Ireland: Good starting point to fight crisis

Ireland reached the higher ground of budget surpluses, full employment and stronger balance sheets: will help it to weather black swan event

April 2020

Gníomhaireacht Bainistíochta an Chisteáin Náisiúnta
National Treasury Management Agency

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Summary

Ireland better placed than most in the Euro Area to weather Covid-19 recession

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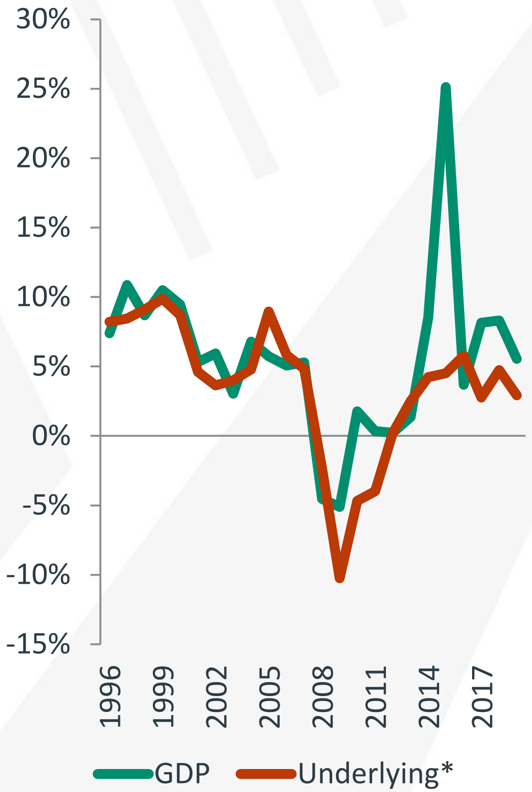
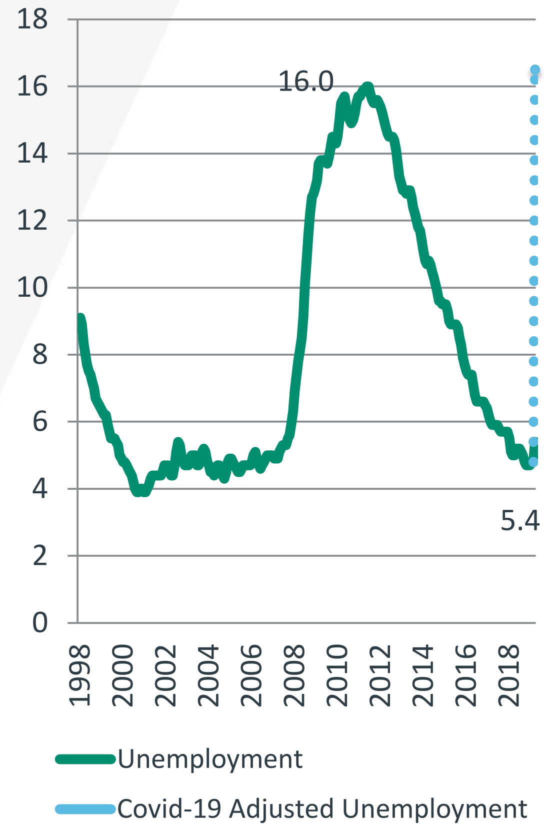
Economy grew strongly before Covid-19; initial unemployment swing will be large like other countries

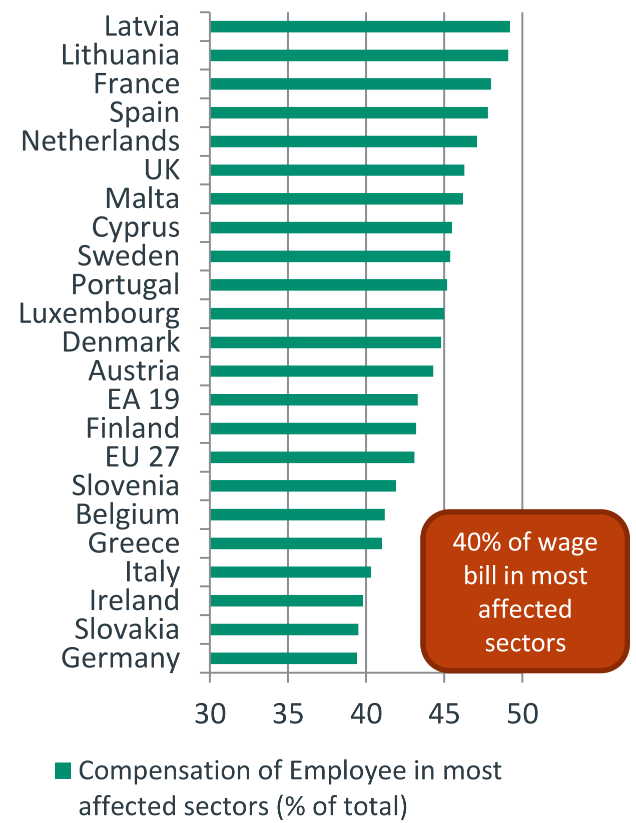
Robust growth in run up to lockdown



Recovery in unemployment rate reversed temporarily



Irish wage bill less impacted – ICT and Pharma help



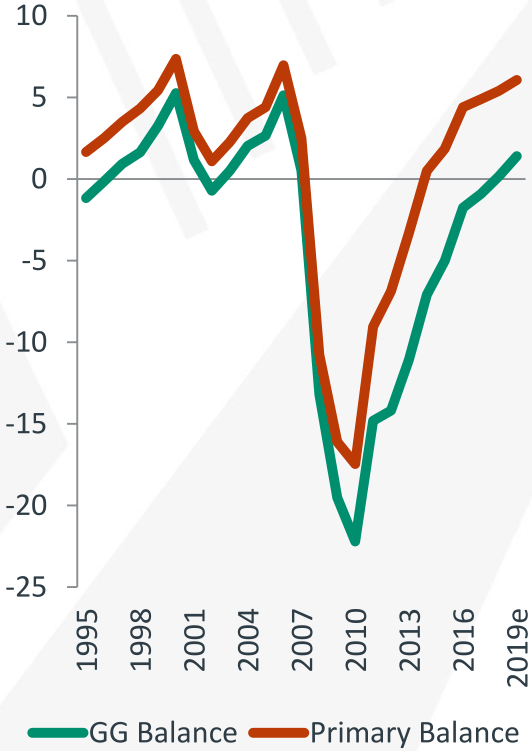
Source: CSO

** Underlying series is modified final domestic demand (excludes inventories)*

*** The dotted line is CSO data. It can be considered an upper bound for unemployment in March*

Ireland used 2014-19 growth to create fiscal room and debt sustainability; will be needed in the years ahead

Six years of primary surplus (€bn)



Improved debt position allows for fiscal policy to act

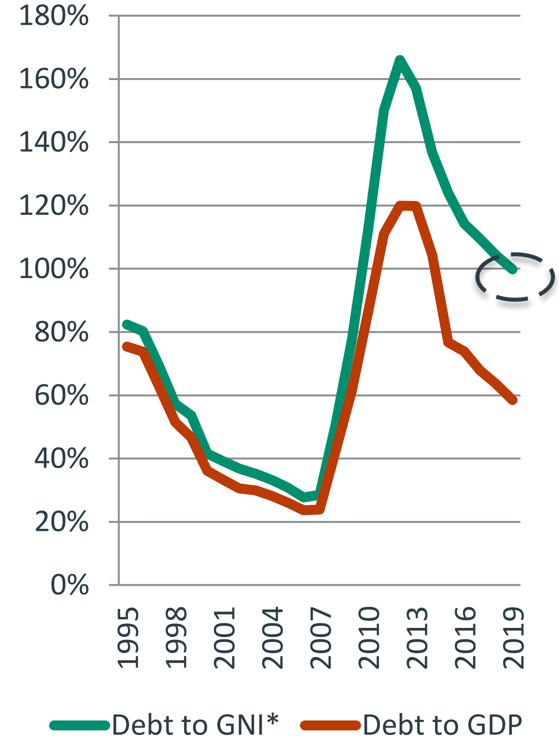
Debt-to-GNI*
(100% 2019f, from 166% peak)

Debt-to-GG Revenue
(236% 2019f, from 353%)

Average interest rate
(2.3% 2019f, from 5.1%)

Debt-to-GDP^
(59% 2019f, from 120%)

Debt hit 100% of national income but will reverse



^ due to GDP distortions, Debt to GDP is not representative for Ireland, we suggest using other measures listed.

Covid-19 and Ireland outlook

Recession

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

This is a black swan event. The Fan chart of outcomes is wide so forecasting is of little value.

Exposure

Ireland's domestic economy will be hit hard like others but there are relative positives.

Our internationally traded sectors (Pharma and ICT) will help weather the storm

Policy

Irish fiscal response currently at 3.3% of GNI*, more could follow if needed.

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

€11bn already funded in 2020; NTMA's original €10-14bn plan will be exceeded but Ireland relatively better placed

Flexibility

Ireland has large cash balances, the 2020 redemptions prefunded and a year free of maturing bonds in 2021

Funding will come from several sources. Bonds, ST paper and the rainy day fund.

10 years

One of the longest weighted average maturities in Europe

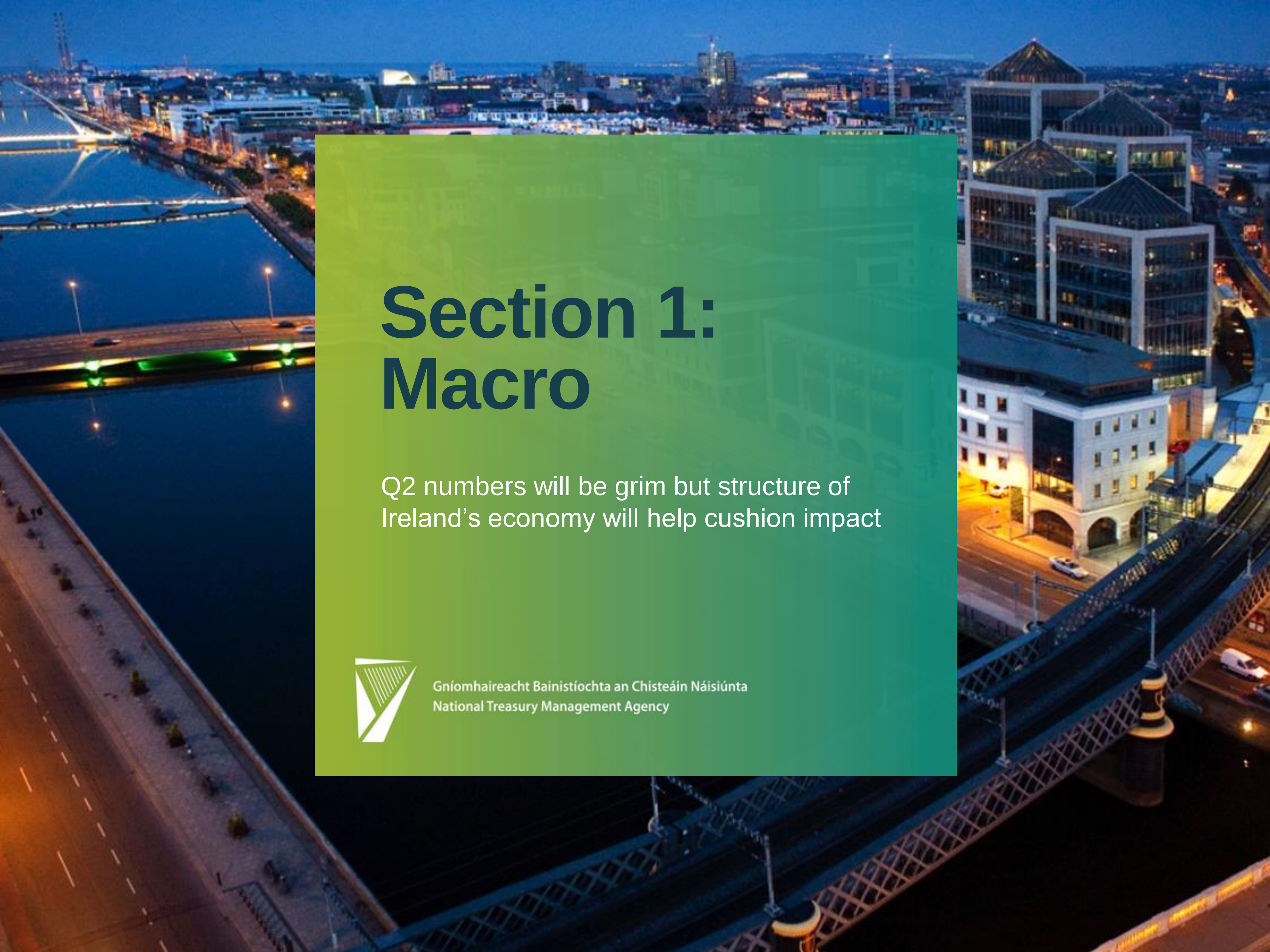
The NTMA used ECB QE to extend debt maturities reduce interest cost and repay the IMF. Now the ECB has started to buy again without limits

AA-

Ireland has been upgraded to AA space by S&P

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

Ireland has large cash bala
2020 redemptions prefu
minimal redemptions i



Section 1: Macro

Q2 numbers will be grim but structure of Ireland’s economy will help cushion impact

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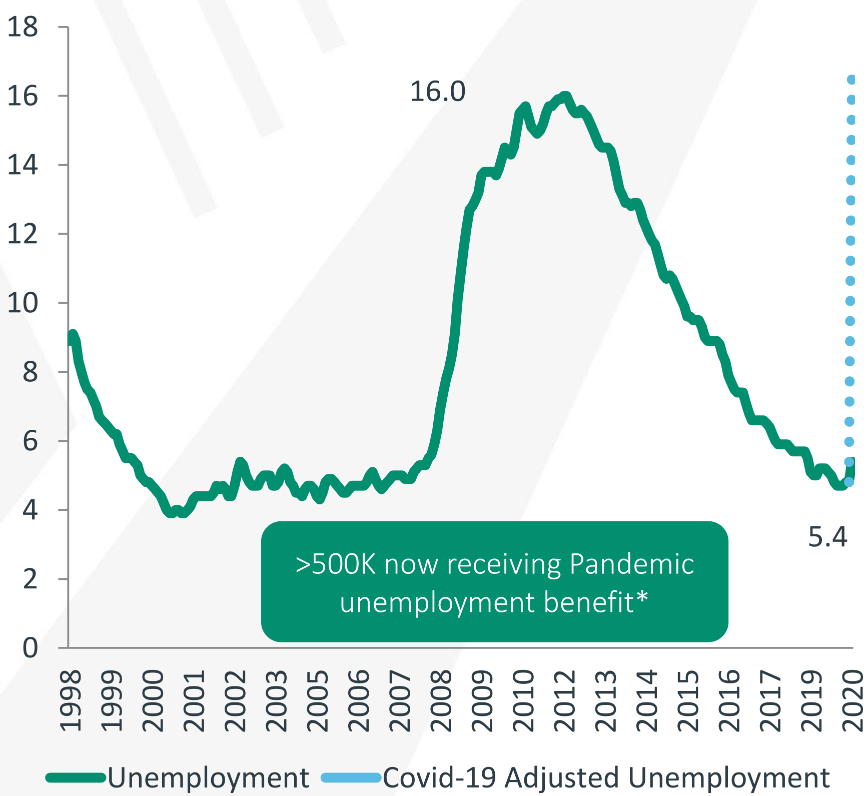
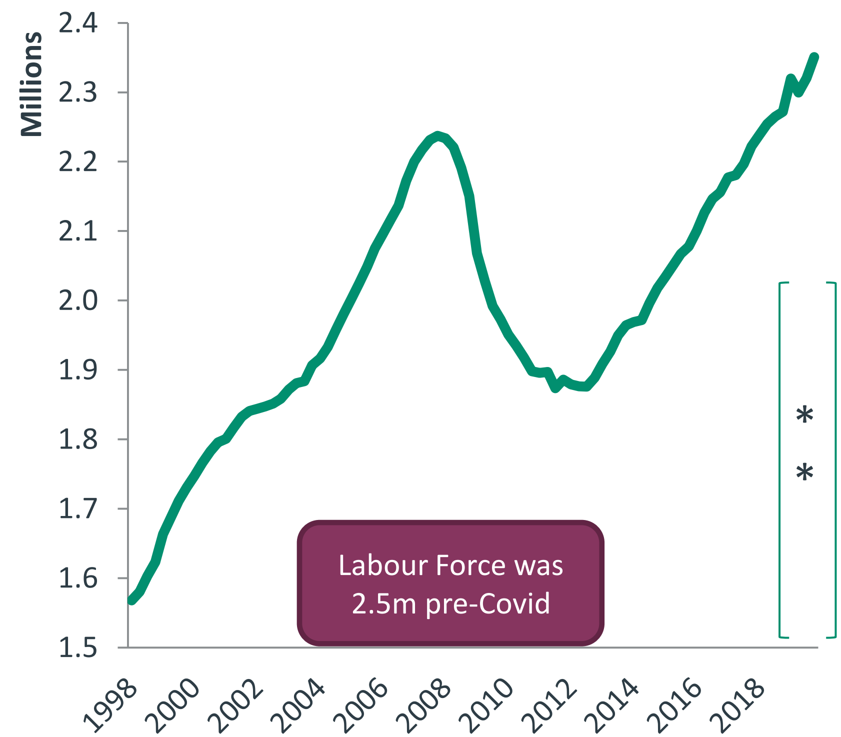
Labour market illustrated Ireland's march to recovery and full employment; now highlights the stark Covid-19 impact

March unemployment rate: Traditional CSO metric 5.4%; incl. Covid-19 impact 16.5%*



Employment growth temporarily reversed – many getting UB while others are furloughed



Source: CSO, Department of Social Protection, NTMA calculations

** The dotted line is CSO data. It can be considered an upper bound for unemployment in March*

*** There is no official data on how employment has been affected. Definitions of what constitutes employed will impact the answer. Thus we give a range of outcomes as accuracy at this present time is difficult.*

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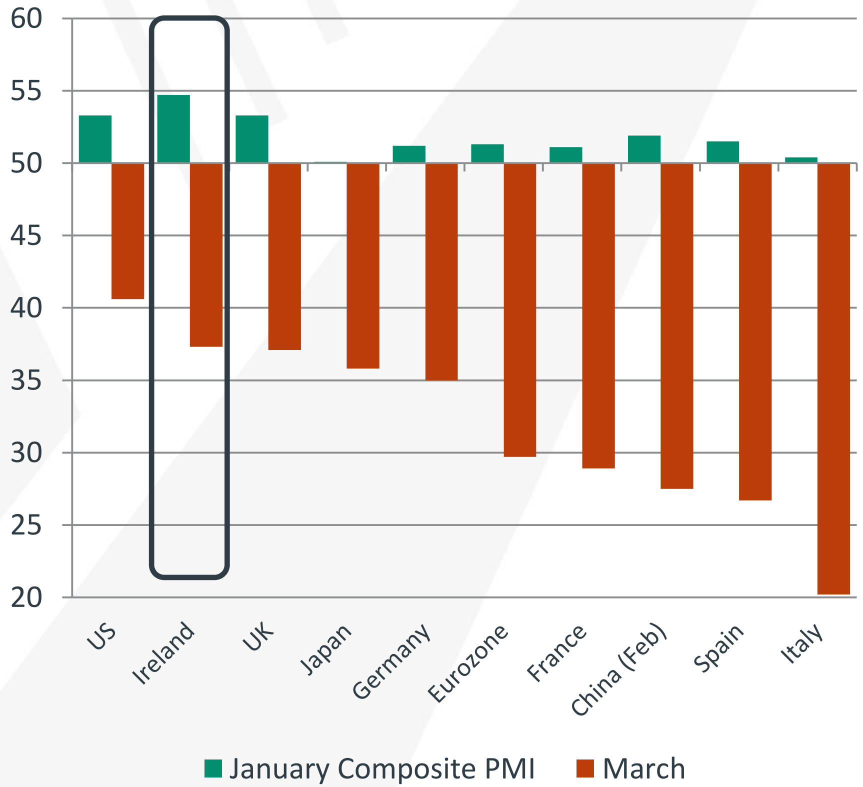
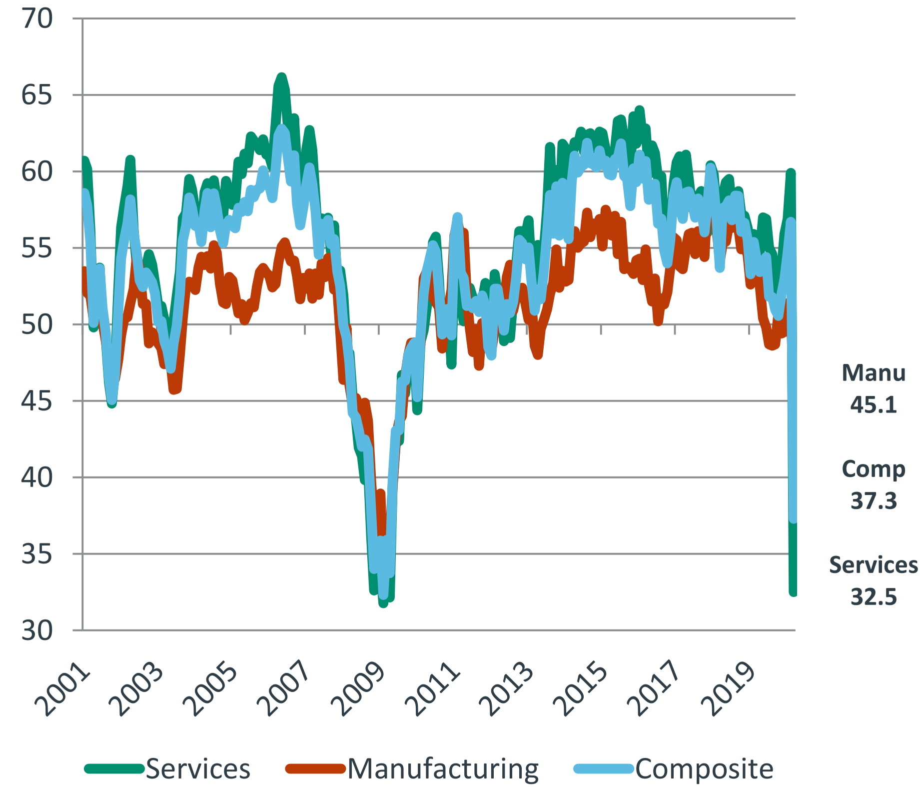
PMIs have tumbled like other countries but Ireland's contraction less than most – timing of lockdown a factor

Ireland's Composite PMI at 37.3 in March, Manufacturing held up at 45.1



After brief upswing after Brexit reprieve, PMIs have fallen sharply on Covid-19



Source: Bloomberg

During lockdown, Pharma and ICT will stabilise GVA; domestic sectors in lockdown or have reduced capacity

2019 data (€ Billions)	GVA	Wage Bill^	Domestic Owned Profits^^	MNCs Profits^^	Estimated % of normal output
Agri, Forest & Fish	3.1	0.7	2.4	0.0	>75%
Industry (incl. Pharma)	112.4	14.1	7.9	90.3	>75%
Construction	*9.7*	*4.5*	*5.0*	*0.2*	*<25%*
Dist, Transport, Hotels & Rest.	*36.2*	*19.8*	*10.0*	*6.0*	*<25%*
ICT	44.7	8.3	1.9	34.7	>75%
Financial & Insurance	23.3	9.2	5.1	9.3	>75%
Real Estate	*20.9*	*0.7*	*20.1*	*0.0*	*<50%*
Prof, Admin & Support	33.7	12.8	5.6	15.6	>75%
P Admin, Educ. & Health	33.7	28.3	5.5	0.1	>75%
Arts, Other	*4.4*	*2.1*	*2.1*	*0.1*	*<25%*
All Sectors	324.2	100.6	65.4	156.3	-

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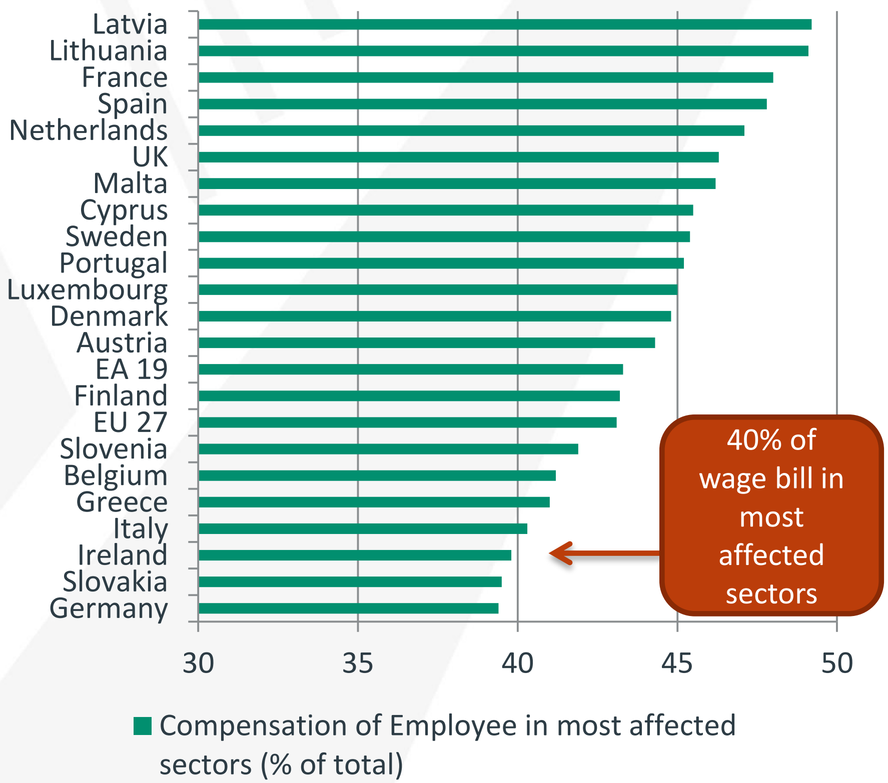
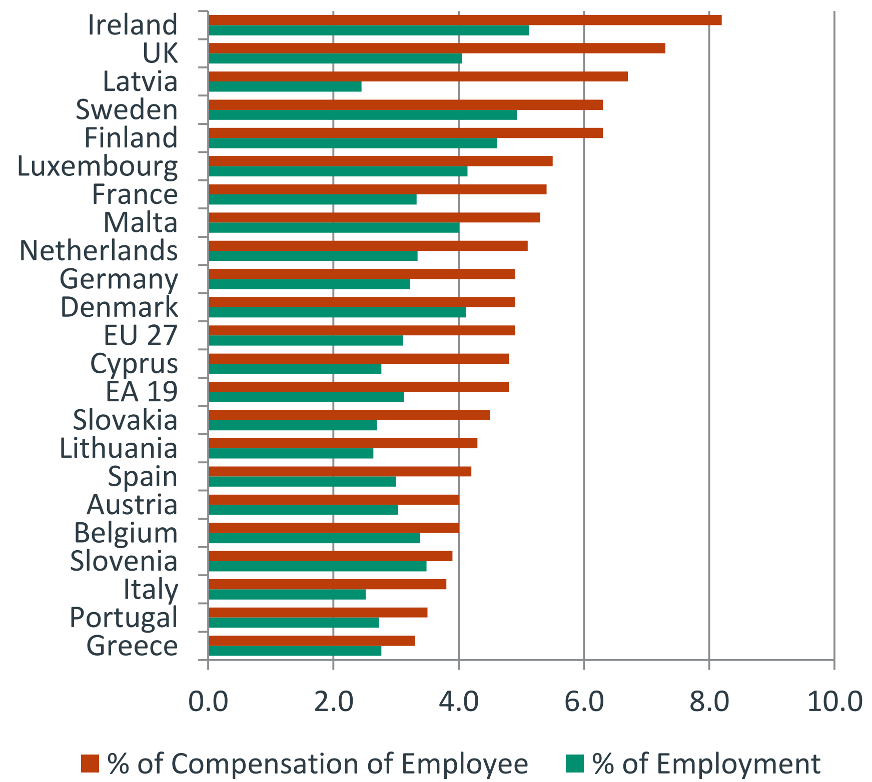
Source: CSO (2019) NTMA calculations
Note GVA figures are not adjusted for distortions by multinationals. ^ Wage Bill is given by compensation of employees in national accounts ^^ Profits are given by Gross Operating Surplus in national accounts

On a relative basis Ireland could perform better than most EU peers – ICT to pay its part

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



ICT sector will 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

Most foreign-owned multinationals are shielded but aircraft leasing is exposed (as are Irish-based airlines)

Timely CSO data on aircraft leasing in Ireland show a small but valuable sector

	2018
Assets (€ bn)	140
Persons Employed	1,971
Average Salary (€ 000s)	207.6
Total Compensation of Employee (€bn)	0.4
Profits (€ bn)	4.7
Industry % of GNI*	2.6

Covid-19 outlook – plummeting travel numbers will endanger leasing contracts

Estimated €250bn hit to global passenger revenues from Covid-19*

Impacts Ireland in two ways

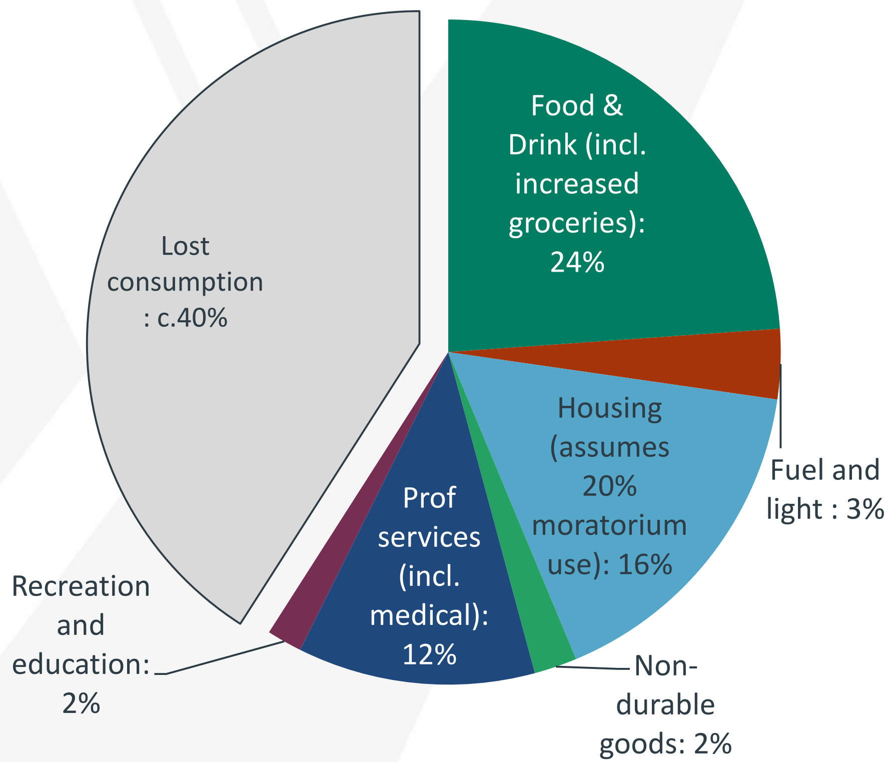
- Hit to Irish- based airlines – Ryanair (Europe's biggest airline) and Aer Lingus
- Will have a knock impact on multinational aircraft leasing companies in Ireland.

- The 2008 crisis led to a fall in aircraft values of 19% on average. Implies hit to assets held in Ireland are likely.
- Support for airlines through fiscal packages in the US and China will alleviate some concerns
- Secondary impacts on retail given high value jobs could be lost. Dublin office market may lose a demand source. Only fiscal impact is lost taxes

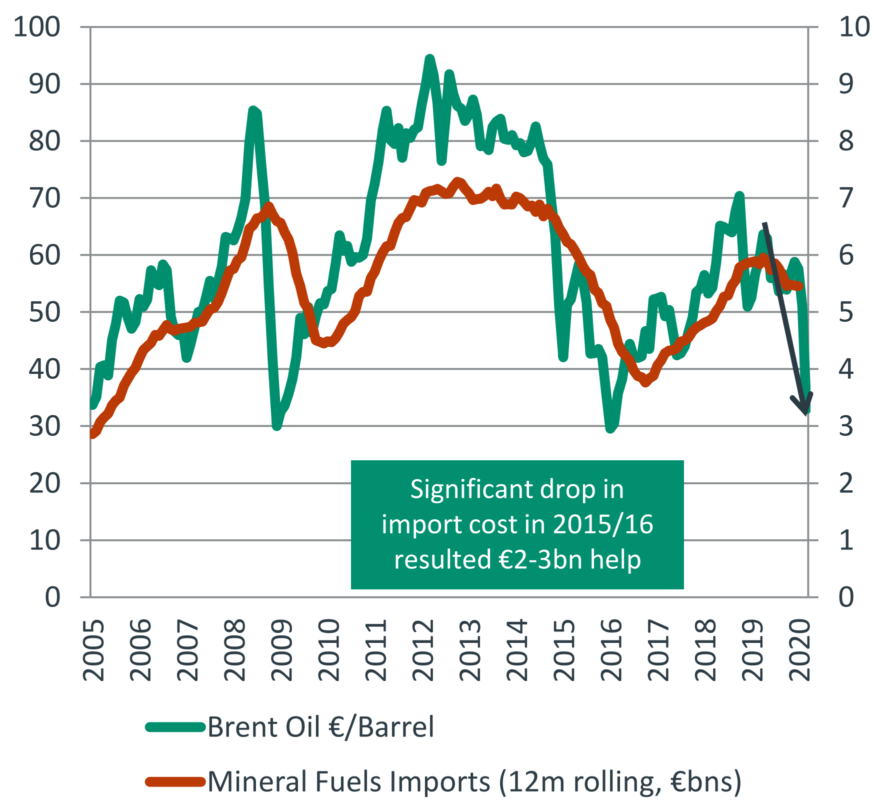
Source: CSO (2018);
**based on 70% reduction in Q2 travel numbers (CAPA forecast)*

Consumption is being curtailed by lockdown; Oil price drop is welcome boost for importer like Ireland

Lockdown economy means as much as 40% of consumption may not be happening



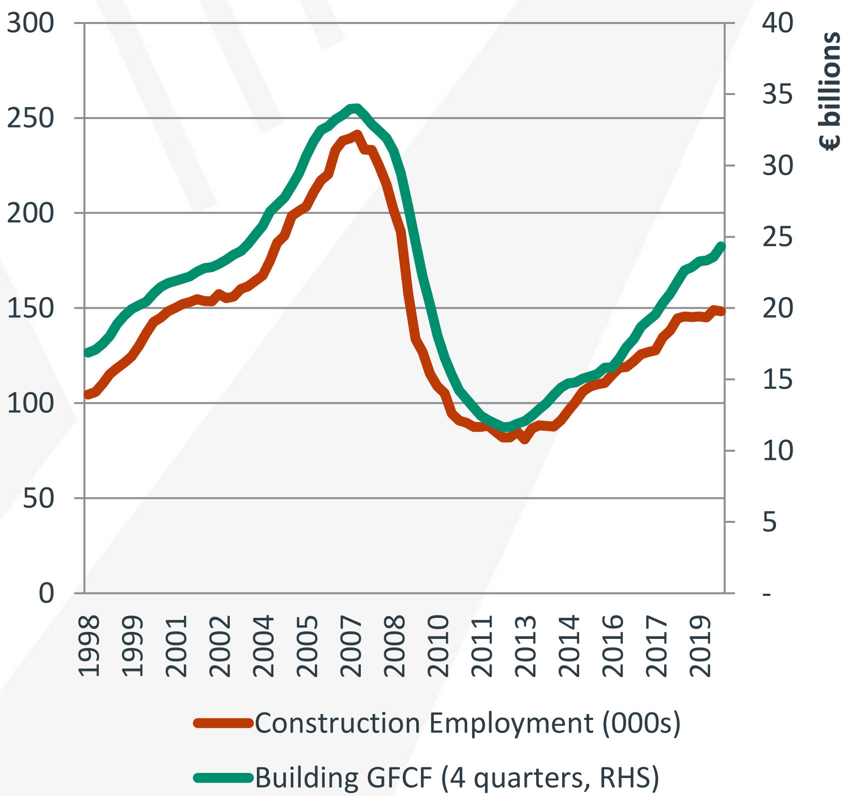
Oil price drop might boost the economy by 0.5-1% of GNI*



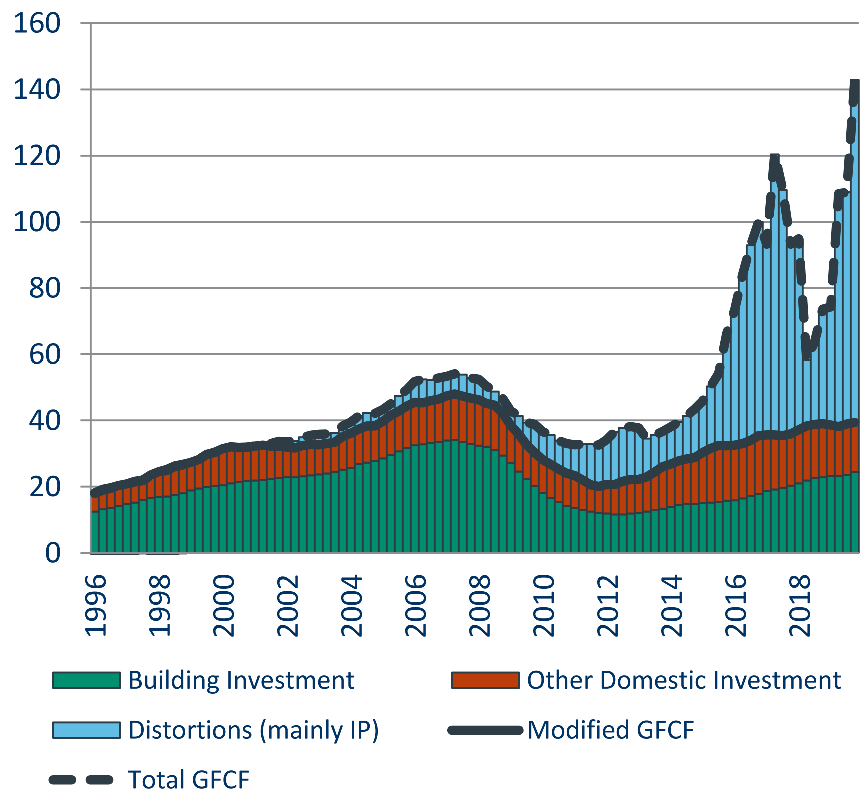
Source: CSO; DataStream; NTMA calculations
Using Household Budget survey data, we can estimate how much consumption of goods and services can still occur during the lockdown. We make allowances for extra grocery shopping and reduced housing costs given government moratorium policy.

Construction sector has been shuttered for the time being

Building and construction investment will be hit in Q2 but can rebound quickly



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



Source: CSO; NTMA calculations

Fiscal response €6.7bn (3.3% of GNI*) is considerable; more could be announced as needed

Fiscal policy response has been swift in three areas.

€6.1bn for income support measures:

1. A temporary wage subsidy has been introduced for 12 weeks which pays 70% of an employee's income up to €410p/w. This equates to any salary below €38,000.
    - Subsidy is for businesses with >20% reduction in turnover and keeps employee on the books.
    - Most furloughed salaries are below €38,000; average payment close to €300 p/w more likely.
    - For salaries >€38,000 claimants will get max. payment of €410 p/w plus any to up from employer.
2. Unemployment benefit for employees who were laid off due to Covid-19 is now €350 p/w. This is larger than the usual benefit of circa €200 p/w.
3. Under normal circumstances, the self-employed are not able to avail of unemployment benefit. This has been temporarily waived and they can apply for a benefit of €350 p/w.
4. A sick leave payment for actual Covid-19 diagnosis or self isolation is available and is €350 p/w.

€400m for increased health spending to combat Covid-19.

€200m for business supports.

Other measures enacted include support for bank borrowers, reducing the CBI's Countercyclical Capital Buffer, deferrals on tax payments including VAT and stamp duty, temporary rent freezes and temporary ban on evictions.

External environment – monetary policy and oil positives will partially offset negative external shock Ireland faces

	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	Down on demand and Saudi action
UK growth	Brexit uncertainty headwind	Covid-19 shock
Euro Growth	Sluggish	Covid-19 shock
Euro currency	No change y-o-y v. £; weaker v $	Weaker versus Dollar?

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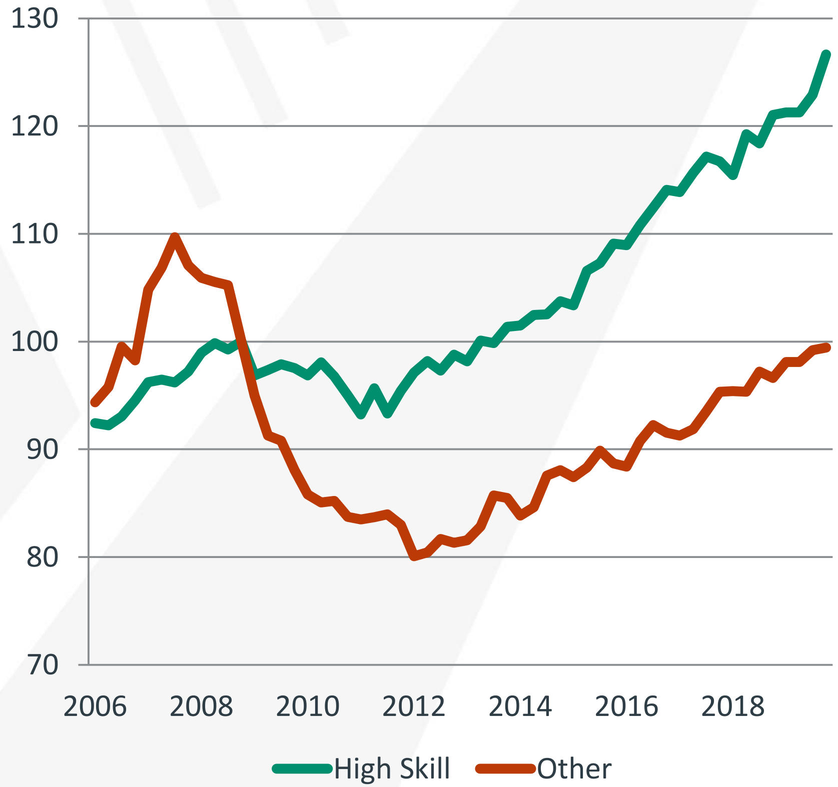
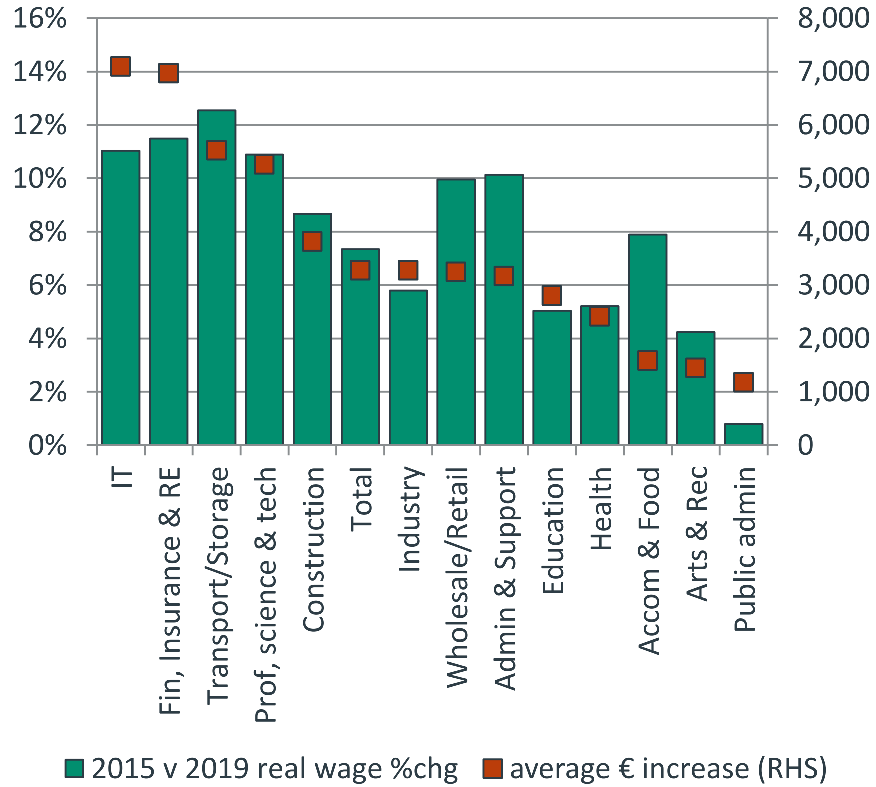
Source: NTMA analysis

High-skill jobs were added in recovery; wage growth and low inflation pushed real wages up in the last five years

High-skill employment grew sharply in recovery period (index, 100 = end 2008)



Real wages increase helped HHs to repair balance sheets, increase living standards



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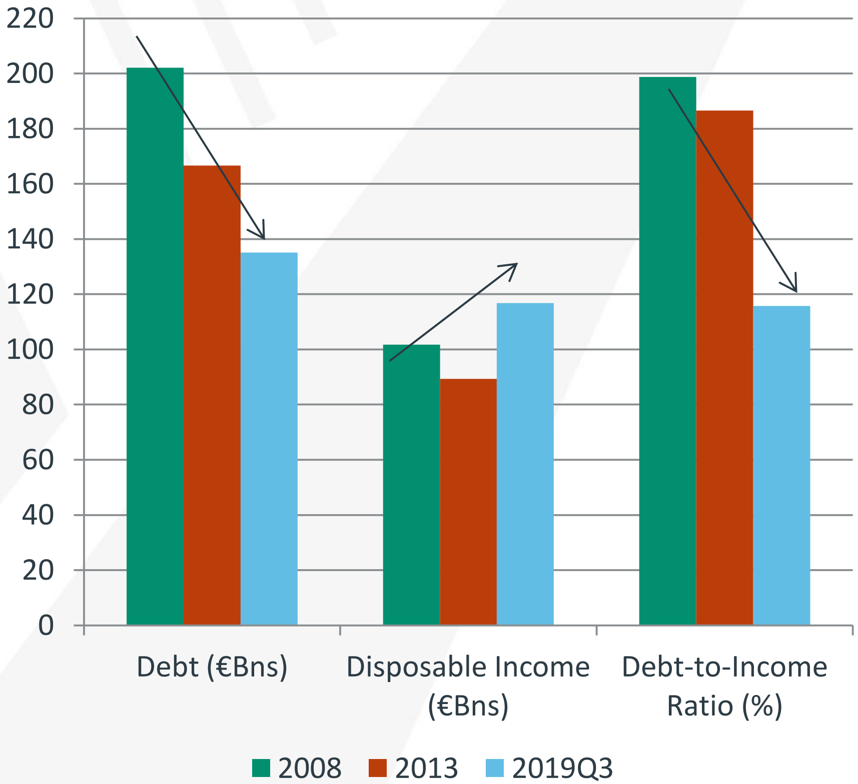
Source: Eurostat; CSO
High skill jobs include the ISCO08 defined groupings Managers, Professionals, Technicians and associate professionals

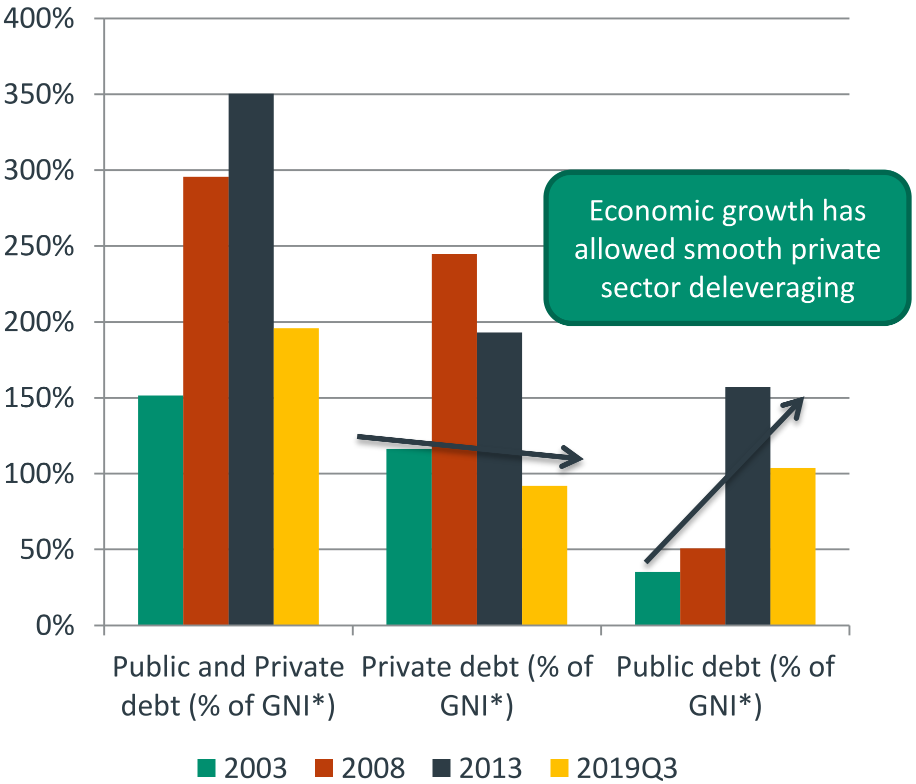
Ireland has used recovery period to repair private sector balance sheets – especially households

Household debt ratio has decreased due to deleveraging and increasing incomes



Source: [CBI]

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



Source: CBI data, CSO

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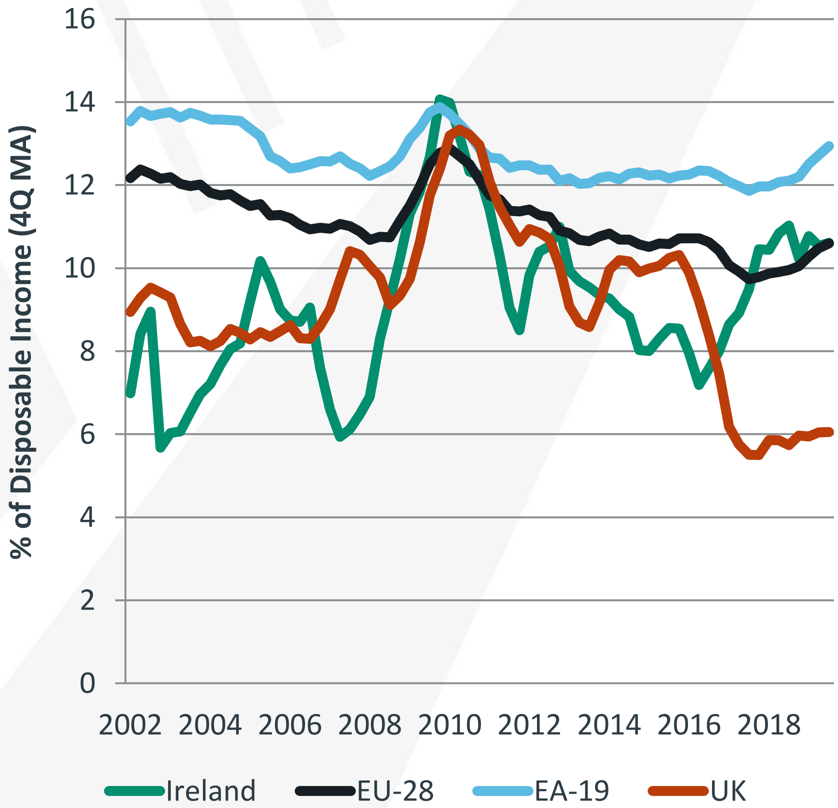
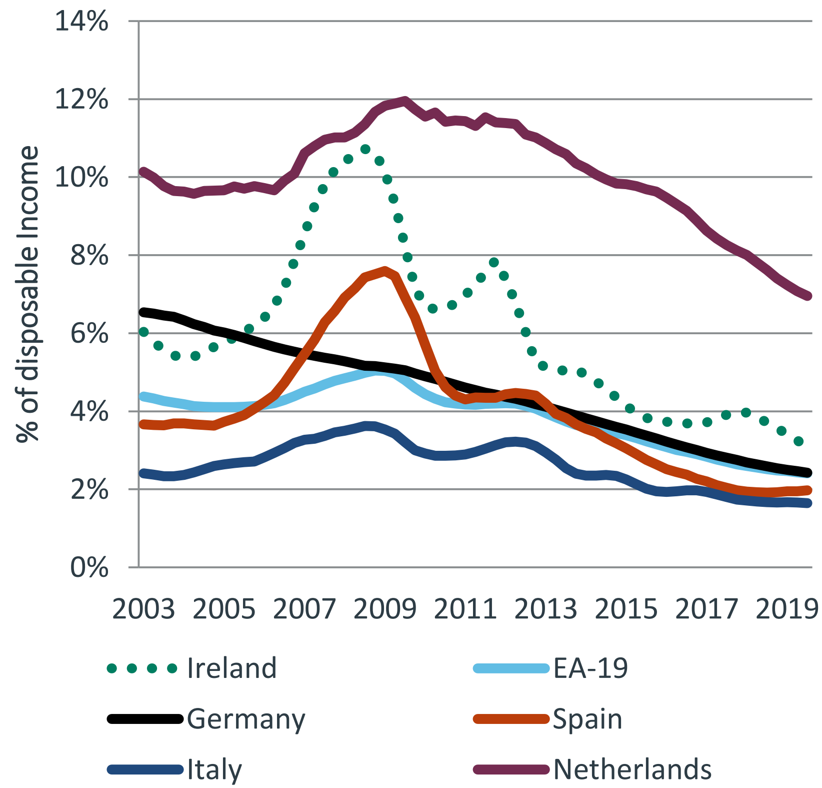
Note: Private debt includes household and Irish-resident enterprises (ex. financial intermediation)
CBI quarterly financial accounts data used for household and CSO data for nominal government liabilities.

Savings rate around EU average – pointing towards households being more prudent

Gross household saving rate lower than peak but close to EU average



Interest burden down to 3% of disposable income from peak of 11%



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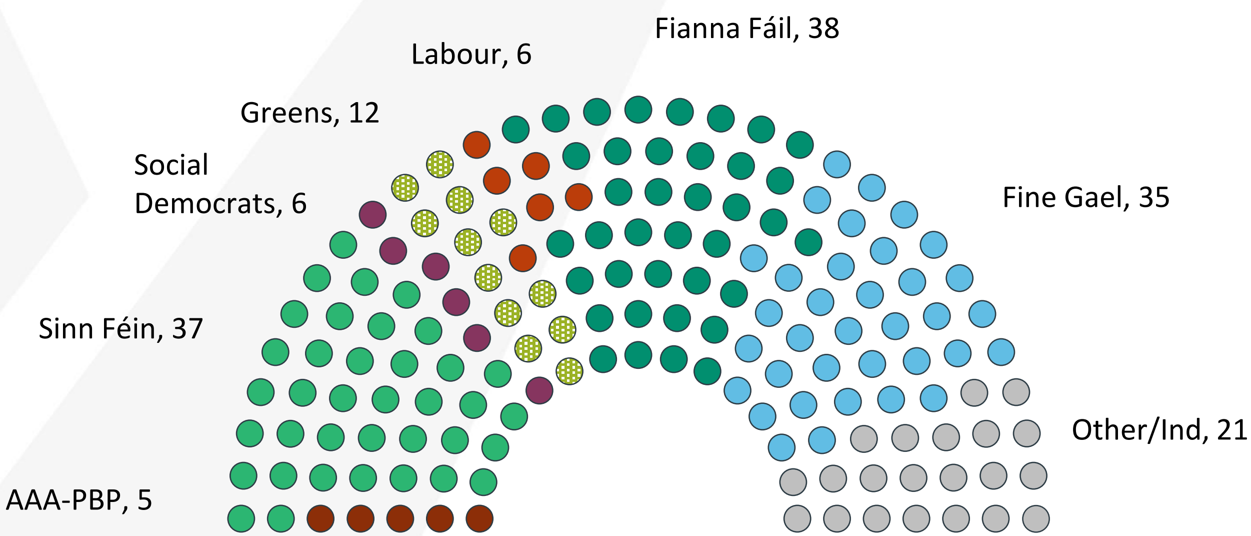
Source: Eurostat, ONS, CSO ; CBI, Eurostat NTMA calculations
Note: Gross Savings as calculated by the CSO has tended to be a volatile series in the past, some caution is warranted when interpreting this data

Recent general election was inconclusive but coalition likely in coming months

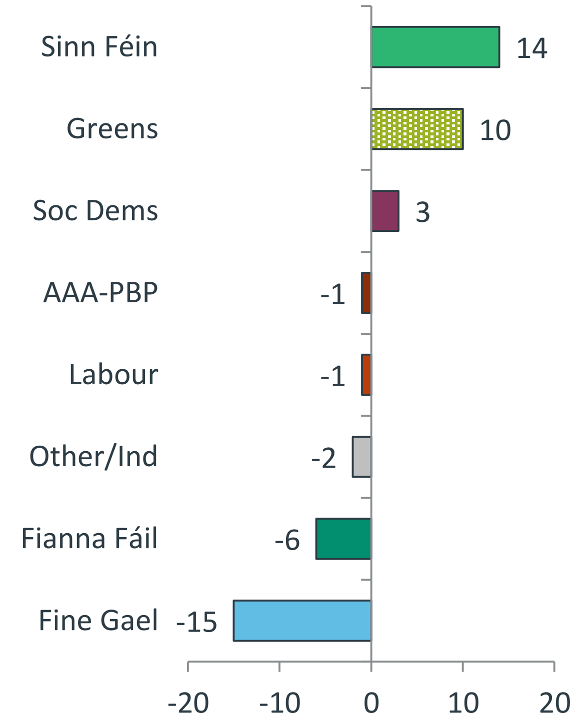
No two parties together can form govt. No new legislation can be passed without govt. formation which will force issue

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



Sinn Féin the biggest winners of the GE but may not enter govt.

Change since GE 2016



Source: NTMA analysis

**Note: Number of seats increased by two to 160 in 2020 election.*

Section 2: Fiscal & NTMA funding

Ireland was in relatively good shape fiscally before Covid-19

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€11bn already funded in 2020; NTMA's original €10-14bn plan will be exceeded but Ireland relatively better placed

Flexibility

Ireland has large cash balances, the 2020 redemptions prefunded and a year free of maturing bonds in 2021.

Funding will come from several sources. Bonds, ST paper and the rainy day fund.

10 years

One of the longest weighted average maturities in Europe

The NTMA used ECB QE to extend debt maturities reduce interest cost and repay the IMF. Now the ECB has started to buy again without limits

AA-

Ireland has been upgraded to AA space by S&P

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

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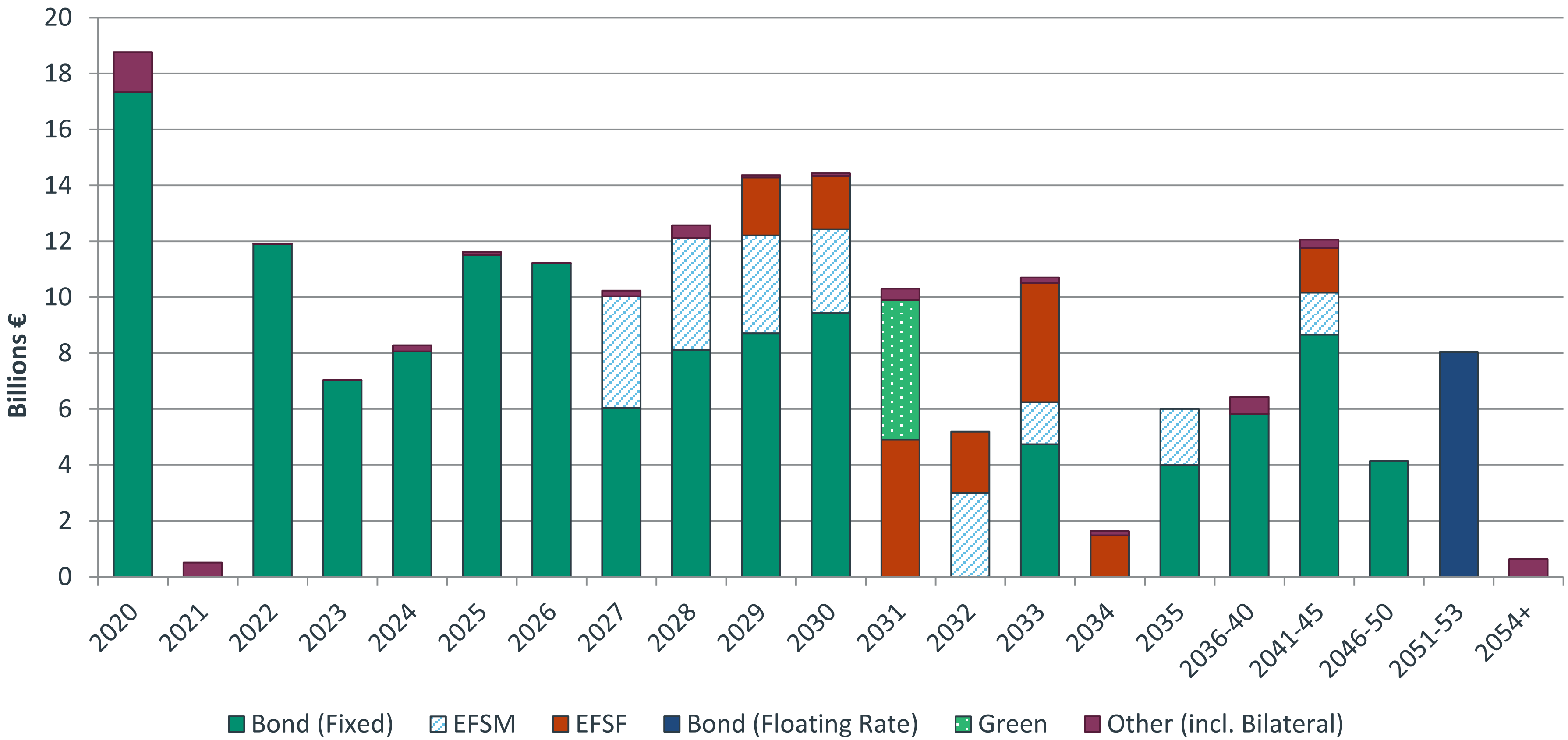
2020 redemptions prefu
minimal redemptions i

Smoother maturity profile and no bond redemptions in 2021

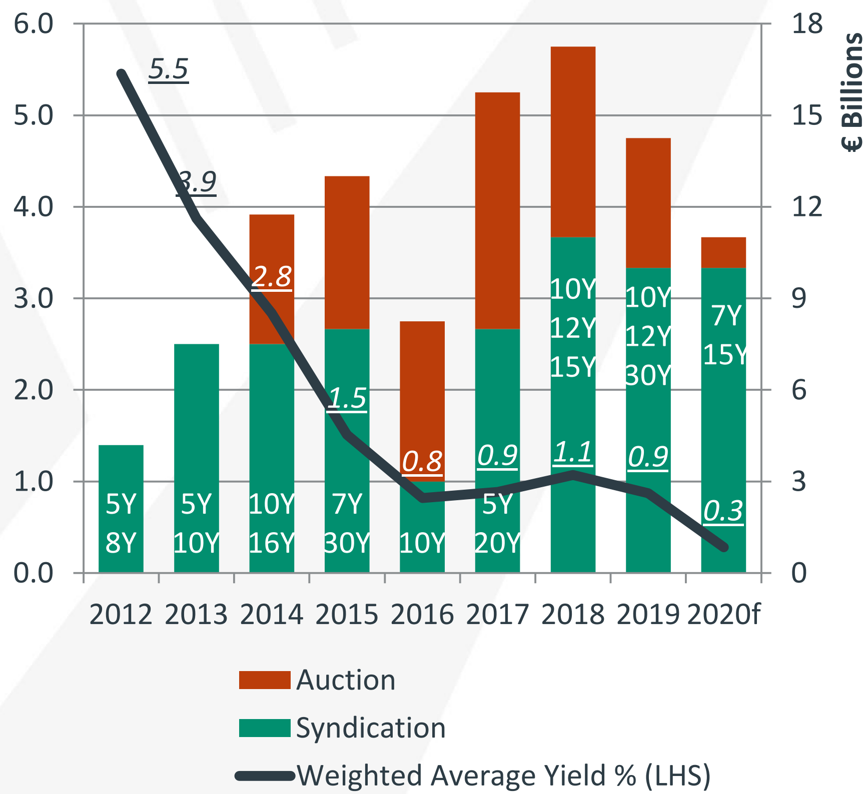


Source: NTMA

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 2027-30 range although these may be subject to change.

Redemptions in coming years much lower than last five years – provides NTMA with flexibility for issuance

NTMA issued €80bn MLT debt since 2015; 13.6 yr. weighted maturity; avg. rate of 0.94%



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

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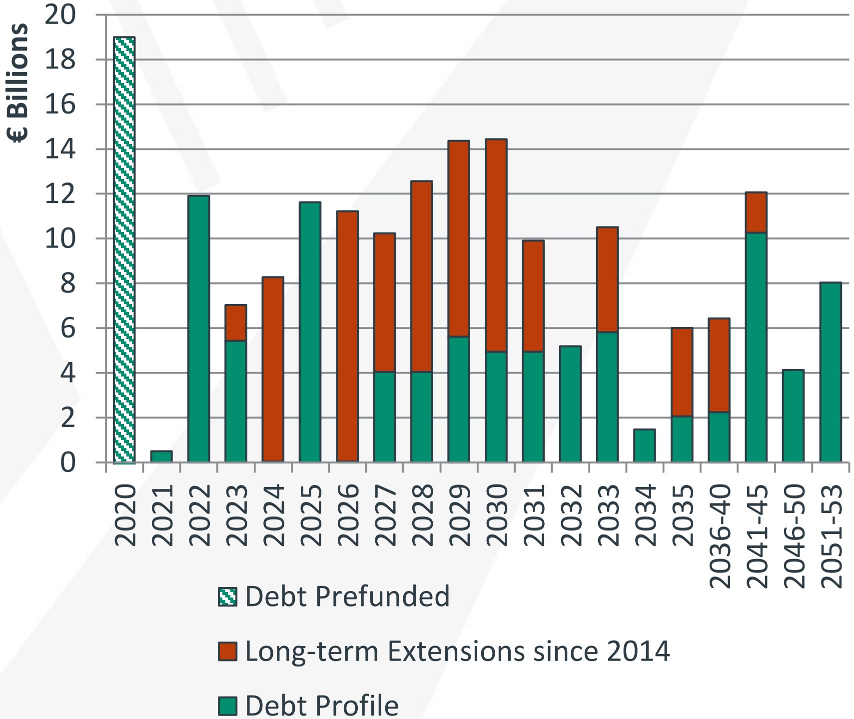
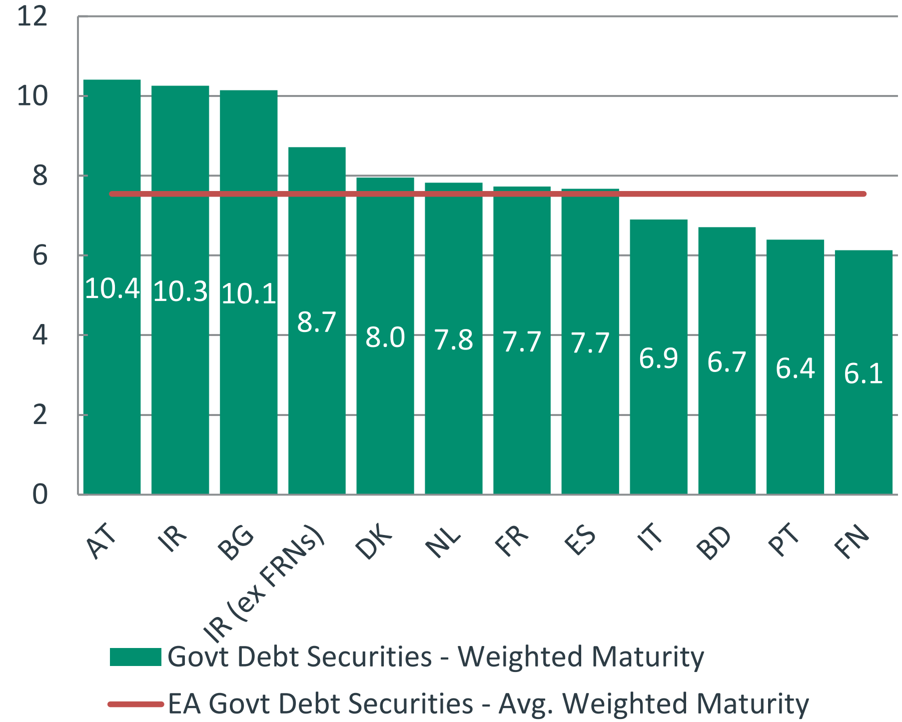
Source: NTMA, CSO, Department of Finance
Only showing marketable MLT debt (auctions and syndications). Other issuance such as inflation linked bonds, private placement and amortising bonds occurred but not shown.

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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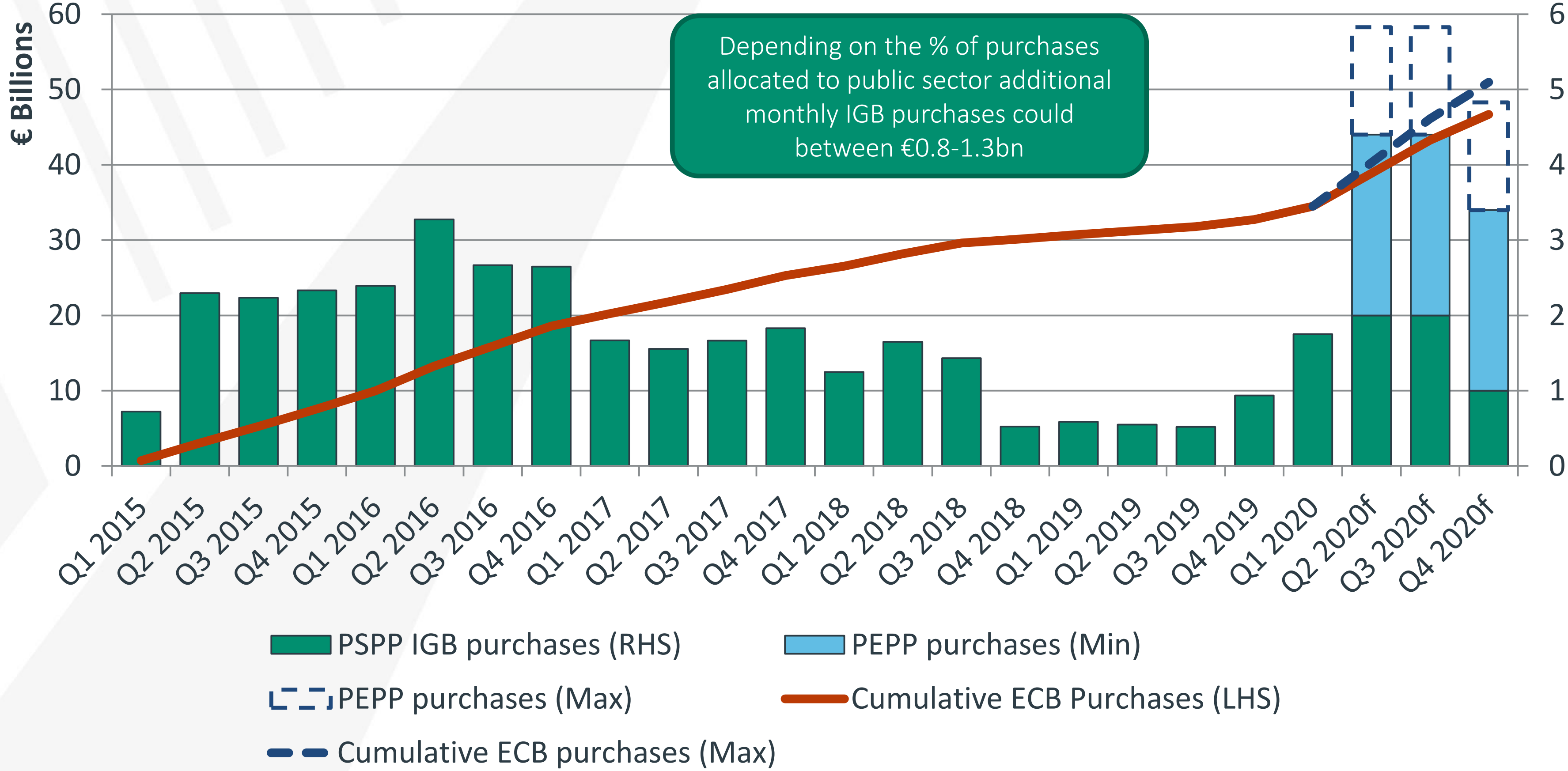
Source: NTMA; ECB

**excludes programme loans. Ireland's maturity including these loans is still similar*

ECB's parameters on new purchases (no limits, <1 yr included) and large size (€750bn) will underpin IGB market



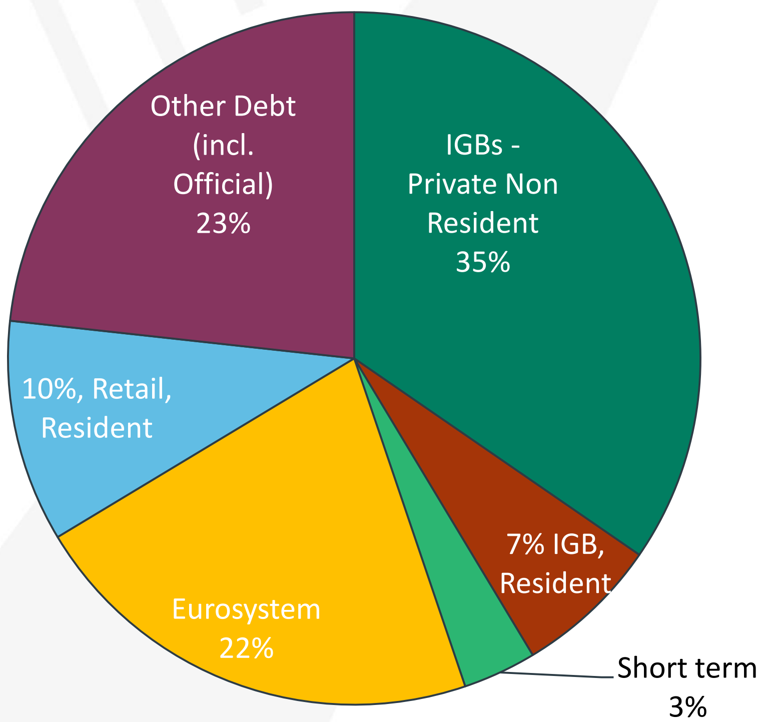
Source: ECB, NTMA Calculations

Notes:

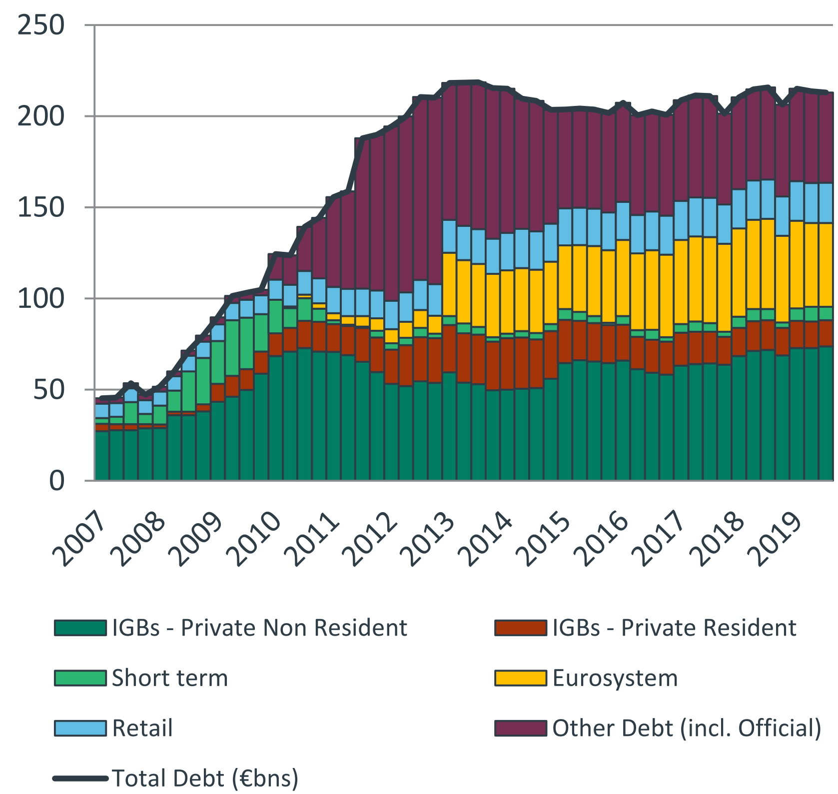
PEPP min scenario assumes 50% of new purchases will be for public sector assets. Using Ireland's capital key of 1.69% would imply €0.8bn. PEPP max scenario assumes 80% of new purchases will be for public sector assets.

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 (Q3 '19)



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



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.

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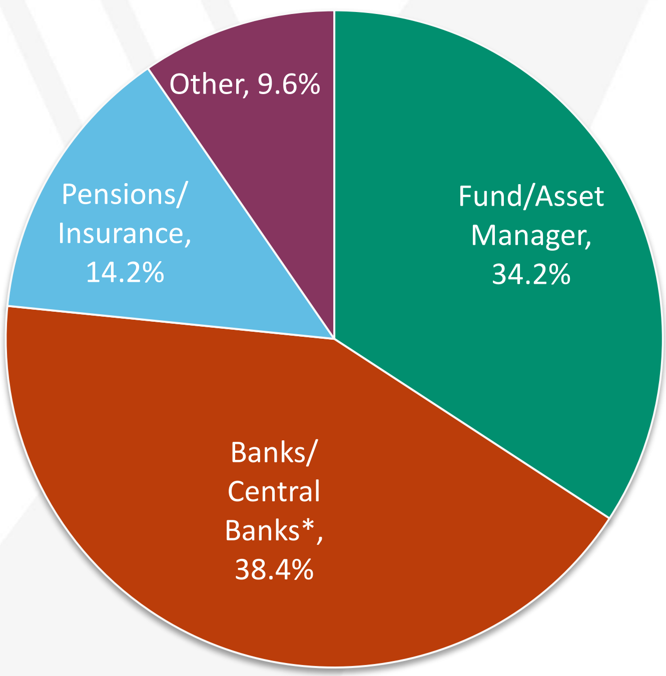
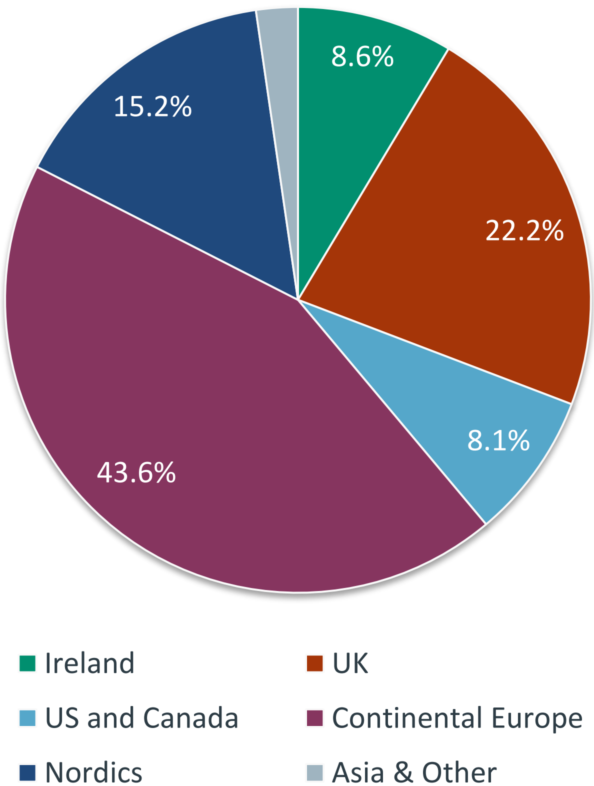
Investor base for Government bonds is wide and varied

Investor breakdown: Average over last 5 syndications



Country breakdown: Average over last 5 syndications

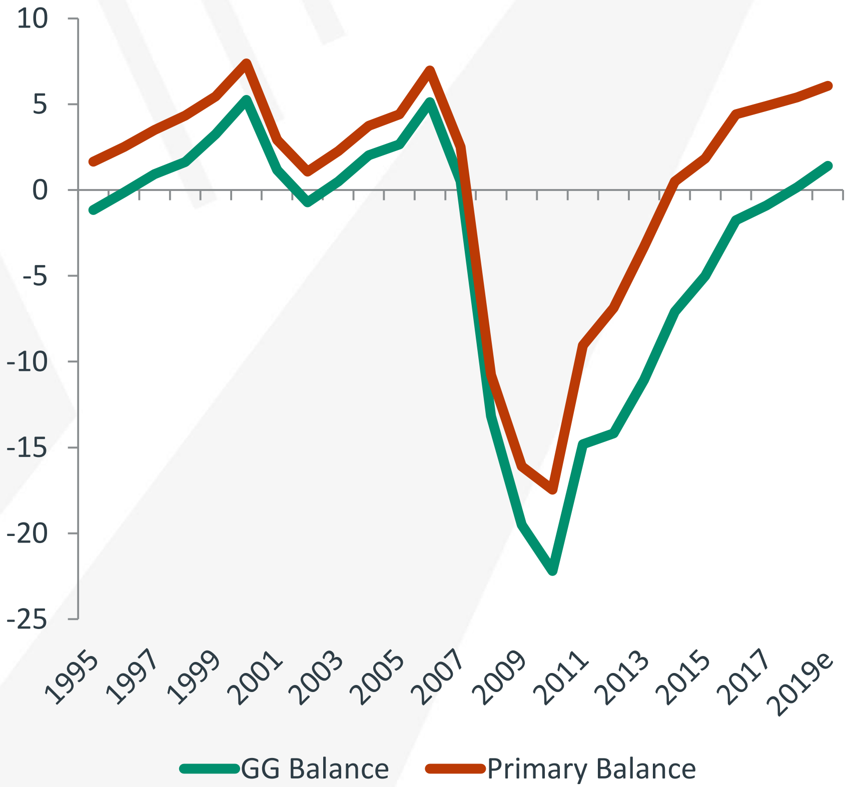


Source: NTMA

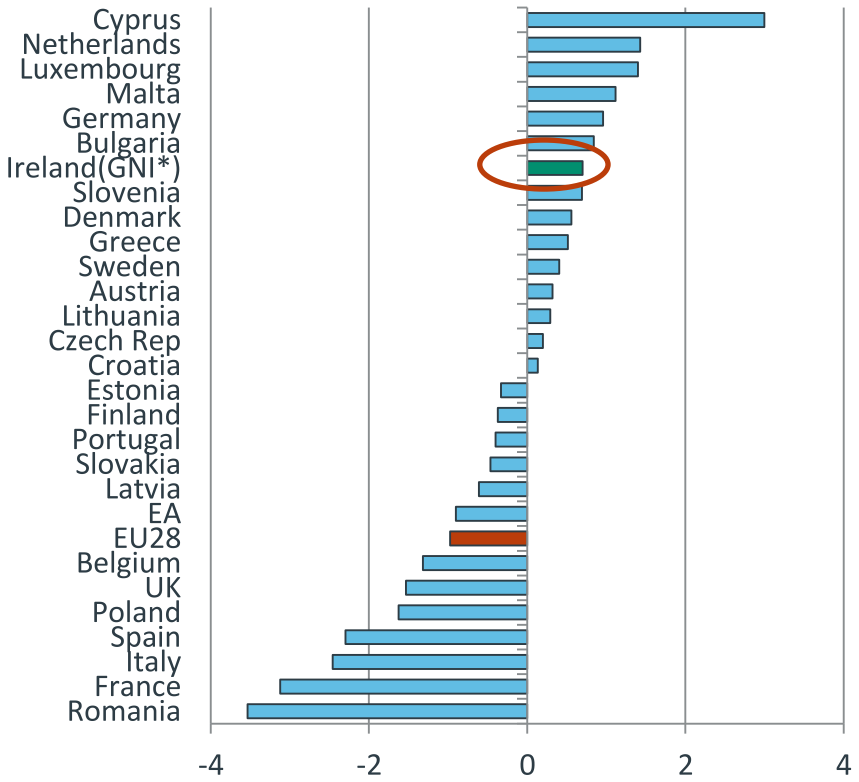
** Does not include ECB. ECB does not participate on primary market under its various asset purchasing programmes*

Fiscal discipline in evidence in last decade – after Covid-19 stimulus Ireland will have to do the hard yards again

Government worked to get Gen. Govt. Balance to surplus before Covid-19



2019 GGB Deficit/Surplus (% of GDP) forecasts; Ireland in better shape than most



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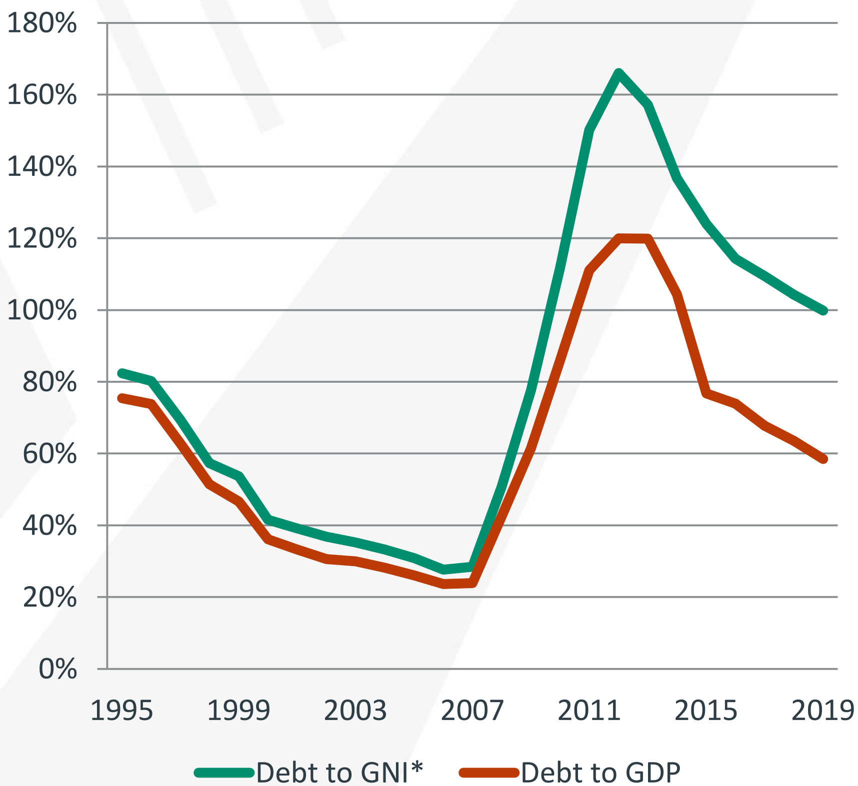
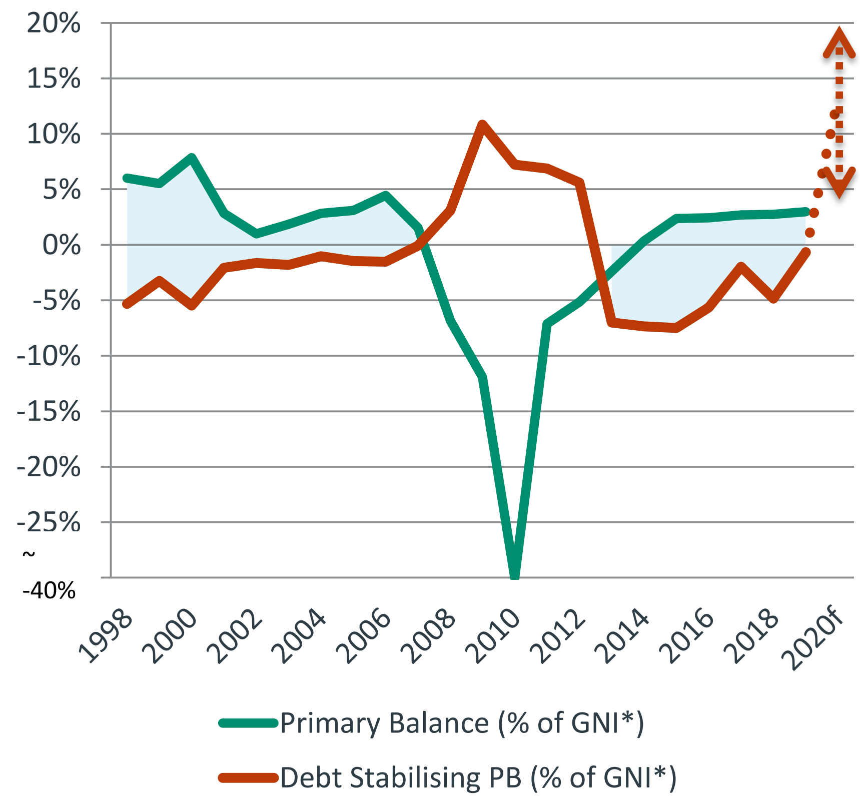
Source: CSO; Eurostat

Gross Government debt likely close to 59% of GDP at end-2019 but 100% of GNI*; will reverse in the short term

Debt-to-GNI* ratio is high but has declined quickly



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



Source: CSO; NTMA analysis

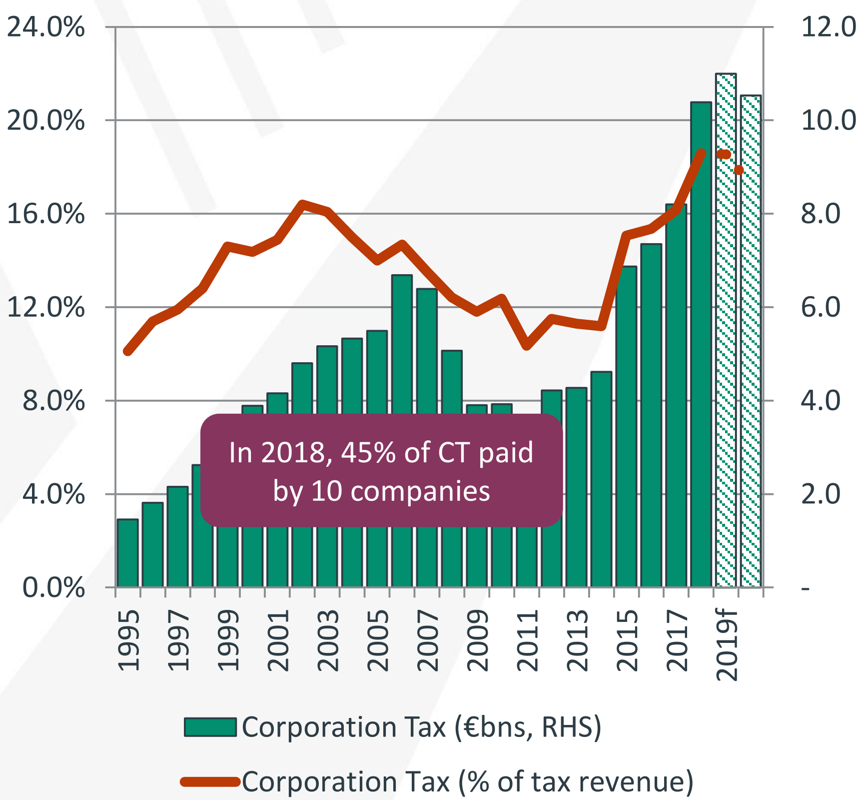
But regardless of improvement, debt stock is high and will increase; assess other metrics apart from debt to GDP too

2018	GG debt to GG revenue %	GG interest to GG rev %	GG debt to GDP %
Greece	377.9%	6.9%	181.2%
Italy	291.7%	7.9%	134.8%
Portugal	284.1%	7.9%	122.2%
Cyprus	256.5%	6.2%	100.6%
Ireland	250.2% (236%)	6.4% (5.5%)	63.6% (59%)
Spain	249.1%	6.2%	97.6%
UK	219.0%	6.3%	85.9%
Belgium	194.7%	4.1%	100.0%
EA19	184.7%	4.0%	85.9%
France	183.9%	3.2%	98.4%
EU28	178.4%	4.1%	80.4%
Slovenia	158.9%	4.5%	70.4%
Austria	151.4%	3.3%	74.0%
Germany	133.2%	2.0%	61.9%
Netherlands	120.3%	2.0%	52.4%

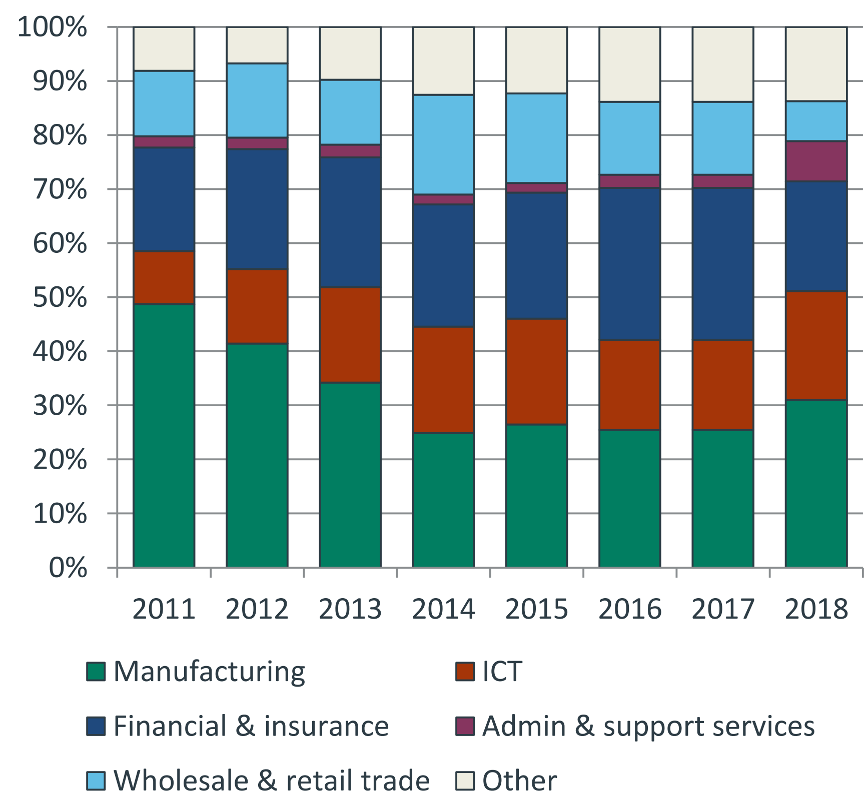
Source: Eurostat, Department of Finance
Ireland numbers in bracket 2019 figures. Also 100% Debt to GNI ratio in 2019*

Corporation tax revenue to be cushioned by payments relating to 2019 and defensive nature of Pharma and ICT

Corporation tax (CT) receipts have more than doubled in four years



Sectors with large MNC presence dominate CT receipts



Source: Department of Finance, Revenue

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	A(high)	R-1 (middle)	Positive	Jan 2020
R&I	A	a-1	Stable	Jan. 2017

Source: NTMA

Section 3: Long term fundamentals

Ireland's long run positives like demographics will reassert in time

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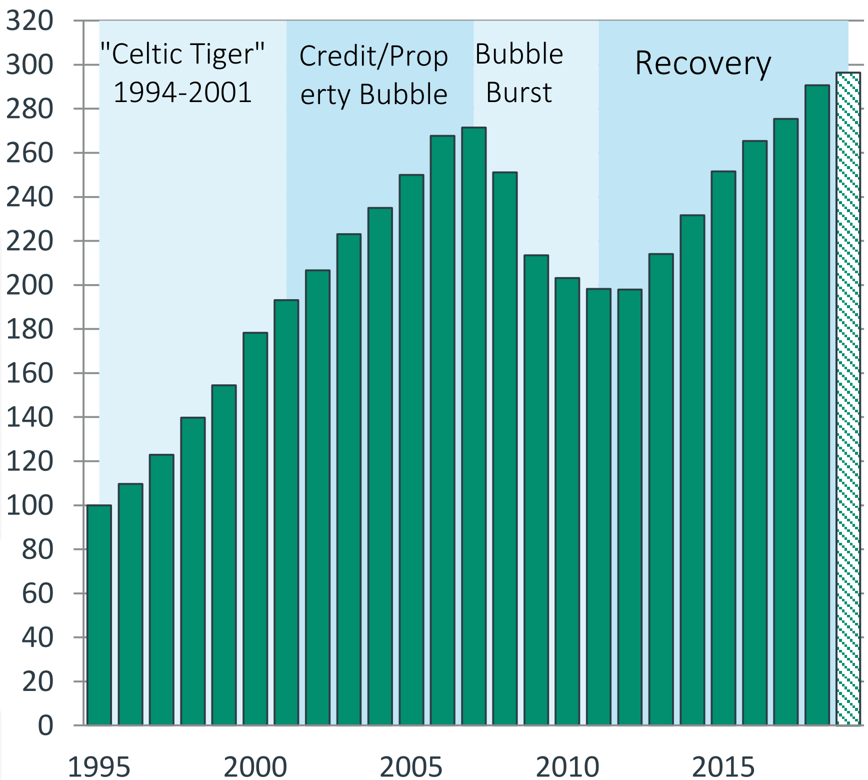
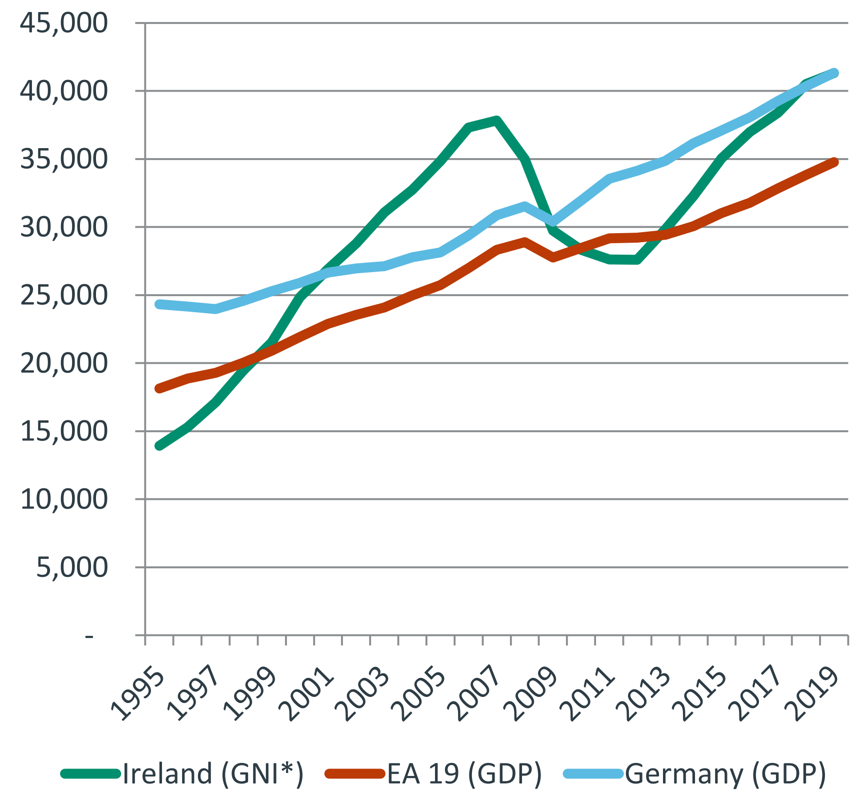
National Treasury Management Agency

Ireland’s structural drivers of growth will reassert when crisis passes

Gross National Income* at current prices (1995=100)



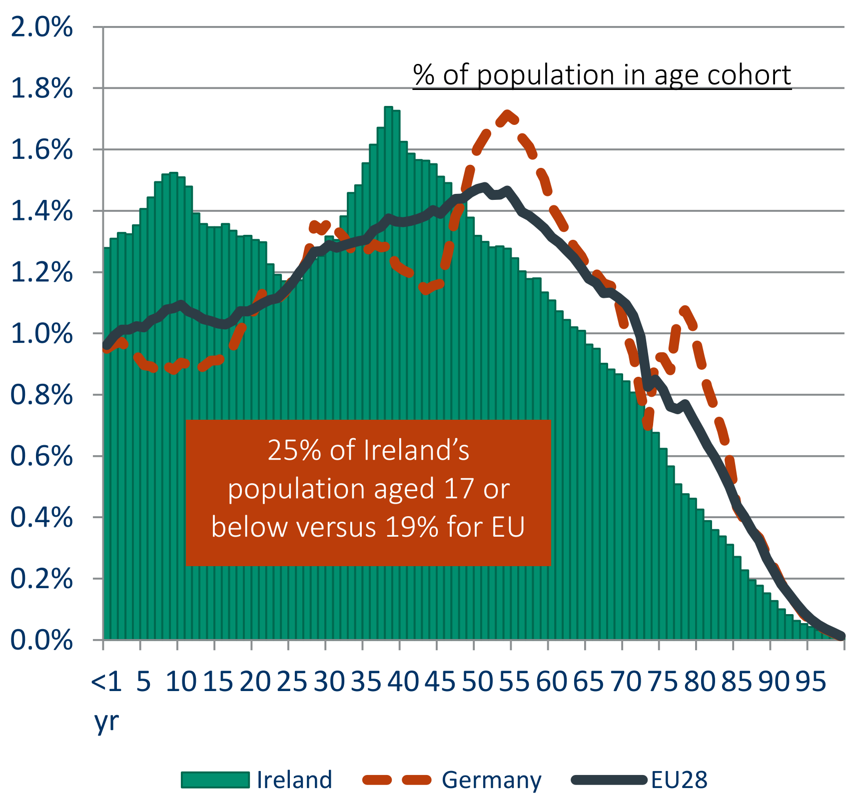
Ireland’s GNI* per capita above 2007 levels and compares favourably to EA



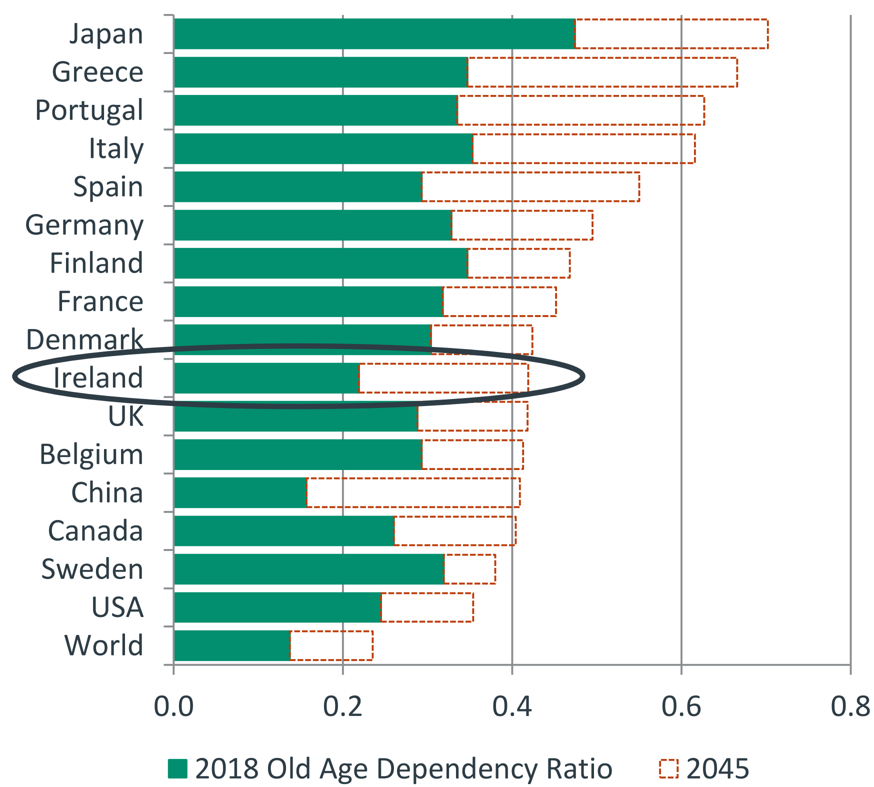
Source: CSO, Eurostat

Ireland's population profile younger than the EU average

Ireland's population was 4.92m in 2019 – over 200,000 more than 2011 Census



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



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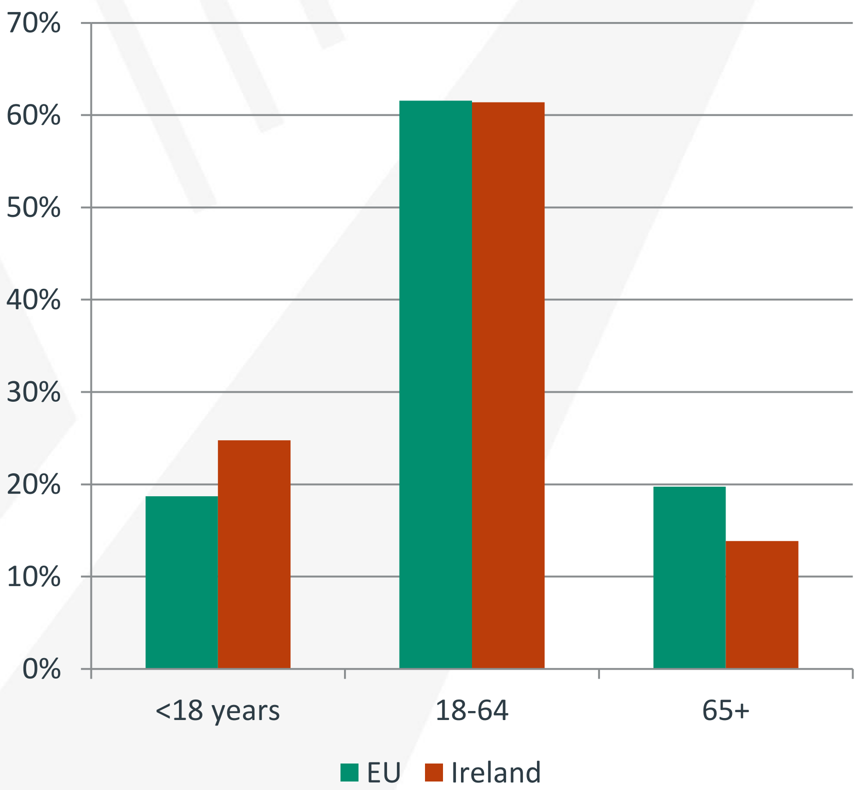
Source: Eurostat (2019) CSO; OECD

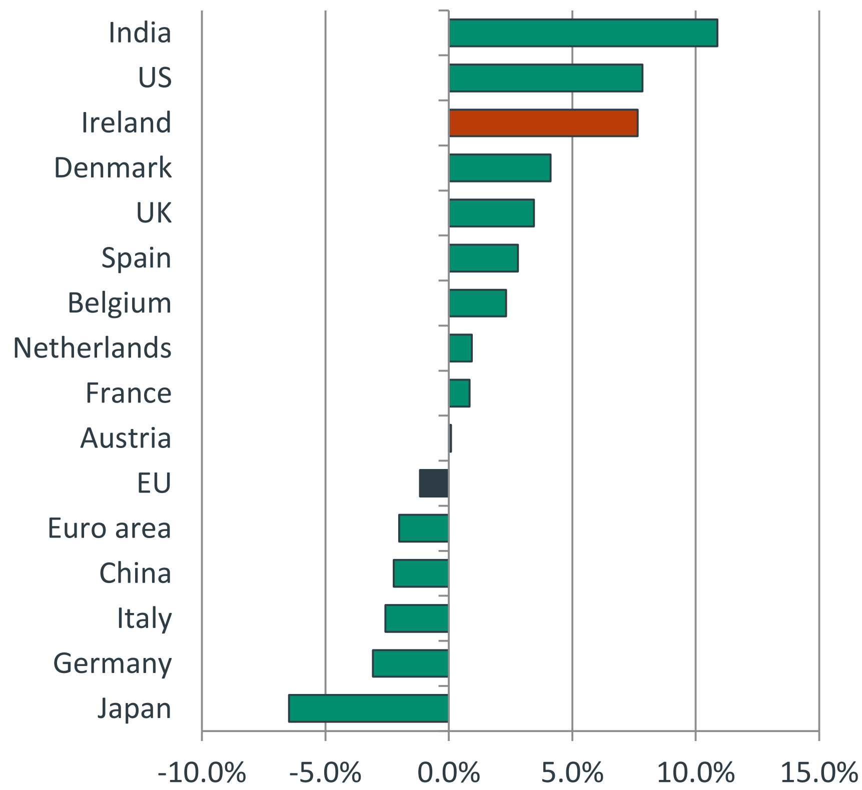
Favourable population characteristics underpin debt sustainability over longer term: next 10 years look healthy

Percentage of population: Ireland's has relatively more young people and fewer old



Source: Eurostat

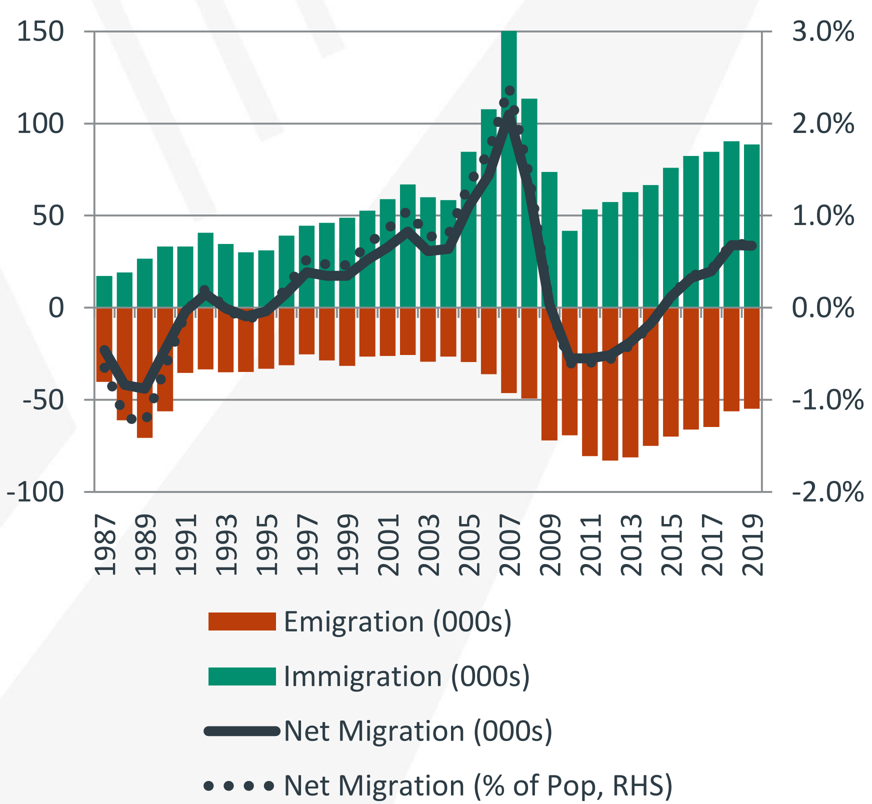
The consequence is that working-age population expected to grow (2020-2029)



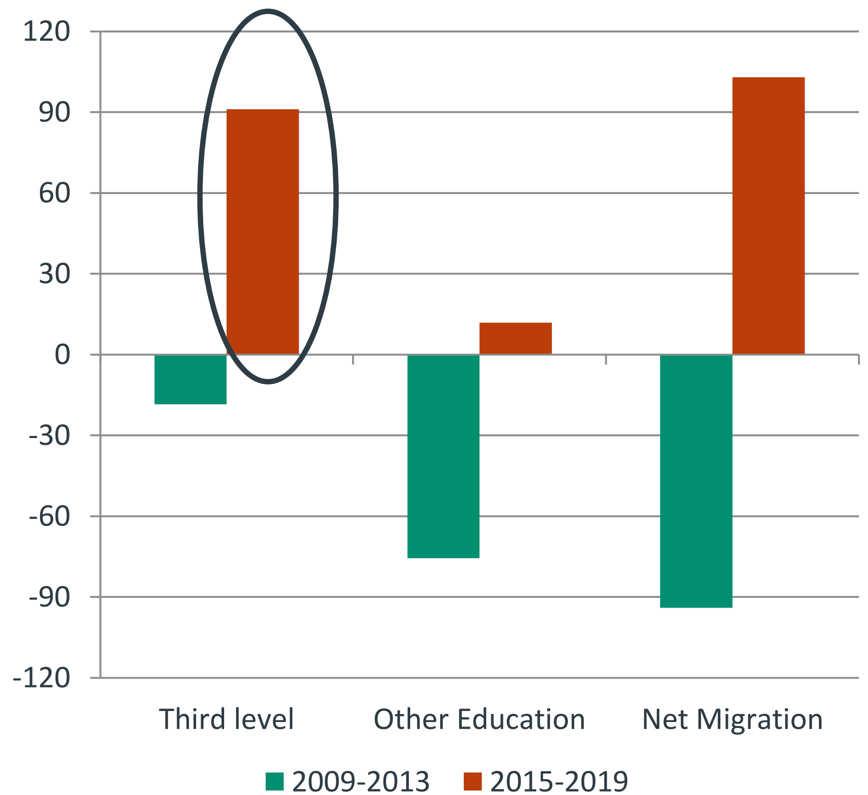
Source: Oxford Economics forecasts

Openness to immigration has been beneficial to Ireland; migration in 2020 to be lower than recent years

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



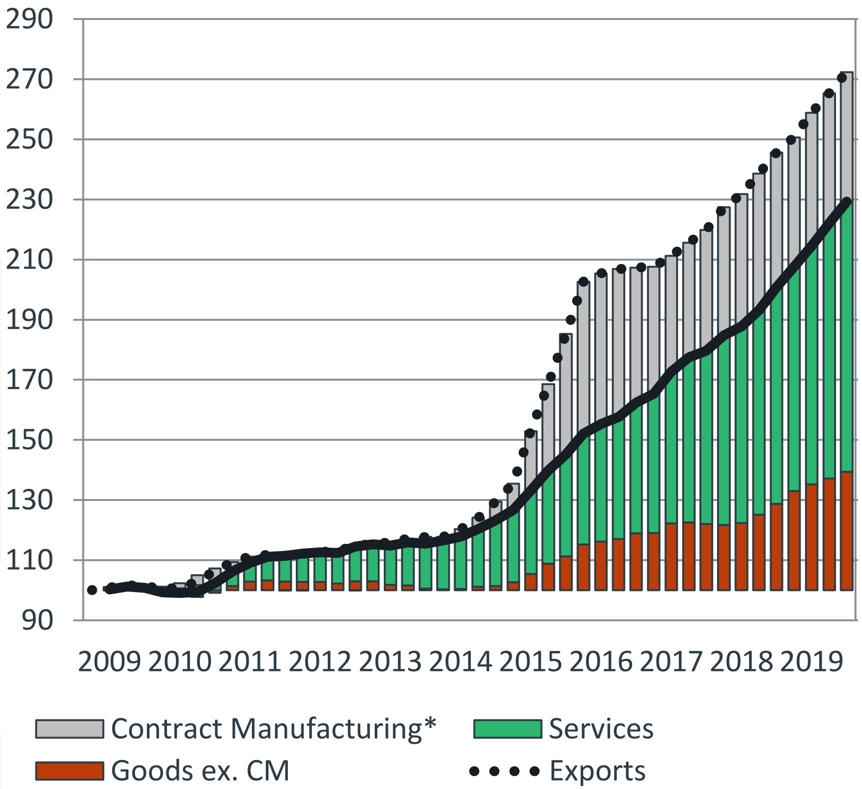
Highly educated migrants moving to Ireland "Reverse Brain Drain"



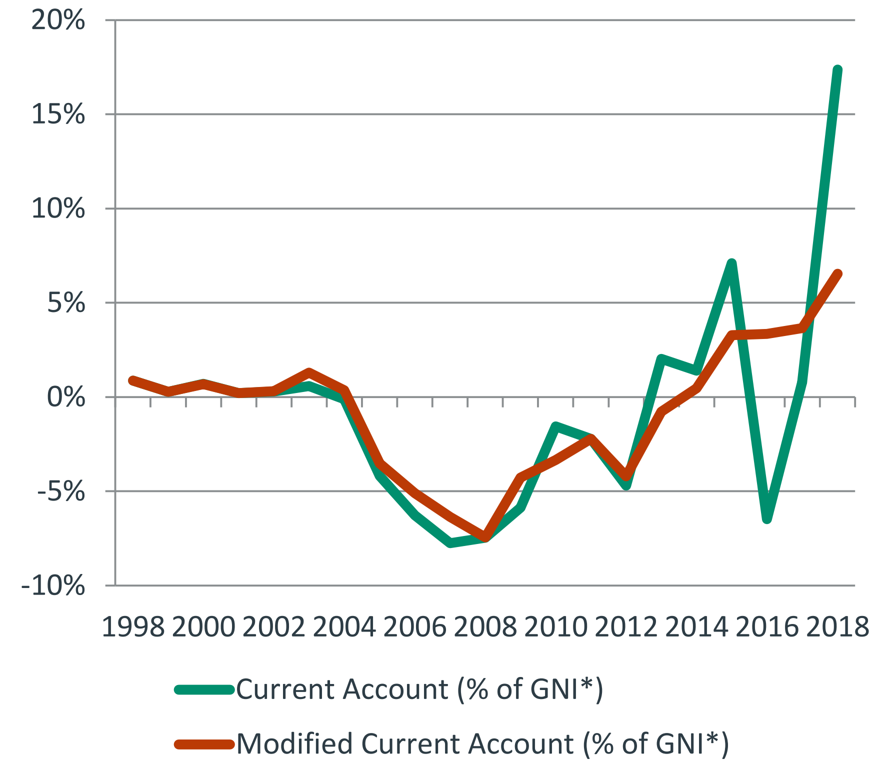
Source: CSO

Openness to trade is also central to Irish success – led by services exports; Ireland is living within its means again

Cumulative post-crisis total exports (4Q sum to end-2008 = 100, current prices)



Current account is distorted heavily by MNEs: modified CA is consistent with GNI*



*Source: CSO, NTMA calculations   * Contract manufacturing proxy*
Nominal values, exports excludes contract manufacturing.
Modified CA=CA less (IP Depreciation + Aircraft Leasing Depreciation + Redomiciled Incomes + R&D Services Exports) adding back (Imports of related to Leasing Aircraft + R&D related IP and services Imports). Significant caution should be exercised when viewing Ireland's current account data. MNC's action distort metrics heavily.

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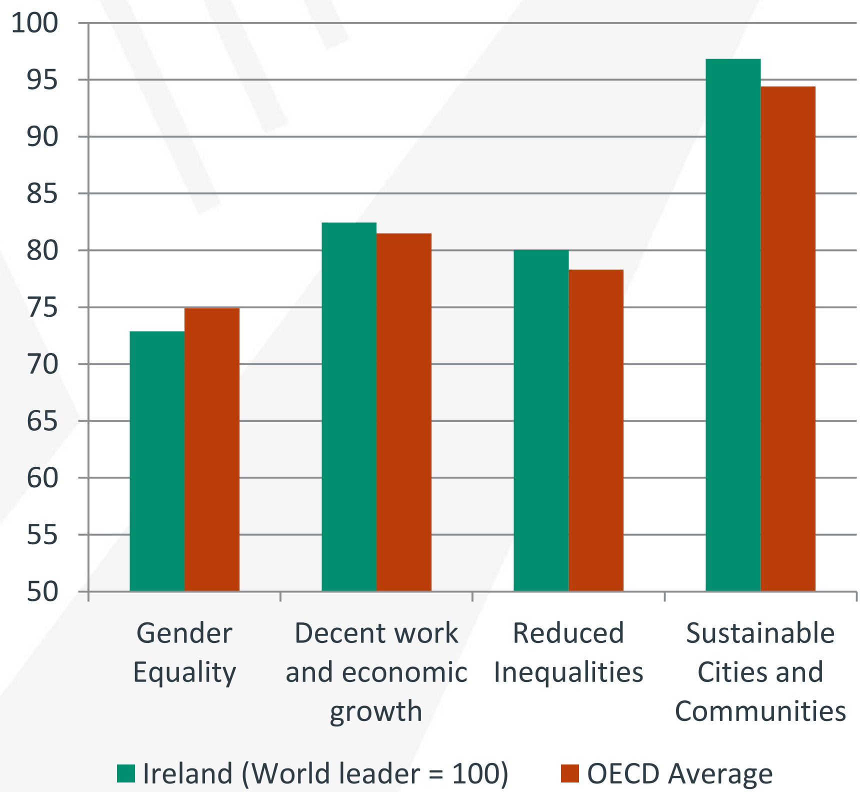
Ireland scores well on social issues and ability to do business

Ireland is close to OECD norms socially

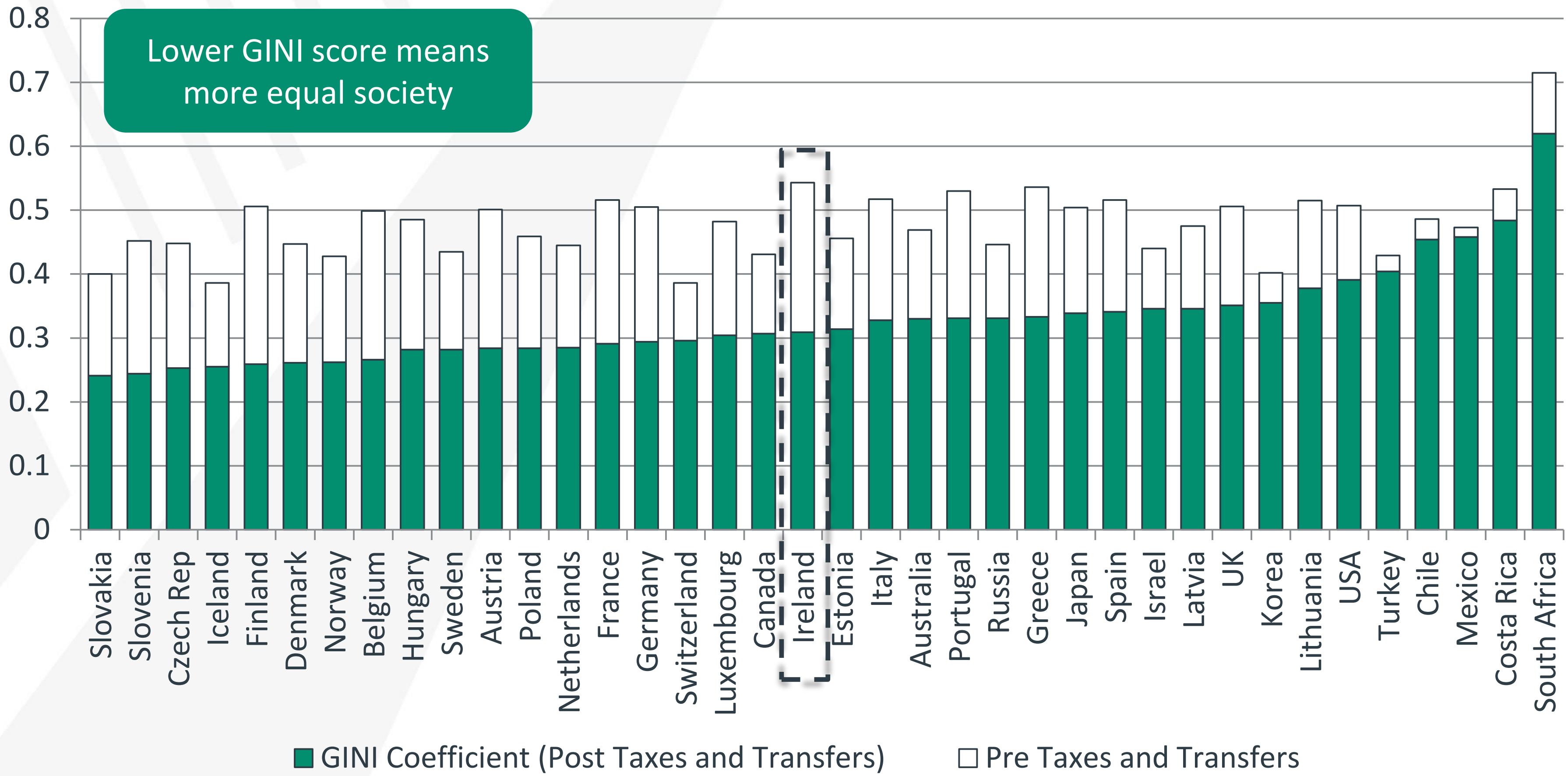


Favourable metrics on property rights and government efficiency

UN Goal – Peace, Justice and Strong institutions	Ireland Actual Figure	Ireland Normalised (world leader = 100)	OECD Average
Overall	-	87.5	75.8
Corruption Perception Index (0-100)	73.0	79.4	73.5
Government Efficiency (1-7)	4.8	**74.8**	**52.8**
Homicides (per 100,000 people)	1.1	97.8	96.1
Prison population (per 100,000 people)	80.0	87.8	74.6
Property Rights (1-7)	6.1	**94.8**	**73.1**
Population who feel safe walking alone at night (%)	75.0	73.7	67.4

Source: United Nations SDG project

Income equality – Ireland's very progressive system means income equality is around OECD average after tax



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Source: OECD

Ireland reformed its corporate tax code to meet global standards; the 12.5% rate is fixed Government policy

Ireland's part in OECD (BEPS 1.0) corporate tax reform

- Ireland has been a strong supporter of the BEPS process since inception.
- Removal of known tax avoidance structures such as the "Double Irish", "the Single Malt" and "stateless companies".
- Ireland is best in class on tax transparency and exchange of information. Ireland is one of only 23 jurisdictions to have been found to be fully compliant with new international best practice by the Global Forum on Tax Transparency and Exchange of Information.
- Ireland introduced Country-by-Country Reporting in 2015. The State also ratified the BEPS multilateral instrument in domestic legislation which will update the majority of Ireland's tax treaties to be BEPS compliant.

Ireland's role in EU actions on corporate tax reform

- Ireland agreed two Anti-Tax Avoidance Directives (ATADs) with its fellow EU Member States in 2016 and 2017. The Anti-Tax Avoidance Directives represent binding commitments to implement three significant BEPS recommendations into Irish law as well as two additional anti-avoidance measures.
- Three out of five required components of the ATADs are now in effect as of 1st Jan 2019: Controlled-Foreign Company (CFC) rules, Exit Tax and General Anti-Abuse Rules (GAAR).
- Ireland continues to engage positively at both EU and OECD level on tax issues.

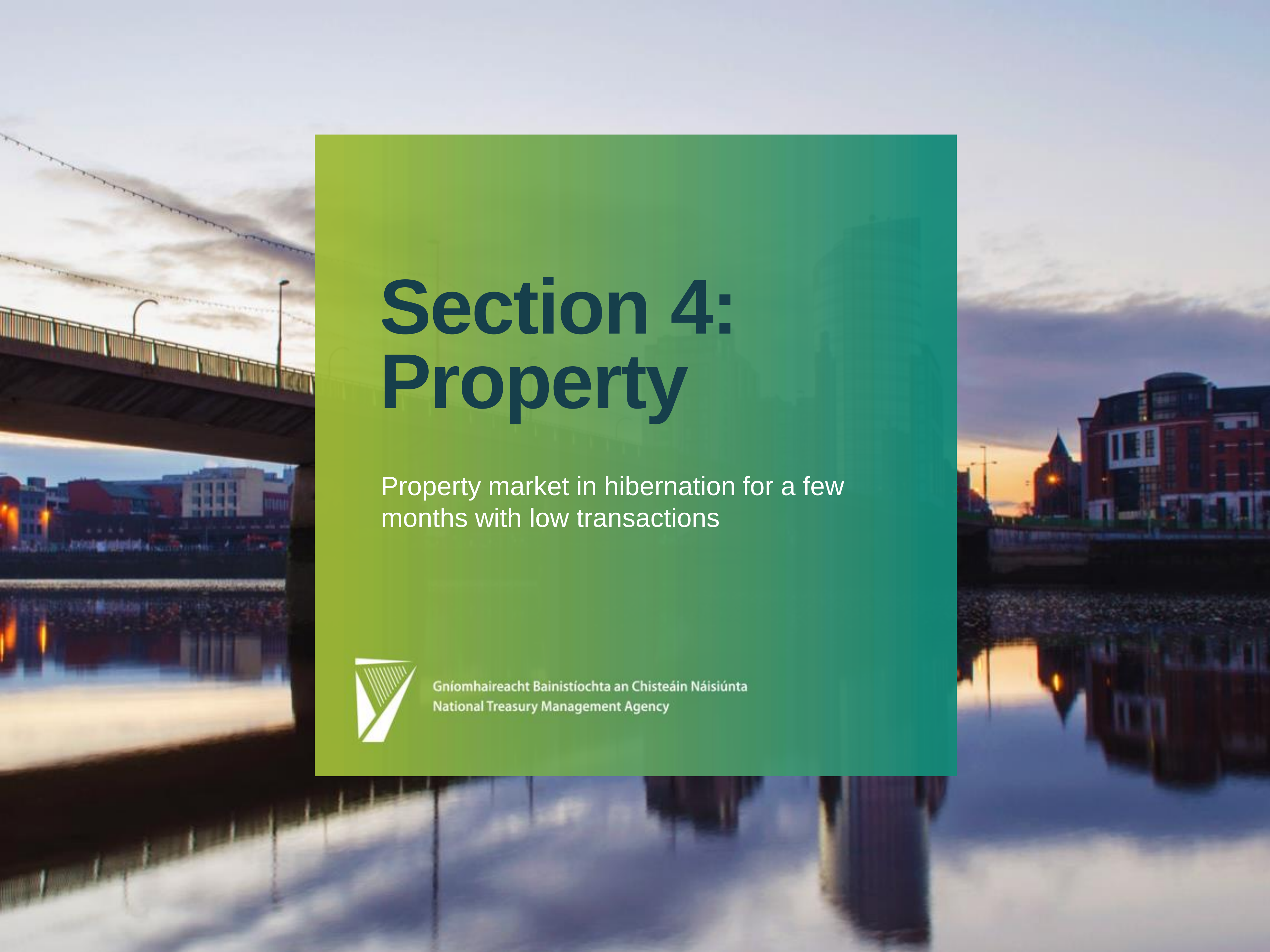
OECD's BEPS 2.0 process could impact the business tax landscape globally – agreement might be delayed to 2021

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 will reduce Ireland's corporation tax base but it is impossible to predict the size of the impact.
- Nothing has been decided as of yet. OECD original deadline of end 2020 is likely to be delayed by the Covid-19 pandemic.

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 would erode this country's comparative advantage.



Section 4: Property

Property market in hibernation for a few months with low transactions

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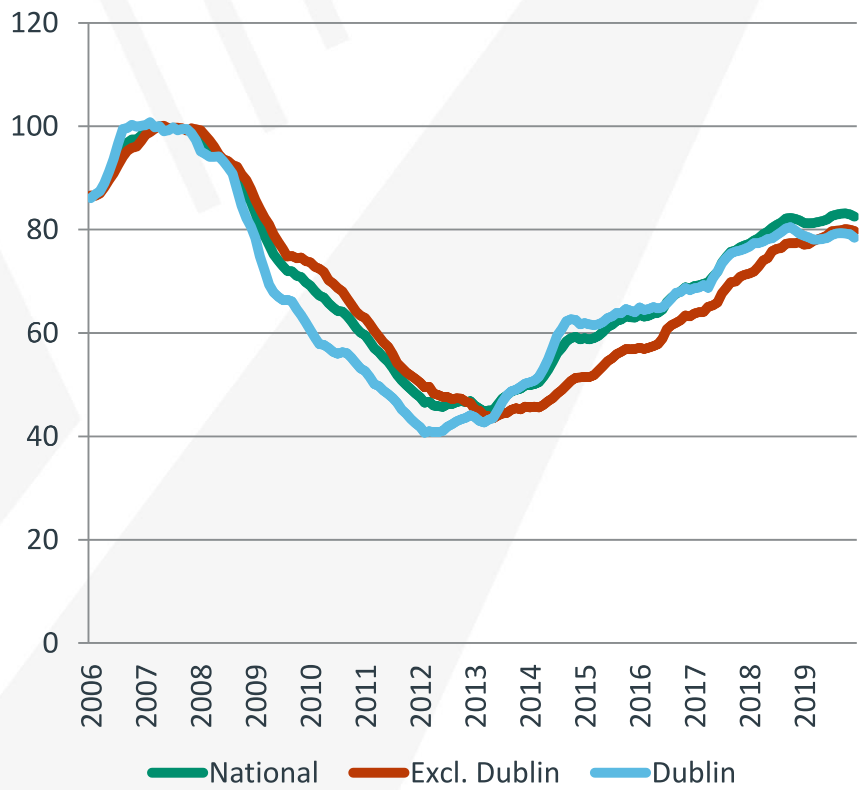
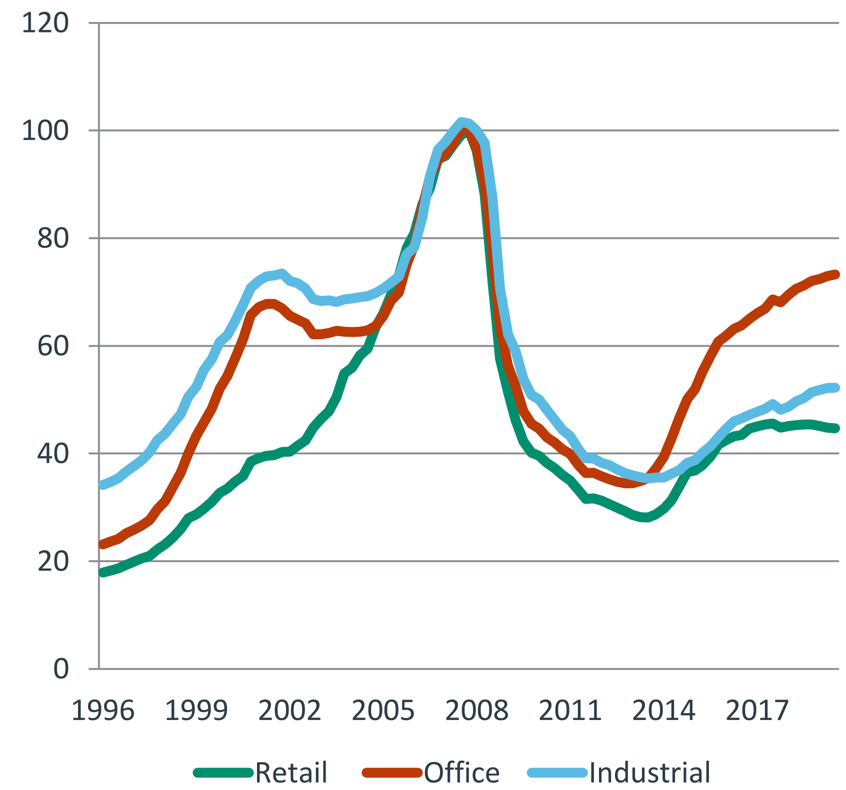
House prices had plateaued before the virus arrived

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



Office prices have diverged from retail and industrial (peak = 100)



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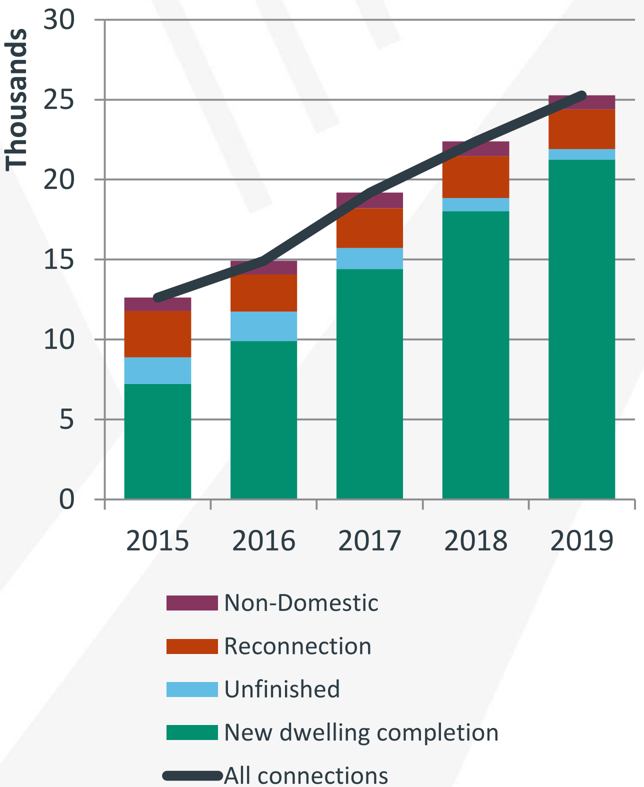
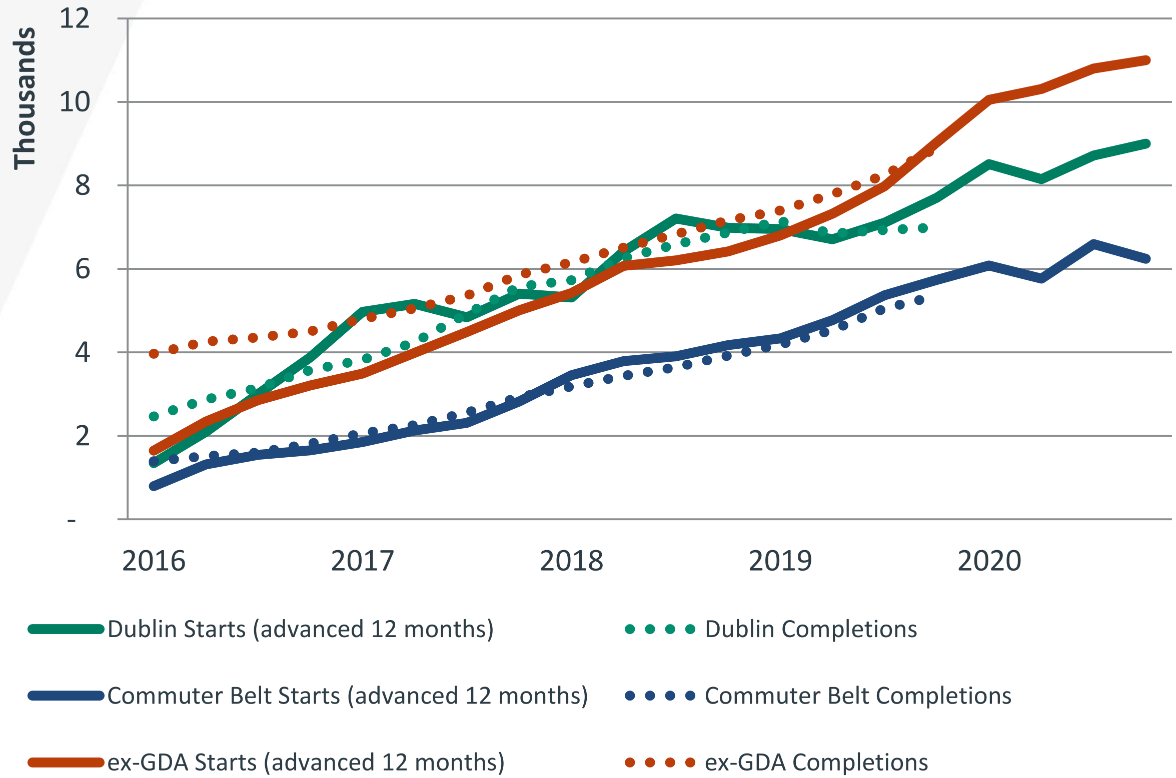
Source: CSO; MSCI data

Housing supply still below demand; supply was catching up before Covid-19 put the sector in hibernation

Housing Completions* above 25,000 in 2019



Housing supply picking up in a uniform fashion – coronavirus to hamper supply H2 2020



Source: DoHPCLG, CSO, NTMA Calculations

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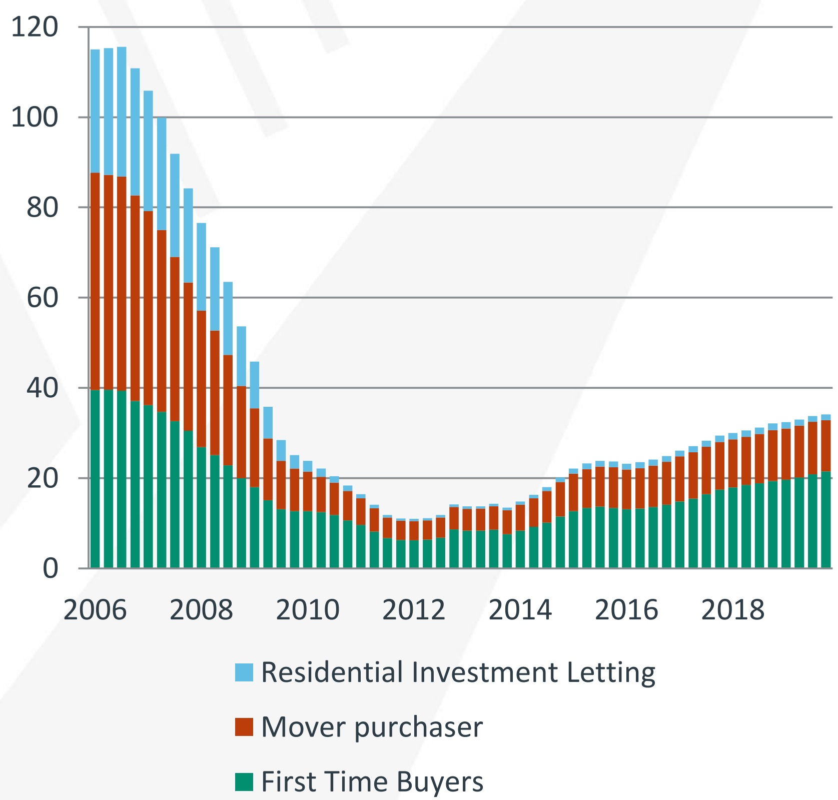
* Housing completions derived from electrical grid connection data for a property. Reconnections of old houses or connections from "ghost estates" overstate the annual run rate of new building.

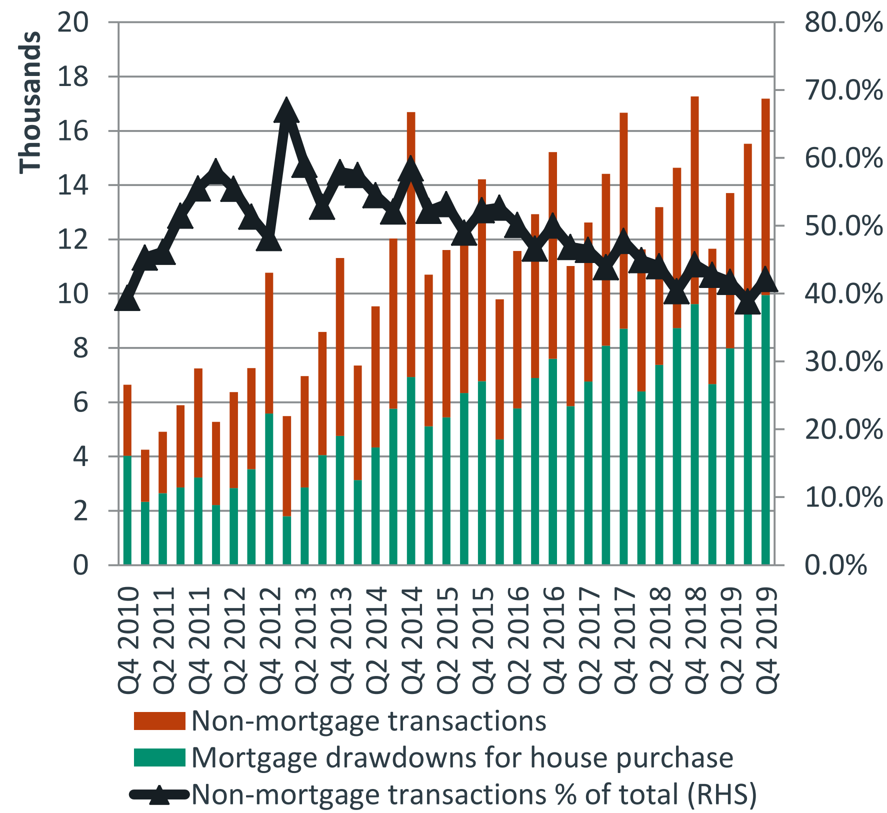
Demand has picked up since 2015 but will fall off given unemployment and hits to income

Mortgage drawdowns rise from deep trough (000s)



Source: BPFI *4 quarter sum used

Non-mortgage transactions still important but closer to 40% of total



Source: BPFI; Residential Property Price Register

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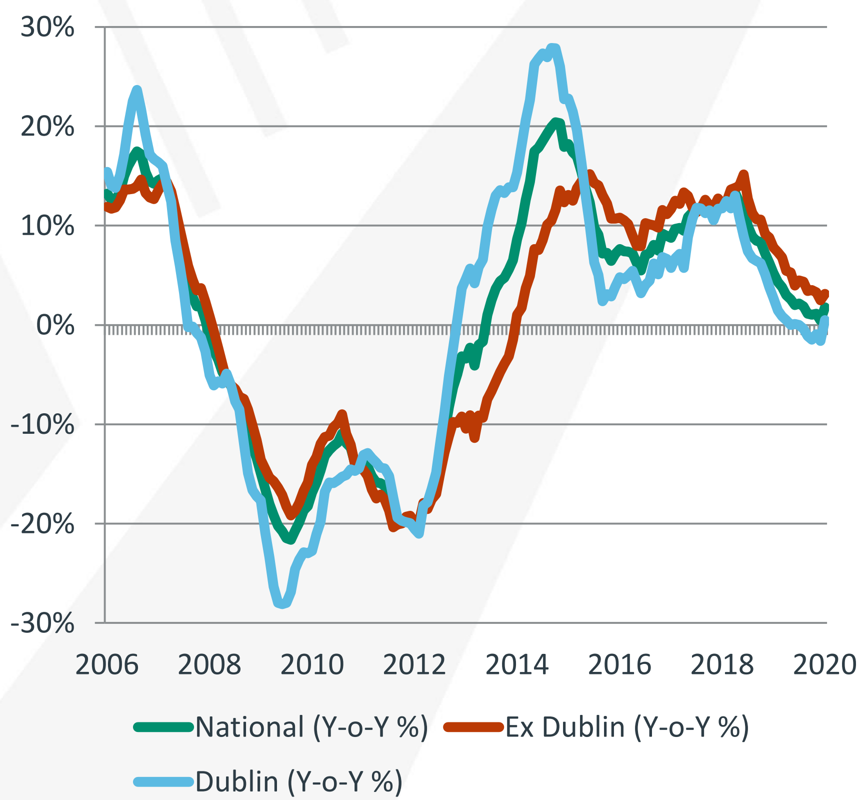
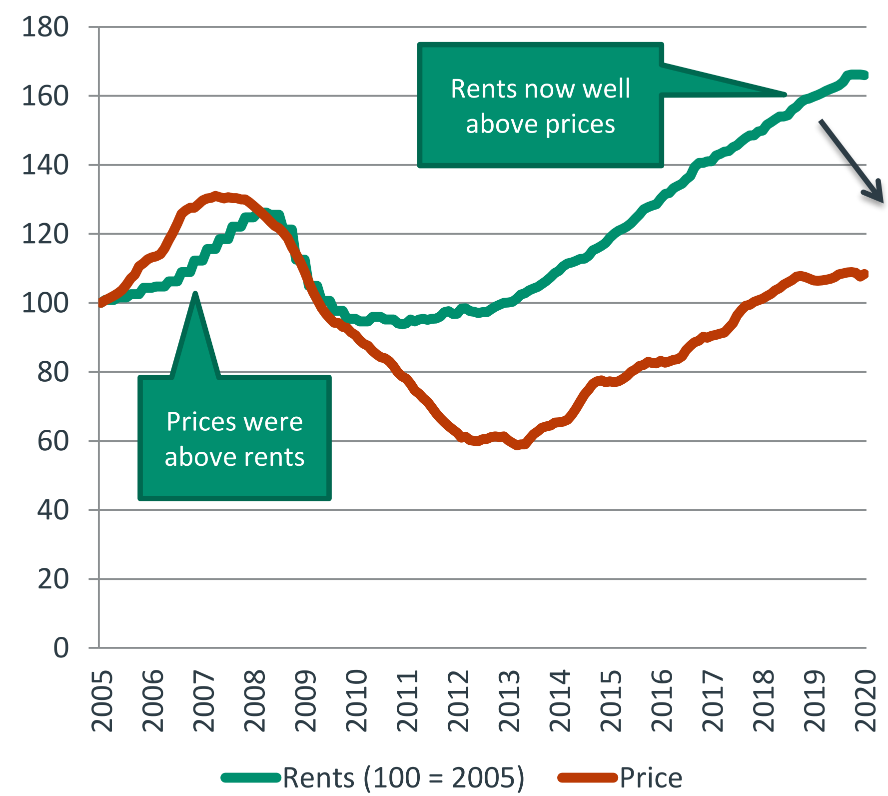
Covid-19 impact on prices unclear as both supply and demand impacted but rents should come off highs

Dublin resi. property prices fell in 2019; higher end of the market most hit



Rents are well above previous peak – out of line with prices



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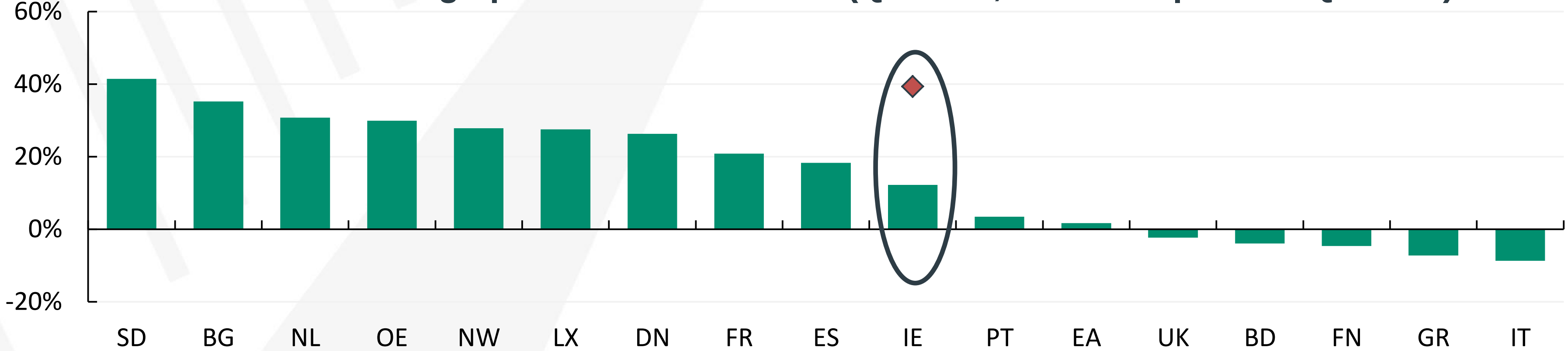
Source: CSO; RTB

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

Deviation from average price-to-income ratio (Q3 2019, red dot represent Q1 2008)



Deviation from average price-to-rent ratio (Q3 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 5: Brexit

“Hard Brexit” risk has de-escalated but cliff edge at end 2020 is sill possible

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Amid Covid-19, trade agreement still progressing – hard Brexit is a possibility for 2021 but extension better for all

Withdrawal Agreement in 2019 helped to solve Northern Ireland border issue

- 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 – customs border will be in the Irish sea. Goods crossing from ROI to NI will not require checks but goods going to UK 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 complex consent mechanism, which allows Stormont to opt-out under simple majority at certain times.

UK-EU Future trading relationship unresolved

- With the withdrawal agreement sorted we enter the transition period, which is slated to finish at the end of 2020.
- The UK government has stated its intention to seek a free-trade arrangement for the long term.
- The upshot is that the trading relationship will be more distant, making negotiations difficult.
- There is only one year to negotiate what normally takes several years.
- More time has been lost as politicians are rightly concentrating on the global pandemic.
- *Risk of hard Brexit if the transition period is not extended.*

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 suffer
- 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 may steal EU market share from British ones (and finally diversify)
  - Import substitution (especially in food)

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

% of total	Goods (2018)		Services (2018)		Total (2018)	
	Exp.	Imp.	Exp.	Imp.	Exp.	Imp.
US	27.9	18.5	11.6	25.4	18.	23.1
UK*	11.5	21.7	15.7	9.6	13.8	13.6
NI	1.6	1.6	n/a	n/a	n/a	n/a
EU-27	38.8	37.4	29.4	26.8	33.5	30.3
China	3.9	5.9	2.6	1.5	3.1	3.0
Other	21.8	22.4	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

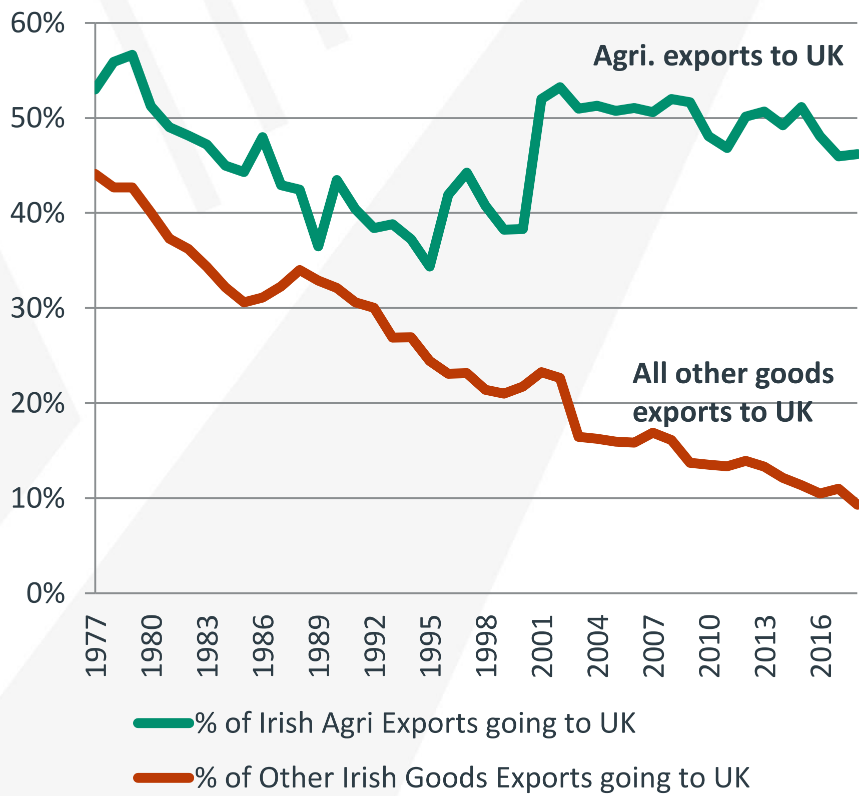
- The UK might only account for 14% of Ireland's total exports, but Ireland is more dependent than that because those UK-reliant sectors are labour intensive

SMEs account for over 55% 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

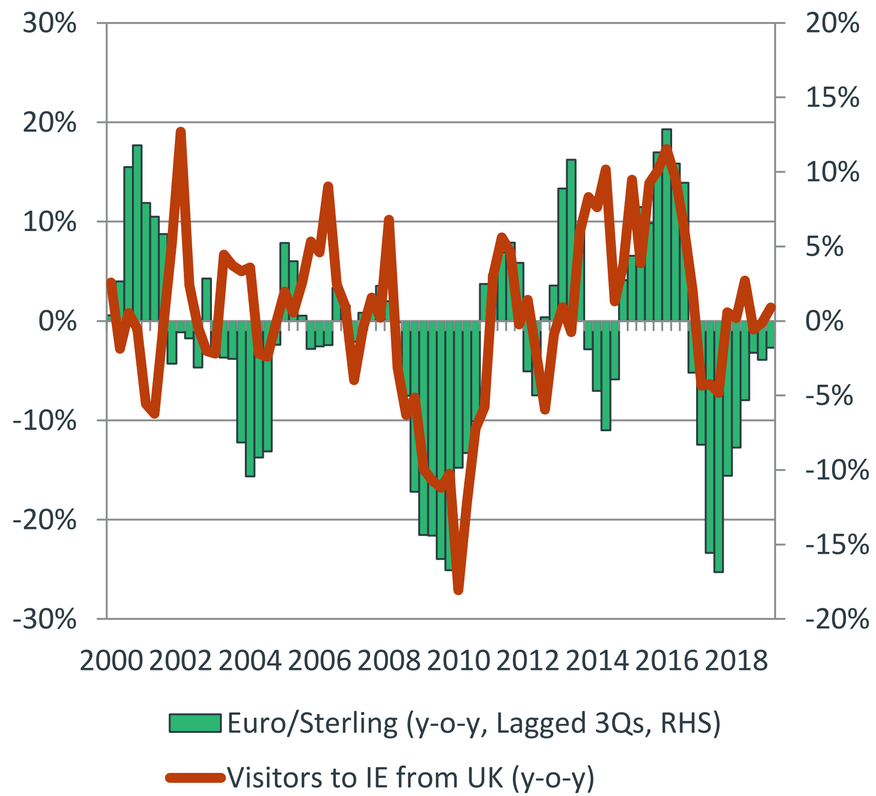
*Source: CSO 2018 * UK data includes Northern Ireland*
NTMA calculations; Data does not include contract manufacturing

Agri-food and tourism most at risk from trade barriers

Agriculture has not diversified from the UK



Tourism numbers linked to FX moves



Source: CSO, DataStream Eikon

Hard Brexit impact estimates all show similar story – return to WTO rules would be negative for Ireland

Forecast vs. no Brexit baseline	Short term (2 years)	Medium term (5 years)	Long term (10-15 years)
Department of Finance (ESRI)	-2.4%	-3.3%	-5.0%
Copenhagen Economics	-2.0 to 2.5%	-4.5%	-7.0% (of which -4.9% is due to regulatory divergence)
Central Bank of Ireland	-4.0%	-	-6.0%
Bank of England "disruptive" (implied)	-5.0%	-6.2%	-6.2%
Bank of England "disorderly" (implied)	-6.3%	-8.2%	-8.2%
UK Treasury range (implied)	-	-	-5.0 to 7.2%

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

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 to 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 6: Other data

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

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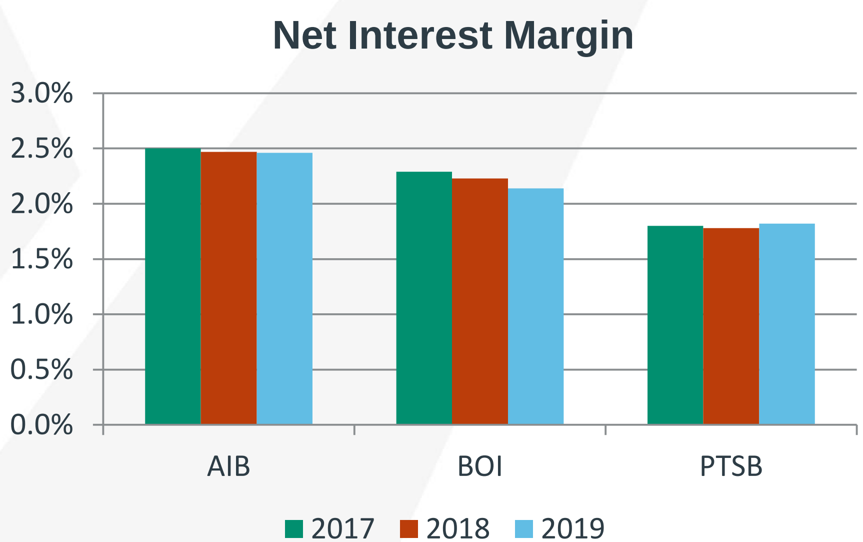
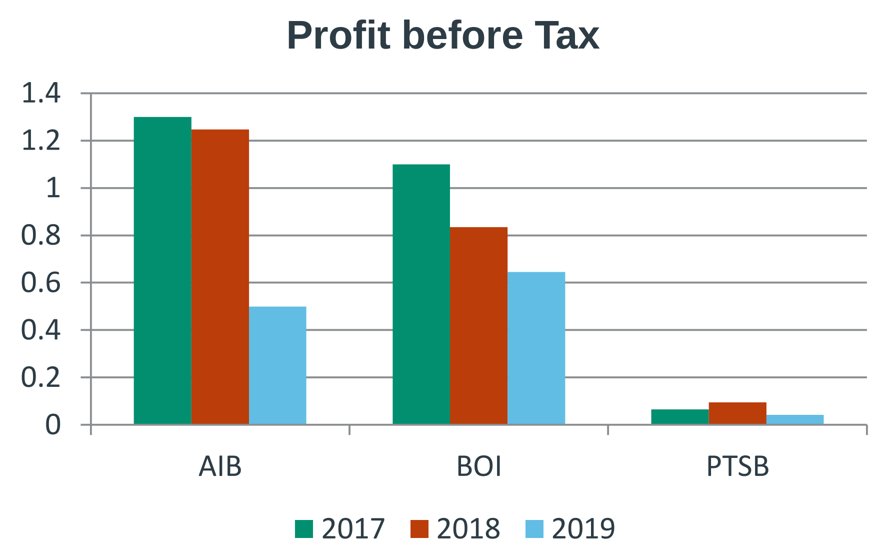
National Treasury Management Agency

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 to be used for debt reduction. Further disposal of banking assets unlikely in the short term given valuations
- Irish banks had paid dividends in recent years.

All three pillar banks were profitable in recent years

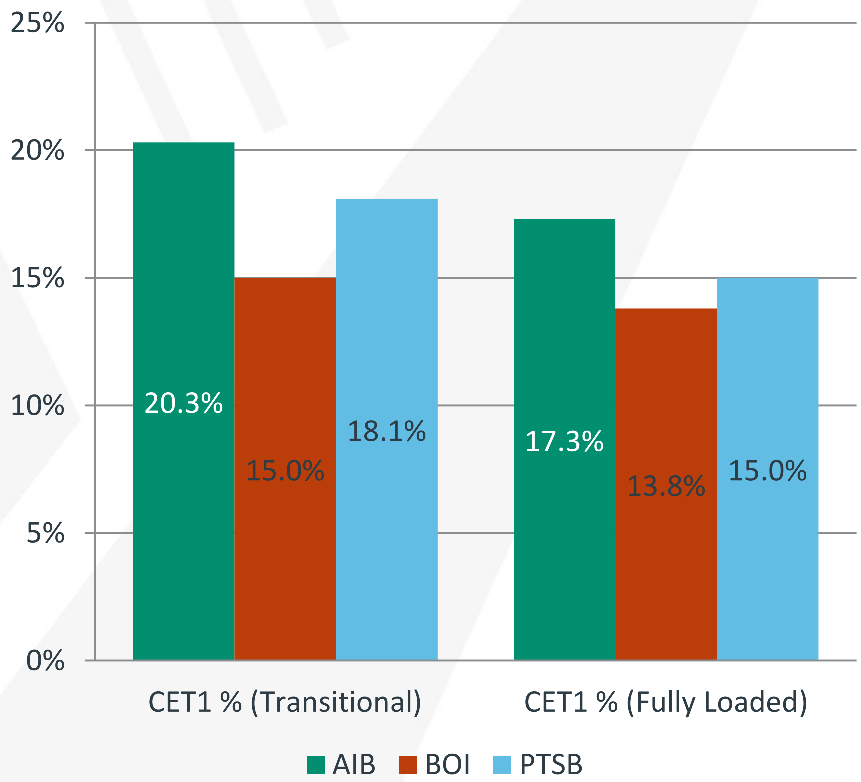




Source: Annual reports of banks - BOI, AIB, PTSB
Profit measures are before exceptional items

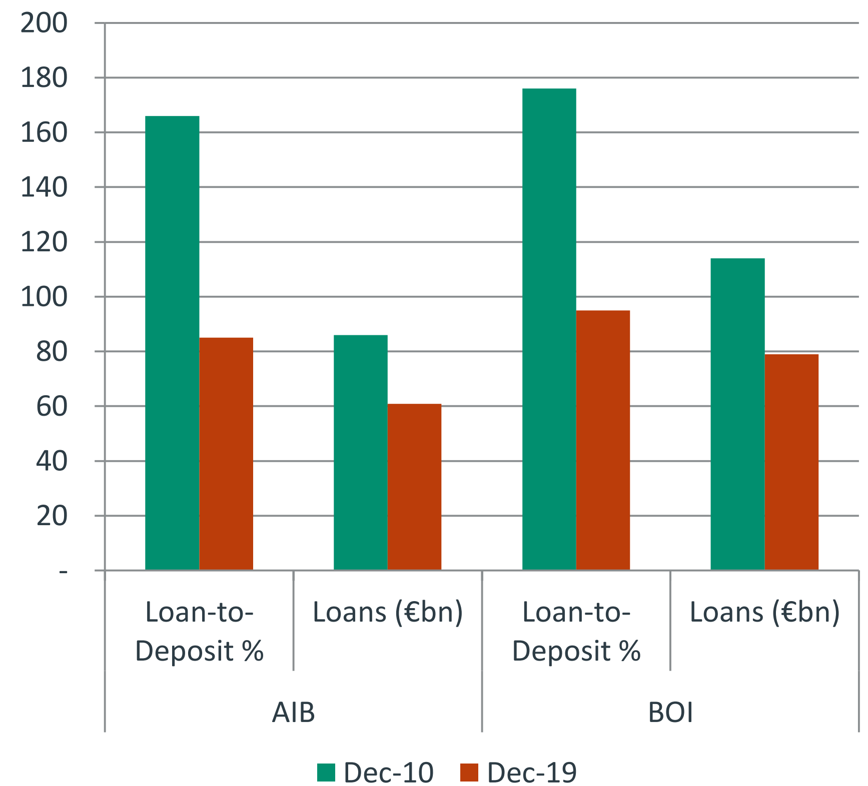
Capital ratios strengthened as banks shrunk and consolidated in last ten years

CET 1 capital ratios (Dec 2019) allow for amble forbearance in Q2



Source: Published bank accounts

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

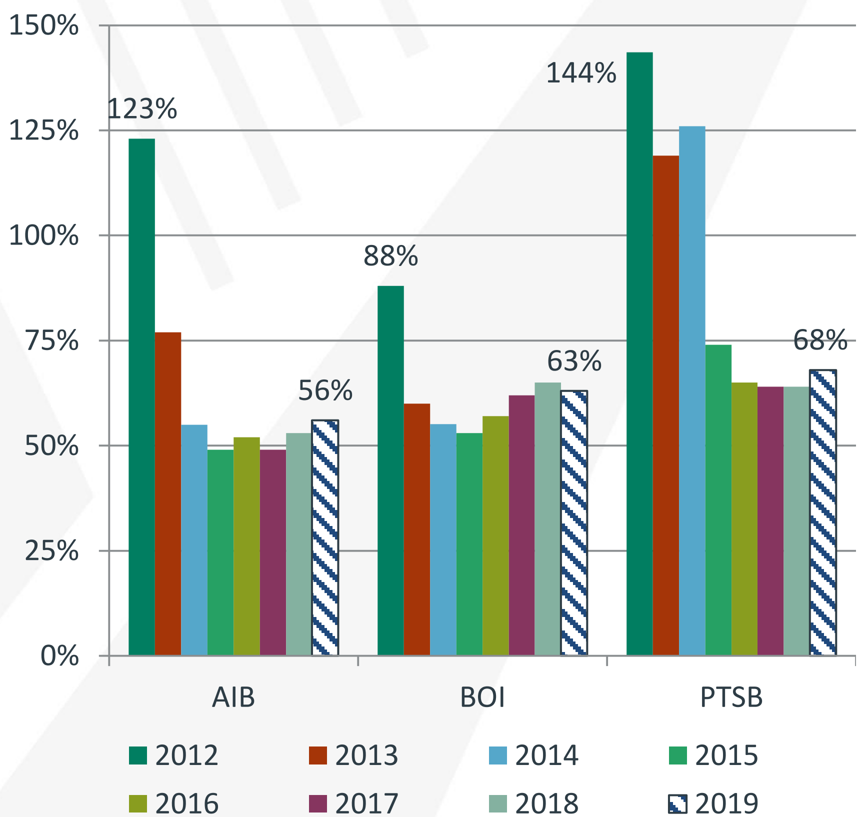


Source: Published bank accounts

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

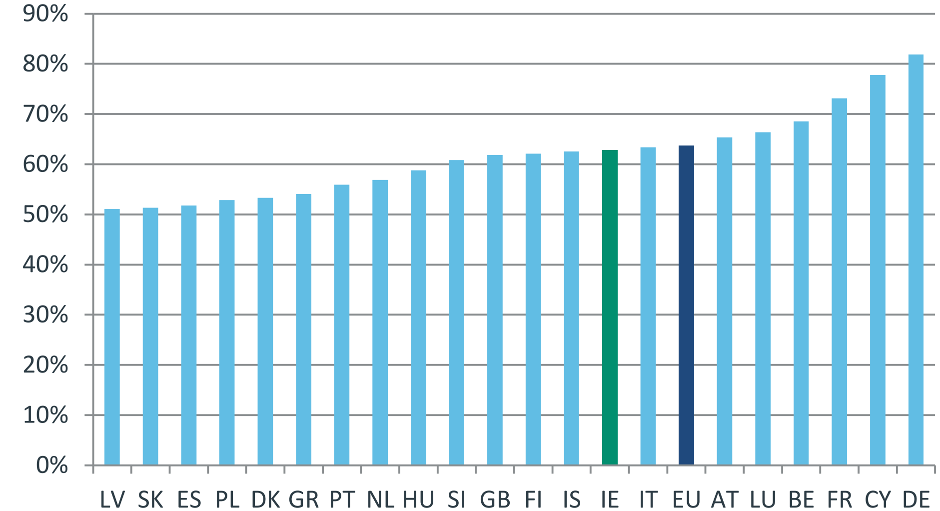
Domestic bank cost base has risen but marginally

Cost income ratios improve dramatically…

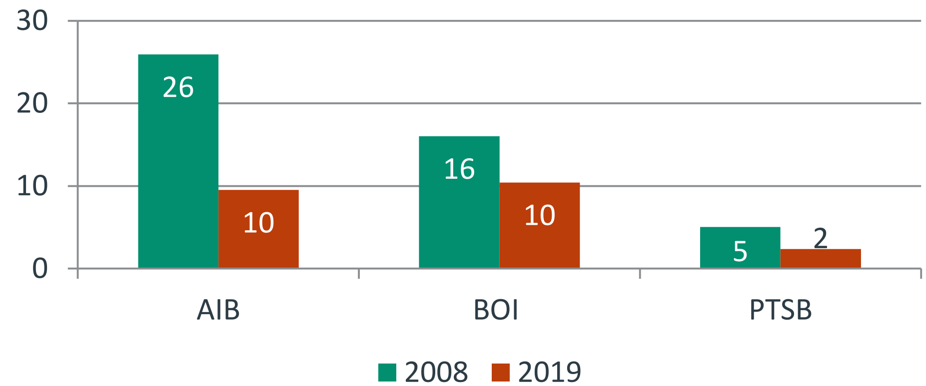


Source: Annual reports of Irish domestic banks

… and IE banks* below EU average



Staffing (000s) halved post crisis

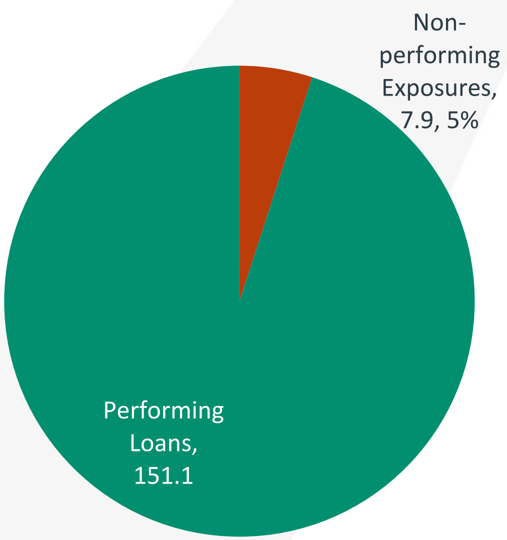


Source: Annual reports of Irish domestic banks, EBA

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

Pillar banks sold non-performing loans during 2018/19

All 3 Pillar banks (€bn)	Dec-18	Dec-19
Total Loans	158.2	159
Non-performing Exposures	12.7	7.9
(NPE as % of Total)	8.0%	5%
Provisions	4.4	3.0
(Provisions as % of book)	2.8%	1.9%
(Provisions as % of Impaired)	34.6%	38.4%



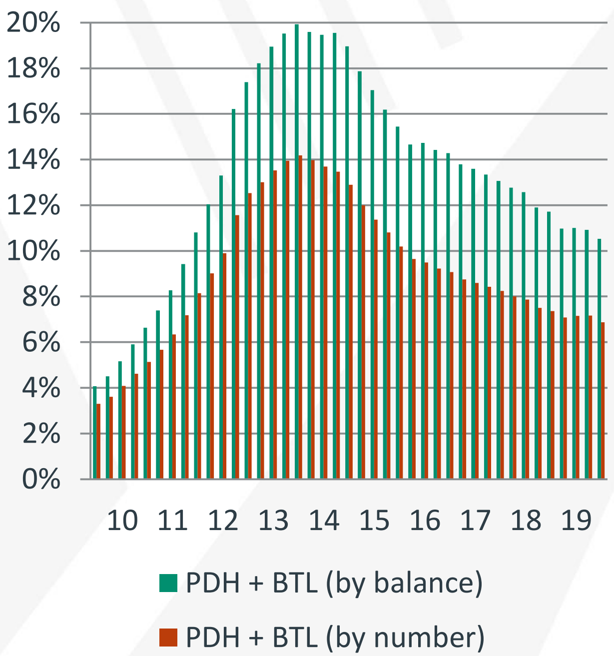
Non-performing exposures % of total loans[1] (loss provision % of NPE)		Dec-18	Dec-19	*Book (€bn)*
BOI	Irish Residential Mortgages	9.5(21)	6.3 (25)	23.1
	UK Residential Mortgages	2.3(15)	2.1 (13)	23.2
	Irish SMEs	11.2(49)	7.5 (54)	7.3
	UK SMEs	6.1(53)	6.3 (46)	1.7
	Corporate	2.6(60)	2 (60)	11.4
	CRE - Investment	10.7(44)	7.7 (37)	7.2
	CRE - Land/Development	14.0(54)	3.8 (64)	0.9
	Consumer Loans	2.1(140)	1.7 (159)	5.7
		6.3(35)	**4.4 (37)**	**80.5**
AIB	Residential Mortgages	10.1 (20)	7.4 (22)	31.5
	SMEs/Corporate	5.2 (36)	2.2 (32)	20.3
	CRE	17.9 (29)	5.1 (35)	7.9
	Consumer Loans	11.2 (50)	6.4 (60)	3.0
		9.6	**5.4 (27)**	**62.1**
PTSB	Residential Mortgages	8.9(39)	5 (38)	12.2
	Buy-to-let Mortgages	12.8(113)	10.5 (138)	3.5
	Commercial	33.3(76)	24.8 (93)	0.17
	Consumer Loans	7.5(112)	4.9 (133)	0.37
		10.0(64)	**6.4**	**16.4**

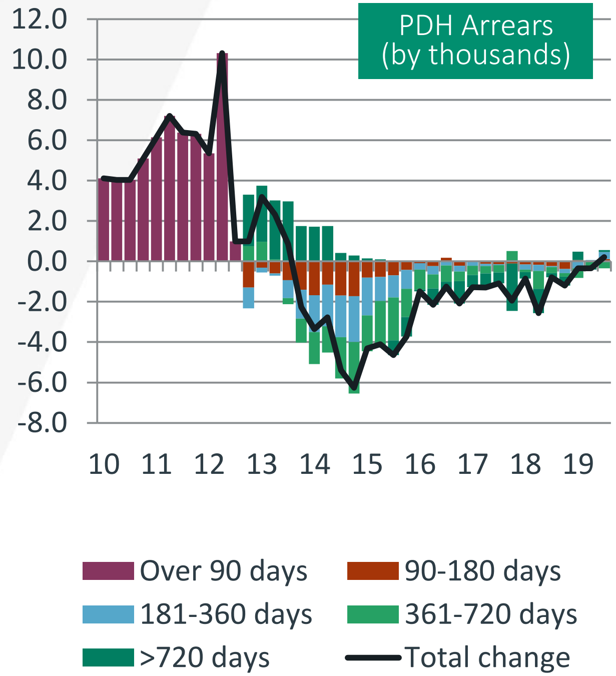
Source: Published bank accounts

1 Non-performing exposures include impaired loans, loans past due greater than 90 days but not impaired, and Forborne Collateral Realisations

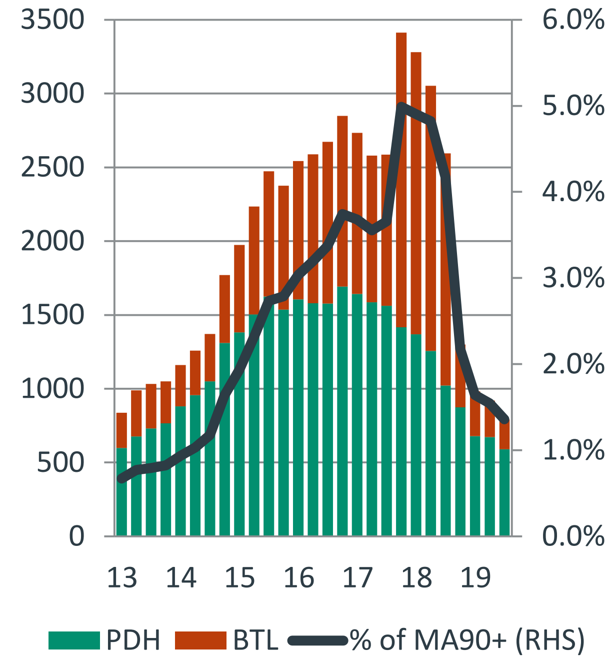
Irish residential mortgage arrears could reverse course in 2020 – moratorium will help

Mortgage arrears (90+ days)





Repossessions**



Source: CBI

- Non-bank entities now hold 13 per cent of all PDH mortgage accounts outstanding; 11 per cent are held by regulated retail credit firms, with the remaining 2 per cent held by unregulated loan owners. Credit Servicing Firms hold 22 per cent of all PDH mortgages in arrears over 720 days

Gníomhaireacht Bainistíochta an Chisteáin Náisiúnta
National Treasury Management Agency

* Over 40% of those cases in arrears > 720 days are also in arrears greater than five years.
** Four quarter sum of repossessions. Includes voluntary/abandoned dwellings as well as court ordered repossessions

The European Commission's ruling on Apple's tax affairs does not change the NTMA's funding plans

- The EC has 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. This was closed on December 31st 2014.
- **This case has nothing to do with Ireland's corporate tax rate.** In its press release the EC stated: "This decision does not call into question Ireland's general tax system or its corporate tax rate".
- **Apple is appealing the ruling, as is the Irish Government.** This process could be lengthy. Pending the outcome of the appeal, Apple has paid approximately €13bn plus EU interest (c. €2bn) into an escrow fund.
- Bank of New York Mellon has been selected for the provision of escrow agency and custodian services to hold and administer the fund.
- Amundi, BlackRock Investment Management (UK) Limited and Goldman Sachs Asset Management International have been selected for the provision of investment management services for the fund.
- As the funds will be held in escrow pending the outcome of the appeal, **the NTMA has made no allowance for these funds.**

Government's NDP outlines green projects; aim to cut CO_2 emissions by at least 80% by 2050

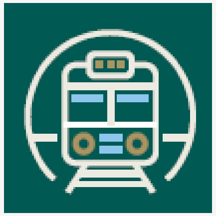
1 in 5 euros in the National Development Plan (NDP) to be spent on green projects

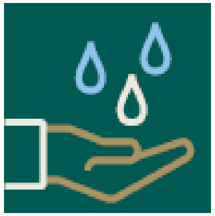
Sustainable Mobility
€8.6 billion

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

GNI* is a better measure of underlying economic activity than GDP/GNP; best as a level rather than a growth metric

- GDP headline numbers do not reflect the “true” growth of Ireland’s income due to MNCs.
- Reasons for 2015-18 MNC distortions:
  - Re-domiciling/inversions of several multinational companies
  - The “onshoring” of IP assets into Ireland by multinationals
  - The movement of aircraft leasing assets in Ireland.
- By modifying GNI to take account of these factors, GNI* gives us a better understanding of the underlying economy.

National Account – Current Prices (€, y-o-y growth rates)	**2015**	**2016**	2017	2018
Gross Domestic Product (GDP)	262.8bn (34.9%)	271.7bn (3.4%)	297.1bn (9.4%)	324.0bn (9.4%)
minus Net Factor Income from rest of the world				
= Gross National Product (GNP)	200.8bn (22.9%)	220.6bn (9.9%)	234.9bn (6.5%)	253.1bn (7.7%)
add EU subsidies minus EU taxes	1.2bn	1.0bn	1.1bn	1.1bn
= Gross National Income (GNI)	202.0bn (22.9%)	221.6bn (9.7%)	236.0bn (6.5%)	254.2bn (7.7%)
minus retained earnings of re-domiciled firms	-4.7bn	-5.8bn	-4.5bn	-5.0bn
minus depreciation on foreign owned IP assets	-30.1bn	-35.3bn	-42.5bn	-46.3bn
minus depreciation on aircraft leasing	-4.6bn	-4.9bn	-5.1bn	-5.4bn
= GNI*	162.7bn (9.4%)	175.6bn (8.0%)	184.0bn (4.7%)	197.5bn (7.3%)

Source: CSO

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