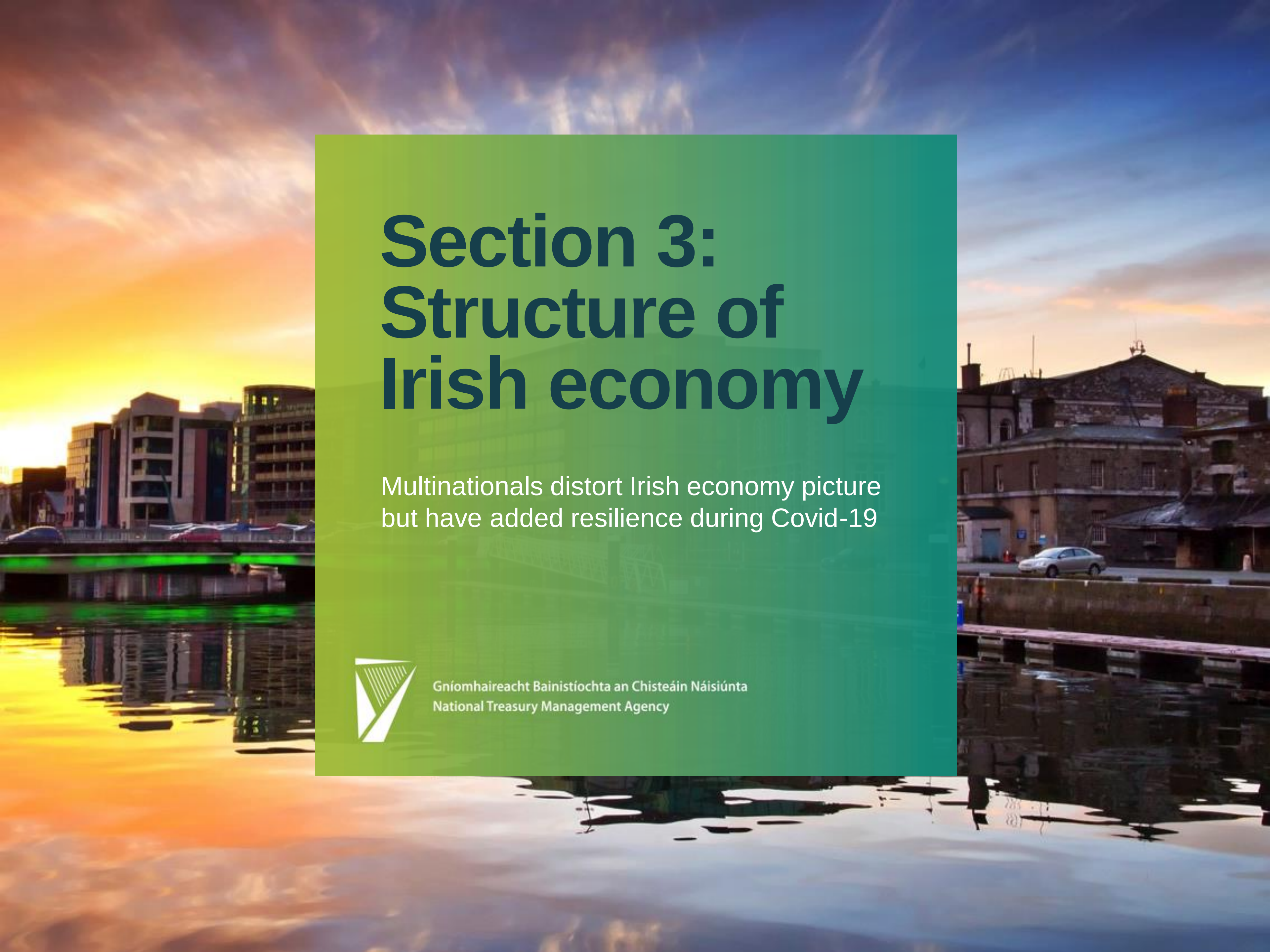
Source: CSO, Department of Finance, NTMA analysis

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

	GG debt to GG revenue %	GG interest to GG rev %	GG debt to GDP %
Greece	370.0%	6.2%	176.6%
Italy	286.4%	7.2%	134.8%
Portugal	274.7%	7.0%	117.7%
Spain	244.2%	5.8%	95.5%
Cyprus	231.6%	6.1%	95.5%
Ireland	***229.1%***	***5.0%***	***58.8%***
UK	227.3%	5.6%	85.4%
Belgium	196.1%	3.9%	98.6%
France	186.7%	2.7%	98.1%
EA19	181.0%	3.5%	84.1%
EU28	176.1%	3.7%	79.3%
Austria	143.7%	2.9%	70.4%
Germany	127.6%	1.7%	59.8%
Finland	113.2%	1.6%	59.4%
Netherlands	111.2%	1.8%	48.6%

Source: Eurostat
Ireland 95% Debt to GNI ratio in 2019*



Section 3: Structure of Irish economy

Multinationals distort Irish economy picture
but have added resilience during Covid-19

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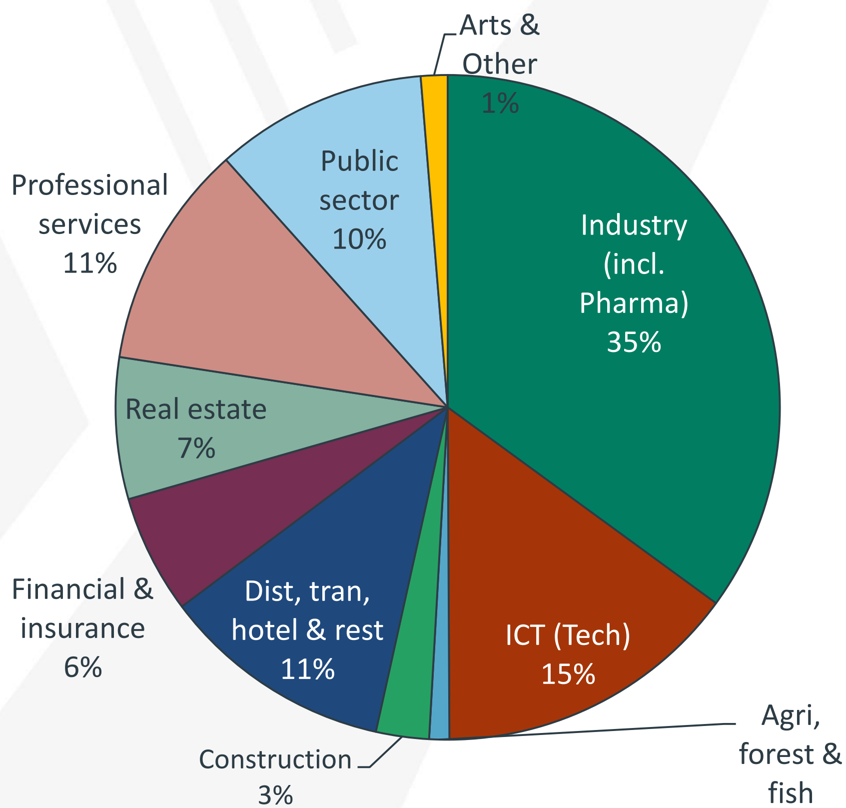
National Treasury Management Agency

Multinational activity has distorted Ireland's data; notwithstanding those issues, MNCs have real impact

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



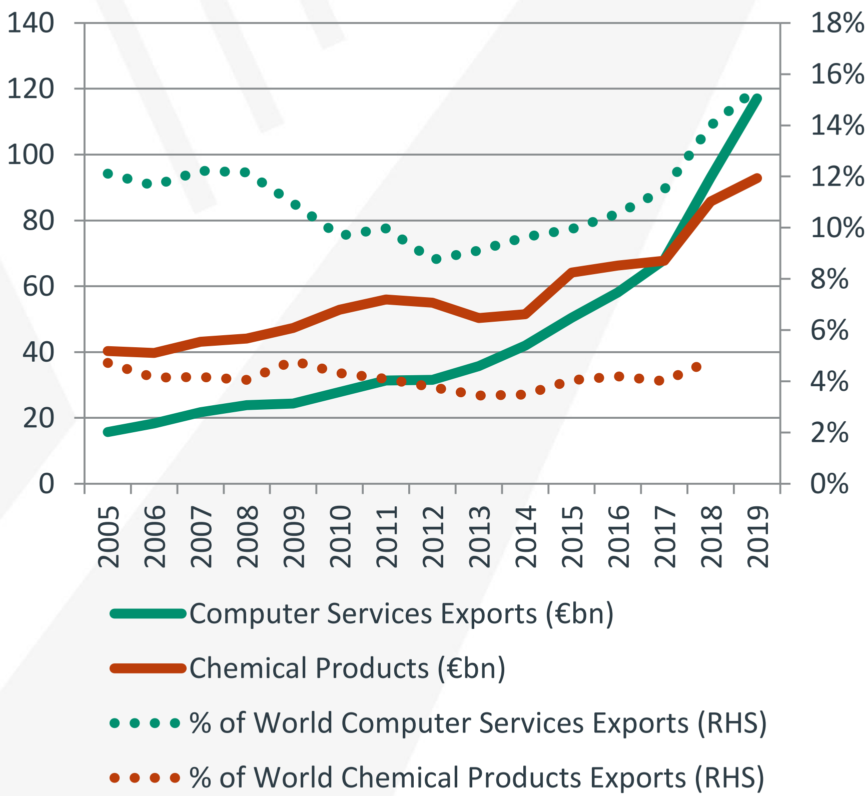
Domestic side of economy adds jobs; MNCs add GVA/high wages

	Share of Employment	Share of Wage Bill (2019)	Share of GVA (2019)	Gross Weekly Earnings € (Q4 2019)
Agriculture	4.5%	1%	1%	N/A
Industry (incl. Pharma.)	**12.2%**	**14%**	**35%**	**916**
Construction	6.2%	4%	3%	821
Dist., Tran, Hotel & Rest	25.4%	20%	11%	571
ICT (Tech)	**5.4%**	**8%**	**15%**	**1,241**
Financial	4.5%	8%	6%	1,235
Real Estate	0.4%	1%	7%	730
Professional	10.8%	13%	11%	810
Public Sector	25.6%	28%	10%	836
Arts & Other	5%	2%	1%	514

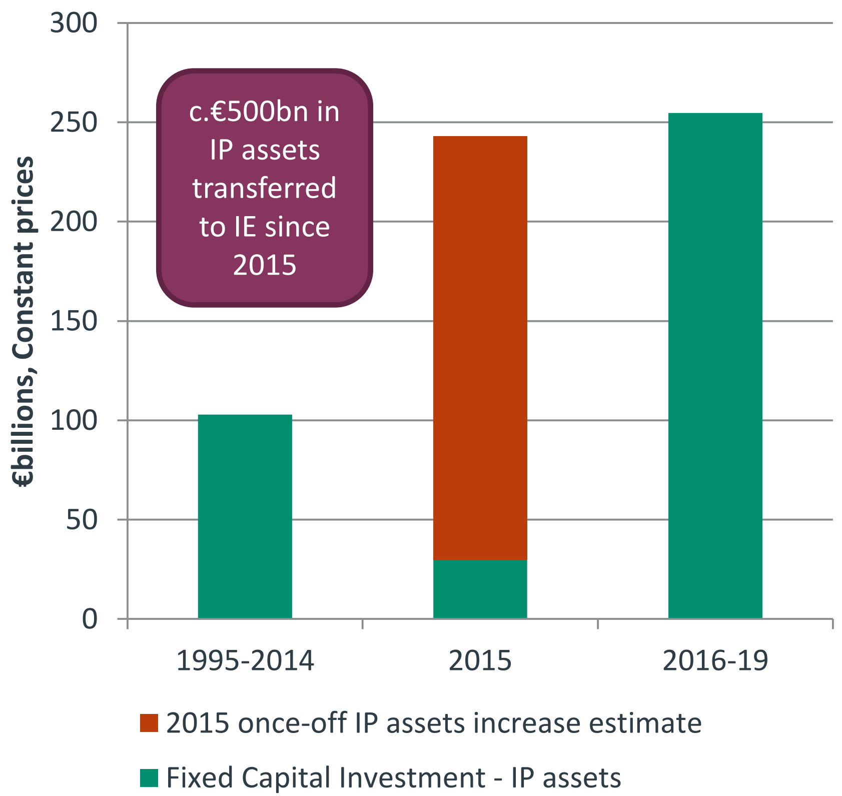
Source: CSO

Sizeable inflows of intellectual property into Ireland by tech. & pharma. in recent years: exports & jobs created

Ireland is a leader in Computer Services; Exports have trebled since 2014



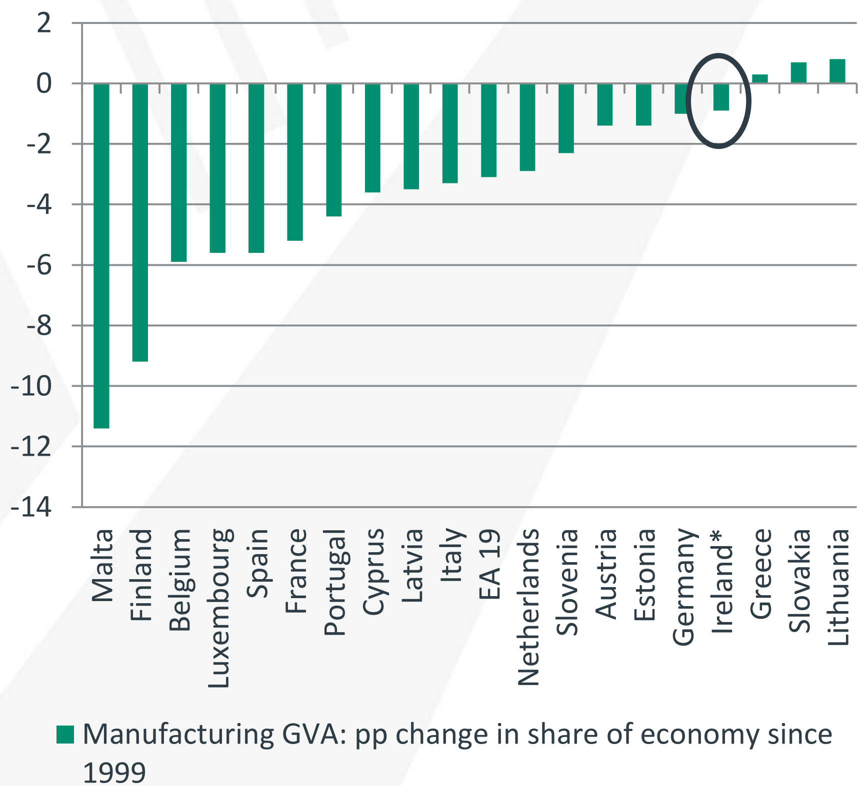
Enormous inflows of IP assets into Ireland since 2015 on the back of BEPS reforms



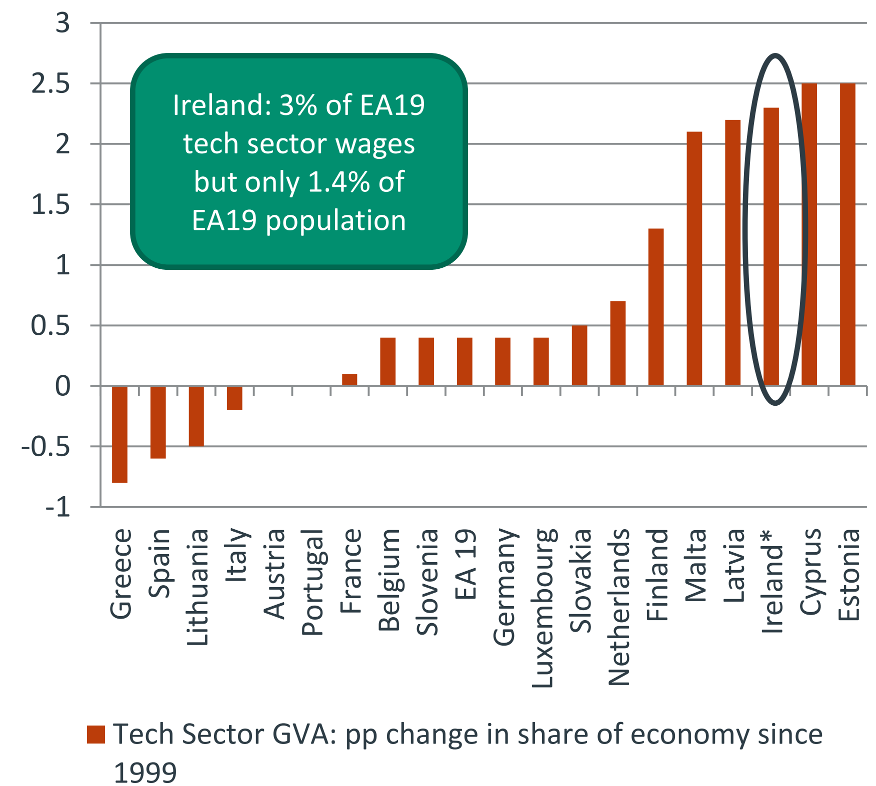
Source: IMF, UN Comtrade, CSO, NTMA Economics Calculations

Ireland has deftly navigated the changing global economy landscape in this century (adjusted GVA for Ireland)

Euro Area manufacturing base hollowed out over time: Ireland less impacted than most



The digitalisation of the economy: Ireland able to grow its tech sector in recent years



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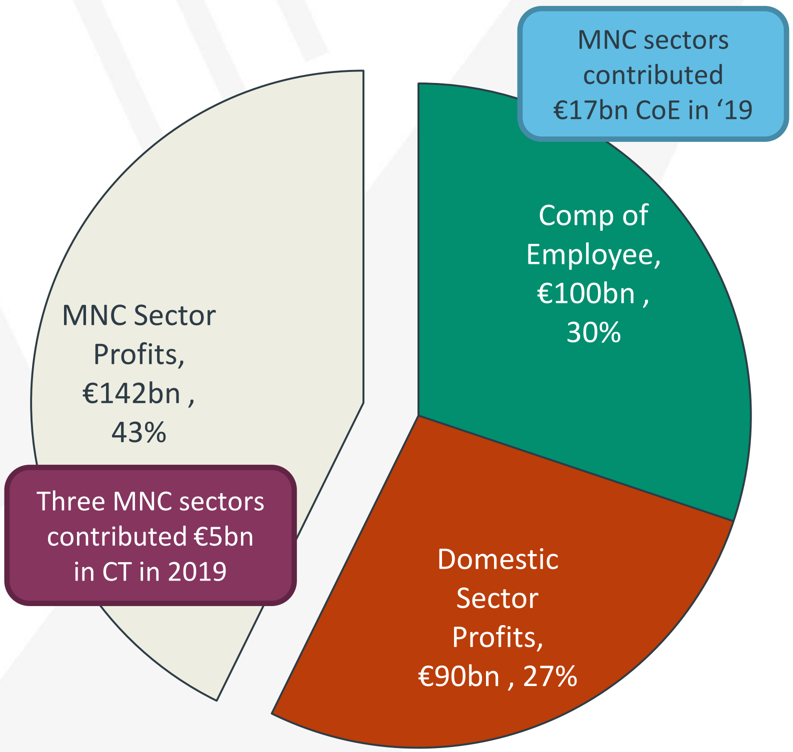
Source: Eurostat, NTMA calculations

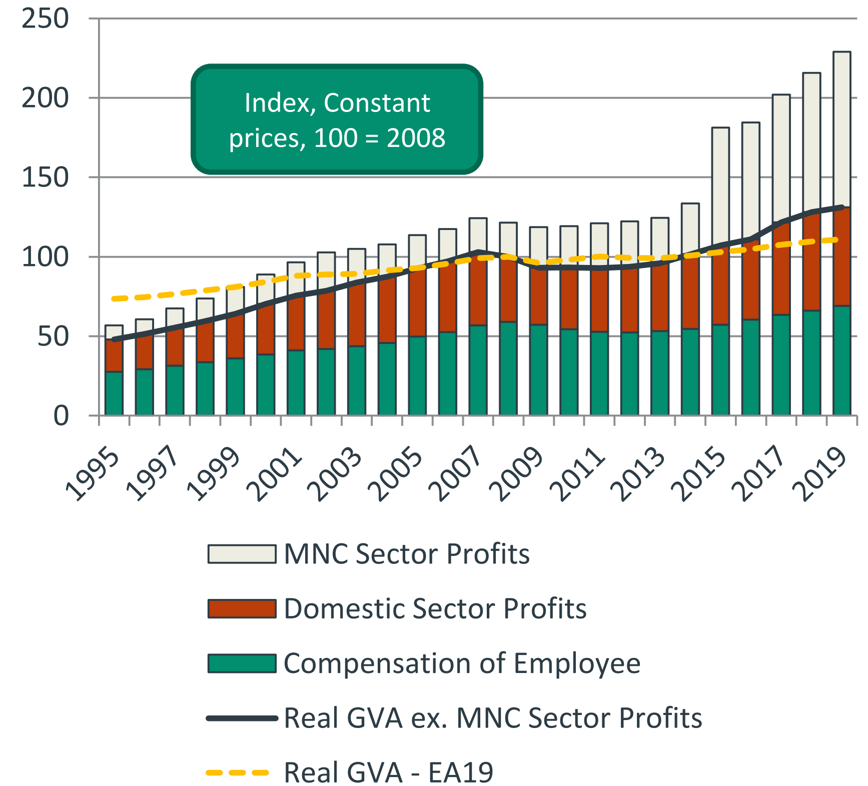
** Ireland's GVA data has been adjusted to strip out the distortionary effects of some of the multinational activity that occurs in Ireland. Specifically a profit proxy is removed from the GVA data for the sectors in which MNCs dominate (parts of Manufacturing, ICT, and renting and leasing services). Unadjusted Ireland's figures are +7.1pp (manufacturing) and +6.5pp (tech sector).*

Adjusting for MNC profits, underlying economy was robust pre-Covid: MNCs add real substance to IE economy

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



Pre-Covid, Ireland had a robust underlying economy; compared favourably to EA



Source: CSO, NTMA calculations (Nominal 2019 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 (MNC sectors = part of Manufacturing, ICT, and renting and leasing services).

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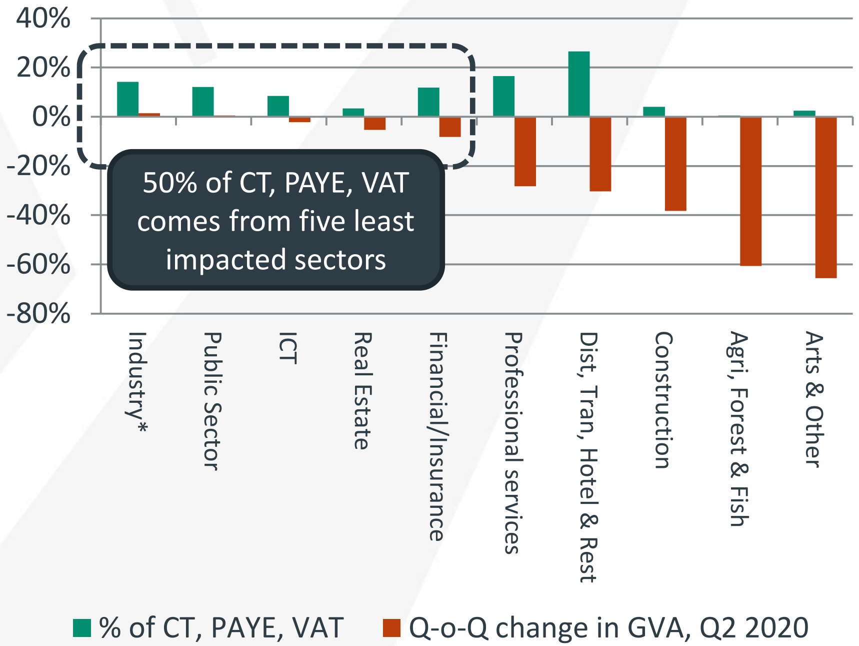
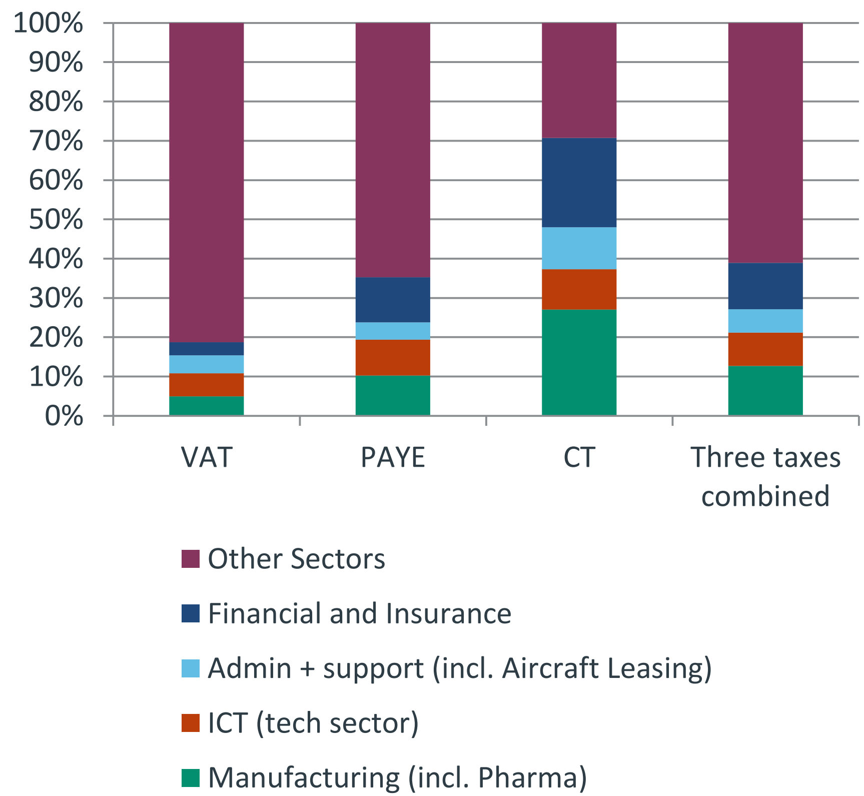
The result of such high value MNC activity in Ireland: Ireland less impacted by Covid - in particular the tax base

GDP overstates Ireland's progress but is still a good barometer for Revenue, in particular CT and IT

Elasticity	GG Revenue	Income Tax	Corporate Tax	Revenue Ex. CT
MDD	0.96	0.93	2.26	0.86
GDP	1.08	1.03	1.33	1.05



Multinational sectors critical for Income tax and Corporation tax: proven true in 2020



Source: CSO, Revenue, NTMA Calculations
Elasticity based on 1995-2019 data.
E = (annual % change in tax)/(annual % change in growth variable)

OECD’s BEPS 2.0 process could impact the business tax landscape globally – agreement delayed to at least 2021

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

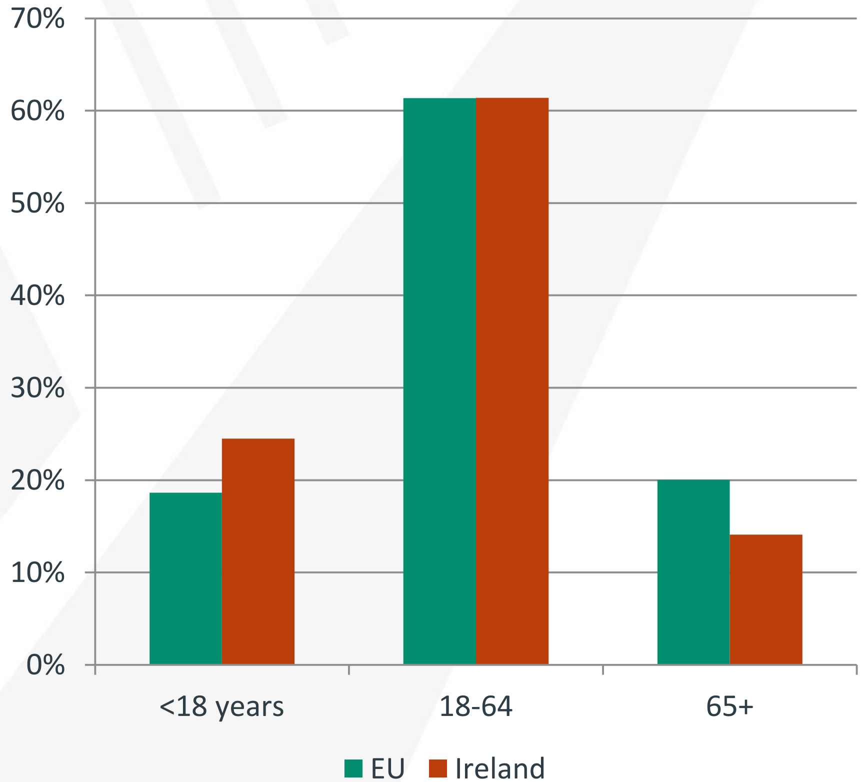
- The OECD has proposed further corporate tax reform - a BEPS 2.0.
- BEPS 2.0 looks at two pillars. The first pillar focuses on proposals that would re-allocate taxing rights between jurisdictions where assets are held and the markets where user/consumers are based. Non-routine profits could - to some - degree be taxed where customers reside.
- Under such a proposal, a proportion of profits would be re- allocated from small countries to large countries. Such a proposal would probably reduce Ireland’s corporation tax base but it is impossible to predict the size of the impact.
- Nothing has been decided yet. There are disagreements across countries. OECD has revised the deadline to mid-2021.

Pillar Two: proposal for minimum global tax

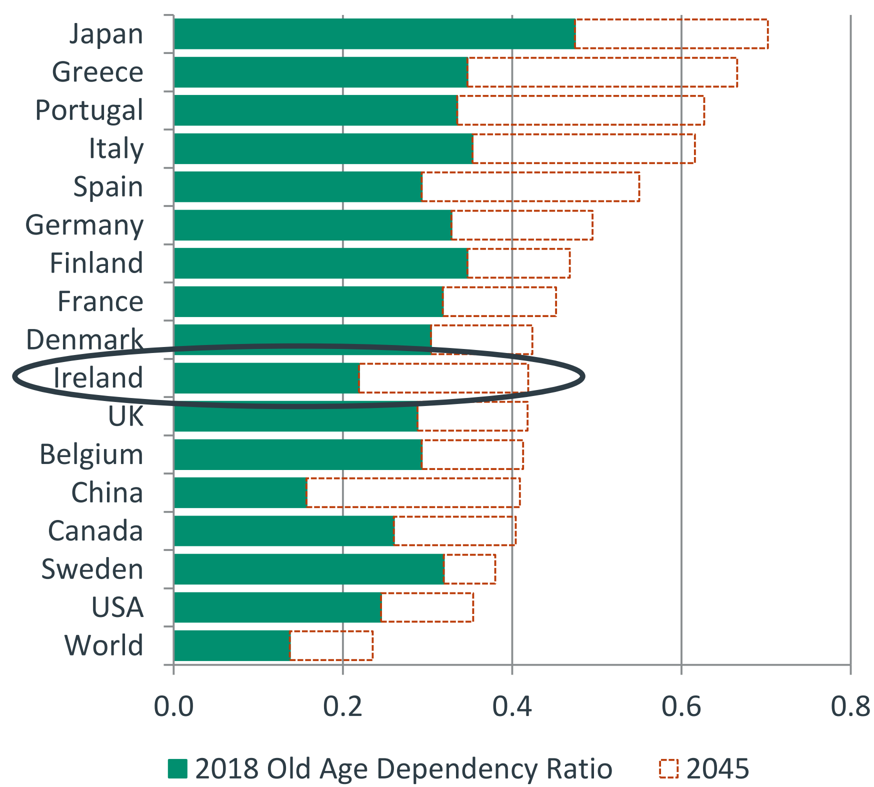
- Pillar Two - the basic idea is to introduce a minimum tax rate with the aim of reducing incentives to shift profits.
- Where income is not taxed to the minimum level, there would an “income inclusion rule” which operates as a ‘top-up’ to achieve the minimum rate of tax.
- The obvious questions arise:
  - what is the appropriate minimum tax rate?
  - who will get the ‘top-up’ payment?
  - Is the minimum rate taxed at a global (firm) level or on a country-by-country basis?
- These questions are as yet unanswered. If the minimum rate agreed is greater than the 12.5% rate that Ireland levies, it might erode this country’s comparative advantage.

Outside of sector makeup, Ireland's population helps growth potential: Age profile younger than the EU average

Ireland's population estimated at 4.98m in 2020: younger population than EU



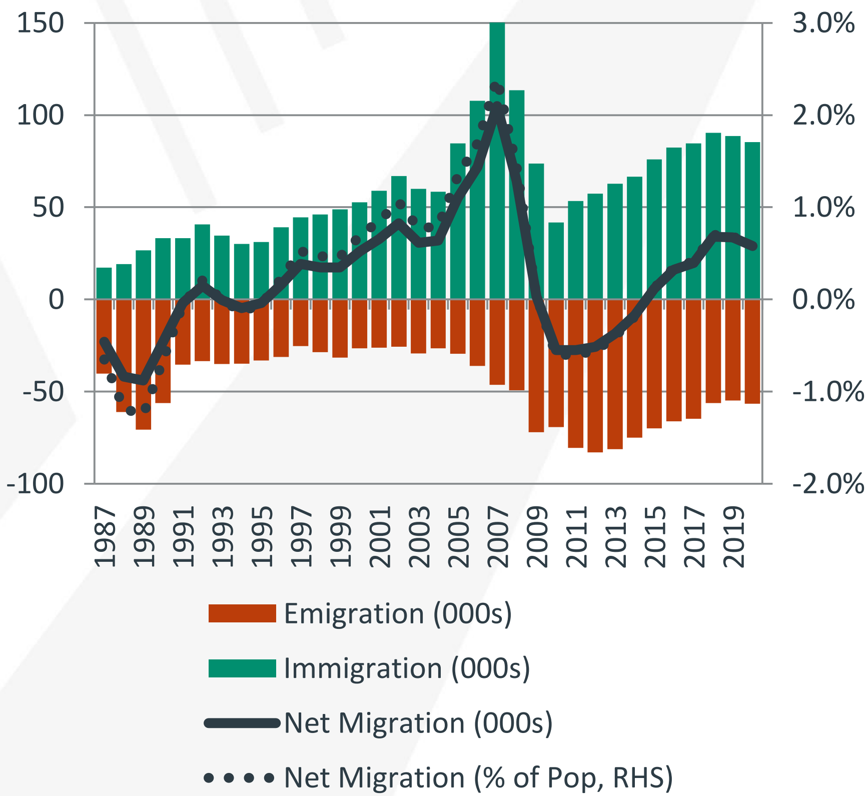
Ireland's population will remain younger than most of its EA counterparts



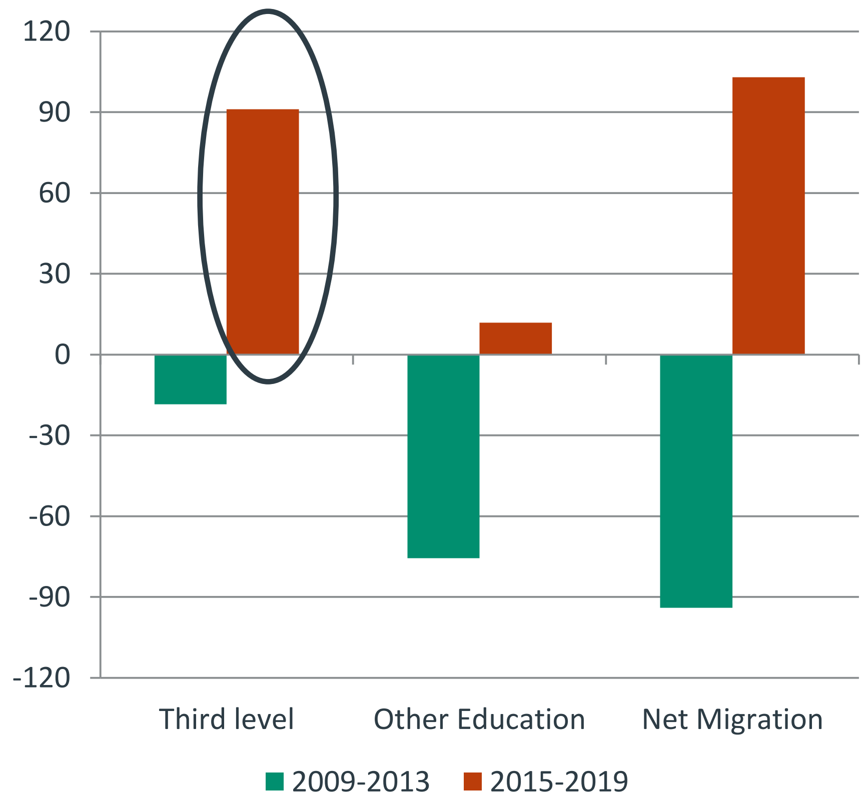
Source: Eurostat (2019) CSO; OECD

Migration has improved Ireland's human capital; post-Covid migration to be closer to zero given travel bans

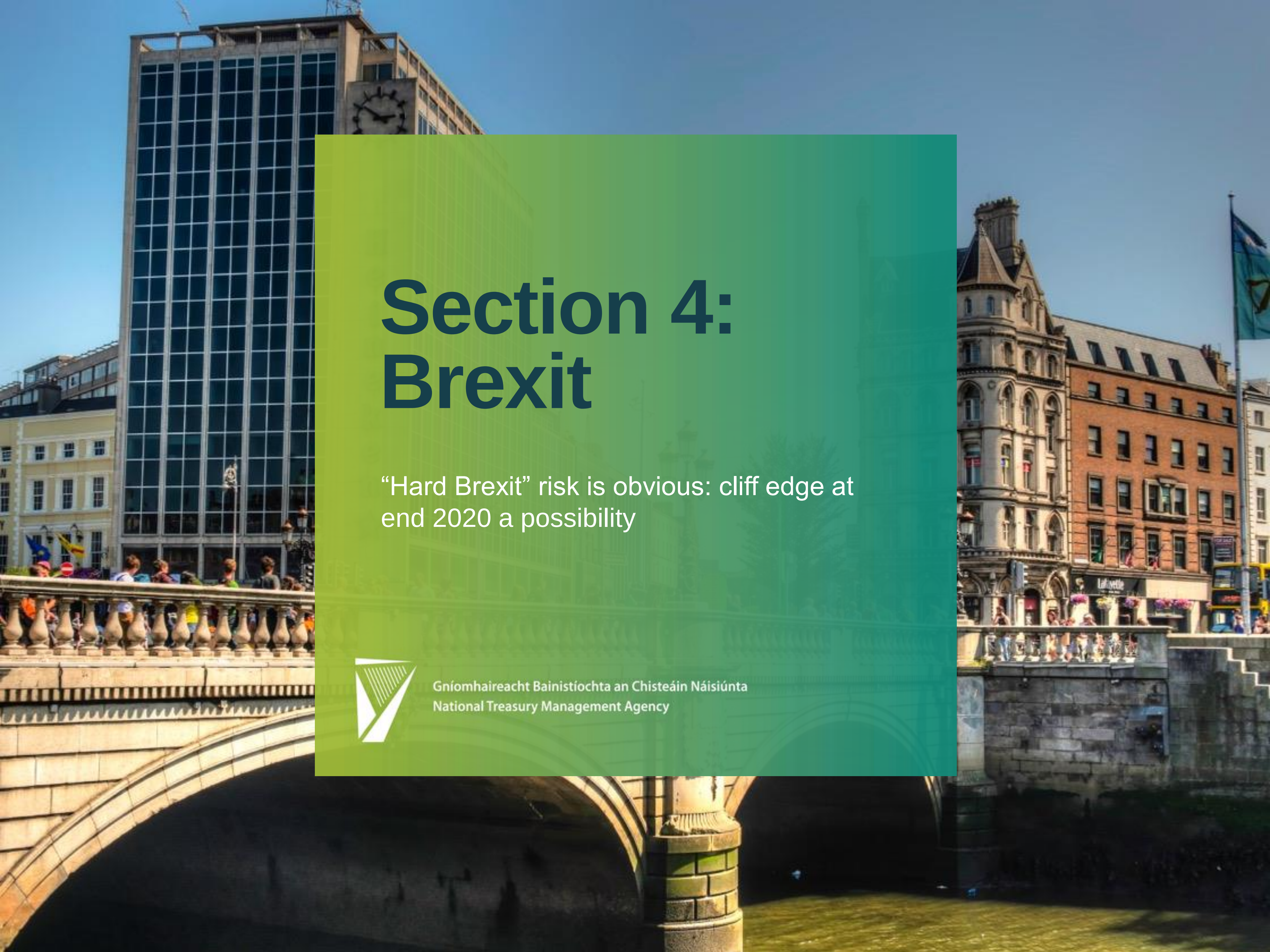
Latest Census data show net migration positive since 2015 – mirroring economy



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



Source: CSO



Section 4: Brexit

“Hard Brexit” risk is obvious: cliff edge at end 2020 a possibility

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State of play: negotiations about trade agreement continue but progress at late stage is slow

UK-EU Future trading relationship unresolved

- The withdrawal agreement of 2019 meant that the transition period started in 2020. It will finish at the end of the year.
- The UK government has stated its intention to seek a free-trade arrangement for the long term. This is a more distant relationship than previously argued for by the UK side.
- The upshot is that the trading relationship will diverge to a greater extent, making negotiations difficult.
- Points of contention include:
    1. Level playing field (state aid)
    2. Fisheries
    3. Dispute resolution and the ECJ role in the new relationship
- There are less than three months to negotiate a partial trade deal. Extending the transition period has been formally rejected by the UK government. *Risk of hard Brexit has increased given transition period was not extended.*
- Hard Brexit estimates suggest the economic hit to Ireland would between 2-6% over the short term.
- The Department of Finance assumes that a Brexit deal will *not* be agreed in its Budget 2021 planning.

Withdrawal Agreement in 2019 would solve Northern Ireland border issues; economic issues remain

Main points of Withdrawal Agreement

- The withdrawal agreement is a legally binding international treaty.
- Northern Ireland will remain 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: the customs border will be in the Irish sea. Goods crossing from Republic of Ireland to Northern Ireland will not require checks, but goods that are continuing on to the UK mainland will.
- Complex arrangements will be necessary to differentiate between goods going to NI and those travelling through NI to UK or vice versa. Customs checks at ports, VAT and tariff rebates and alignment of regulations will be needed.
- All of this is backed by a layered consent mechanism, which allows Stormont to opt-out under simple majority at certain times.
- The withdrawal agreement could undermined by the UK's own Internal Markets Bill. The European Union recently launched legal action against the UK's Bill on the grounds that it undercuts London's earlier legal commitments.

Hard Brexit impact intertwined with Covid-19 in short run – No deal would be negative for Ireland in long run

GDP Forecast	2020	2021	2-year Brexit impact (in isolation)	Long term (10-15 years)
Department of Finance (ESRI)	-2.4	1.7	-3pp	-5.0%
Central Bank of Ireland	-0.4	3.4	-2.3pp	-6.0%
Copenhagen Economics	n/a	n/a	n/a	-7.0% (of which -4.9pp is due to regulatory divergence)
Bank of England “disruptive” (implied)	n/a	n/a	n/a	-6.2%
Bank of England “disorderly” (implied)	n/a	n/a	n/a	-8.2%

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Source: Department of Finance, Central Bank of Ireland, ESRI, Copenhagen, Bank of England
Implied uses the impact on UK GDP and an elasticity measure of 0.8 to calculate the impact on Irish Growth

Negatives of hard Brexit outweigh positives in short-term, although opportunities may appear longer term

Cons

Short term

- Major trade disruption from tariffs, customs checks and documentation (red tape)
- Regions suffer severe recession in agriculture and UK-focused manufacturing; tourism might dip
- Confidence shock to business and households
- Liquidity may dry up in property market
- Fiscal impacts are likely given need to support regions

Long term

- Lower consumer spending thanks to higher inflation when tariffs dominate the FX benefit
- Political economy cost (loss of ally in the EU)

Pros

Short term

- Cheaper domestic food prices

Long term

- Fiscal help from Europe is likely; selective temporary waiving of State Aid rules?
- FDI influx from UK, as multinationals avoid turmoil; UK's reputation might be tarnished
  - Financial services (passporting lost by UK)
  - Other multinationals - especially IT and business services
- Commercial property occupancy could rise; there may also be an influx of well paid workers
- Gradual partial trade recovery
  - Irish companies focused on Britain may steal EU market share from British competitors
  - Import substitution (especially in food)

Whichever type of Brexit materialises, trade is likely to be negatively impacted

% of total	Goods (2019)		Services (2018)		Total (2018)	
	Exp.	Imp.	Exp.	Imp.	Exp.	Imp.
US	30.8	15.5	11.6	25.4	18.0	23.1
UK*	10.3	22.5	15.7	9.6	13.8	13.6
NI	1.4	1.9	n/a	n/a	n/a	n/a
EU-27	37.1	36.7	29.4	26.8	33.5	30.3
China	5.9	5.8	2.6	1.5	3.1	3.0
Other	15.9	19.4	43.3	38.3	30.7	31.1

Irish/UK trade linkages will suffer following Brexit

- The UK is the second largest single-country export destination for Ireland's goods and the largest for its services
- At the same time, Ireland imports c. 20% of its goods from the UK.

Ireland's trade with the UK is labour intensive

- The UK might only account for 10% of Ireland's total exports, but Ireland is more dependent than that because those UK-reliant sectors are labour intensive

SMEs account for approx. half of Irish exports to the UK. They are likely to be more adversely affected than larger companies by the introduction of tariffs and barriers to trade

*Source: CSO 2018/19 * UK data includes Northern Ireland*
NTMA calculations; Data does not include contract manufacturing

If no deal by year-end, UK's Global Tariff Schedule would come into effect for Ireland's exporters to UK (mainland)

Under the UK's WTO Tariff Schedule, it would impose tariffs on only 40% of the UK's imports from MFN countries: For Ireland, agri-food exports particularly hit by tariffs

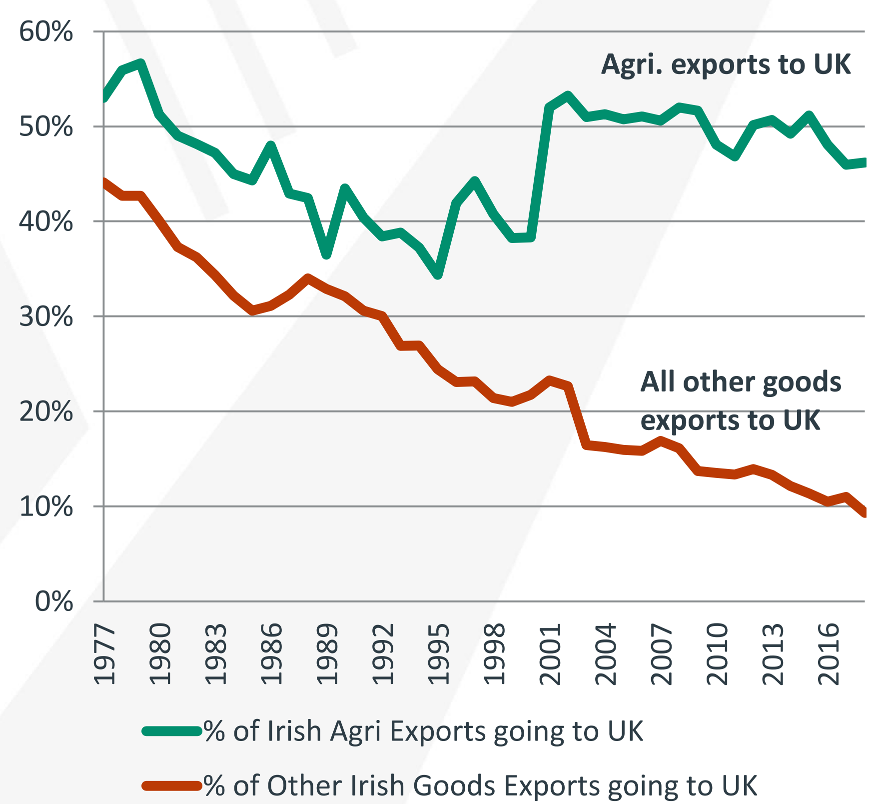
UK-EU Relationship	% of Tariff Free Products
EU Membership	100%
Free Trade Agreement	60-100%
Partial FTA	60-100%
WTO UK GT schedule	60%
WTO EU MFN schedule (Assumed in modelling)	52%

Economic modelling of WTO scenario often assumes a worse tariff regime than UKGT

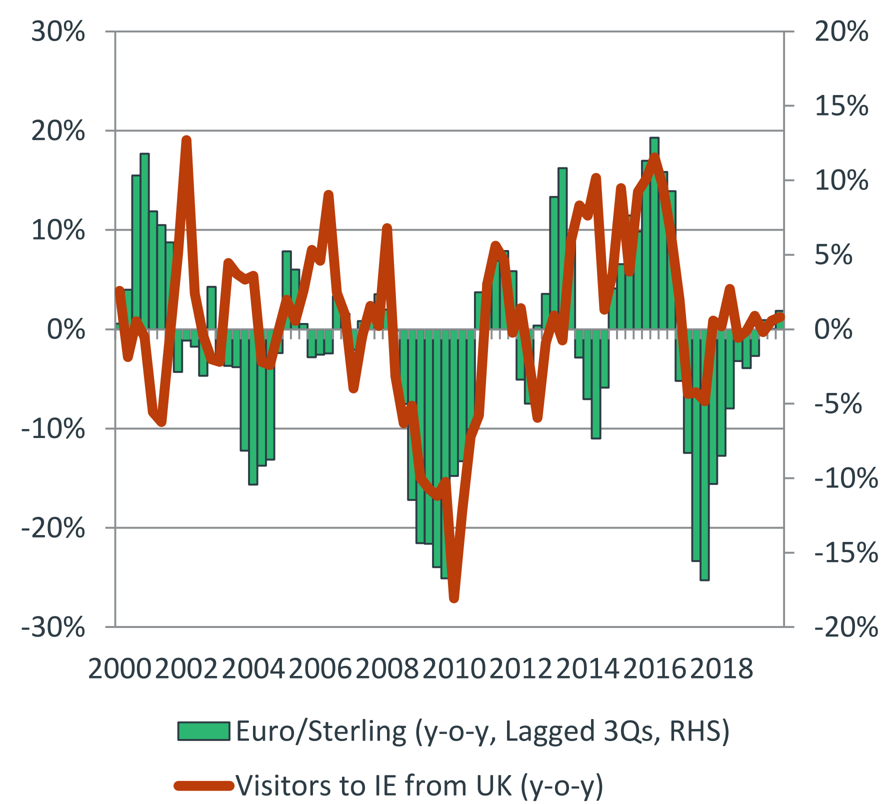
Product	% of IE-UK goods exports	Comment on tariff imposed under UK schedule
Pharmaceutical products	16.9%	Almost all pharma products are tariff free
Machinery and mechanical appliances	8.1%	A lot of this category remains duty free.
Meat and edible offal	7.7%	High customs duties are imposed on Meat (6-16% + £34-£2313 per 100kg)
Dairy produce, birds eggs, natural honey, edible products	5.6%	High customs duties are imposed on Dairy (6-16%+£14-185 per 100kg)
Electrical machinery and equipment	4.8%	A lot of this category remains duty free.
Organic chemicals	4.3%	Tariffs on Active Pharmaceutical Ingredients (6%)
Plastics and articles thereof	3.8%	Tariff rates increase but are lower than the current EU MFN rates.
Cereals, flour, starch or milk, pastry cooks products	3.7%	Bread and bakery face a small tariff (8%)
Meat & fish	3.5%	High tariff (6-25%+£34-2313 per 100kg)
Optical, medical or surgical instruments	2.9%	Most medical devices remain tariff free

Agri-food and tourism most at risk from trade barriers

Agriculture has not diversified from the UK



Tourism numbers linked to FX moves but Covid impact will overshadow Brexit hit



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Source: CSO, DataStream

Many financial institutions have announced that they will expand or set up in Dublin

FDI: Ireland benefitting already

- Ireland could be a beneficiary from displaced FDI. The chief areas of interest are
  - Financial services
  - Business services
  - IT/ new media.

- Dublin is primarily competing with Frankfurt, Paris, Luxembourg and Amsterdam for financial services.

- Ireland's FDI opportunity will depend on the outcome of post-exit trade negotiations. The UK (City of London) is almost certain to lose its EU passporting rights on exit, so there may be more opportunities in time.

Companies that have indicated jobs have or will be moved to Ireland

BARCLAYS
Morgan Stanley
citi
J.P.Morgan
Goldman Sachs
TD
Bank of America Merrill Lynch
LEGG MASON GLOBAL ASSET MANAGEMENT
S&P Global Ratings
BARINGS

Section 5: Property

Property market showing fewer transactions, completions; prices less affected

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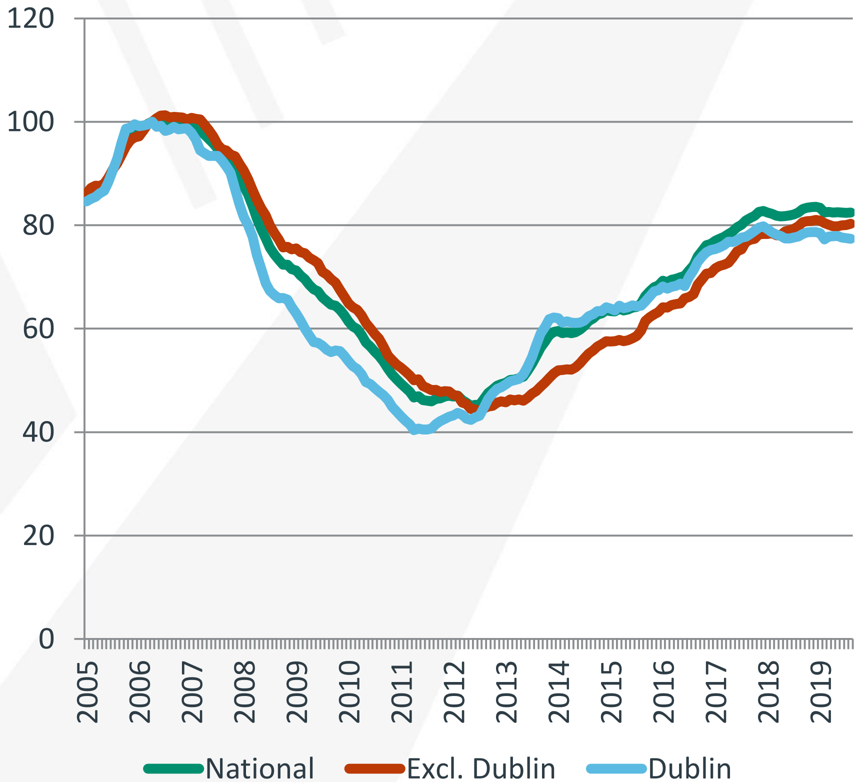
National Treasury Management Agency

House prices had plateaued before the virus arrived; Covid price impact minimal so far

House prices have stabilised 20% below their peak (100 in 2007)



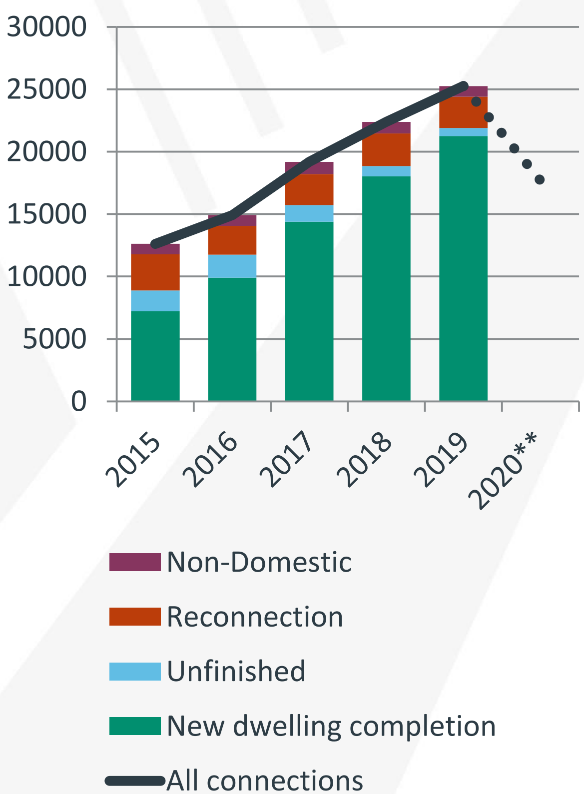
Covid-19 impact: transactions, approvals down sharply; prices stable

Level (y-o-y % change)	Mar	Apr	May	Jun	Jul
# of transactions	4,386 (1.6%)	2,621 (-42.6%)	2,553 (-48.0%)	2,988 (-31.1%)	3,327 (-39.7%)
# of mortgage approvals	3,733 (-9.9%)	2,200 (-46.5%)	1,879 (-61.9%)	2,263 (-49.5%)	3,397 (-33.8%)
Commencements	2,383 (-3.8%)	1,039 (-47.4%)	873 (-53.1%)	1,187 (-36.7%)	1,621 (-25.3%)
Residential Property Price Index	134.3 (1.0%)	134.2 (0.7%)	134.1 (0.4%)	134.2 (0.1%)	134.6 (-0.5%)
Private Rent Index	117.5 (3.1%)	115.4 (0.8%)	114.1 (-0.7%)	113.8 (-1.2%)	114.0 (-1.4%)

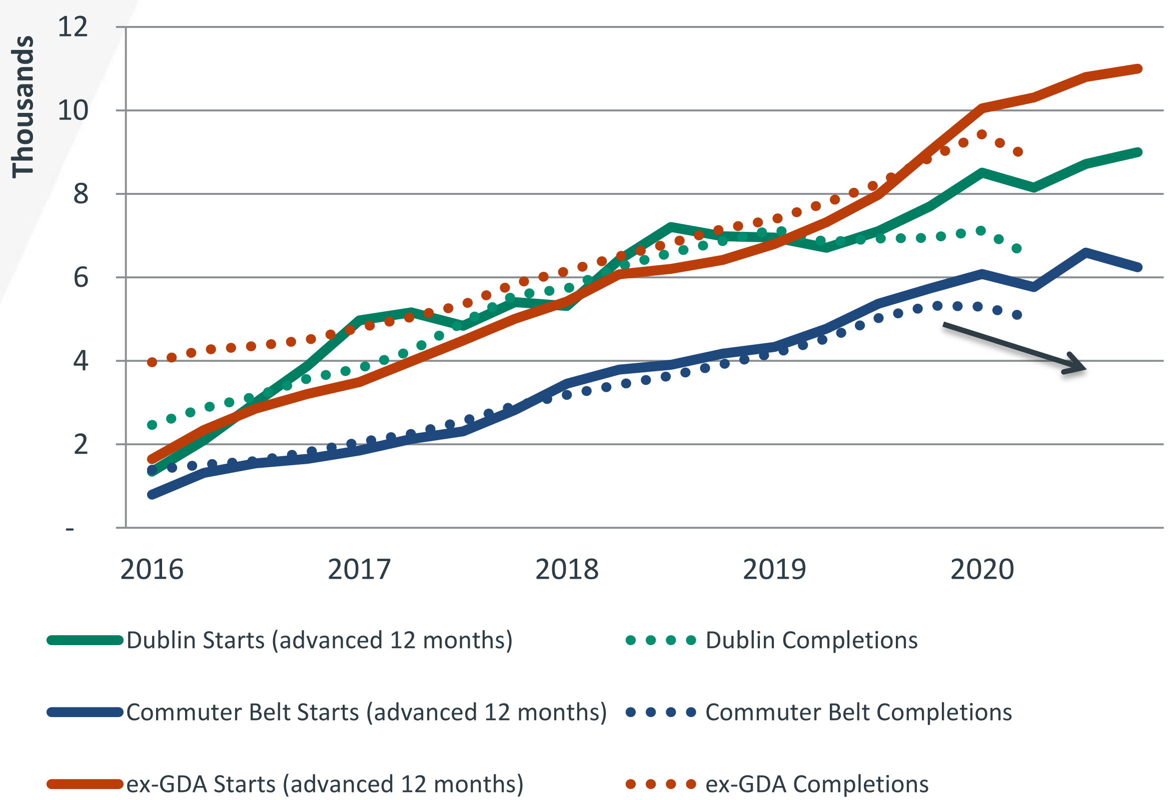
Source: CSO; BPFI, PPR, Department of Housing

Housing supply still below demand; supply was catching up before Covid-19 slowed market

Housing Completions* above 25,000 in 2019



Housing supply picked up pre-Covid: coronavirus to hamper supply H2 2020



Source: DoHPCLG, CSO, NTMA Calculations

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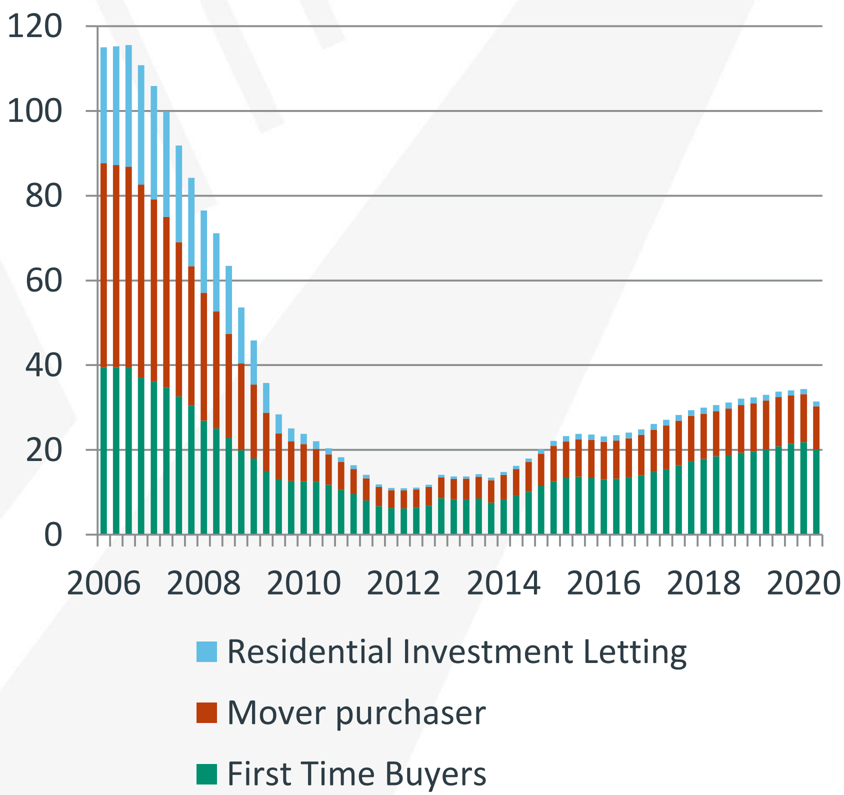
* Housing completions derived from electrical grid connection data for a property. Reconnections of old houses or connections from "ghost estates" overstate the annual run rate of new building.
**2020 completions forecasted down 30% on 2019 (market forecasts)

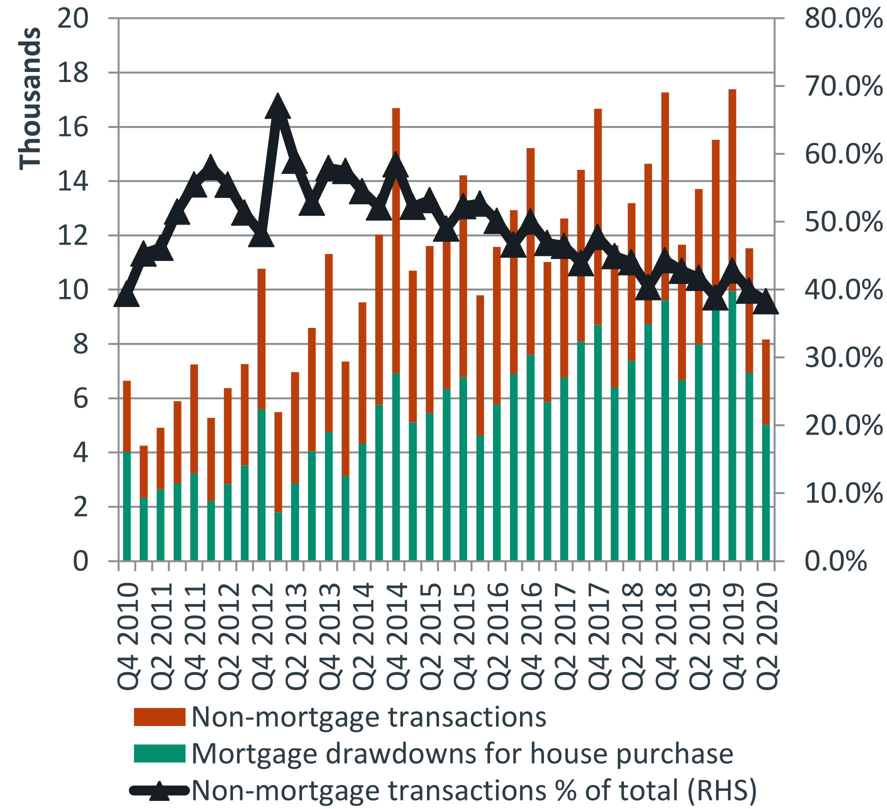
Demand will fall off given lower migration and rising unemployment – demand may drop below 30,000 in ST

Mortgage drawdowns (000s) rose from deep trough before Covid-19 impact



Source: BPFI (4 quarter sum used)

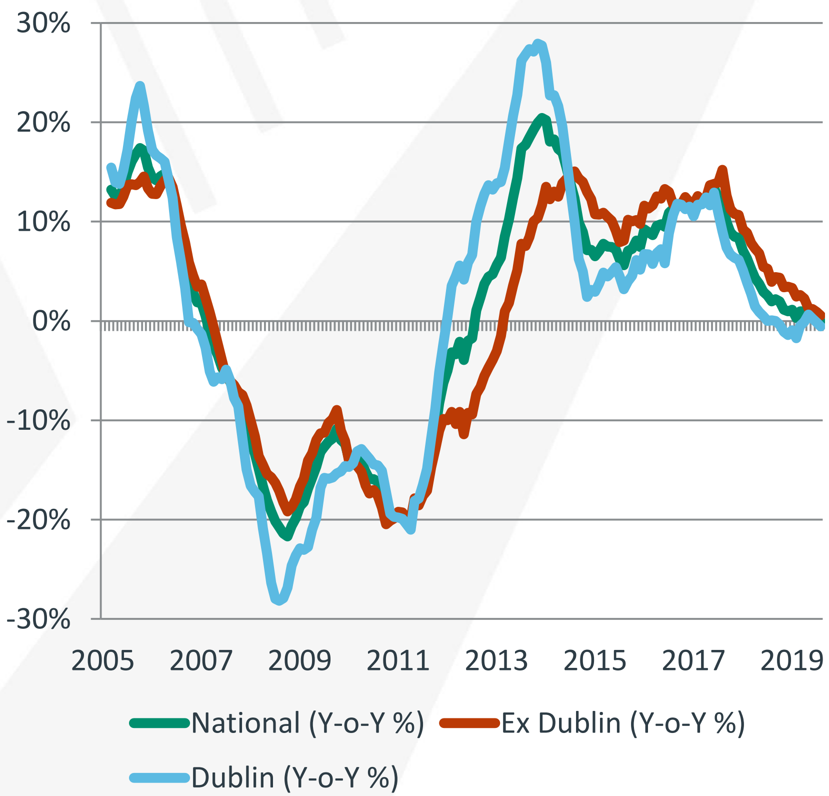
Non-mortgage transactions still important; transaction volume hit in Q2



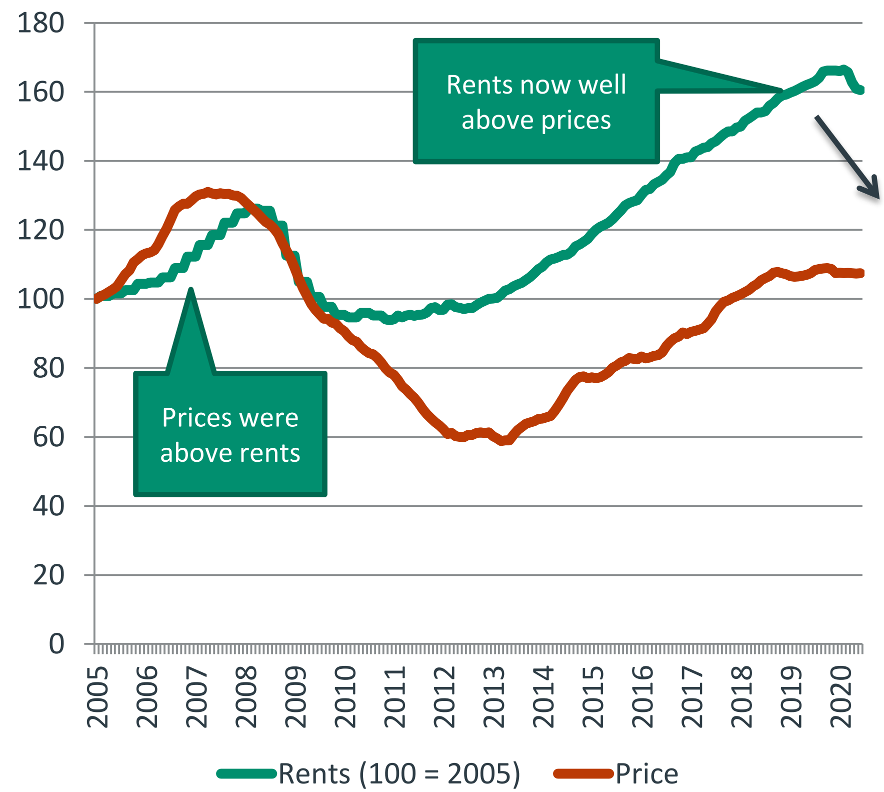
Source: BPFI; Residential Property Price Register

Covid-19 impact on prices unclear as both supply and demand impacted, but rents should come off highs

Dublin house prices fell in 2019; higher end of the market slightly softer than the rest

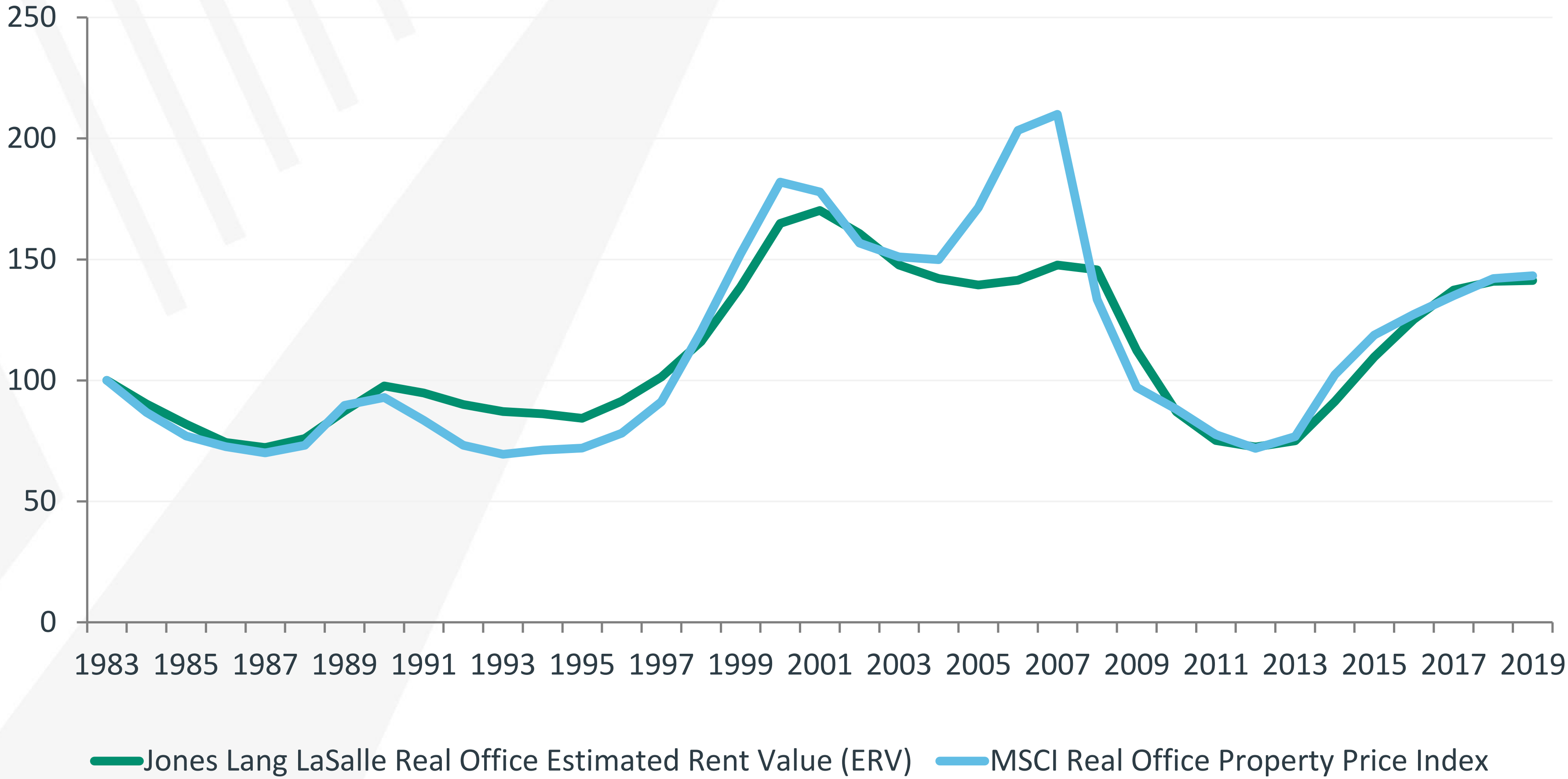


Rents are well above previous peak but have fallen in recent months



Source: CSO; RTB

Commercial property rents and prices were in sync pre-Covid – both plateaued in 2018/19 and now threatened



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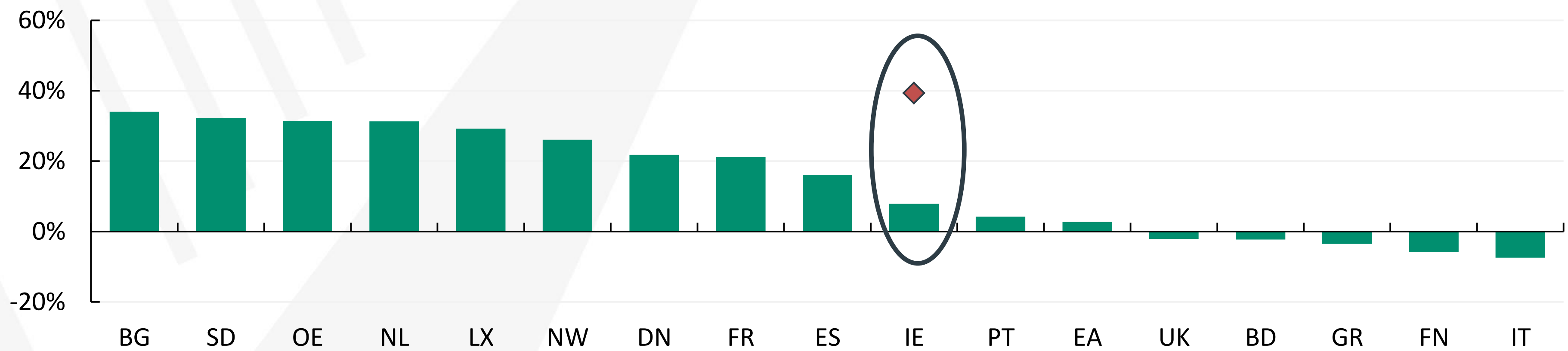
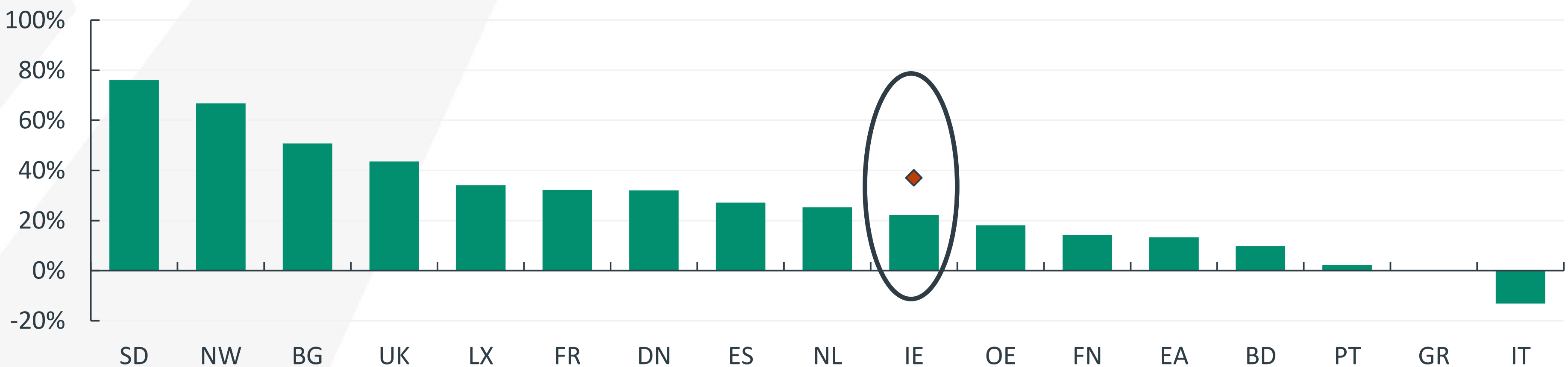
Source: MSCI, Jones Lang LaSalle, NTMA analysis
Indexed data, 1983 = 100

Irish house price valuation metrics remained well below 2008 levels throughout last cycle

Deviation from average price-to-income ratio (Q4 2019, red dot represent Q1 2008)



Deviation from average price-to-rent ratio (Q4 2019, red dot represent Q1 2008)



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Source: OECD, NTMA Workings

Note: Measured as % over or under valuation relative to long term averages since 1980.

Section 6: Banks & other

Ireland’s banks now among best capitalised in Europe – complete reverse of late 2000s

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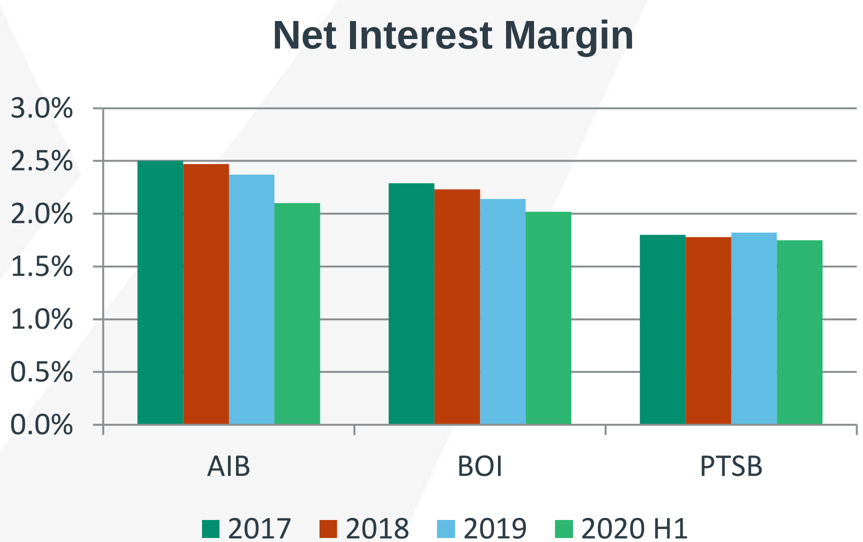
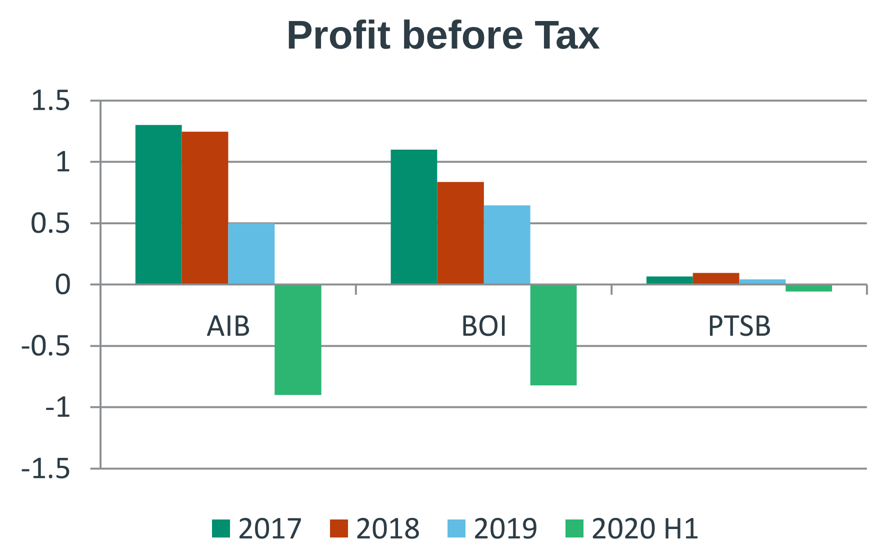
Ireland’s pillar banks in relative good shape to weather Covid-19 storm

- Banks profitable before Covid-19: income, cost and balance sheet metrics much improved.
- Interest rates on mortgages and to SMEs are still high compared to EU thanks to legacy issues and the slow judicial process in accessing collateral.
- An IPO of AIB stock (28.8%) occurred in June 2017. This returned c. €3.4bn to the Irish Exchequer: used for debt reduction. Further disposal of banking assets unlikely in the short term given low valuations
- Irish banks had paid dividends in recent years.

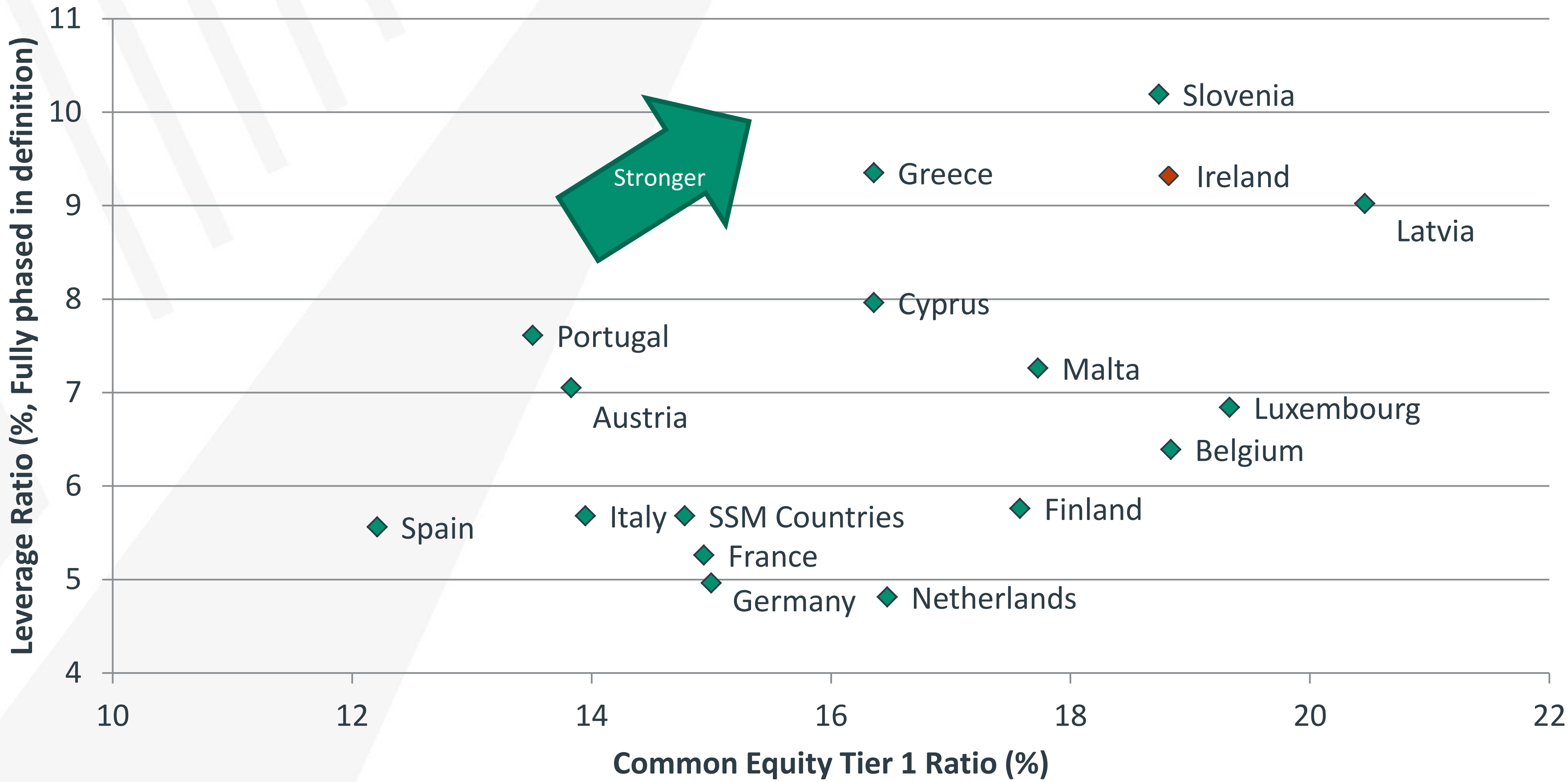
All three pillar banks were profitable in recent years, Covid impact in H1





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

Ireland’s banks are among the best capitalised in Europe



Source: ECB consolidated banking data (Q4 2019)

Note: Leverage Ratio = Tier 1 capital/Total leverage exposure; CET1 = Common tier 1 capital/total risk exposures. “Fully loaded” refers to the actual Basel III basis for CET1 ratios.

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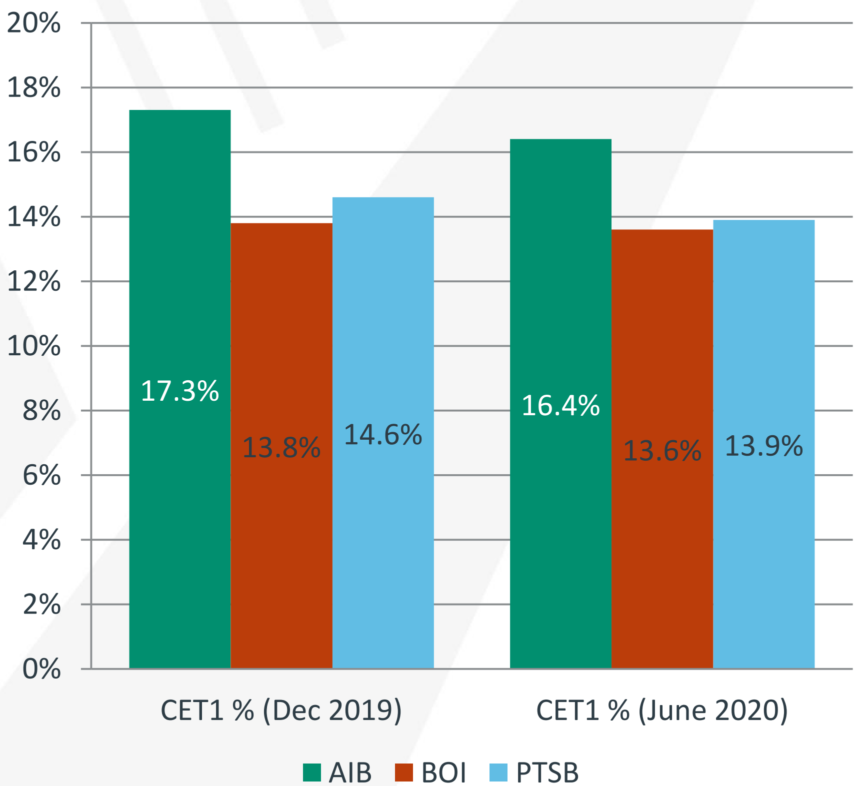
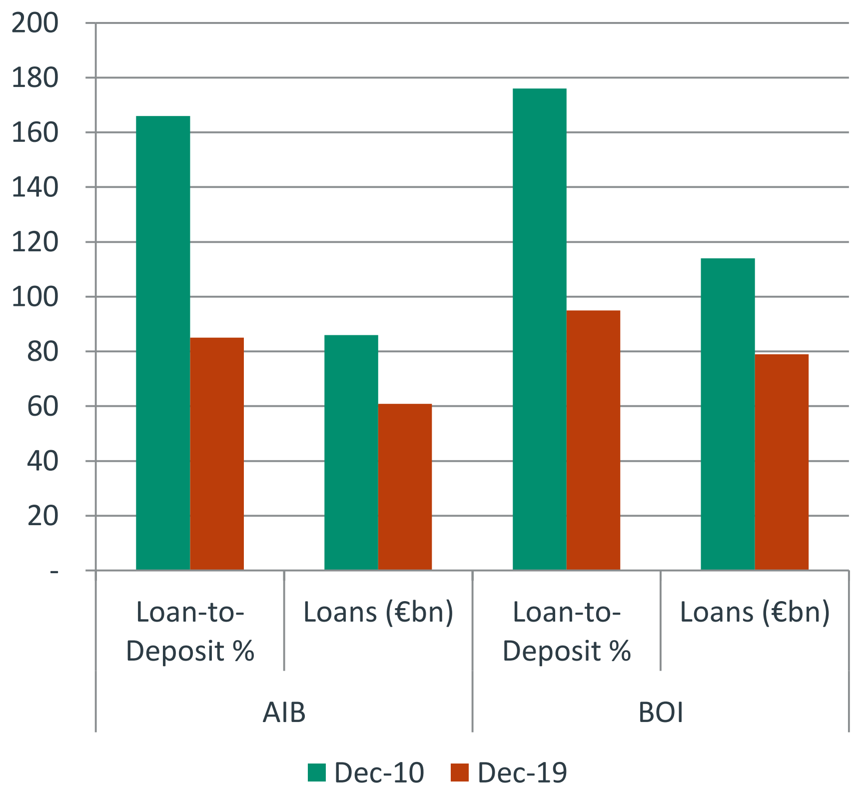
Capital ratios strengthened as banks shrunk and consolidated in last ten years

CET 1 capital ratios allow for amble forbearance in Q2



Source: Published bank accounts

Loan-to-deposit ratios have fallen significantly as loan books were slashed

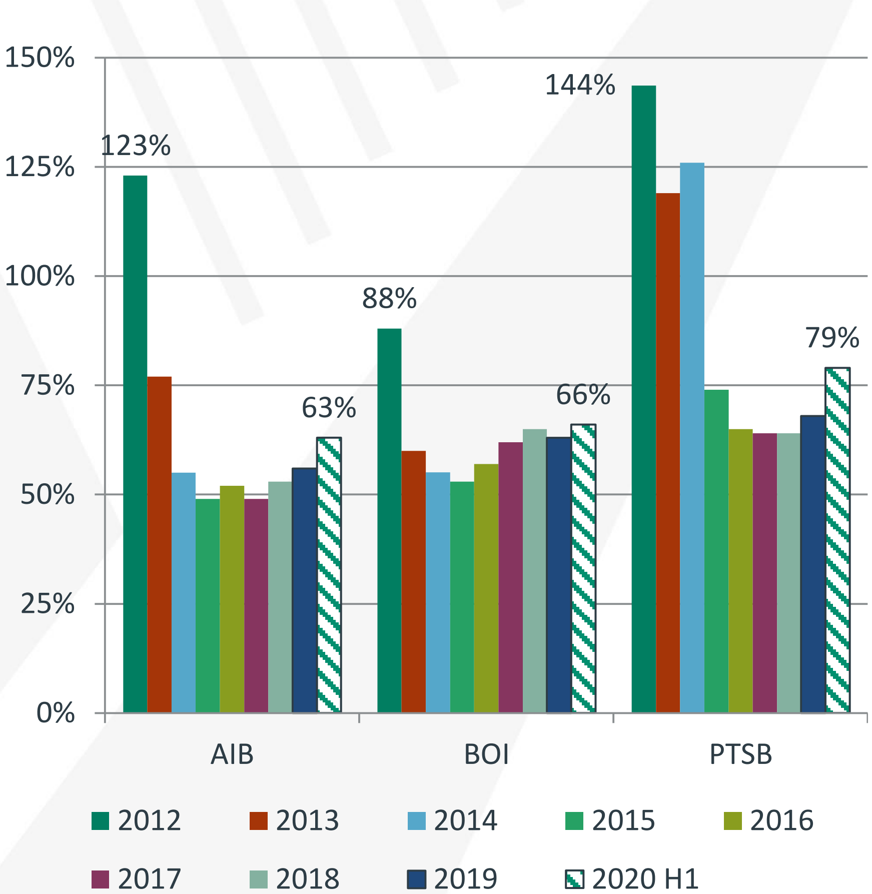


Source: Published bank accounts

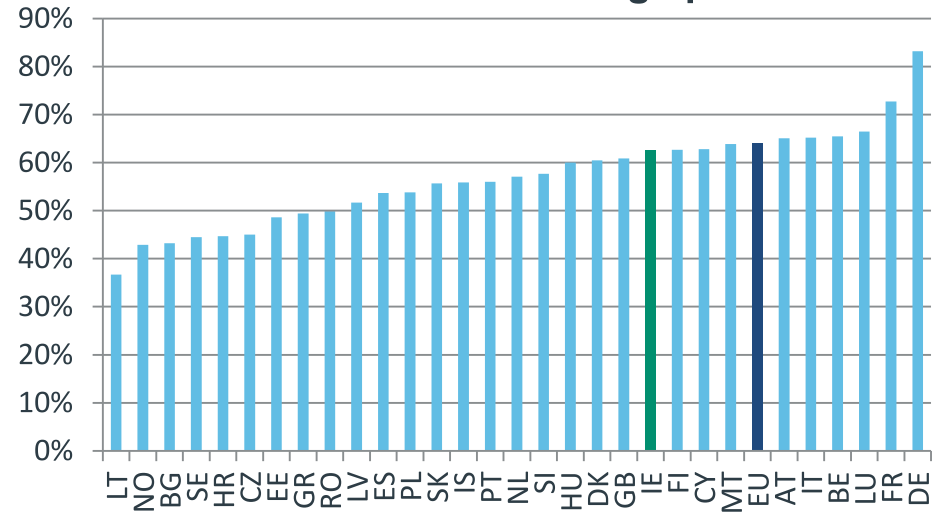
Note: "Transitional" refers to the transitional Basel III required for CET1 ratios
"Fully loaded" refers to the actual Basel III basis for CET1 ratios.

Domestic bank cost base has risen due to Covid

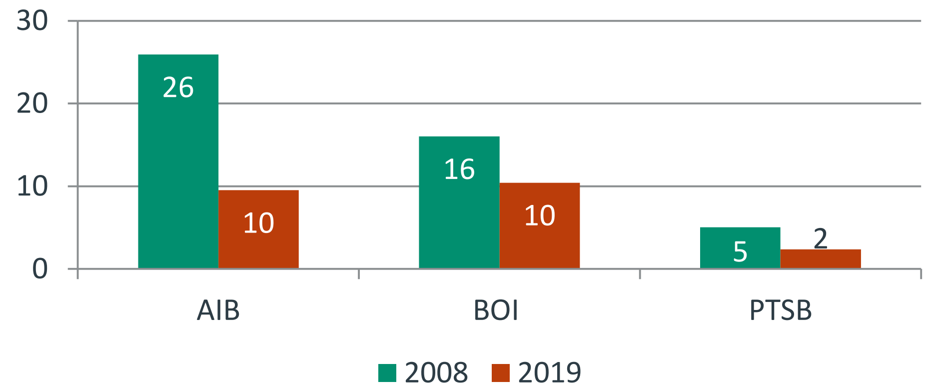
Cost income ratios increased …



… IE banks* below EU average pre-Covid



Staffing (000s) halved post crisis



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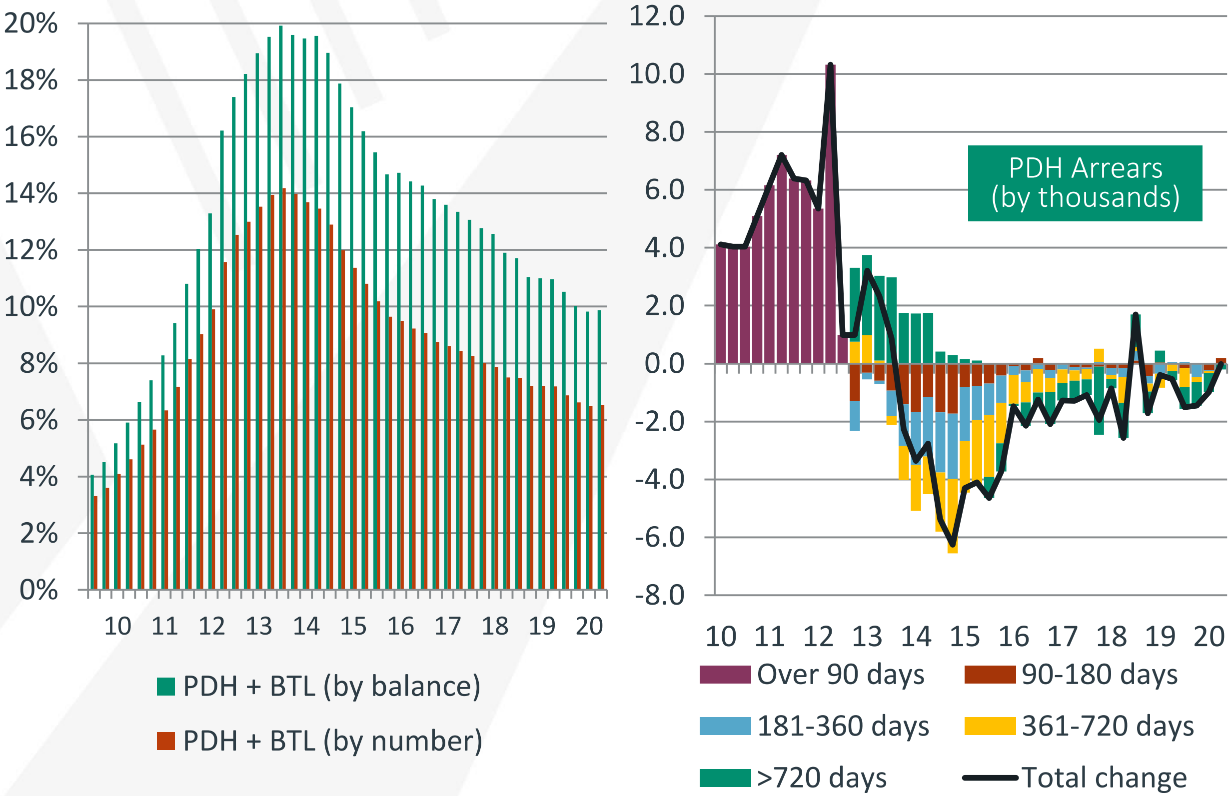
Source: Annual reports of Irish domestic banks, EBA

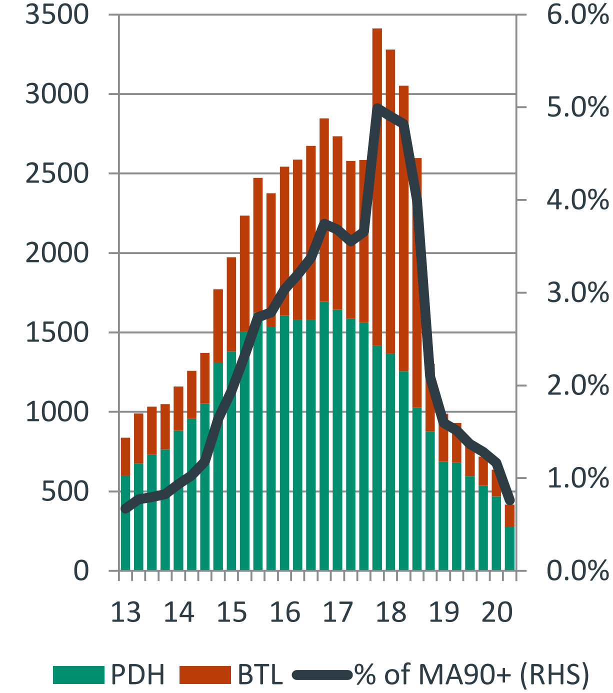
* EBA data includes three domestic banks as well as Ulster Bank, DEPFA & Citibank.

Irish residential mortgage arrears may reverse course in 2020

Mortgage arrears (90+ days)



Repossessions*



Source: CBI

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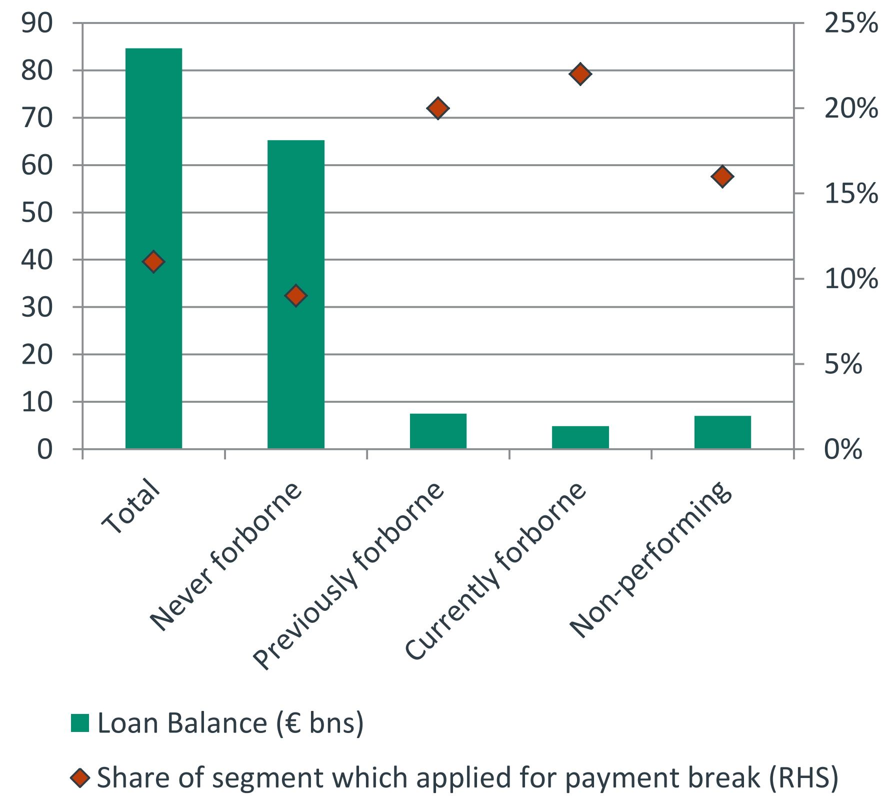
* Four quarter sum of repossessions. Includes voluntary/abandoned dwellings as well as court ordered repossessions

One in nine owner-occupier mortgages was on a payment break during H1 2020

Some 11% of accounts applied for a payment break in early 2020

End- May	Balance (€ m)	Share
Total	94,940	100%
No request	84,019	88.50%
Payment break: active	10,042	10.60%
Payment break: approved and pending	176	0.20%
Payment break: expired	246	0.30%
Request under consideration	207	0.20%
Request cancelled	213	0.20%
Request rejected	36	0%

A history of forbearance or non-performance associated with payment breaks



Source: CBI

The European Commission's ruling on Apple annulled in court; further appeal by EC means case continues

- Back in 2016, the EC had ruled that Ireland illegally provided State aid of up to €13bn, plus interest to Apple. This figure is 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. <u>The General Court granted the appeal in July, annulling the EC's ruling.</u>
- 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. <u>The General Court has judged no such advantage occurred.</u>
- The Commission has decided to appeal to a higher court: the European Court of Justice. This process could still be lengthy. Pending the outcome of the second appeal, the €13bn plus EU interest will remain in an escrow fund.
- The NTMA has made no allowance for these funds in any of its planning throughout the whole process. <u>There is no need to adjust funding plans given the decision by the General Court in July or by the Commission's decision to appeal.</u>

Government's NDP outlines green projects; proposed law will commit Ireland to net-zero emissions by 2050

1 in 5 euros in the National Development Plan (NDP) to be spent on green projects

Sustainable Mobility

€8.6 billion

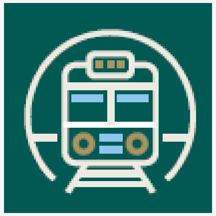
Sustainable Management of Water and Environmental Resources

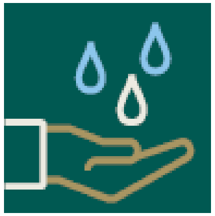
€6.8 billion

Transition to a Low carbon and Climate Resilient Society

€7.6 billion

Total:€23 billion (13% of GNI*)



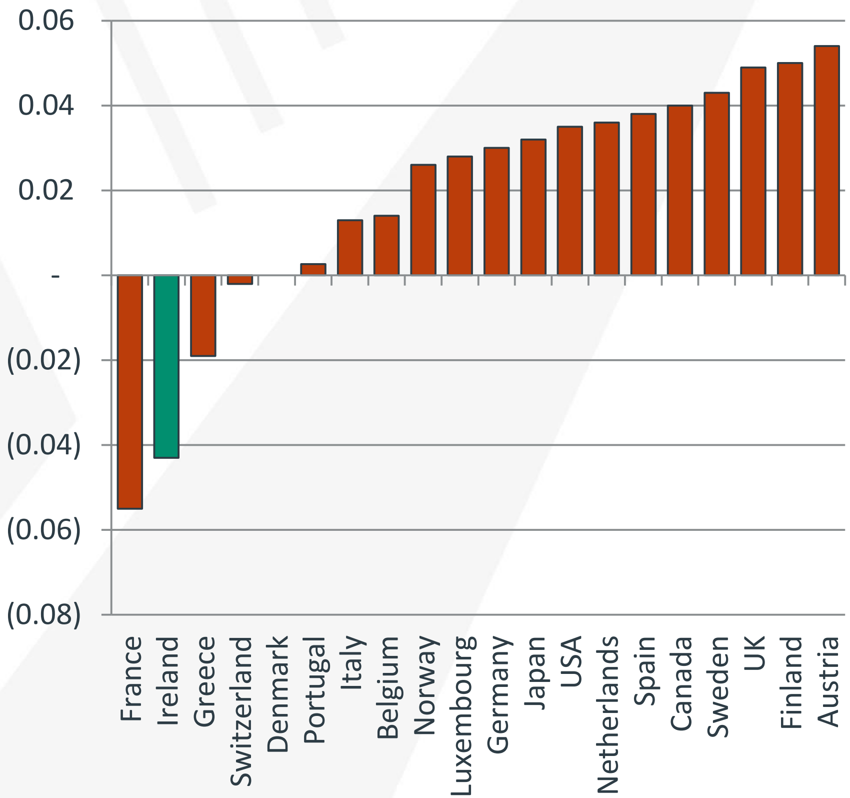


Further details are available at ntma.ie

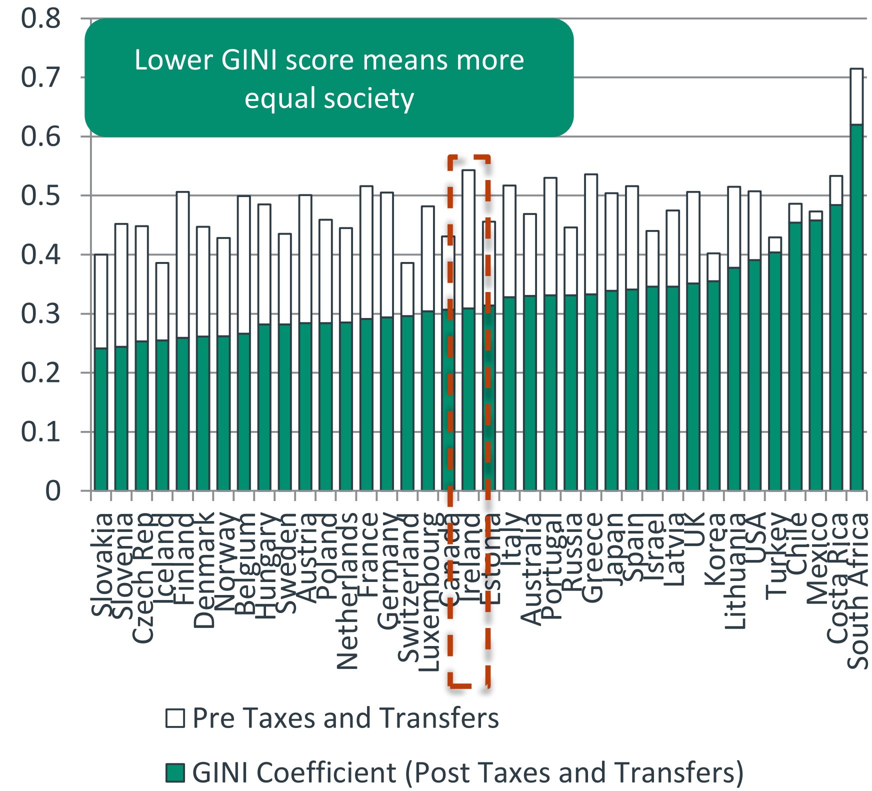
Source: National Development Plan 2018-2027

Income equality has improved: Ireland's progressive system the main driver and cushioned the economy in 2020

Lower inequality (1985-2015): economic rise reduced GINI coefficient unlike others



Progressive system means Ireland is around the OECD average for GINI after tax

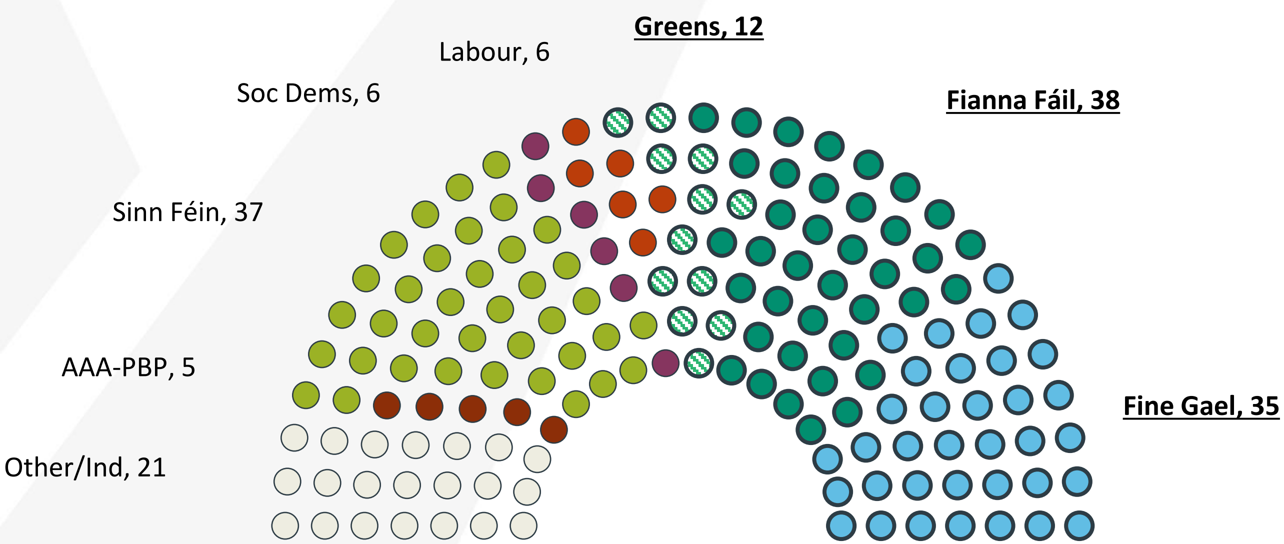


Source: IMF, OECD

Irish coalition government formed in mid-2020; made up of Fianna Fáil, Fine Gael and the Greens

Programme for government focuses on economic recovery, Brexit, public investment and climate action

Breakdown of seats in Dáil Éireann following 2020 General Election (160 Seats total)



Rotating Taoiseach – will revert to FG in 2022

Name	Party	Position/ Ministry
Micheál Martin	FF (leader)	Taoiseach (PM, until end 2022)
Leo Varadkar	FG (leader)	Tánaiste (deputy PM), Business
Simon Coveney	FG	Foreign Affairs (Brexit)
Paschal Donohoe	FG	Finance
Eamon Ryan	Greens (leader)	Climate, Transport

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Source: NTMA analysis

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