Ireland: Begins 2020 in best shape since early 2000s

Second straight budget surplus in 2019

January 2020

Gníomhaireacht Bainistíochta an Chisteáin Náisiúnta
National Treasury Management Agency

Index

Summary

Full employment as debt sustainability improves

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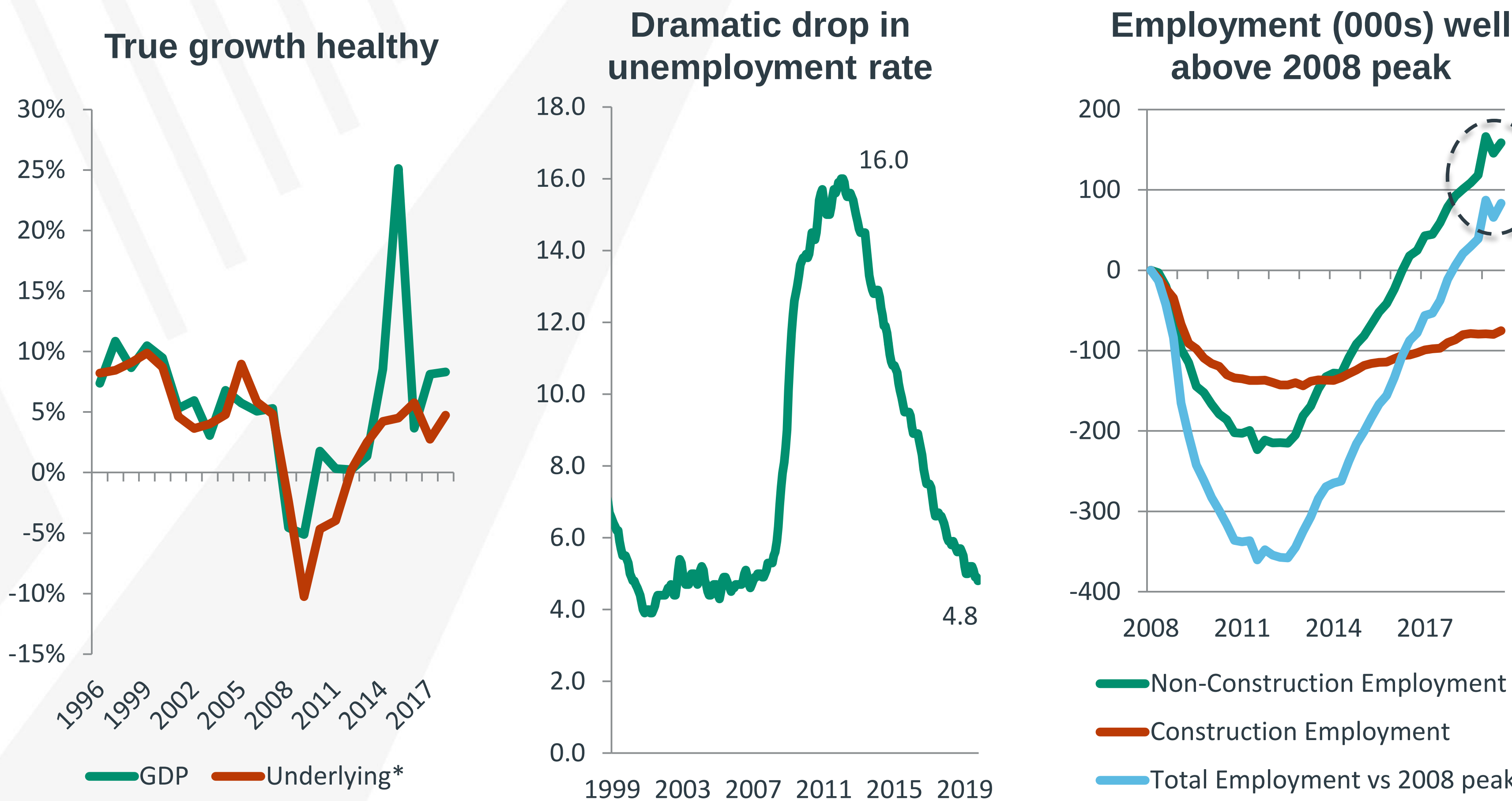
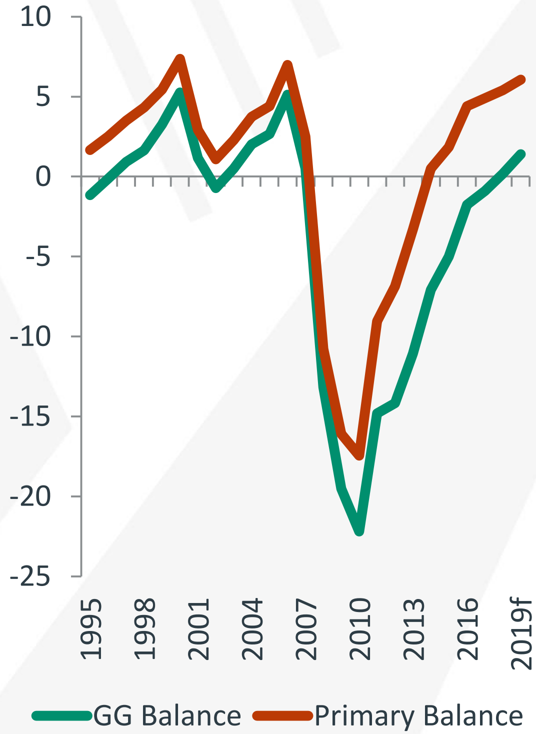
Domestic economy growing: averaging 4%+ since 2014



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

Ireland is improving its debt sustainability year-by-year

Two years of budget surplus (€bn)



Ireland is improving its debt dynamics by the month

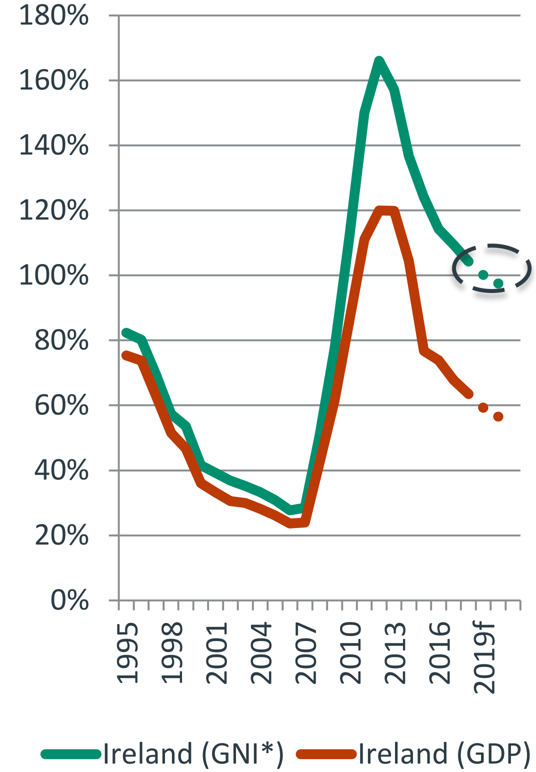
Debt-to-GNI*
(100% 2019f, from 166% peak)

Debt-to-GG Revenue
(243% 2019f, from 353%)

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

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

Debt headed below 100% of national income



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

Main risks are external and outside of Ireland’s control

Brexit

Deal is likely to be passed in UK parliament meaning the immediate risk is gone.

The catch for Ireland is that Britain reverts to WTO rules in the end and diverges from EU regs.

US

Ireland is still a “high beta” bet on the US economy, in particular its ICT sector.

US is in the late stage of its economic cycle, although interest rate cuts may extend its duration

Tax

Corporation tax reform may impact Ireland's economic model in the medium term.

The OECD BEPS II process is set to be completed by end 2020

Funding range of €10-14bn for 2020 – down from 2019

€10-14bn

Funding range is €10-14bn for the coming year

Ireland has €20bn+ in outflows in 2020, so the NTMA will run down some of its cash buffer

10 years

One of the longest weighted average maturities in Europe

The NTMA used ECB QE to extend debt maturity, reduce interest cost and repay the IMF

AA-

Ireland has been upgrade to AA space by S&P

Ireland's debt sustainability has been improving and Brexit risk has receded

Section 1: Macro

Economy still healthy, but manufacturing has softened in line with global conditions

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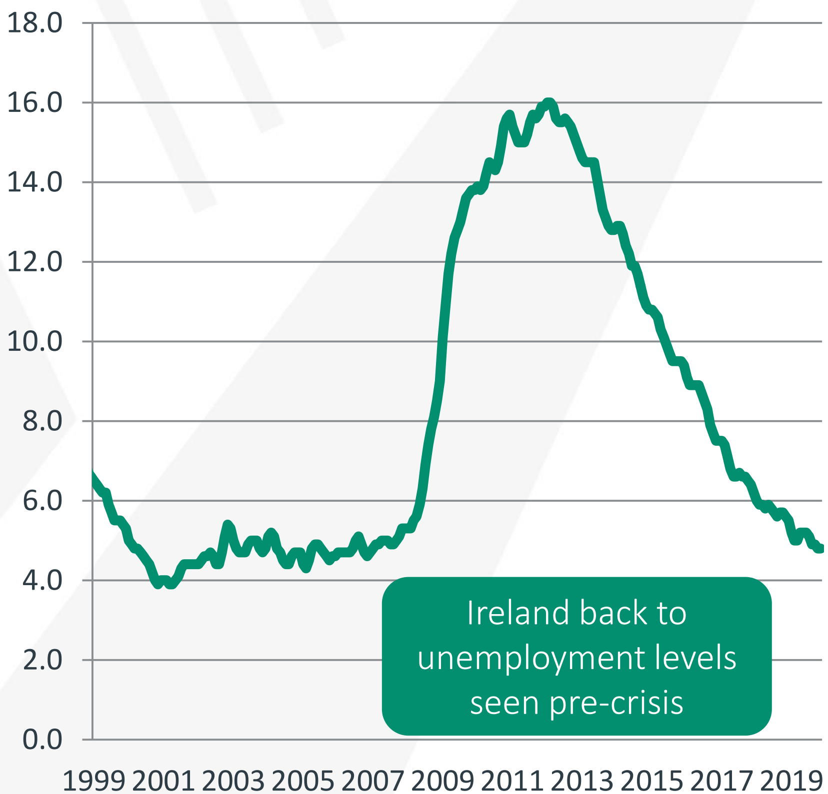
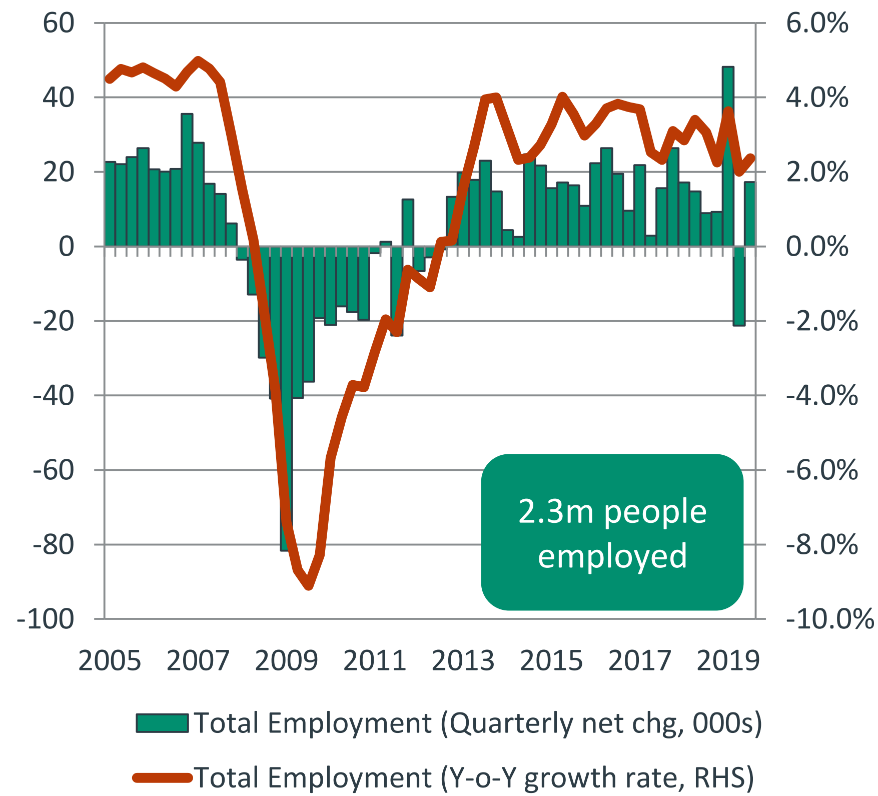
Labour market best illustrates Ireland's growth story – Ireland is close to full employment

Unemployment rate: down to 4.8% in December 2019 from peak of 16%



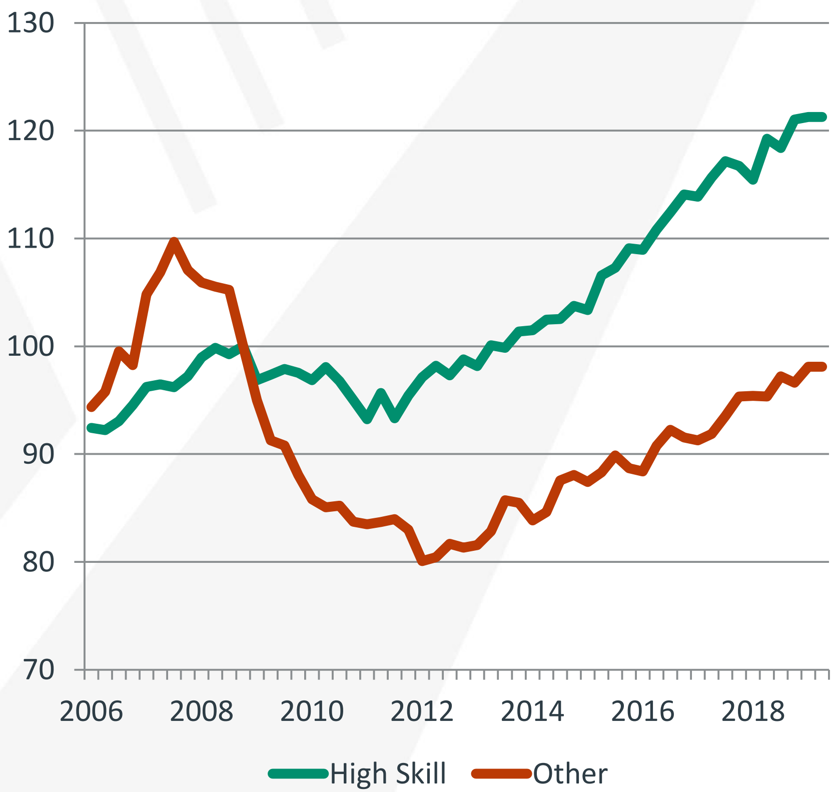
Employment growth consistently above 2%; average net jobs increase of 15K a quarter



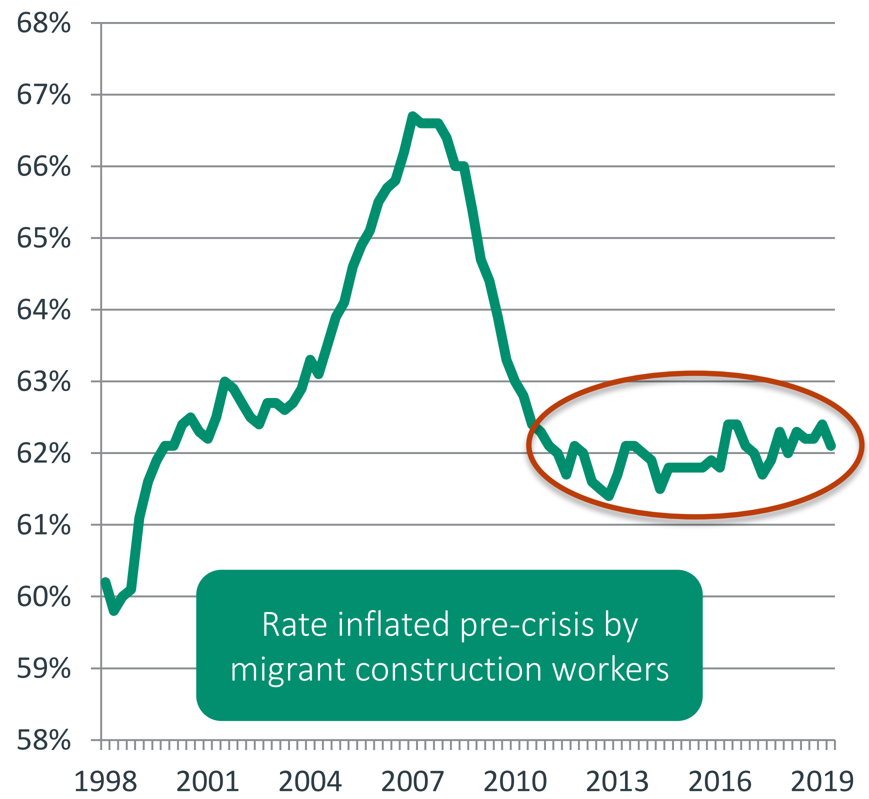
Source: CSO

High-skill employment an important driver; though labour participation rate has been slow to recover

High-skill employment has grown sharply (index, 100 = end 2008)



Labour participation has not yet fully recovered as young stay in school



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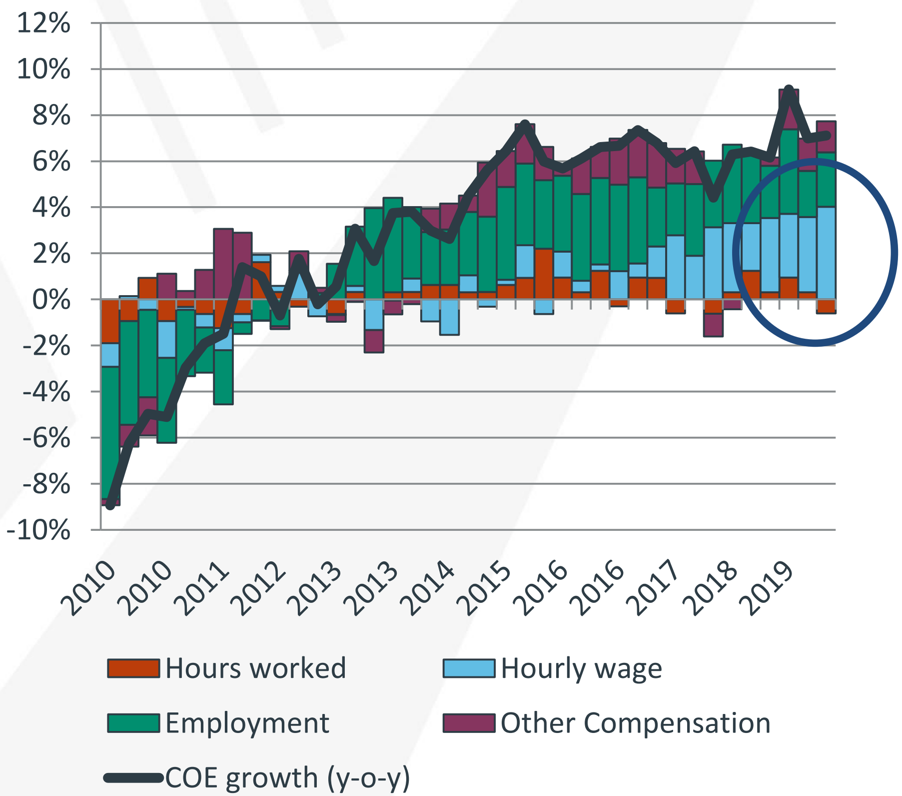
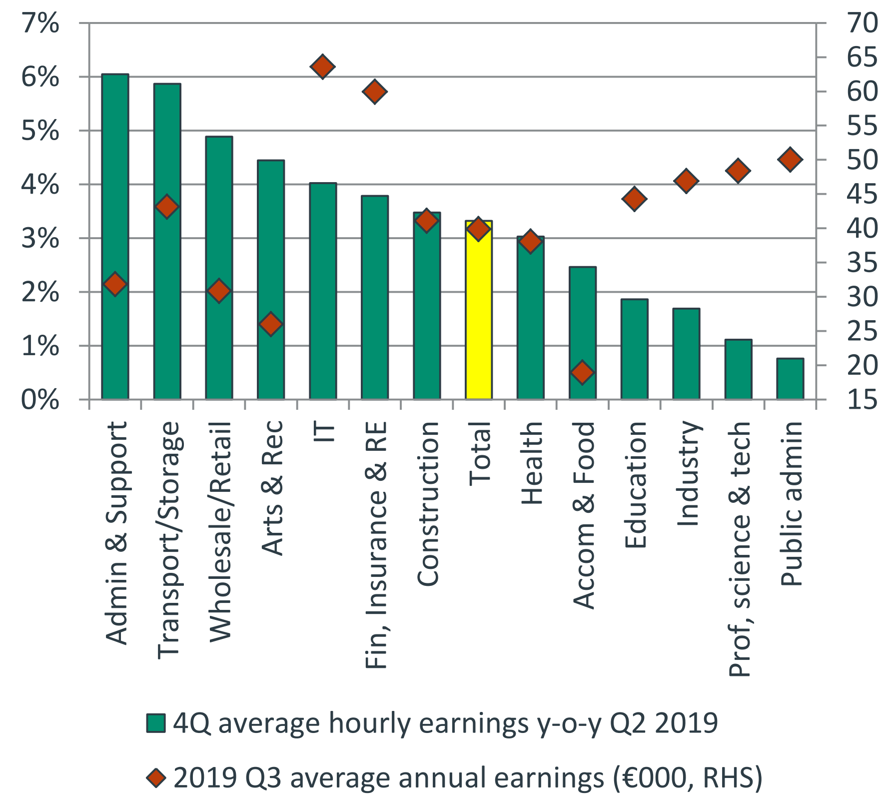
Source: Eurostat; [CSO]
High sk0ill jobs include the ISCO08 defined groupings Managers, Professionals, Technicians and associate professionals

Wage growth evident in 2019 but uneven across sectors

Wage growth a driver for increase in compensation of employees…



… but disparities remain across sectors



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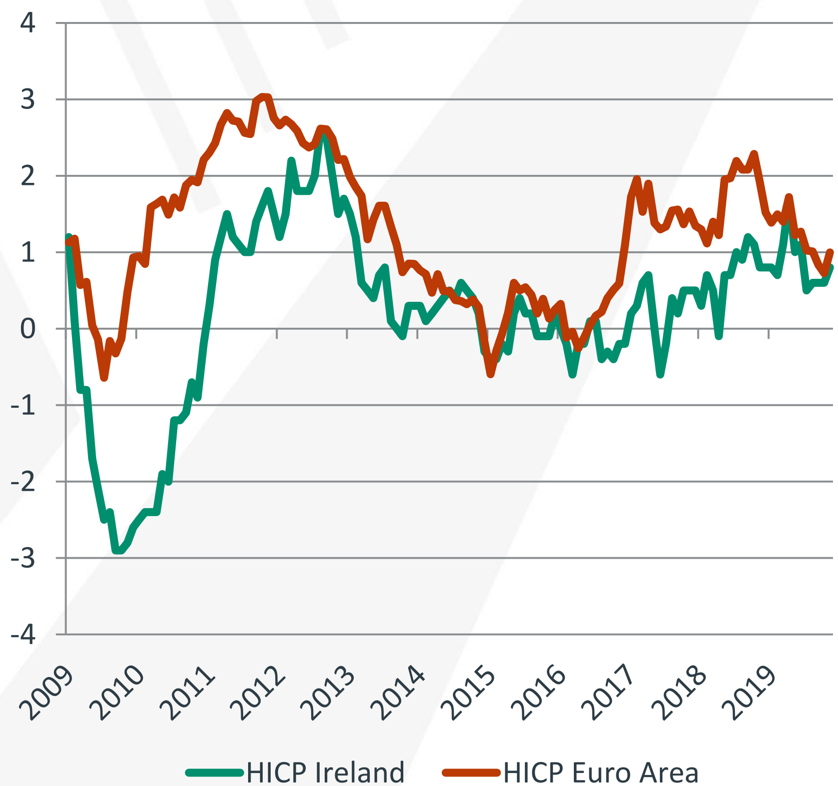
Source: Eurostat, CSO

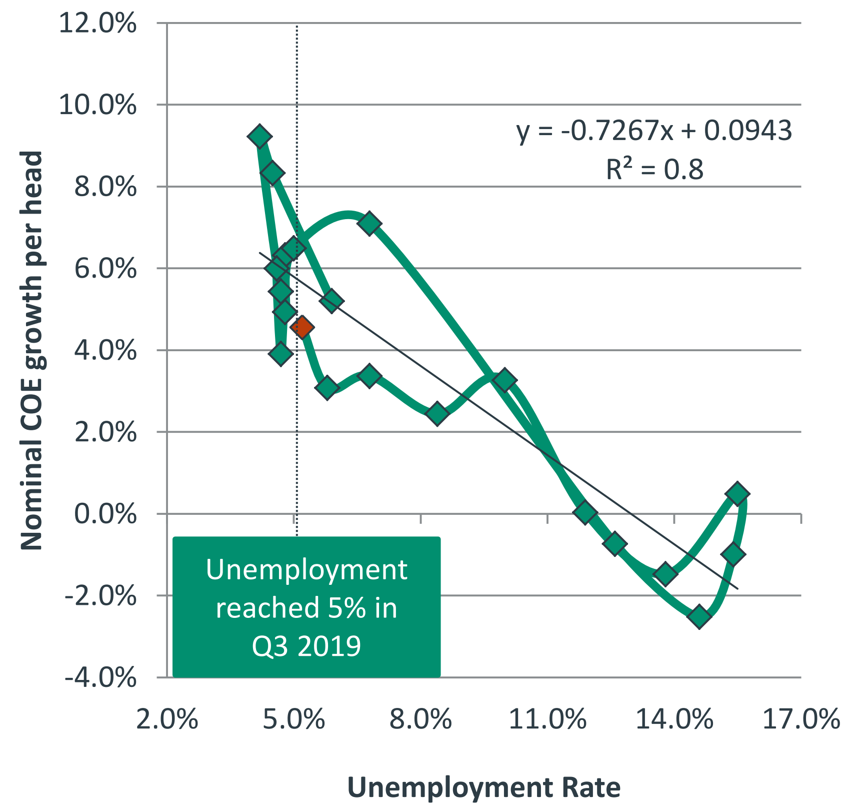
Despite being late cycle, inflation is low; Ireland's *Phillips Curve* might be starting to bite

Inflation (%) in Ireland similar to rest of euro area currently – Brexit ref. impact has gone



Source: CSO, Eurostat

At full employment, wage growth could become an issue if Brexit outcome is benign



Source: CSO, NTMA analysis; Non-Agriculture employment /wage data on yearly basis (1999-2018)

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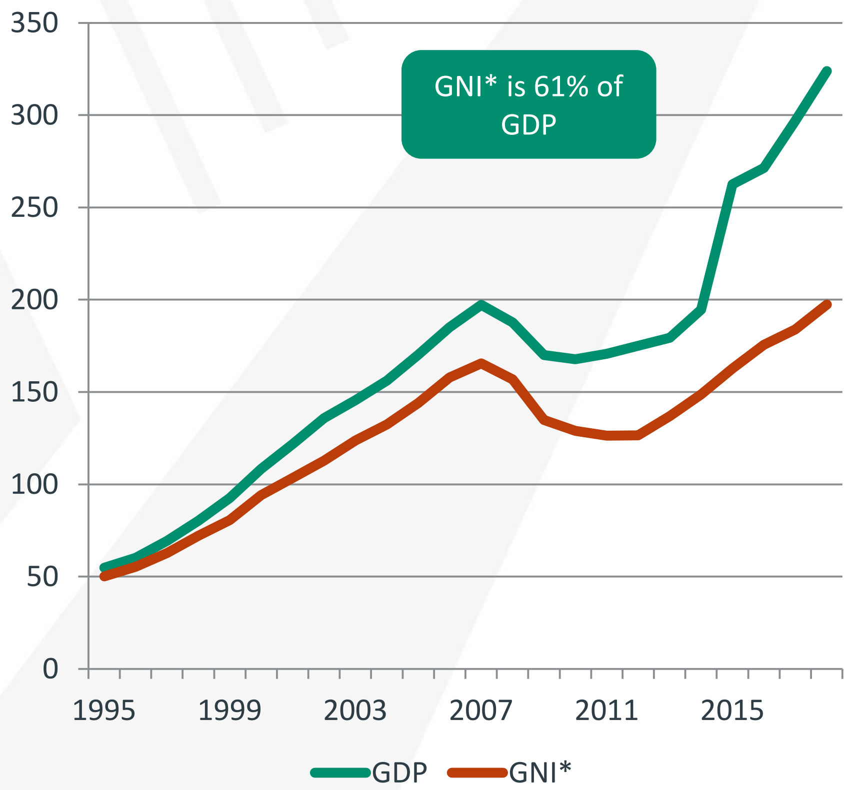
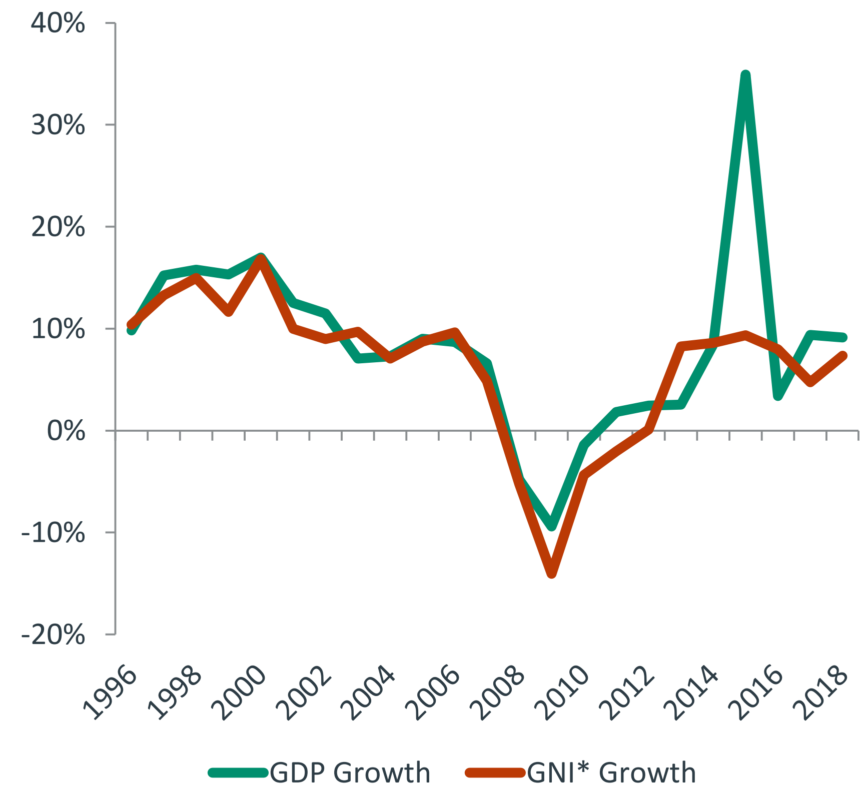
GDP distortions mean we need to look to other metrics; Irish recovery evident when looking at GNI*

GNI* was €197bn in 2018; 7.3% higher than in 2017 (current prices or cash basis)



GNI* growth rate averaged 8% in 2013-2018 (current prices or cash basis)



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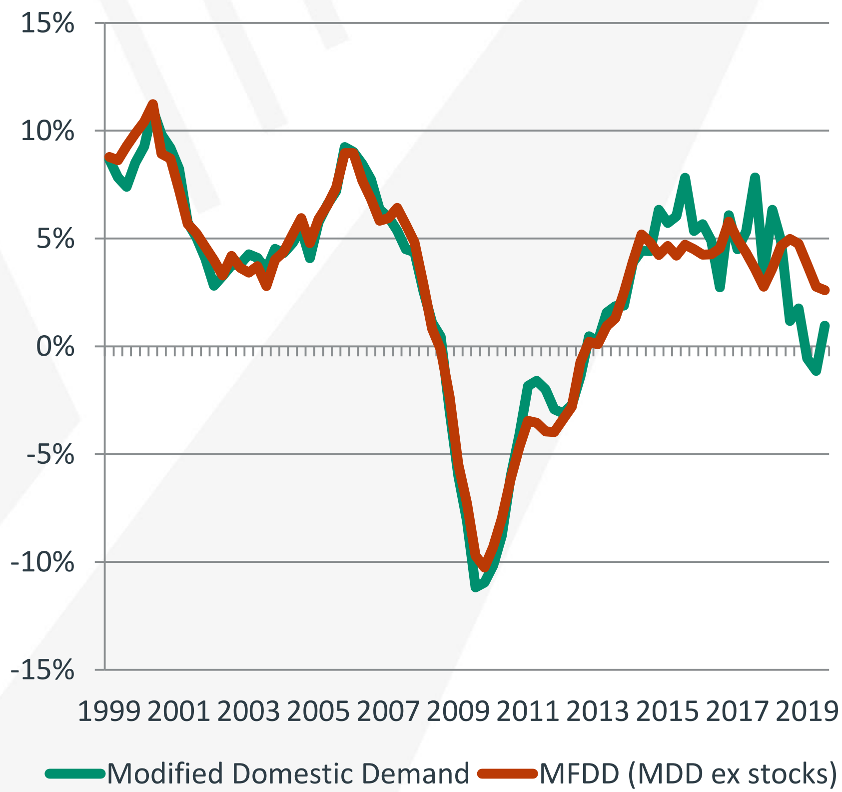
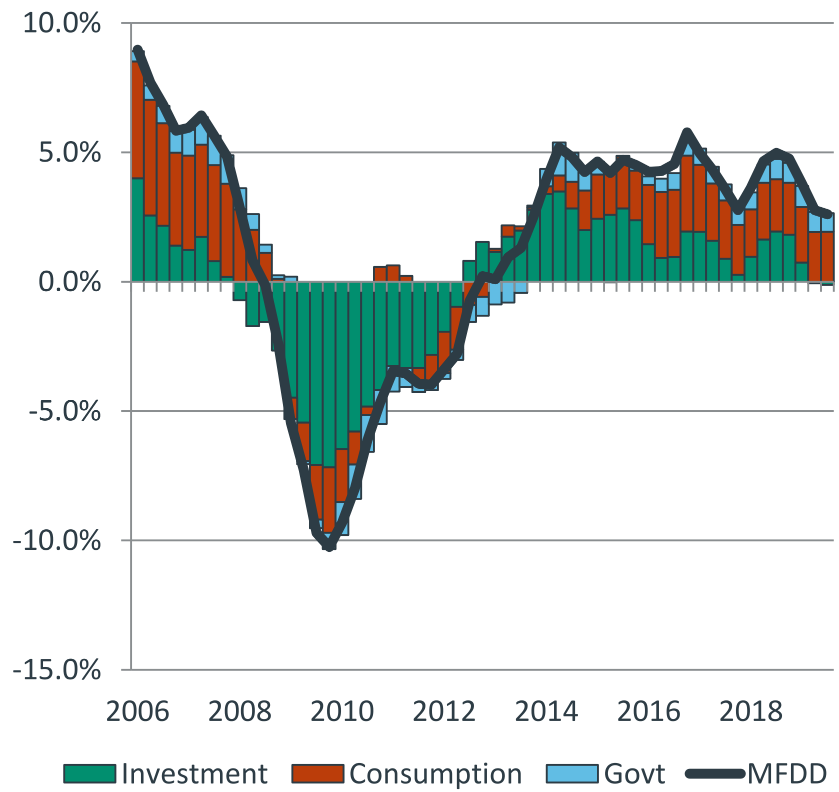
Source: CSO
Note: See annex for discussion on the GDP distortions from 2015 onwards

When looking for price-adjusted timely data, modified final domestic demand is the best measure

In real terms underlying growth in Ireland averaged 4.3% since 2014



MFDD measure driven by consumption; investment slowed by Brexit uncertainty



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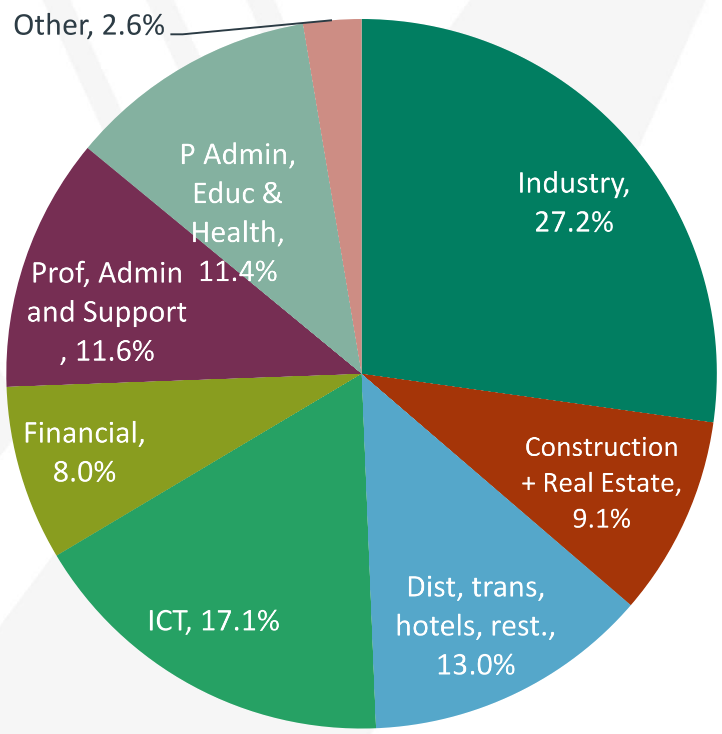
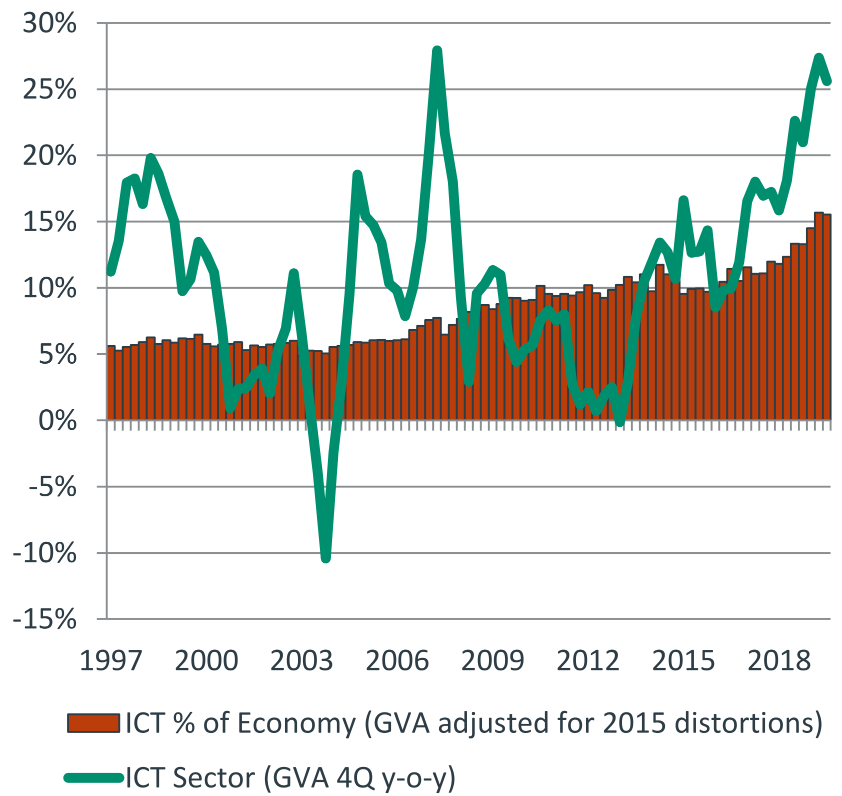
Source: CSO
Note MDD measure used here includes private consumption, government consumption, building investment, elements of machinery & equipment investment, elements of intangible asset investment. See annex for more detail.

Economy has been driven by multinational growth – in particular ICT; tech grew 26% in year to Sept 2019

Breakdown of the Irish economy by sector – Industry (pharma) and ICT are 40% of GVA



Information and communication sector has expanded rapidly in recent years



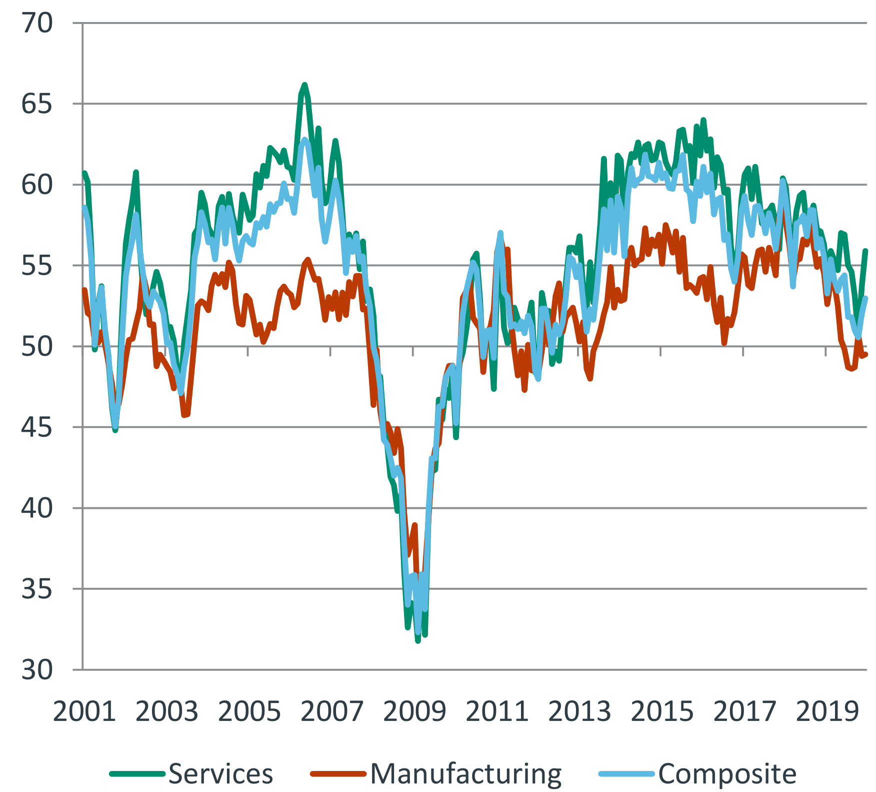
Source: CSO (2018)
Note GVA figures adjusted for distortions in 2015. A depreciation charge was subtracted from industry GVA in 2015 and onwards to take account of multinational effects.

Manufacturing is declining like elsewhere in the world; services are robust but growth has decelerated

Manufacturing PMIs across the globe declined in 2019

Country	PMI Dec 2018	PMI Dec 2019
EU	51.5	46.4 ↓
France	49.7	50.4 ↑
Germany	51.5	43.7 ↓
Italy	49.2	46.2 ↓
Japan	52.6	48.4 ↓
Spain	51.1	47.4 ↓
UK	54.3	47.5 ↓
US	53.8	52.4 ↓
World	*51.4*	*50.1* ↓

Ireland's PMIs slipping much like rest of globe – services above 50 however



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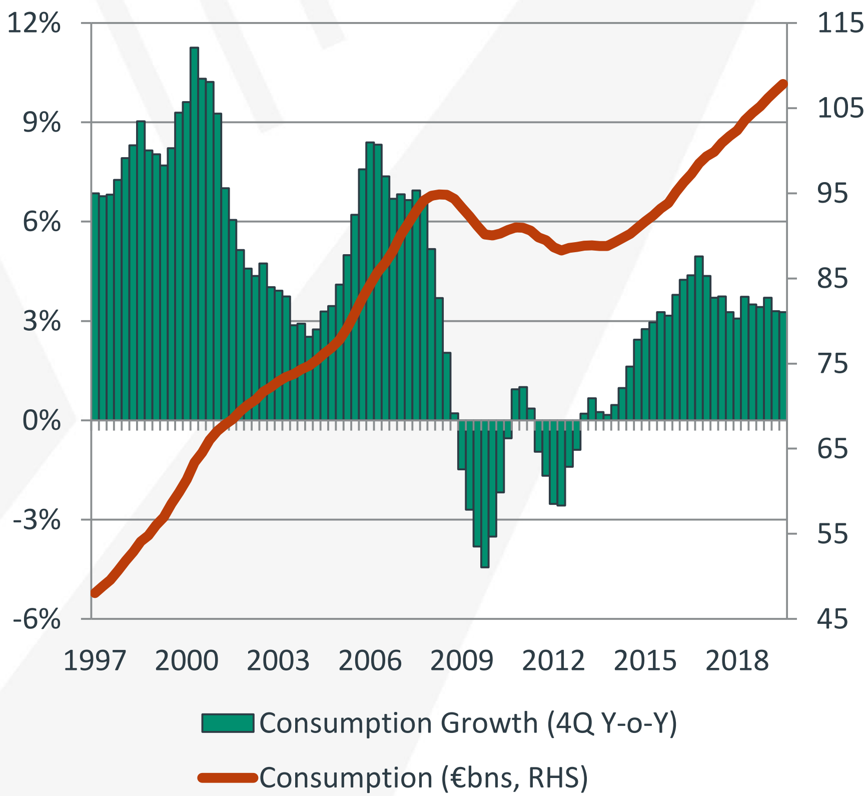
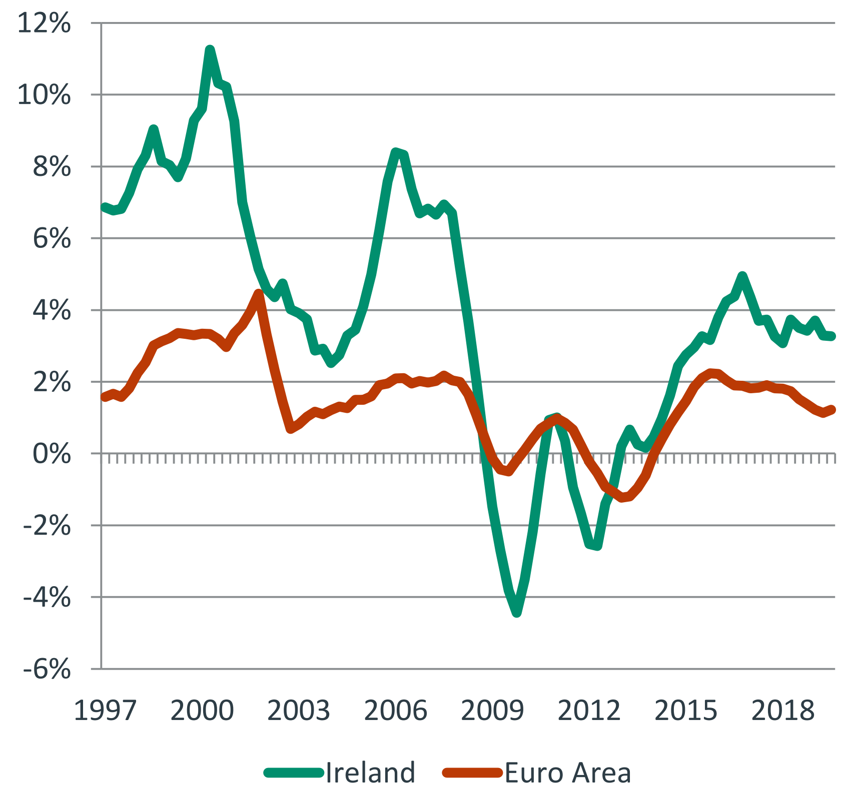
Source: Bloomberg

Consumer spending growth consistent around 3%

Private consumption expanded by 3.3% in 2018 – steady trend emerging



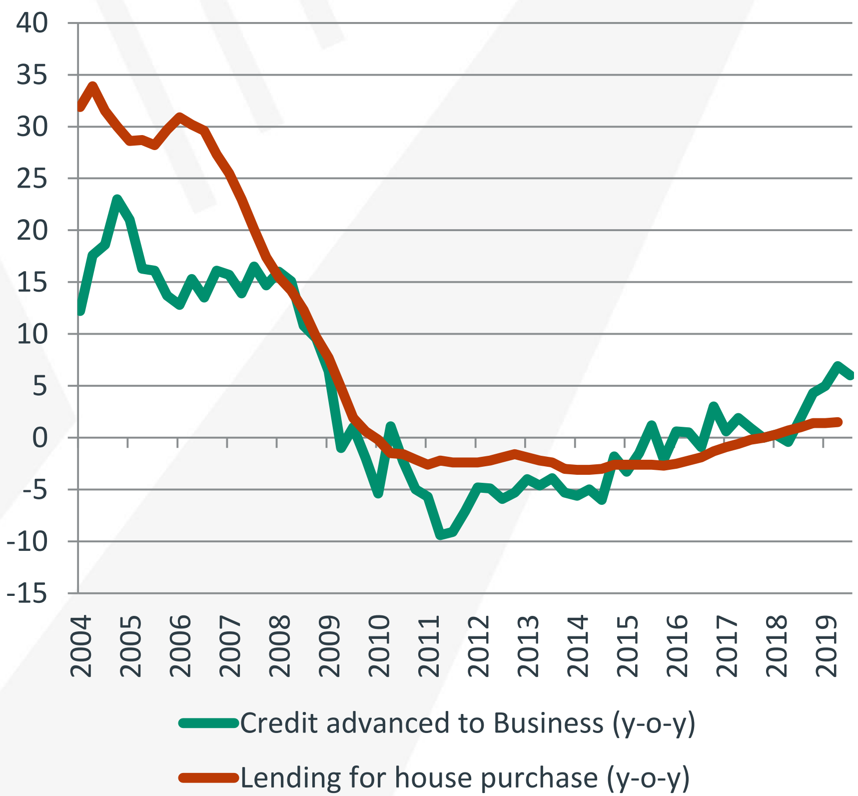
Ireland's consuming faster than Euro Area peers



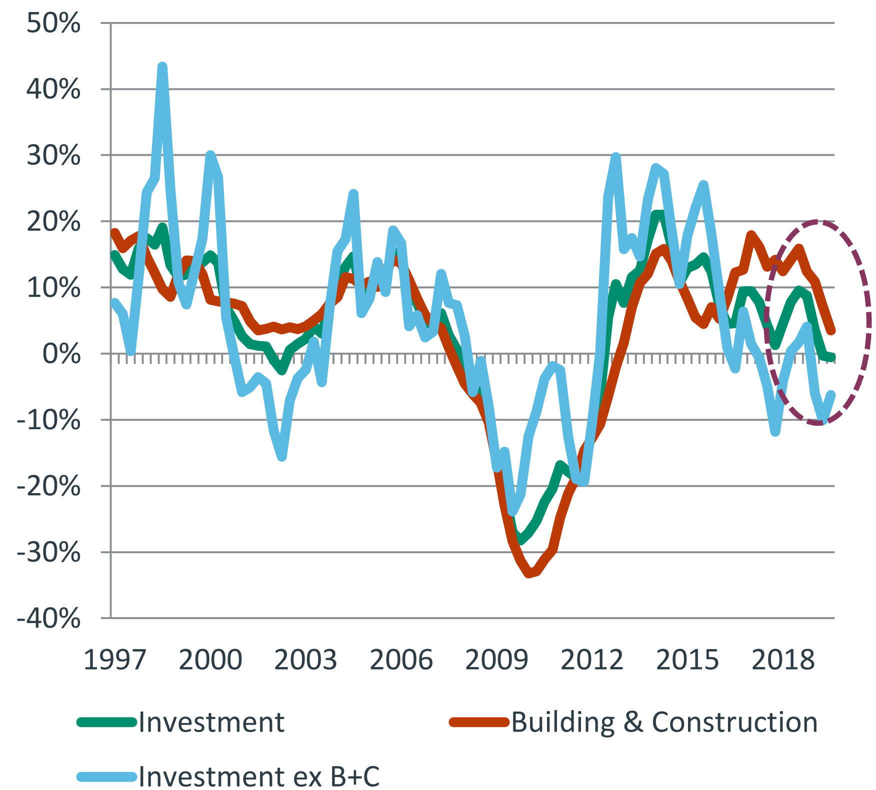
Source: CSO; Eurostat

Crucially the recovery was not driven by credit; debt reduction ended as recently as 2018

Lending for house purchase only edging into positive territory



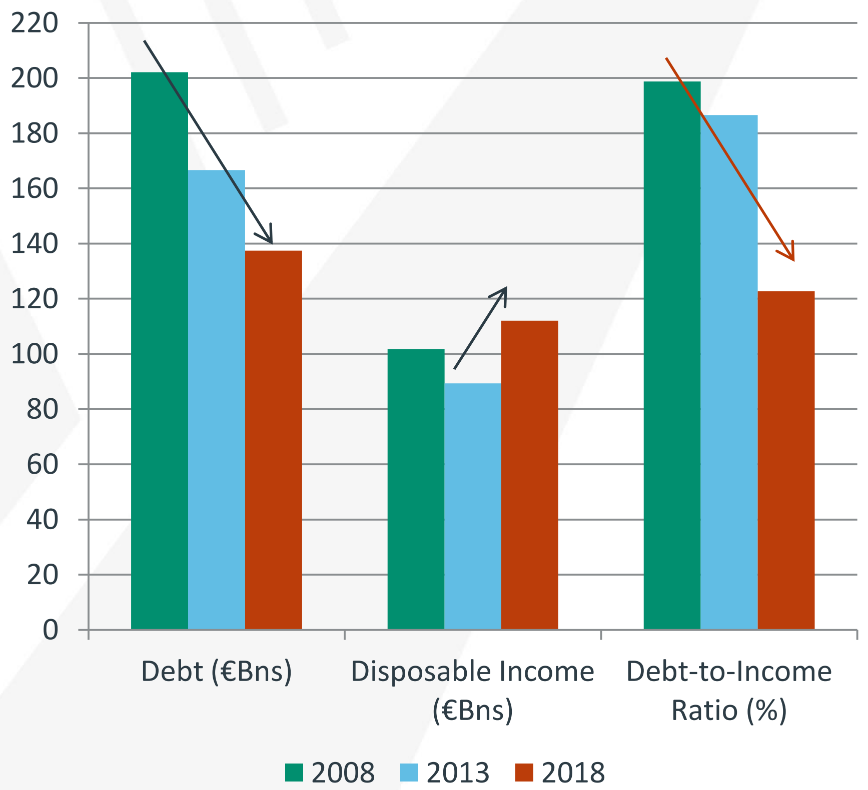
Modified investment led solely by building & construction; mach. & equipment is sluggish



Source: CBI; CSO
Note: Credit to business series excludes financial intermediation and property related credit
Note: Modified investment excludes impact of imports of intangible and aircraft leasing assets

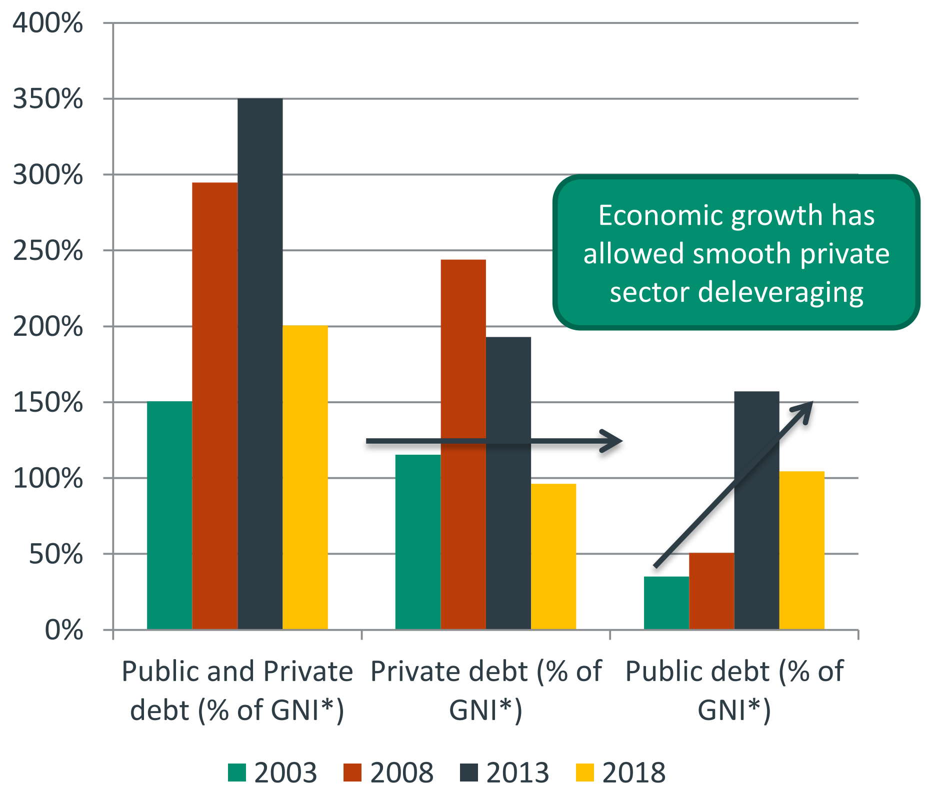
Private debt levels remain elevated but Ireland has used recovery period to repair balance sheets

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

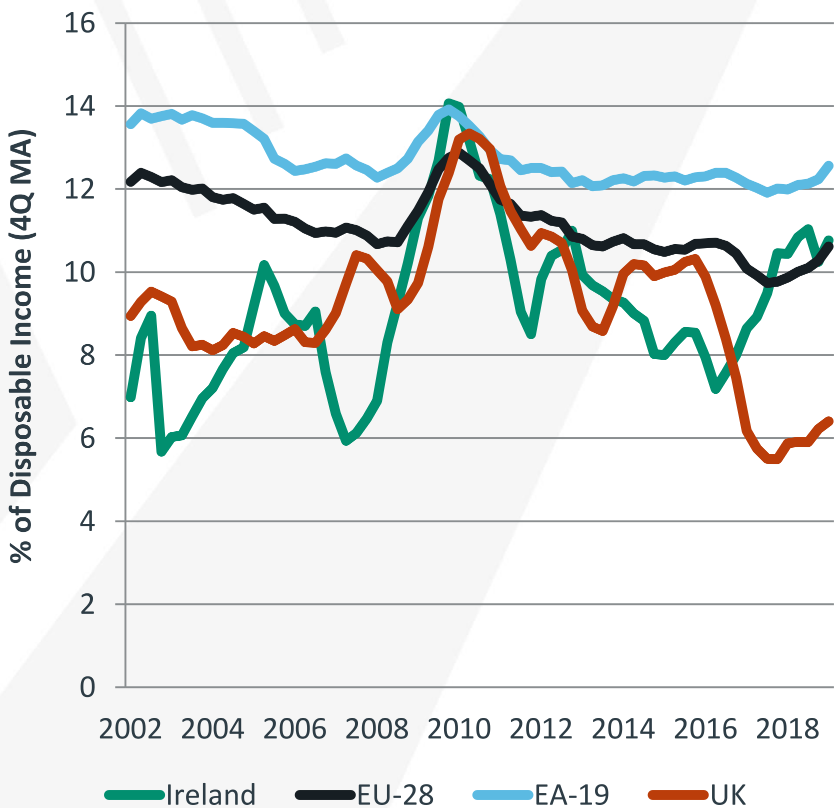


Source: CBI data, CSO

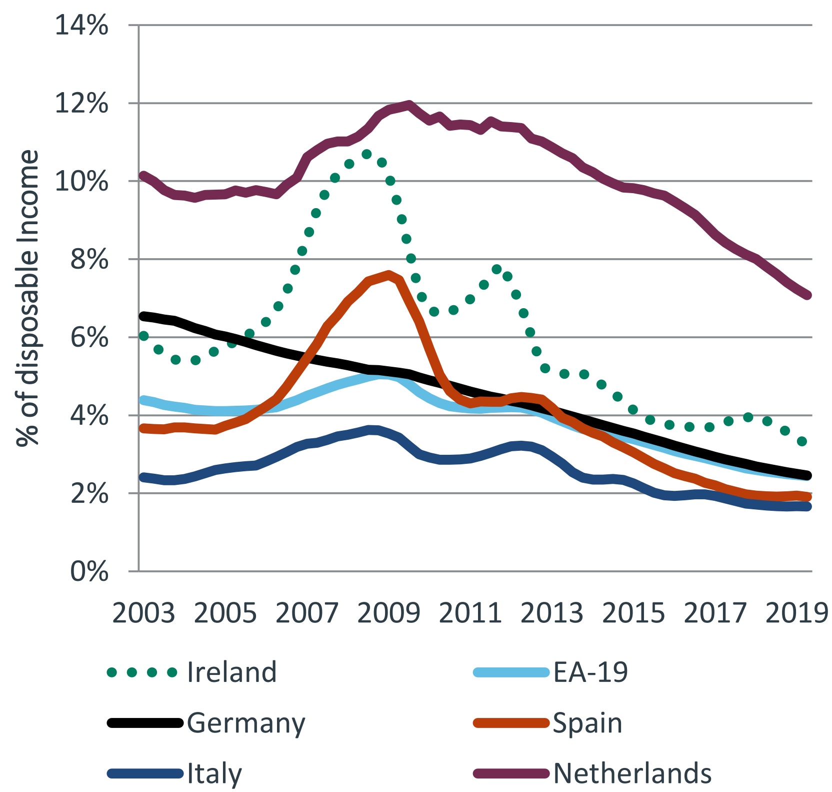
Note: Private debt includes household and Irish-resident enterprises (ex. financial intermediation)
CBI quarterly financial accounts data used for household and CSO data for nominal government liabilities.

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 well below 4% of disposable income from peak of 11%



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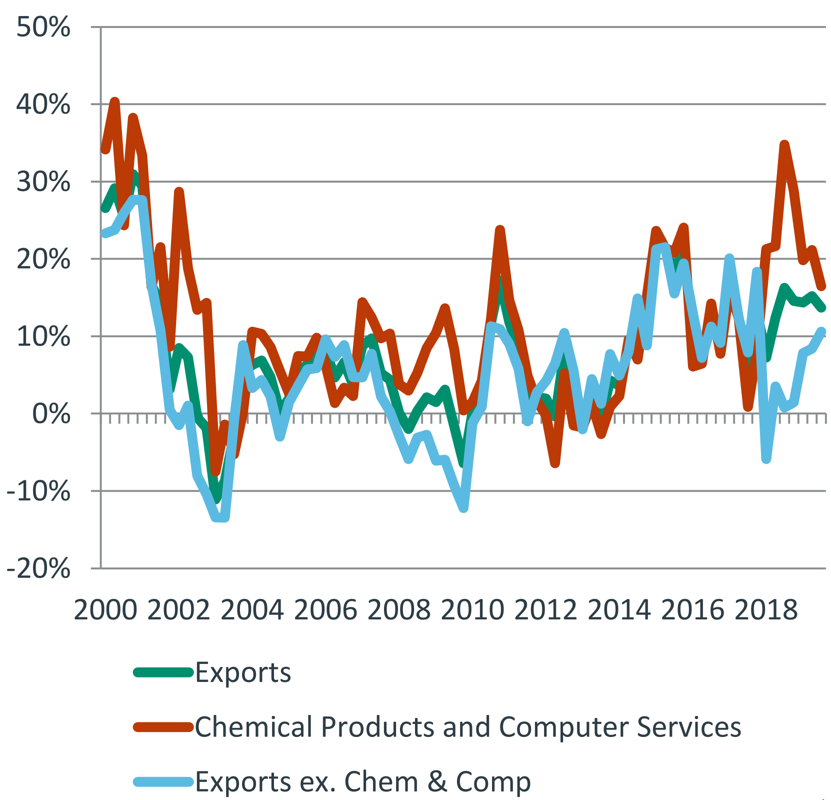
Source: Eurostat, ONS, CSO ; CBI, Eurostat NTMA calculations
Note: Gross Savings as calculated by the CSO has tended to be a volatile series in the past, some caution is warranted when interpreting this data

External environment worst since 2012 for Ireland? Brexit deal would alleviate short term risks

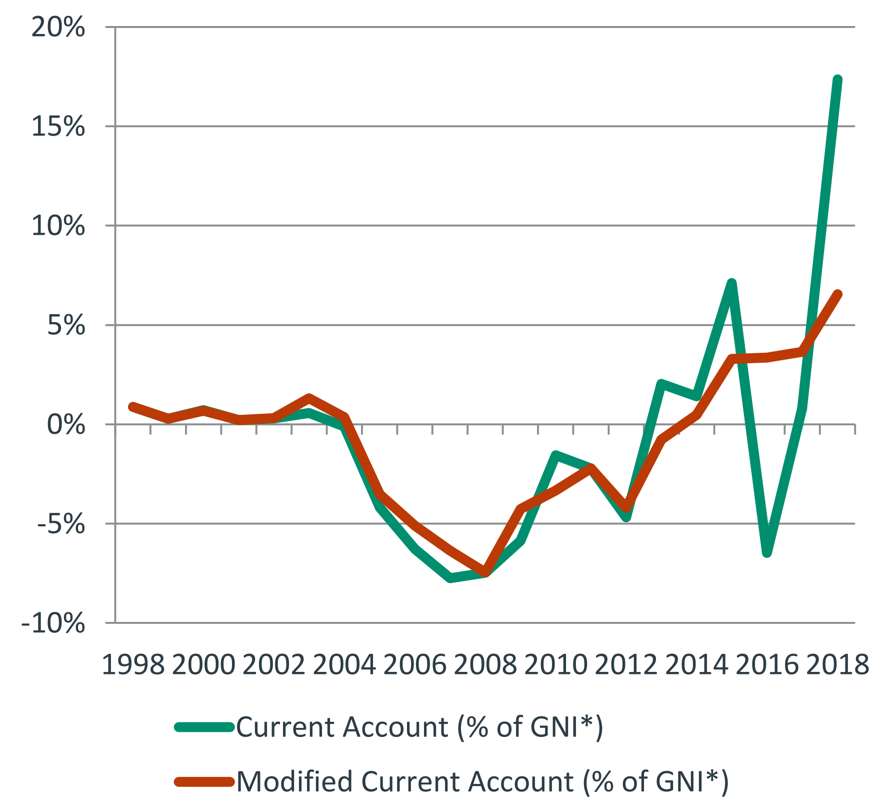
	2015	2016	2017	2018	2019	2020f
EA Monetary Policy	Accommodative	Accommodative	Accommodative	Less accommodative	Accommodative in Q4	Accommodative
US Monetary Policy	Accommodative	Accommodative	Accommodative but tightening	Further tightening	Easing	Easy policy continuing
US growth	Stimulative	Less stimulative	Stimulative	Stimulative due to fiscal package	YC inversion, but still growing	Labour market strength
Oil price	Falling	Falling	Rising	Falling	Flat y-o-y	Rising on tensions?
UK growth	Stimulative	Less favourable; Brexit impact	Growth slowing	Growth slowing	Brexit risks	Brexit risks reduced for 2020
Euro Growth	Stimulative	Stimulative	Stimulative	Slowing growth	Sluggish	Unimpressive
Euro currency	Very Helpful	Helpful	Headwind	Neutral	No change y-o-y v. £; weaker v $	Neutral?

Export growth has rebounded in 2019; Ireland is living within its means

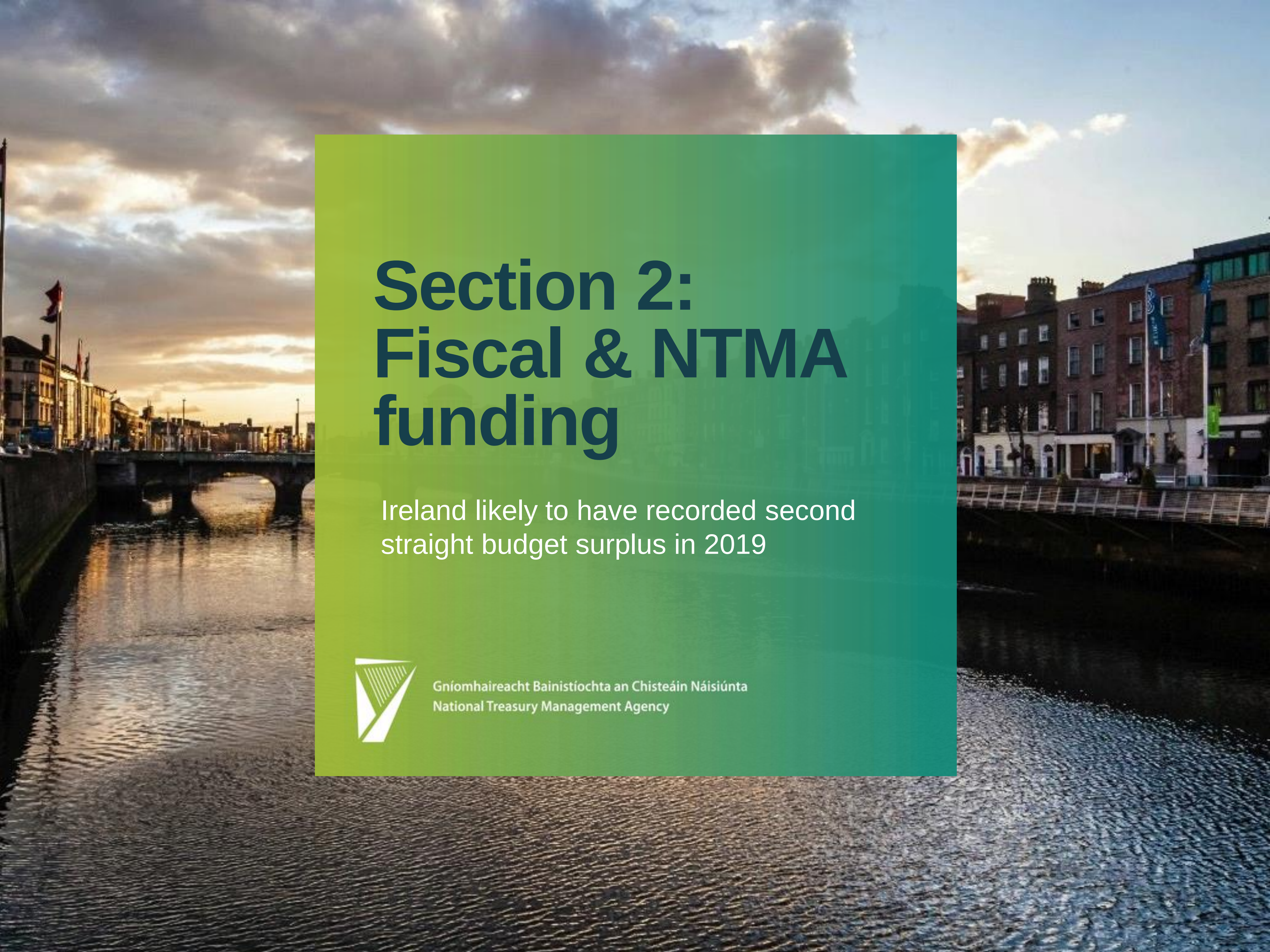
Goods exports outside MNC-dominated sectors rebounding (y-o-y change)



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



Source: CSO, NTMA calculations
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.



Section 2: Fiscal & NTMA funding

Ireland likely to have recorded second straight budget surplus in 2019

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Funding range of €10-14bn for 2020 – down from 2019

€10-14bn

Funding range is €10-14bn for the coming year

Ireland has €20bn+ in outflows in 2020, so the NTMA will run down some of its cash buffer

10 years

One of the longest weighted average maturities in Europe

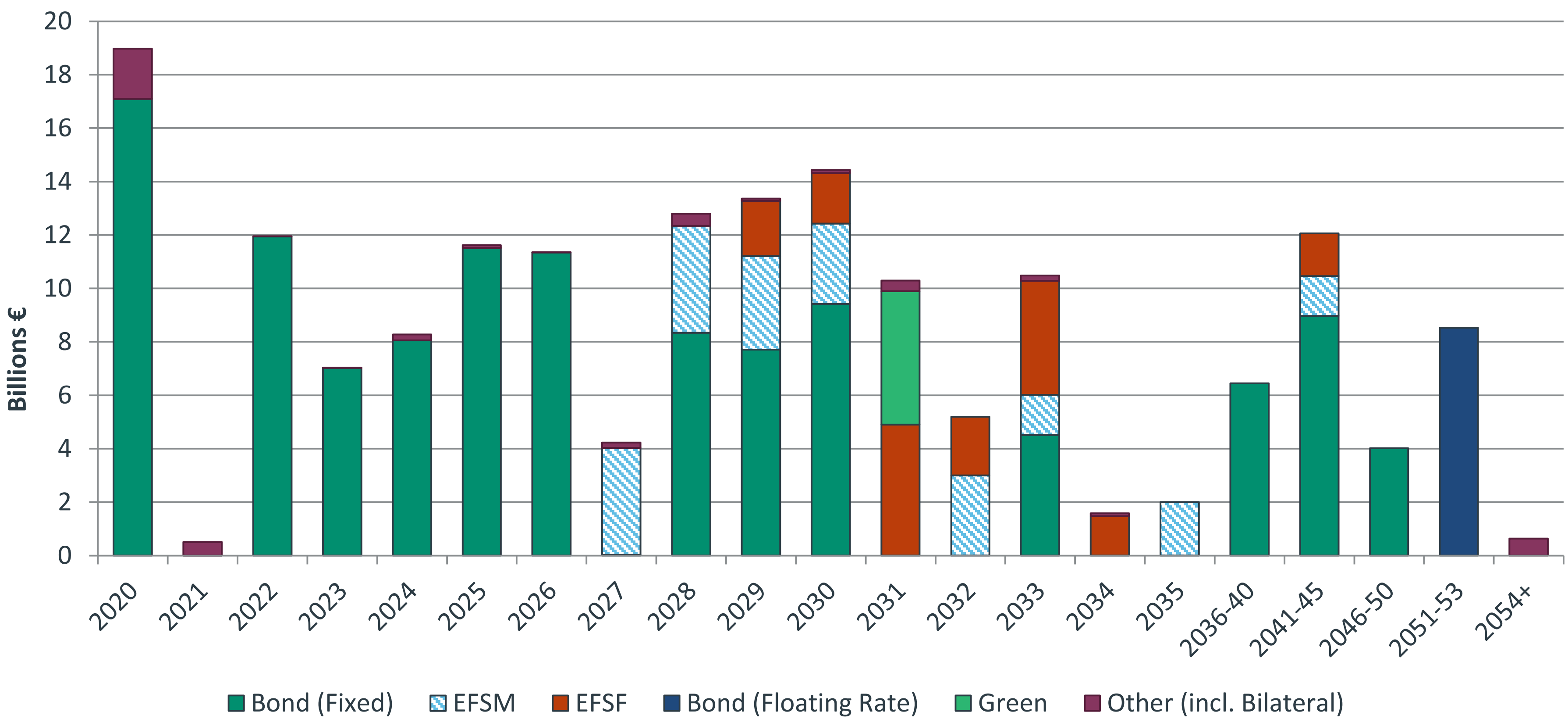
The NTMA used ECB QE to extend debt maturity, reduce interest cost and repay the IMF

AA-

Ireland has been upgrade to AA space by S&P

Ireland's debt sustainability has been improving and Brexit risk has receded

Maturity profile: IMF repayment and FRN buy-backs have reduced refinancing risk; Green diversifies investor base



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.

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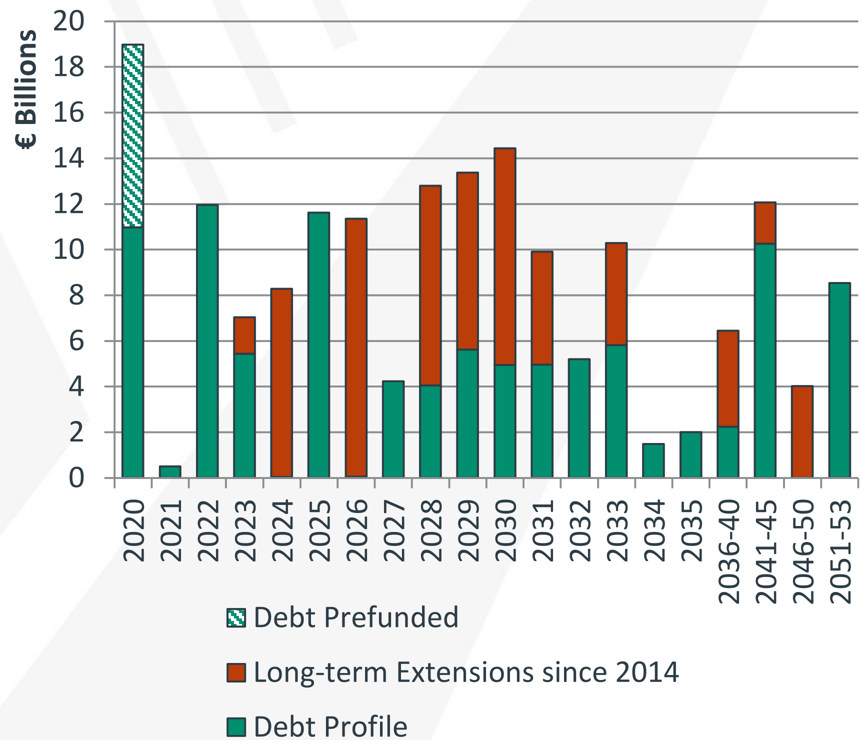
The NTMA took advantage of QE to extend debt profile

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*

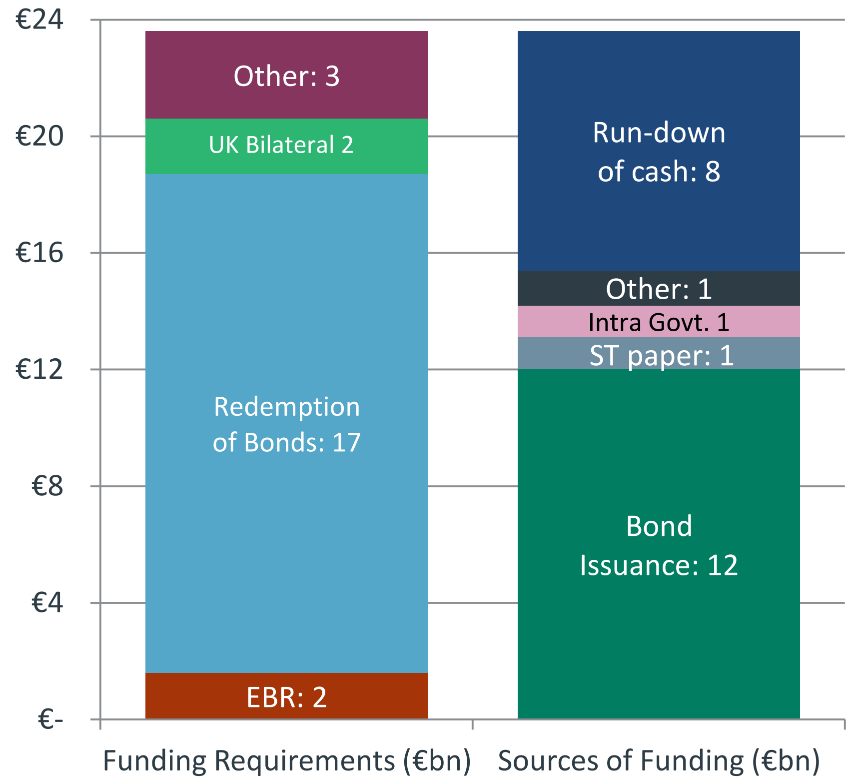
Funding requirements will be met by mix of new issuance and rundown of cash

Two bonds mature in 2020, the first in April and the second in October.

Four of the remaining five tranches of the UK bilateral loan mature in 2020.

Exchequer Borrowing Requirement could be smaller than estimated if Brexit withdrawal agreement is ratified by UK.

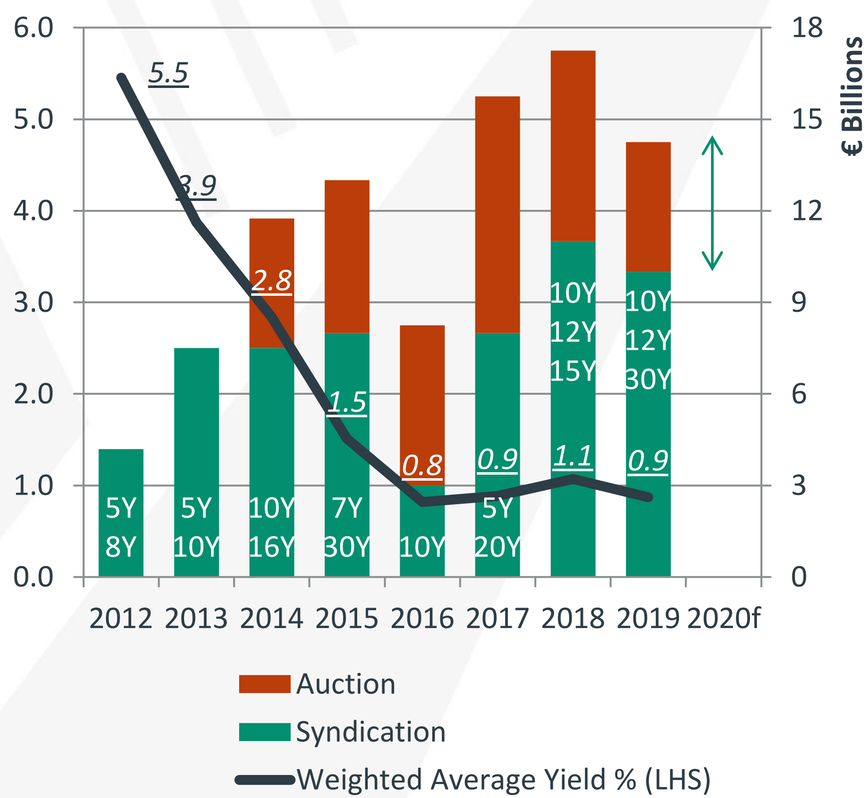
Existing cash balances will be run down to meet part of the 2020 funding requirement.



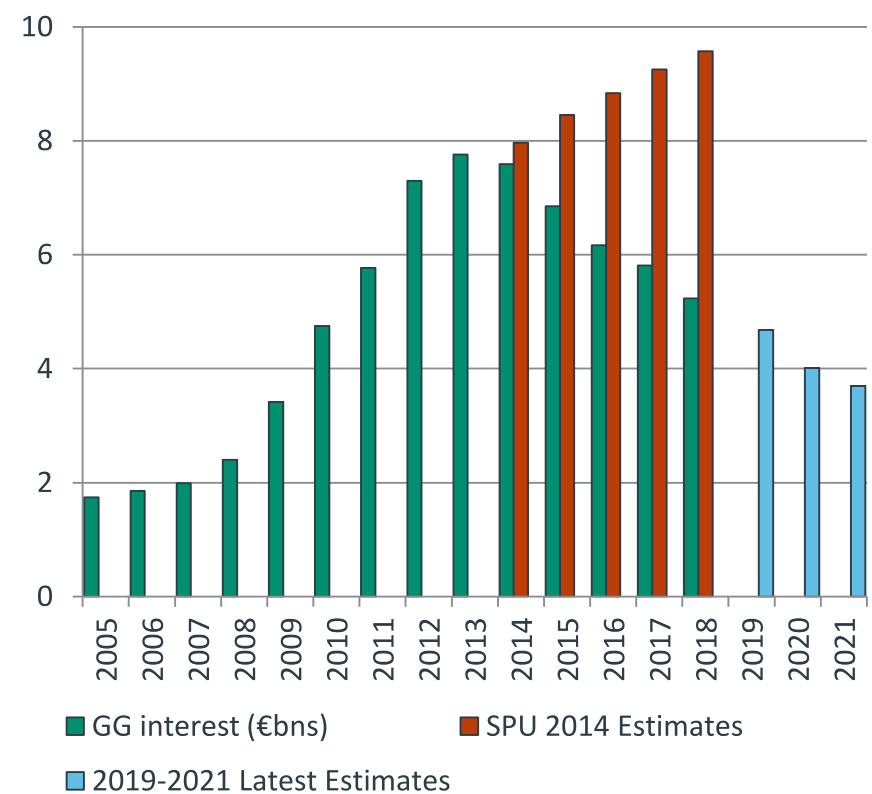
Notes:
Short Term Paper (ST paper) = Net growth in marketable short-term debt (Treasury Bills and Commercial Paper).
Intra Govt .funds = Expected growth in funding from domestic public sector sources.
Other funding requirements includes general contingency provision e.g. for potential Floating Rate Note purchases.
Other sources Includes other cash inflows and expected European Investment Bank loan drawdowns.
Mid-point of €10bn-€14bn bond funding range is used for illustrative purposes.

ECB policy and NTMA's funding strategy have lowered the State's interest burden

NTMA issued €69bn MLT debt since 2015; 14.1 yr. weighted maturity; avg. rate of 1.04%



Interest costs forecasted pre-QE to be c.€10bn; will drop below €5bn by end 2019



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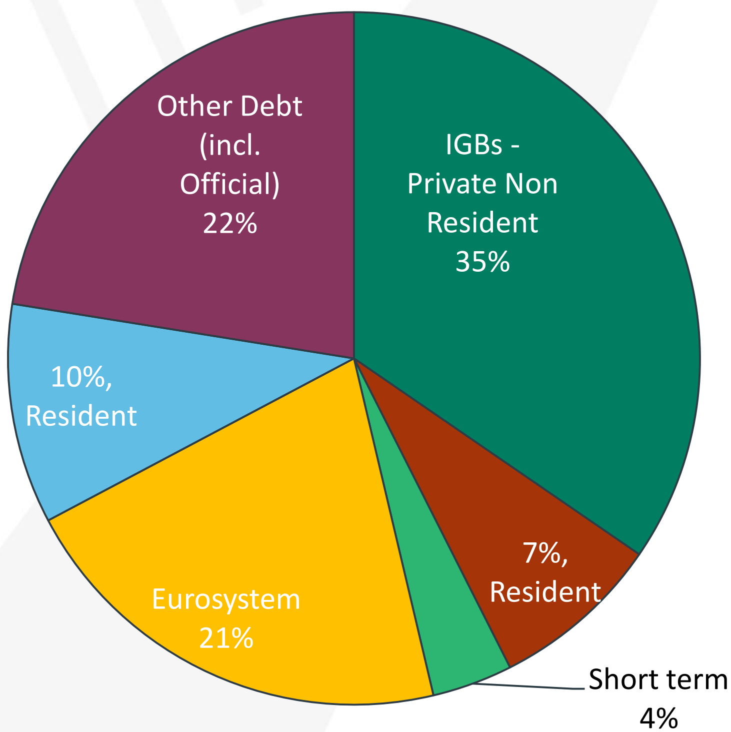
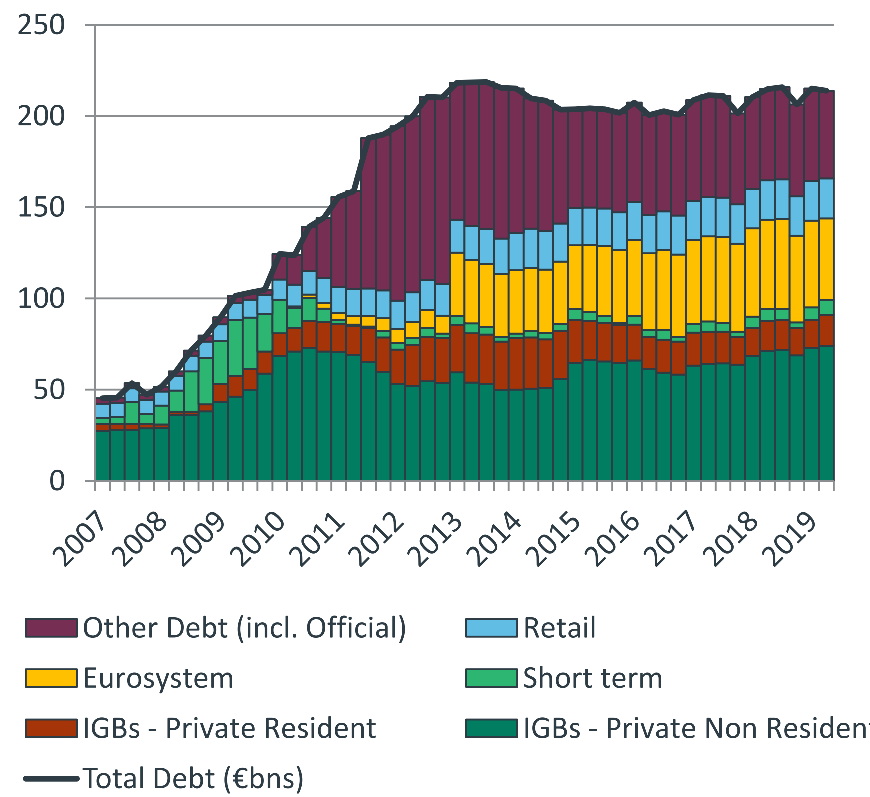
Source: NTMA, CSO, Department of Finance
Only showing marketable MLT debt (auctions and syndications). Other issuance such as inflation linked bonds, private placement and amortising bonds occurred but not shown.

Diverse holders of Irish debt – sticky sources account for over 50%

Ireland roughly split 80/20 on non-resident versus resident holdings (H1 '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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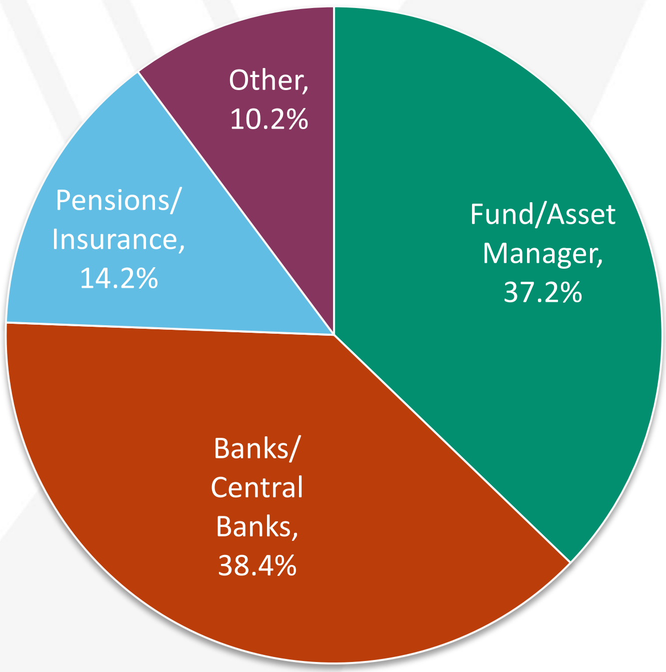
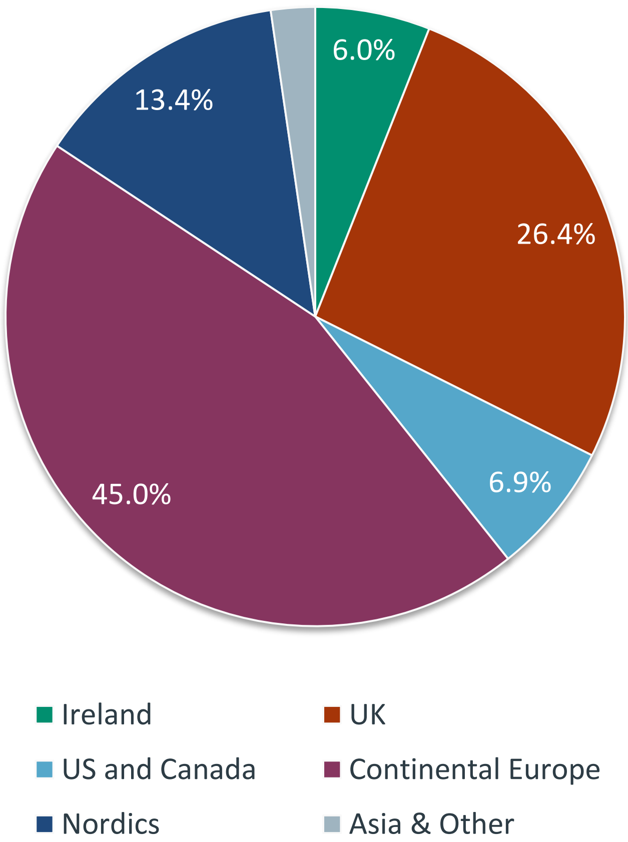
Investor base for Government bonds is wide and varied

Investor breakdown: Average over last 5 syndications



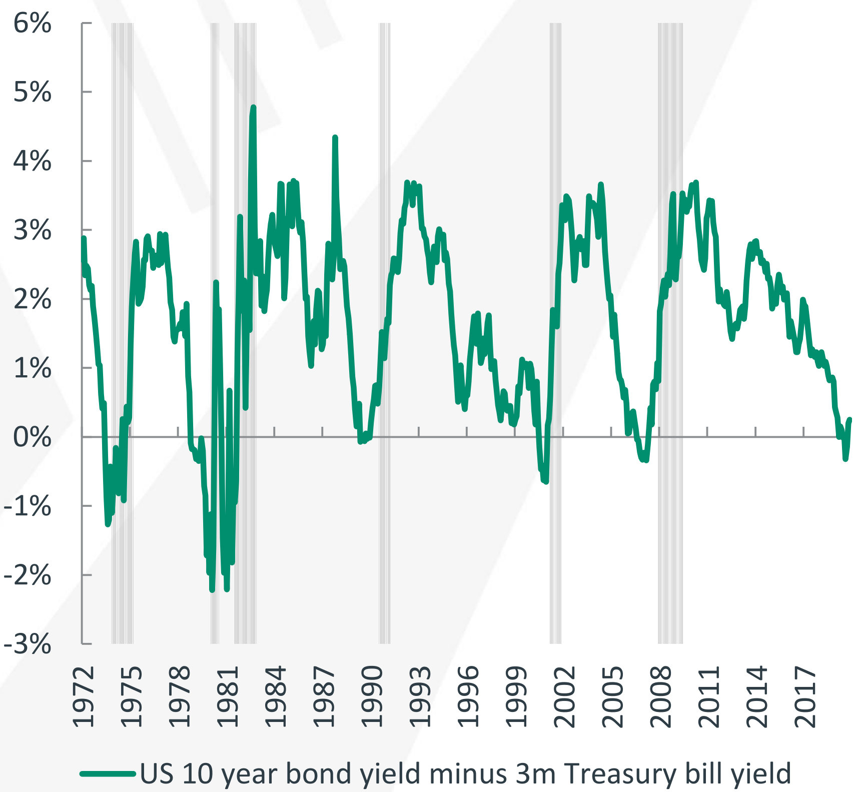
Country breakdown: Average over last 5 syndications



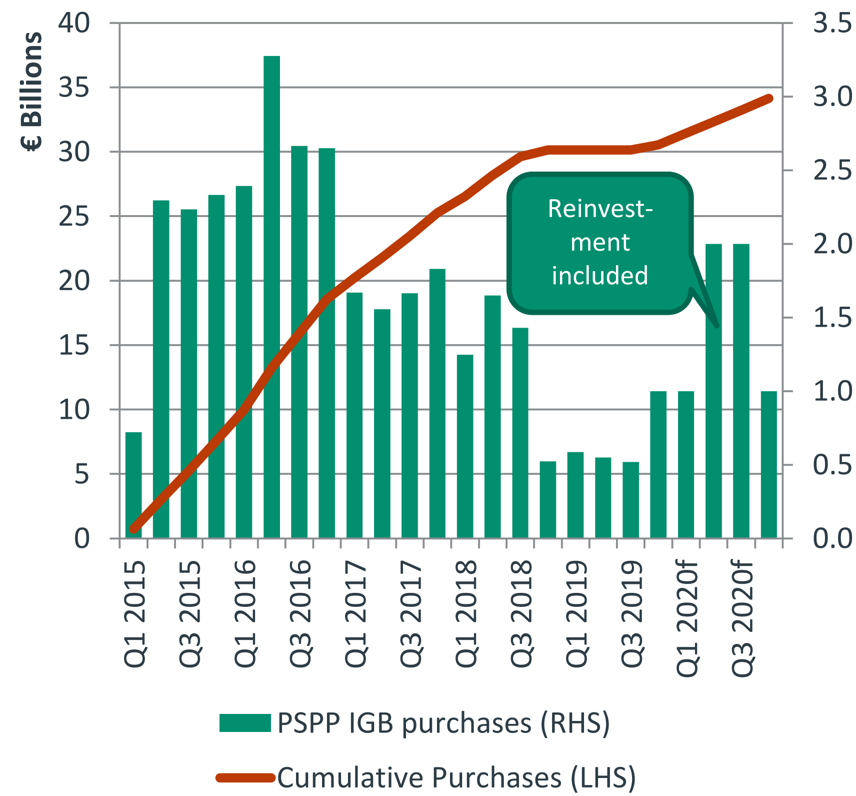
Source: NTMA

Late cycle risks mixed for Ireland: yield curve sets recession clock ticking but central banks are now easing

US yield curve has inverted (albeit only slightly so far): could be waiting a while yet



PSPP restarting + re-investment means ECB will be active In IGBs in 2020



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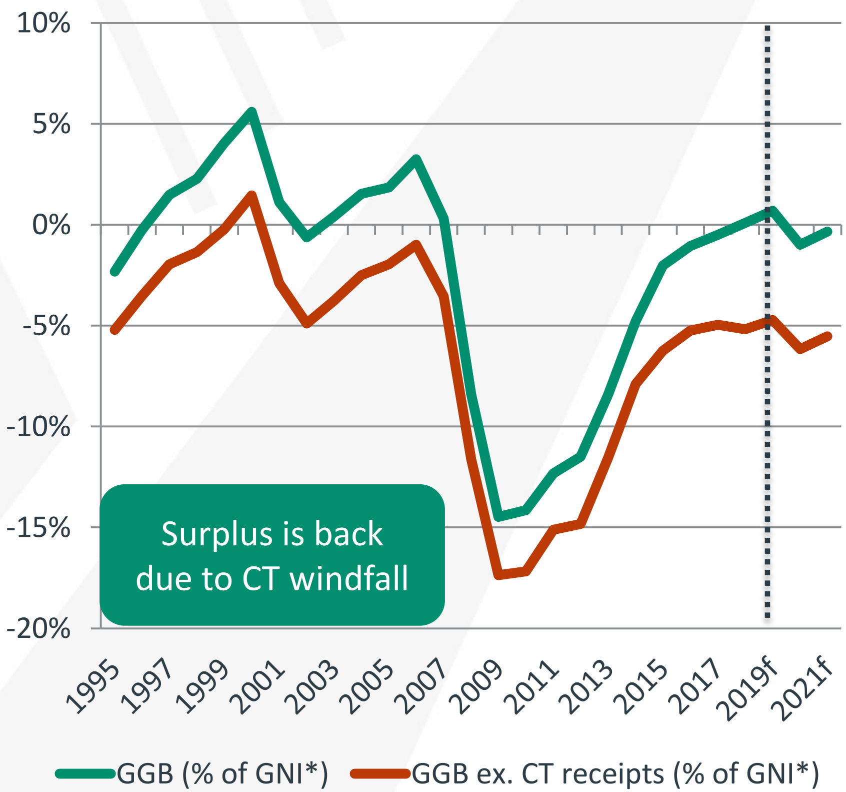
Source: DataStream, ECB

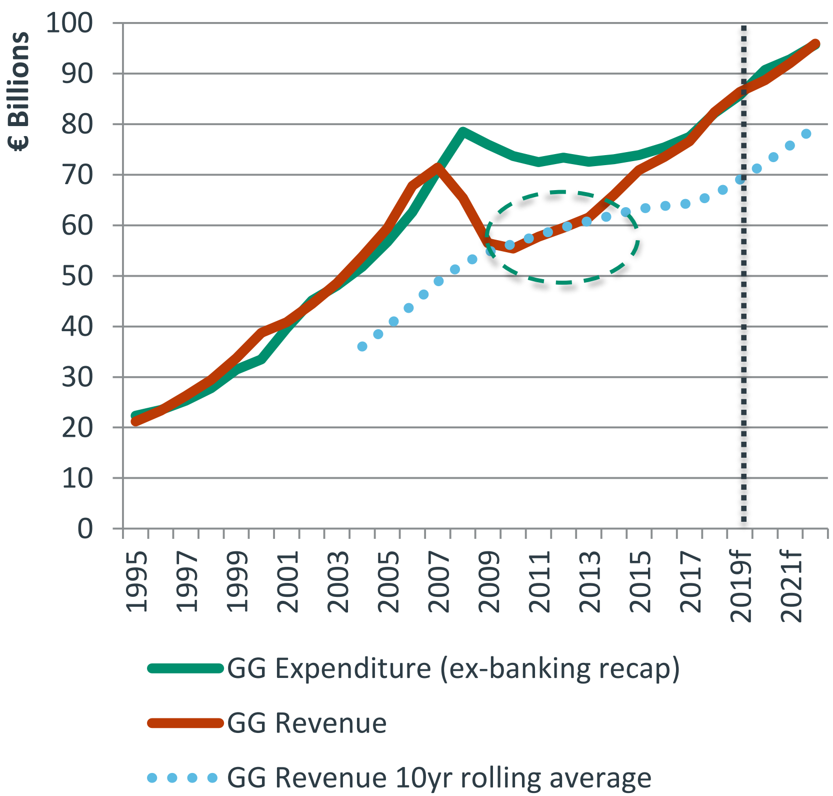
**Shaded areas indicate recessionary periods in the US*

Ireland recorded full budget surplus for first time in 11 years in 2018: another one likely for 2019

Gen. Govt. Balance in surplus but might slip into deficit in case of no-deal Brexit



Revenue surge has helped Ireland balance the books since 2015 (€bn)



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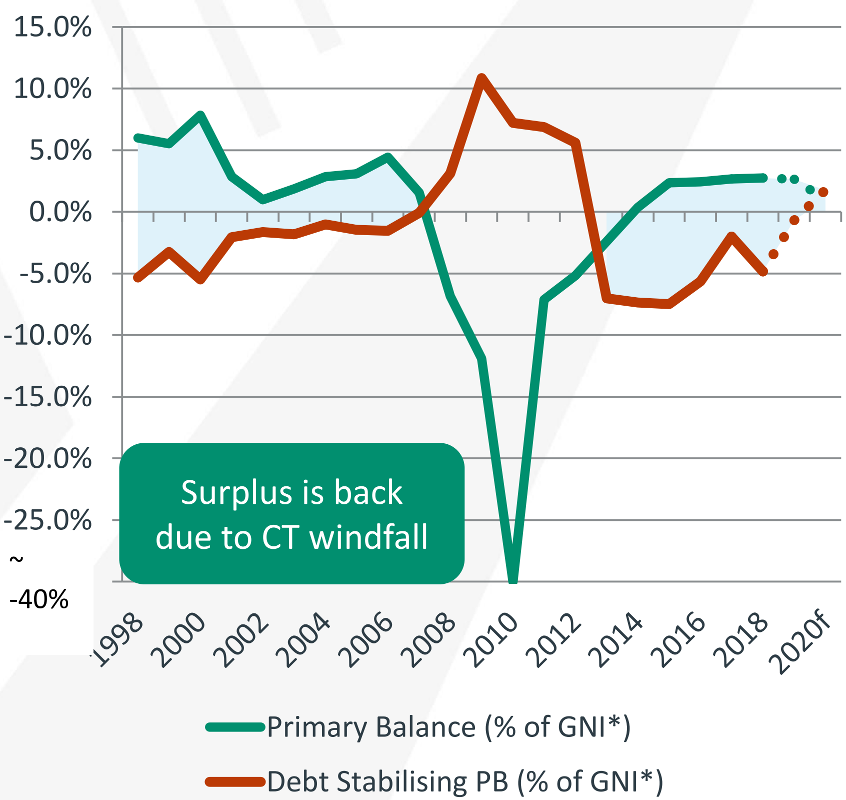
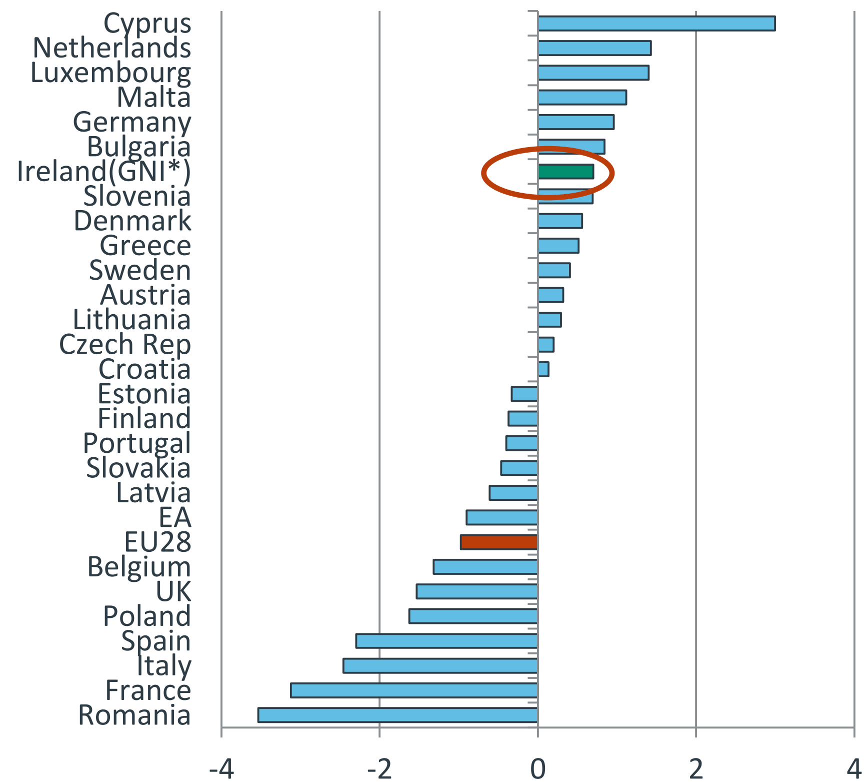
Source: CSO; Department of Finance

Ireland has improved its debt dynamics: next step is to follow others and run a GGB surplus for many years

In recent years Ireland has run primary surpluses that reduced debt ratios



2019 GGB Deficit/Surplus (% of GDP) forecasts; Ireland moving up the ranks

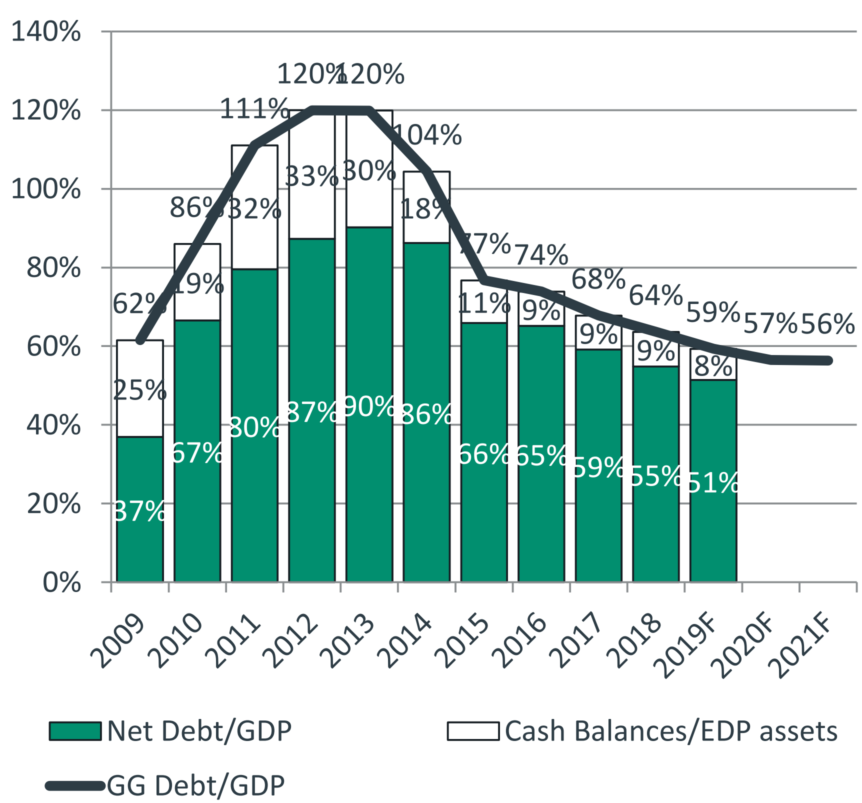


Source: CSO; Department of Finance, EU Commission forecasts, NTMA calculation

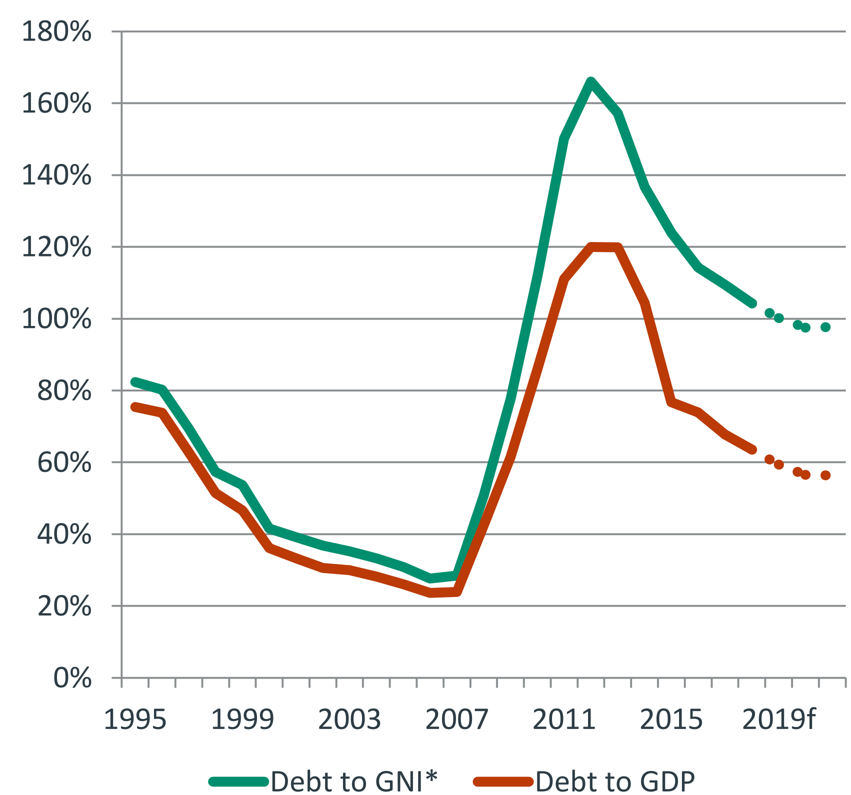
Note: Debt Stabilising primary balance is the primary balance it is necessary to run in a year to keep the debt-to-GNI ratio from rising given the average interest rate and growth in that year.*

Gross Government debt likely close to 59% of GDP at end-2019; 100% of GNI*; reality somewhere in between

Ireland's net debt position converging with gross debt as EDP assets are run down



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



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Source: [CSO](); [Department of Finance]()

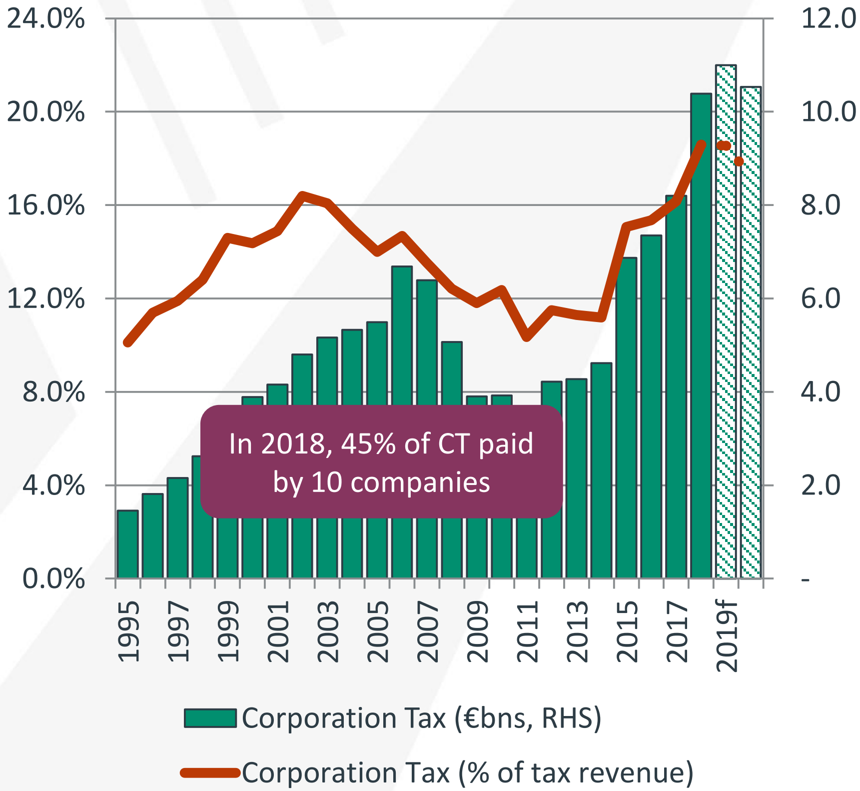
It’s best to analyse Irish debt with broad range of metrics

2018	GG debt to GG revenue %	GG interest to GG rev %	GG debt to GDP %
Greece	377.9%	6.3%	181.2%
Italy	291.7%	7.6%	134.8%
Portugal	284.1%	7.5%	122.2%
Cyprus	256.5%	6.0%	100.6%
Ireland	250.2%	5.7%	63.6%
Spain	249.1%	5.9%	97.6%
UK	219.3%	5.9%	85.9%
Belgium	194.7%	3.9%	100.0%
EA19	184.7%	3.7%	85.9%
France	183.9%	2.9%	98.4%
EU28	178.4%	3.8%	80.4%
Slovenia	158.9%	3.9%	70.4%
Austria	151.4%	3.1%	74.0%
Germany	133.2%	1.9%	61.9%
Netherlands	120.3%	1.9%	52.4%

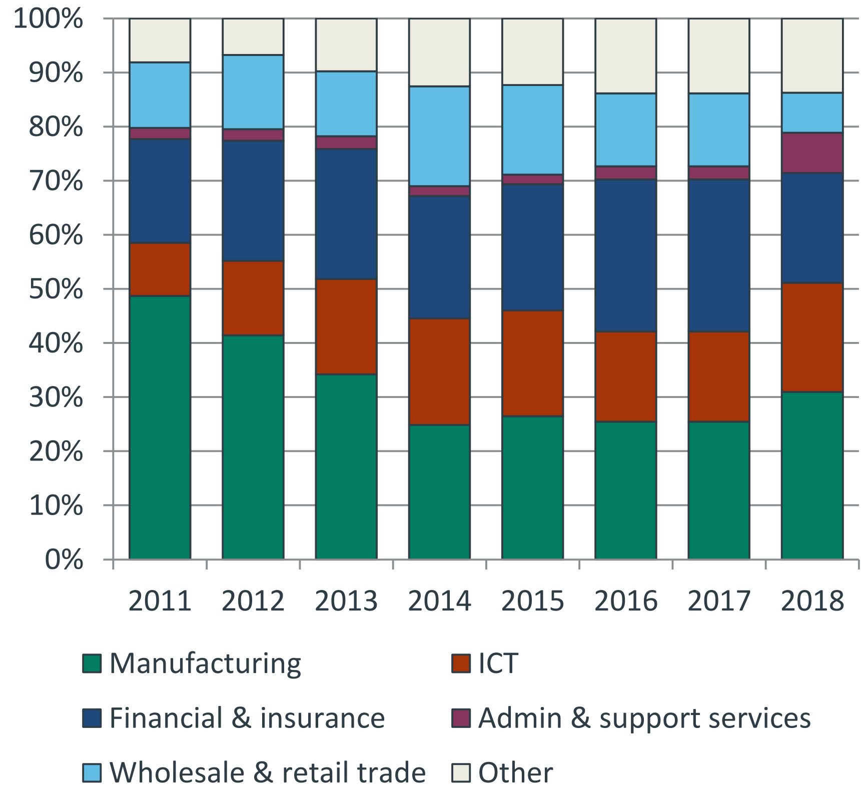
Source: Eurostat, Department of Finance
104% Debt to GNI ratio in 2018*

Corporation tax revenue keeps surprising positively, but each year the concentration risk increases

Corporation tax receipts have more than doubled in four years



Sectors with large MNC presence dominate the CT receipts



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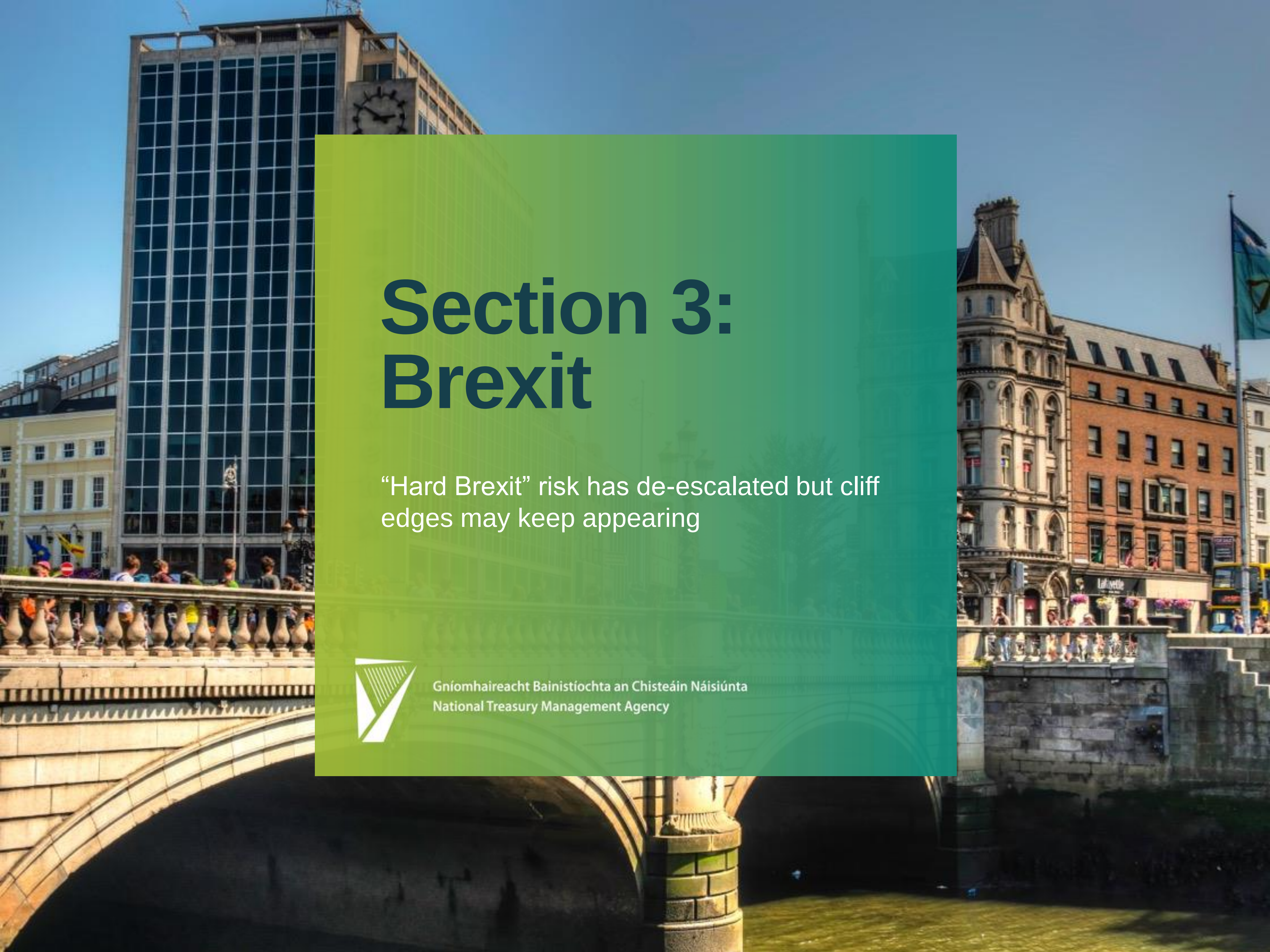
Source: Department of Finance, Revenue

S&P restores “AA” grade – for first time in a decade

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)	Stable	March 2016
R&I	A	a-1	Stable	Jan. 2017

€ Billion	2016	2017	2018
Currency and deposits (mainly retail debt)	21.3	21.6	21.6
Securities other than shares, exc. financial derivatives	124.2	130.7	134.2
- Short-term (T-Bills, CP etc)	2.4	2.9	3.1
- Long-term (MLT bonds)	121.8	127.8	131.1
Loans	55.2	49.0	50.3
- Short-term	0.7	0.5	0.6
- Long-term (official funding)	54.6	48.5	49.7
General Government Debt	200.7	201.3	205.9
EDP debt instrument assets	*24.9*	*27.3*	*28.6*
Net Government debt	175.8	174.0	177.3

Source: NTMA, CSO



Section 3: Brexit

"Hard Brexit" risk has de-escalated but cliff edges may keep appearing

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Brexit deal solves many issues for Ireland but does not eliminate the risk of a hard Brexit

Northern Ireland border issued solved if current deal is ratified by UK parliament

- 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

- After the withdrawal agreement is 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.
- This is a departure from Theresa May's government position which kept all of the UK in the EU customs union and kept many regulations aligned.
- 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. *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 surplus will turn to deficit, challenging 3% of GDP limit in worst case

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

- None, bar 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

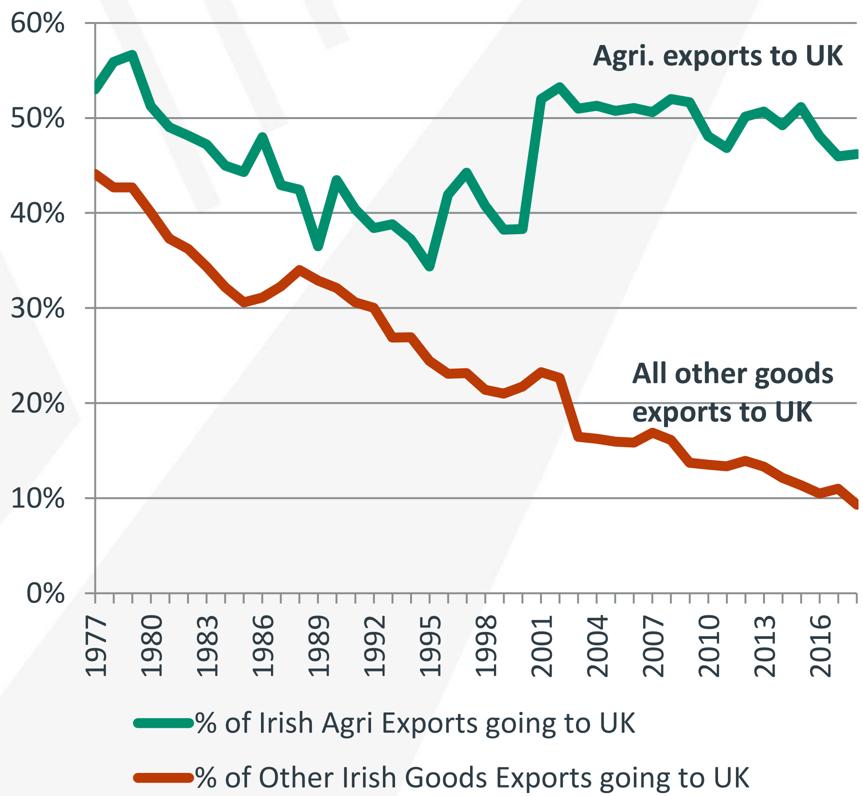
- The UK might only account for 14% of Ireland's total exports, but Ireland is more dependent than that because those UK-reliant sectors are labour intensive

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

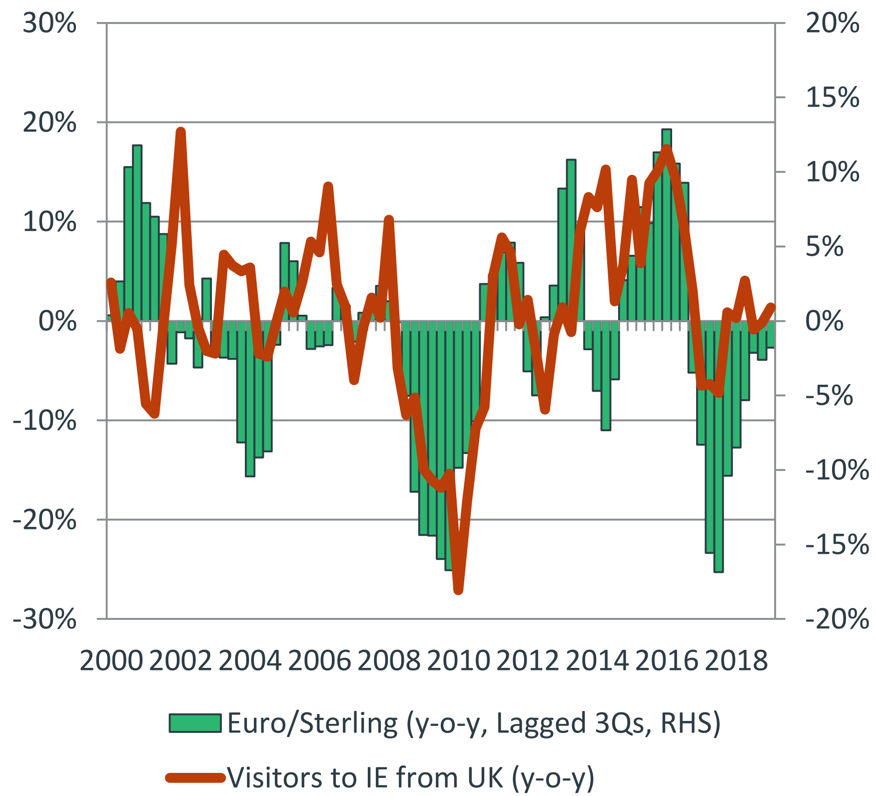
*Source: CSO 2018 * UK data includes Northern Ireland*
NTMA calculations; Data does not include contract manufacturing

Agri-food and tourism most at risk from trade barriers

Agriculture has not diversified from the UK



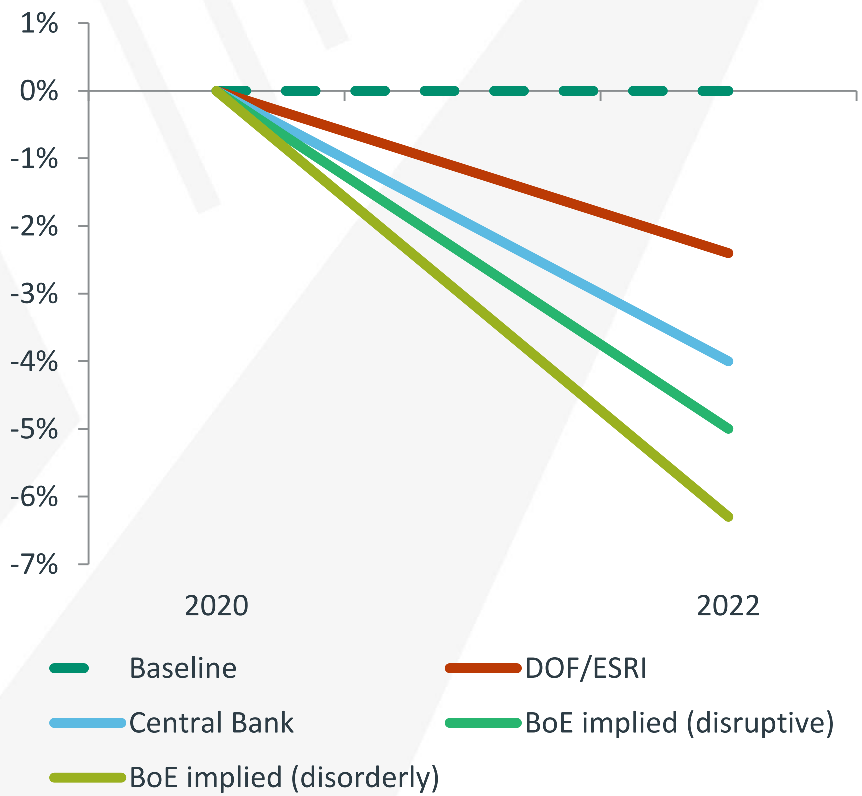
Tourism numbers linked to FX moves



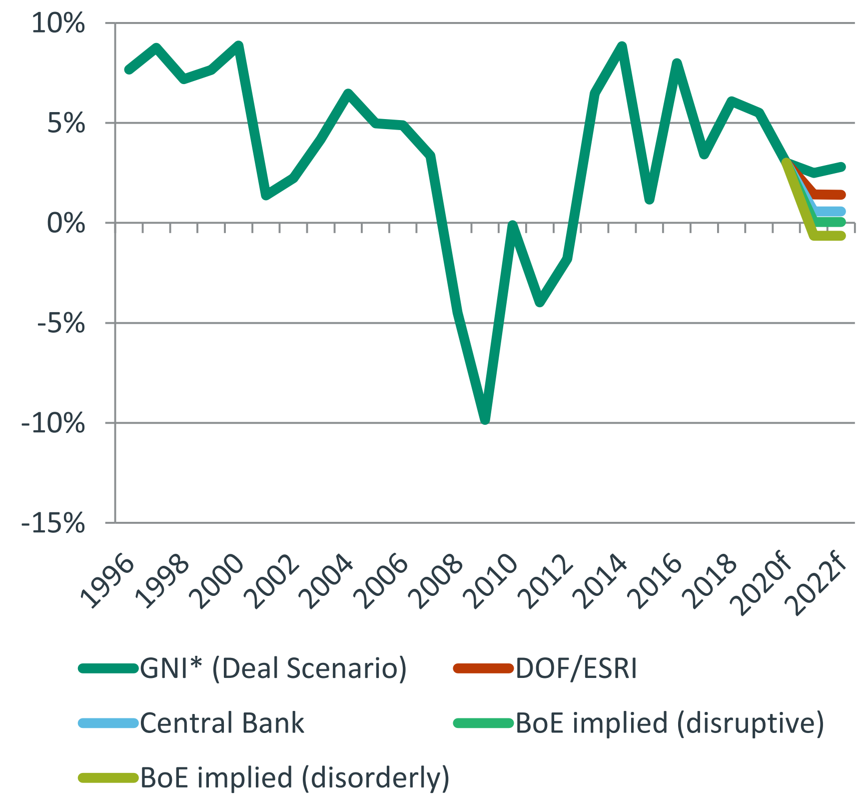
Source: CSO, Datastream Eikon

Fan chart of hard Brexit impact on Ireland – the most severe forecast puts Ireland into recession

The hit from the baseline for various forecasts of a hard Brexit



Impact on GNI* growth under various forecasts of hard Brexit



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Source: CSO, various forecasters – GNI shown has been deflated to produce a real GNI* series*

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 already announced that they will expand or set up in Dublin after Brexit

FDI: Ireland may benefit

- 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

Section 4: Long term fundamentals

Ireland’s long run future looks bright thanks to its favourable demographics

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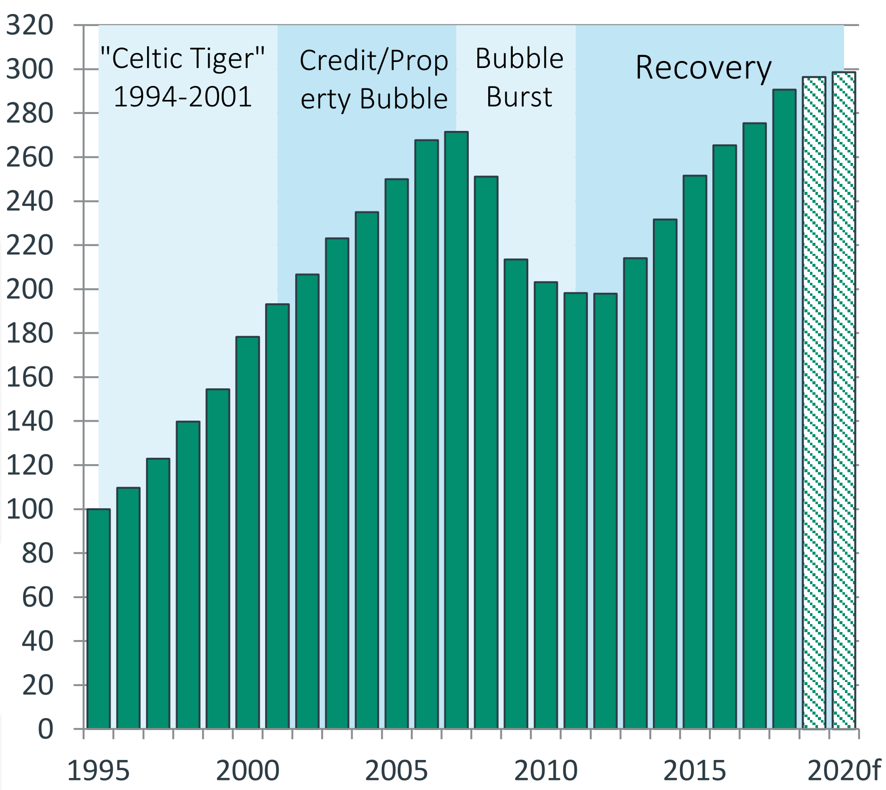
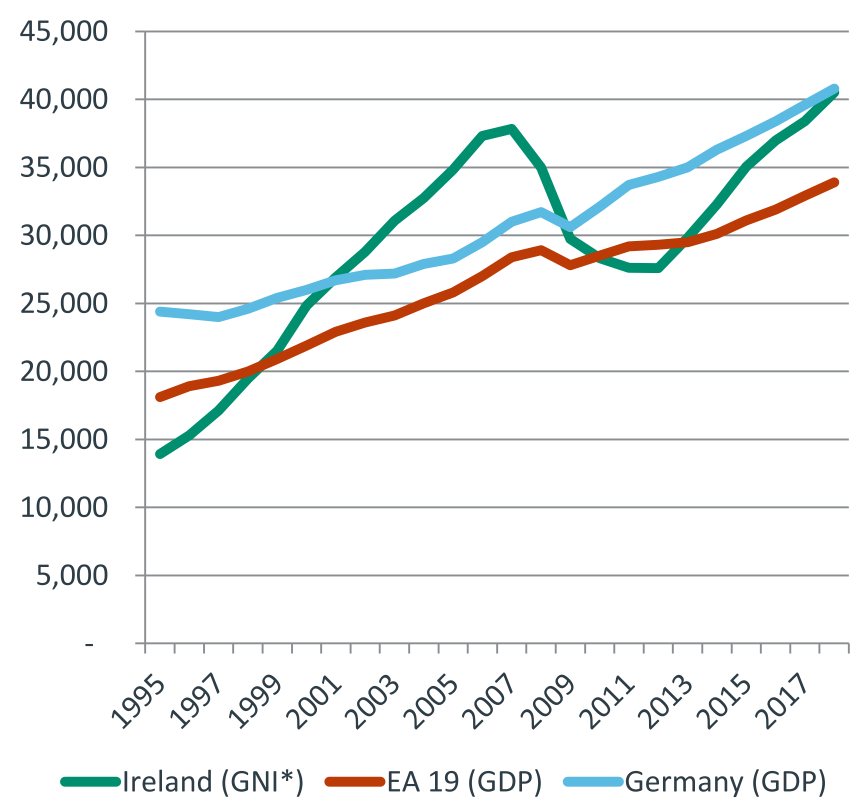
National Treasury Management Agency

Much rebalancing has taken place – Ireland's structural growth drivers have reasserted

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



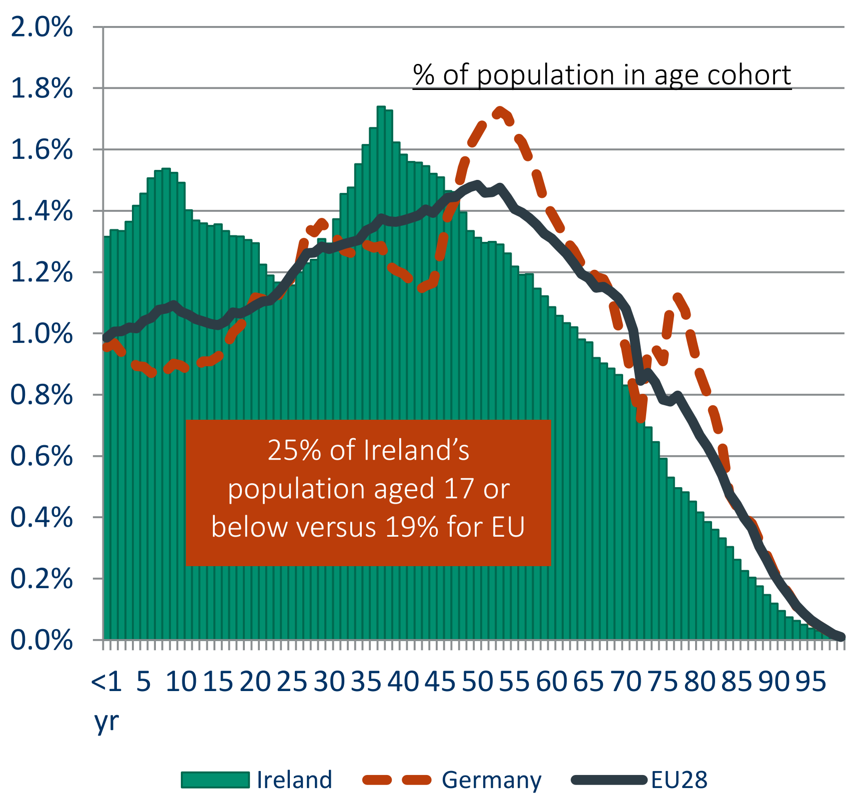
Ireland's GNI* per capita hit 2007 levels and compares favourably to EA



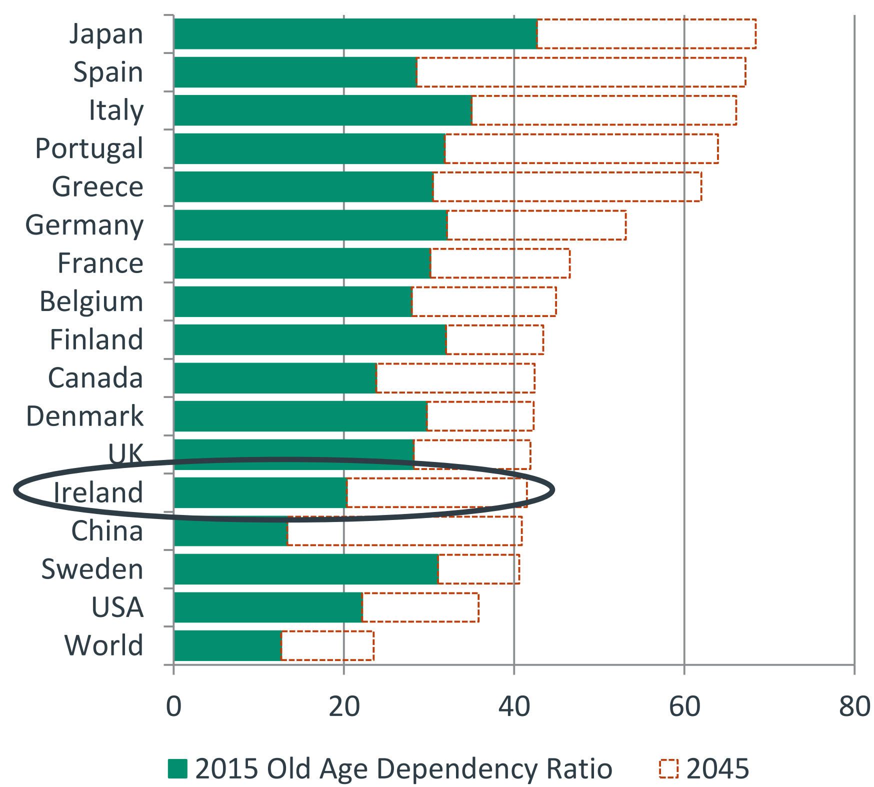
Source: CSO, Eurostat

Ireland's population profile healthier than the EU average

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



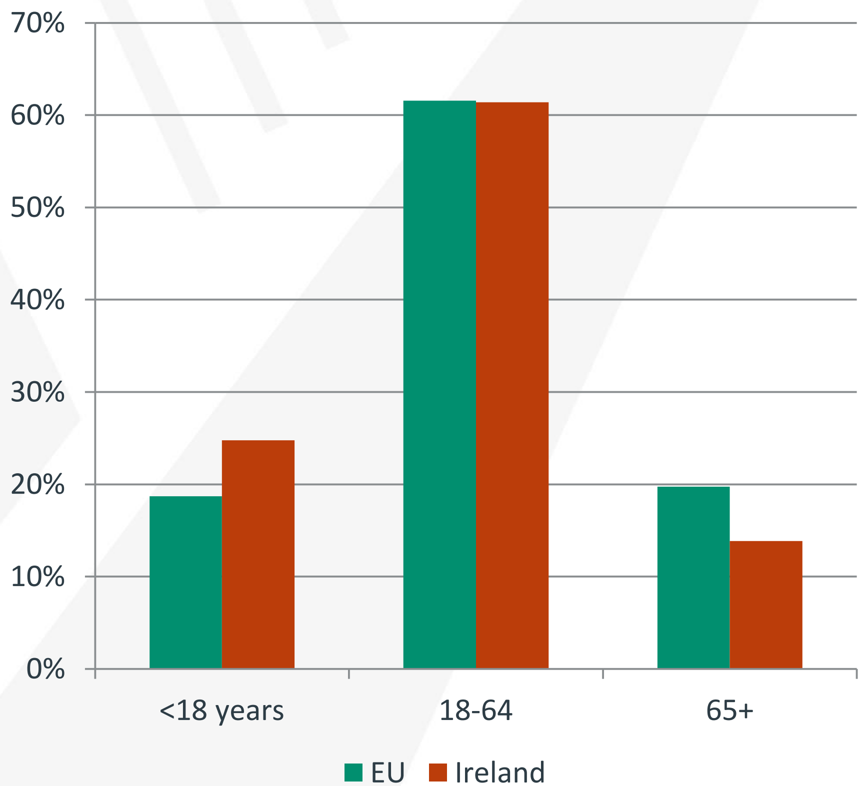
Ireland's population will remain younger than most of its EA counterparts



Source: Eurostat (2018) CSO; UN population projections

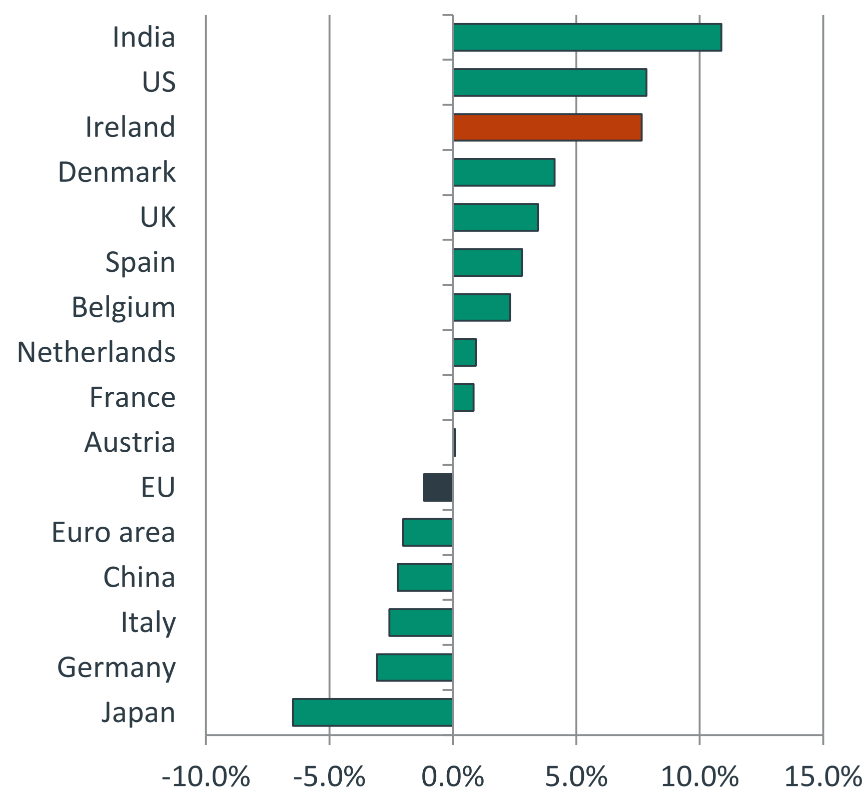
Favourable population characteristics underpin debt sustainability over longer term: next 10 years look healthy

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

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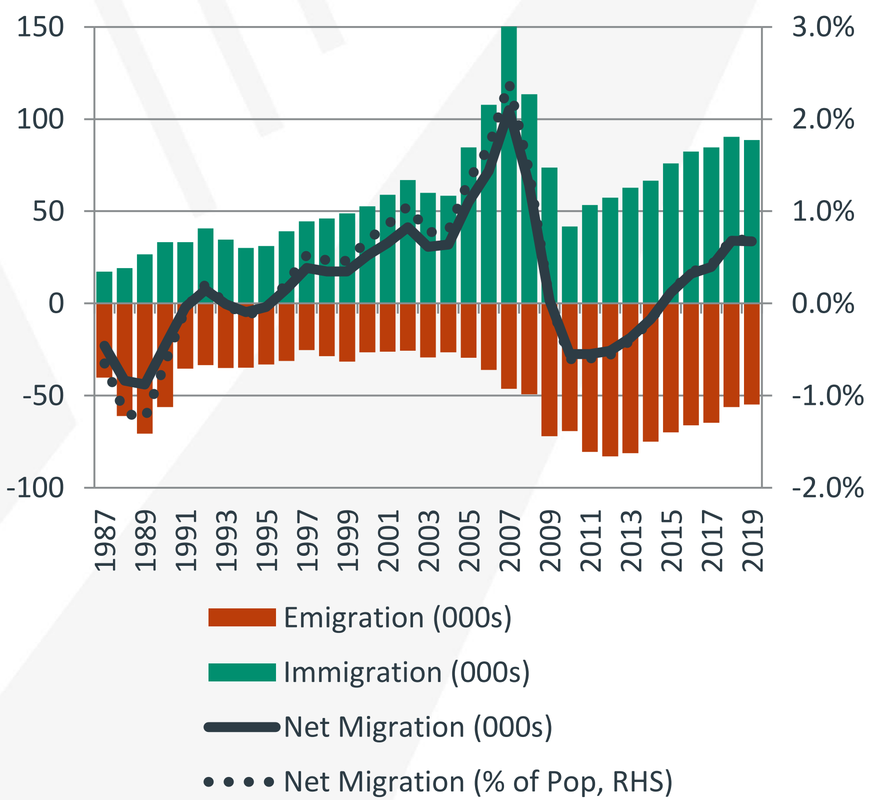
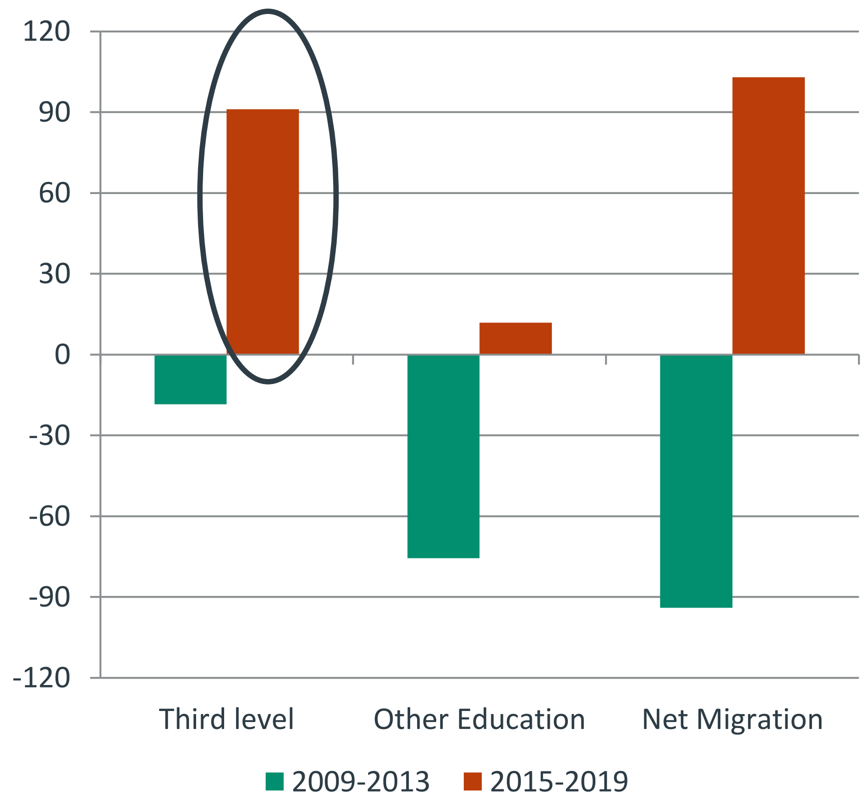
Openness to immigration has been beneficial to Ireland

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



Highly educated migrants moving to Ireland "Reverse Brain Drain"



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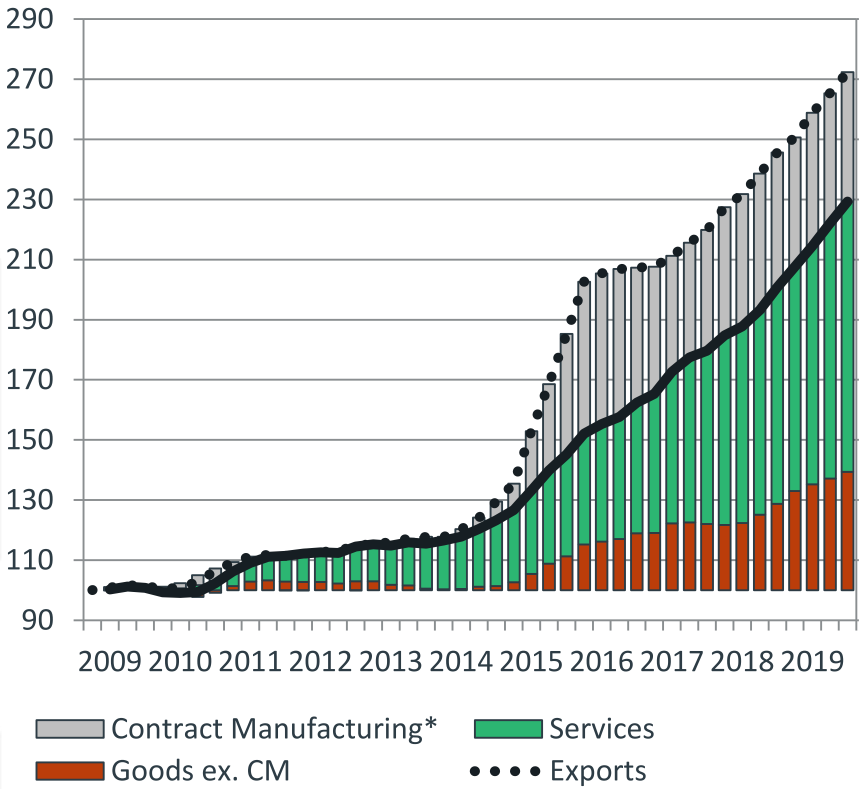
Source: CSO

Openness to trade is also central to Irish success – led by services exports; Brexit may hinder export-led growth

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



Ireland benefits from export diversification by destination

% 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
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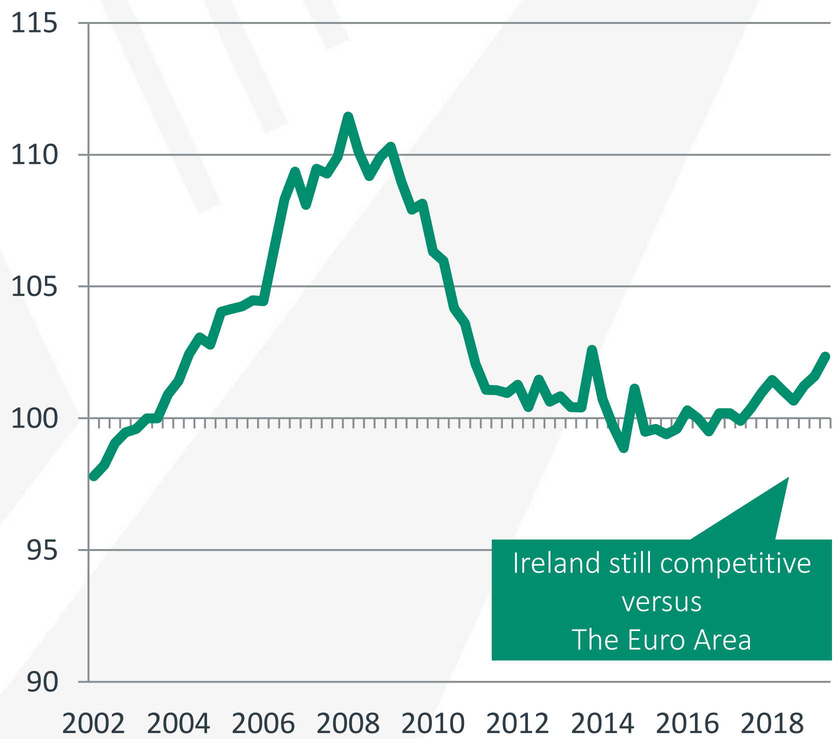
EU-27	38.8	37.4	29.4	26.8	33.5	30.3
China	3.9	5.9	2.6	1.5	3.1	3.0
Other	21.8	22.4	43.3	38.3	30.7	31.1

*Source: CSO, NTMA calculations , * Contract manufacturing proxy*

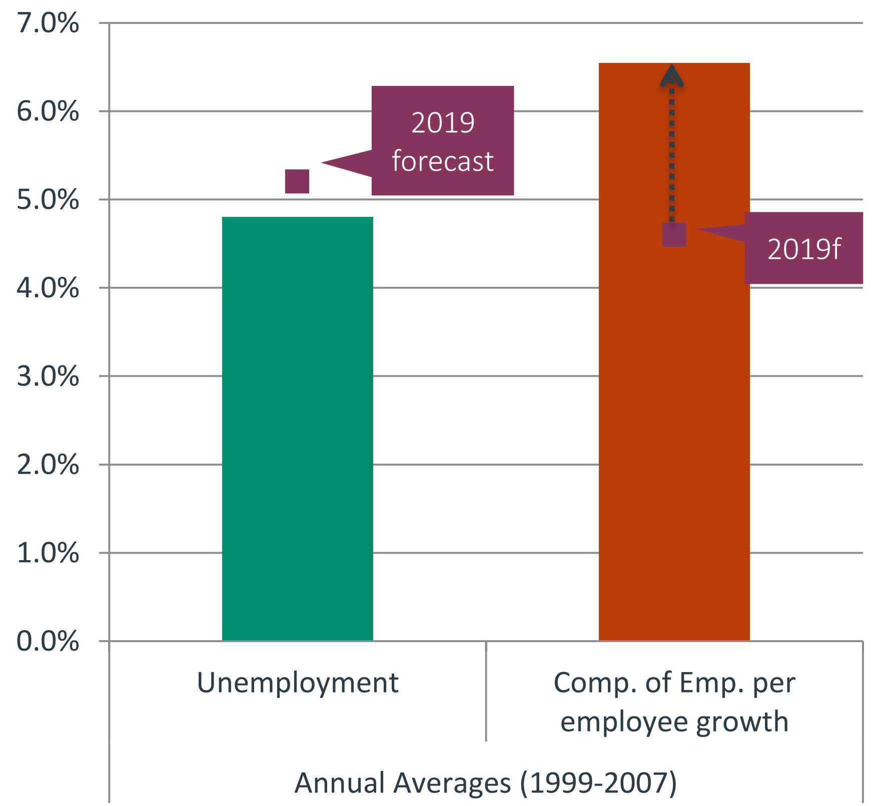
Ireland is relatively competitive now; we need to avoid repeat of the mid-2000s

Nominal Labour Cost Ratio – IE vs Euro Area



*Source: Eurostat, NTMA analysis *Ratio = IE Nom. Labour Costs/ EA Nom. Labour Costs*

Unemployment back towards 1999-2007 level, but wage growth lower



Source: CSO, Eurostat, NTMA calculations

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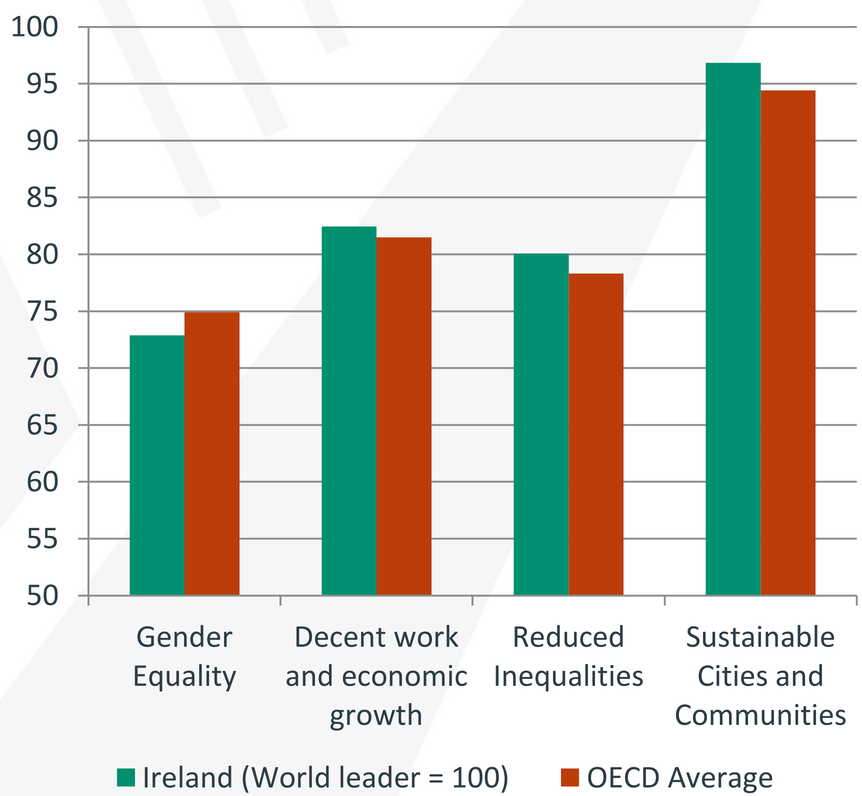
Ireland is a good place to live and do business

Ireland is close to OECD norms socially

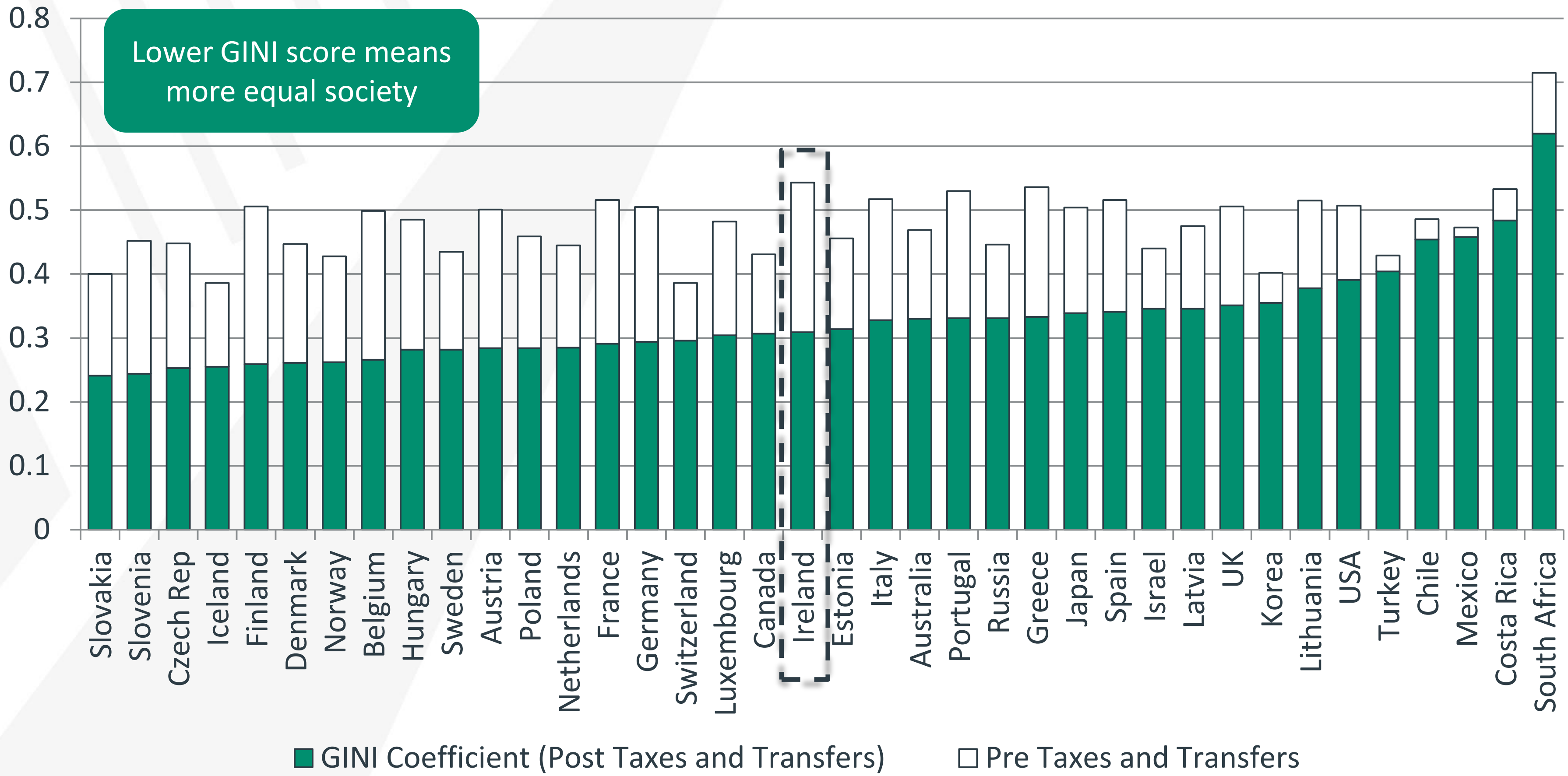


Ireland scores well on metrics such as property rights and government efficiency

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.

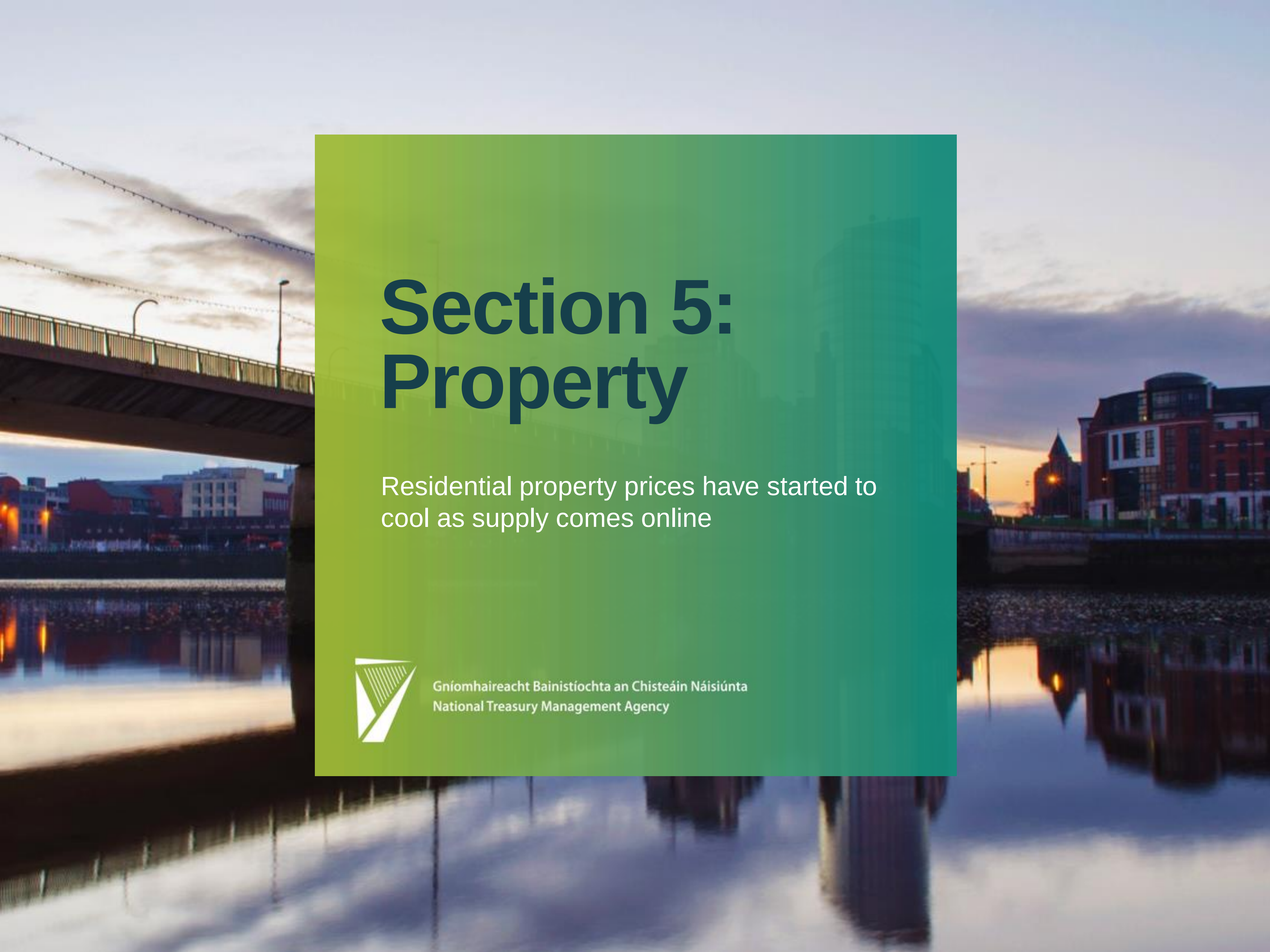
OECD's BEPS 2.0 process could impact the tax landscape globally – one to watch in 2020.

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 but proposals are currently in the public consultation phase.

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 5: Property

Residential property prices have started to cool as supply comes online

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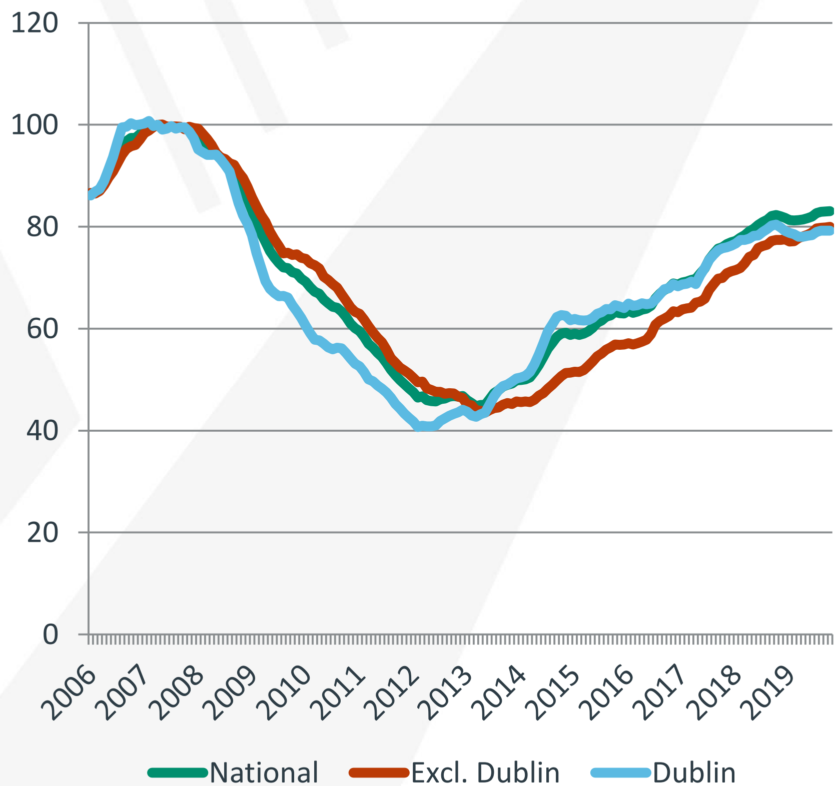
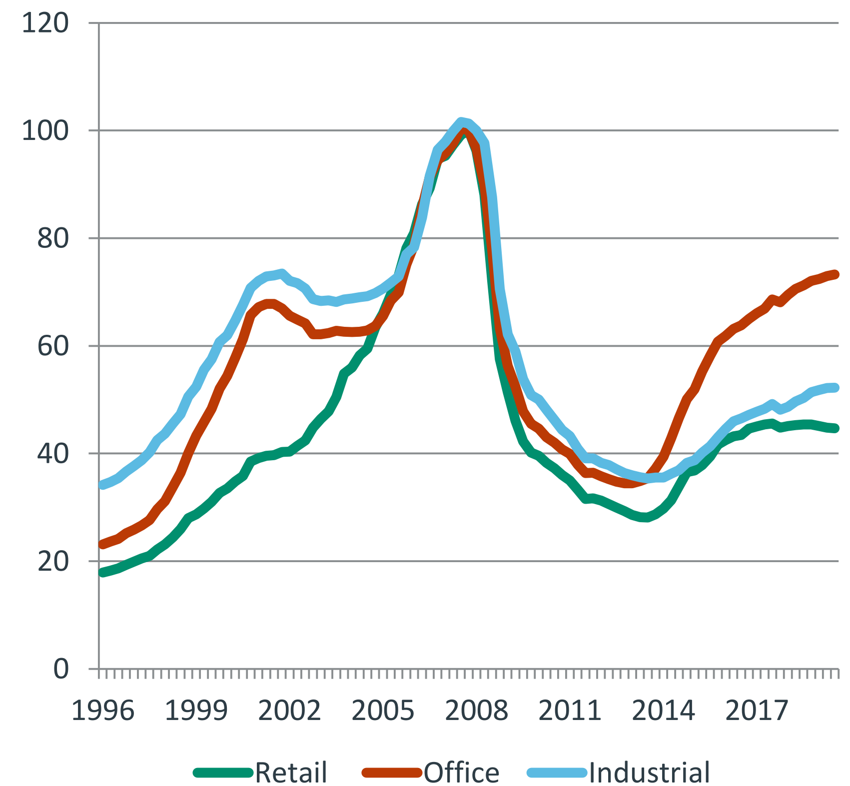
House prices have plateaued over the last year

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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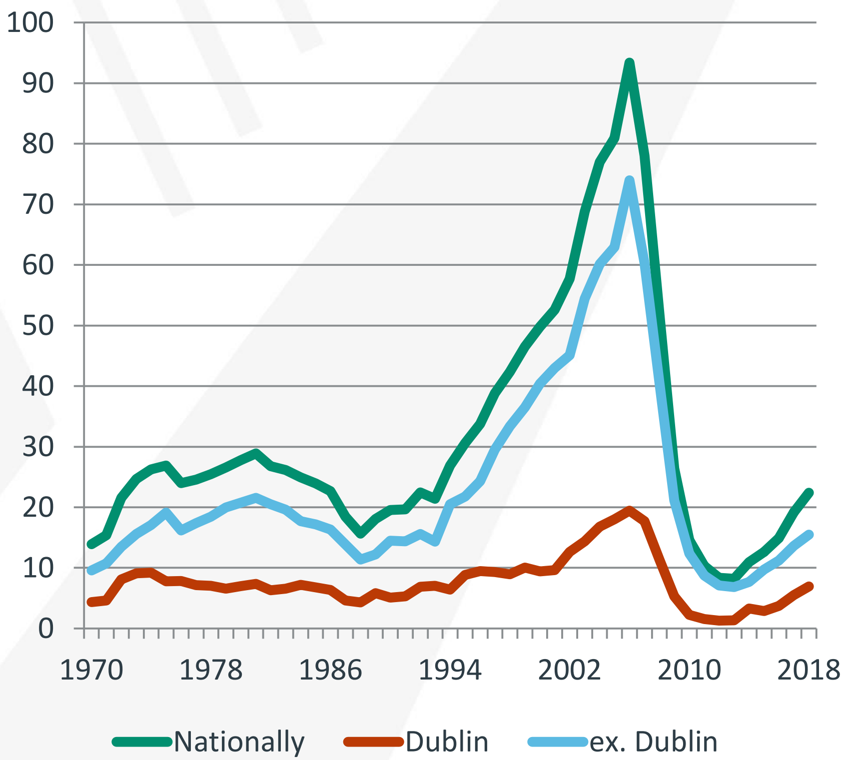
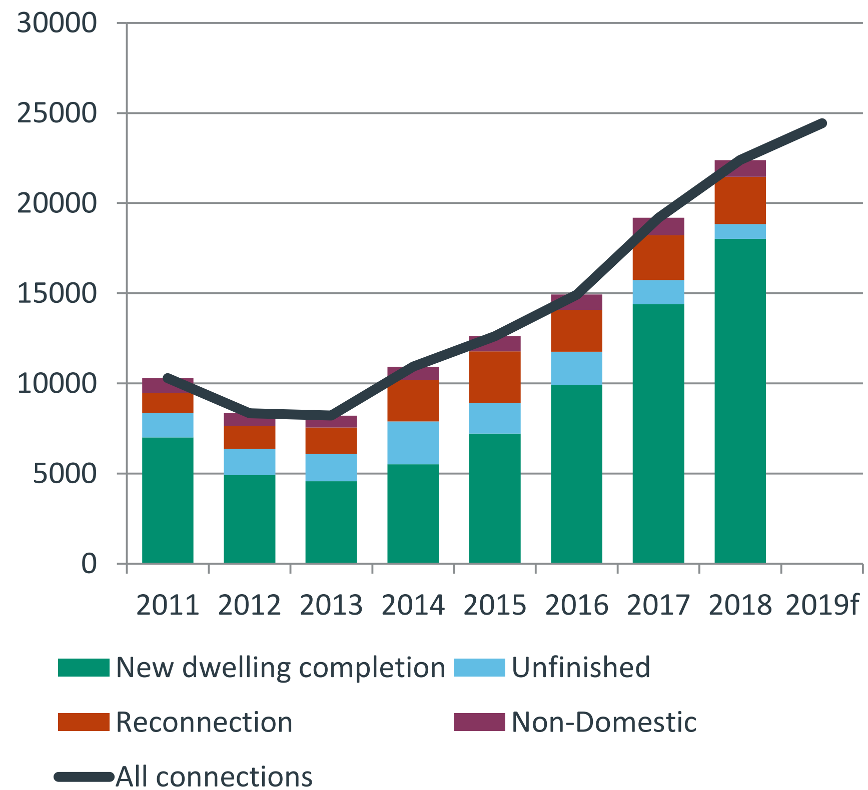
Source: [CSO](); MSCI data

Housing supply still below demand; but price inflation has moderated as supply is catching up

Housing Completions above 22,000 in 2018 but still low historically (000s)



New dwellings* make up 80% of housing completions: some debate about the rest



Source: DoHPCLG, CSO, NTMA Calculations

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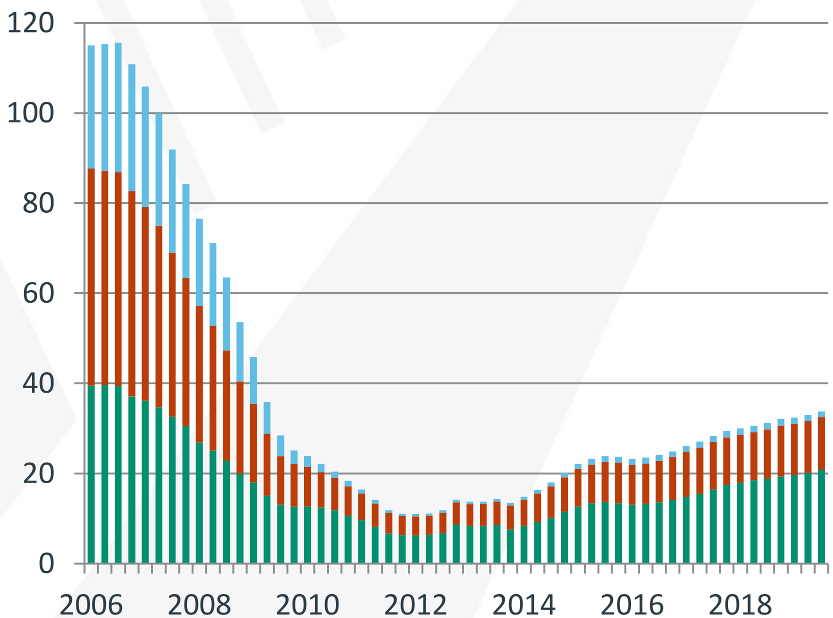
* Housing completions derived from electrical grid connection data for a property. Reconnections of old houses or connections from "ghost estates" overstate the annual run rate of new building.

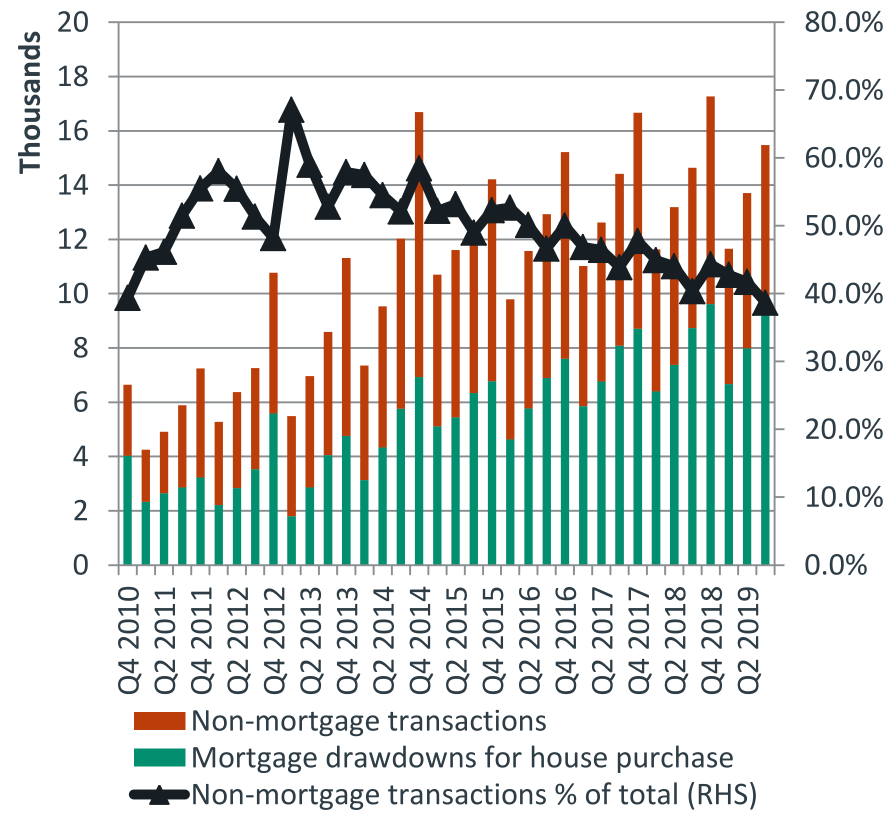
Demand has picked up since 2015; credit slowly increasing as cash buyers become less important

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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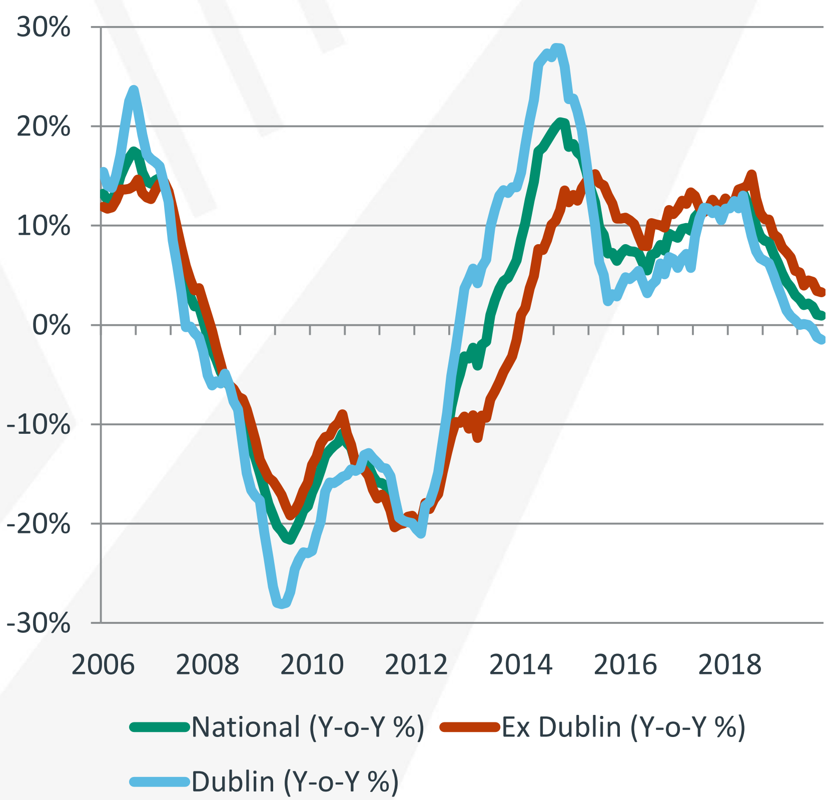
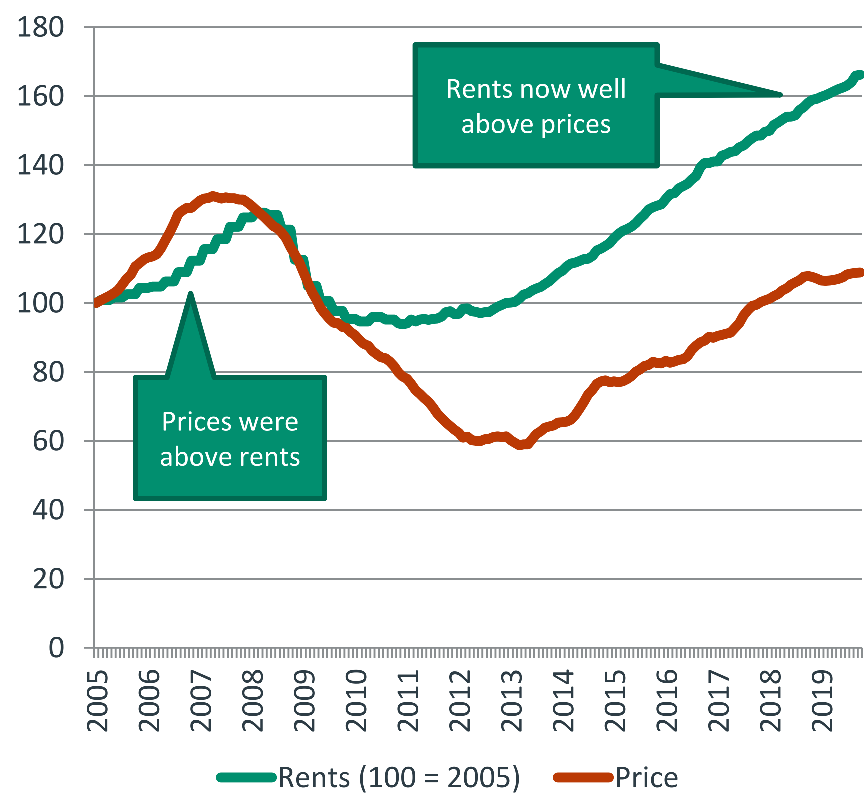
Residential property prices have steadied in recent quarters; rents continue to increase

Residential property prices have rebounded strongly since 2012 but steadied in 18/19



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



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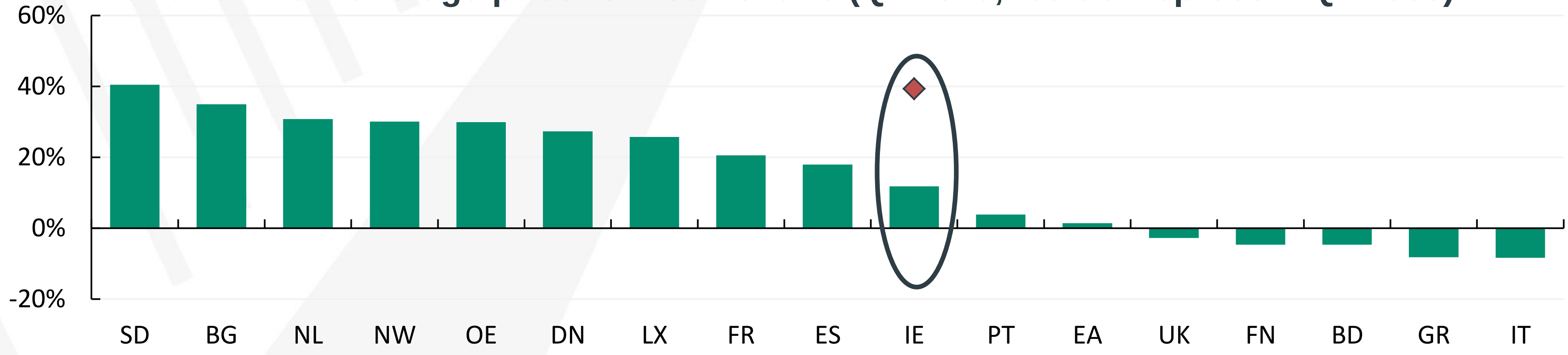
Source: CSO; RTB

Irish house price valuation metrics continue to rise but remain below 2008 levels; most countries are expensive

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



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

Source: OECD, NTMA Workings

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

Section 6: Other data

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

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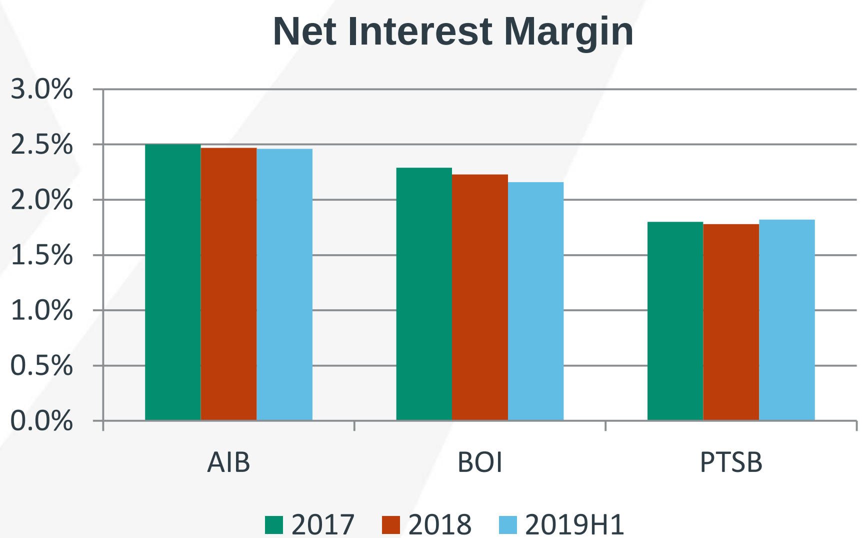
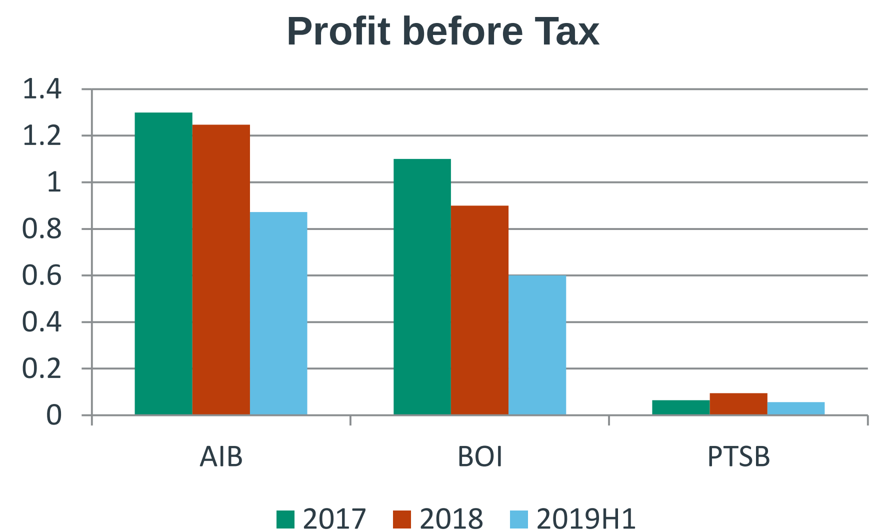
Ireland has legacy banking-related assets – equity in banks and expected NAMA surplus

- Banks continue to be profitable: income, cost and balance sheet metrics are 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 will depend on market conditions.

All three pillar banks are profitable

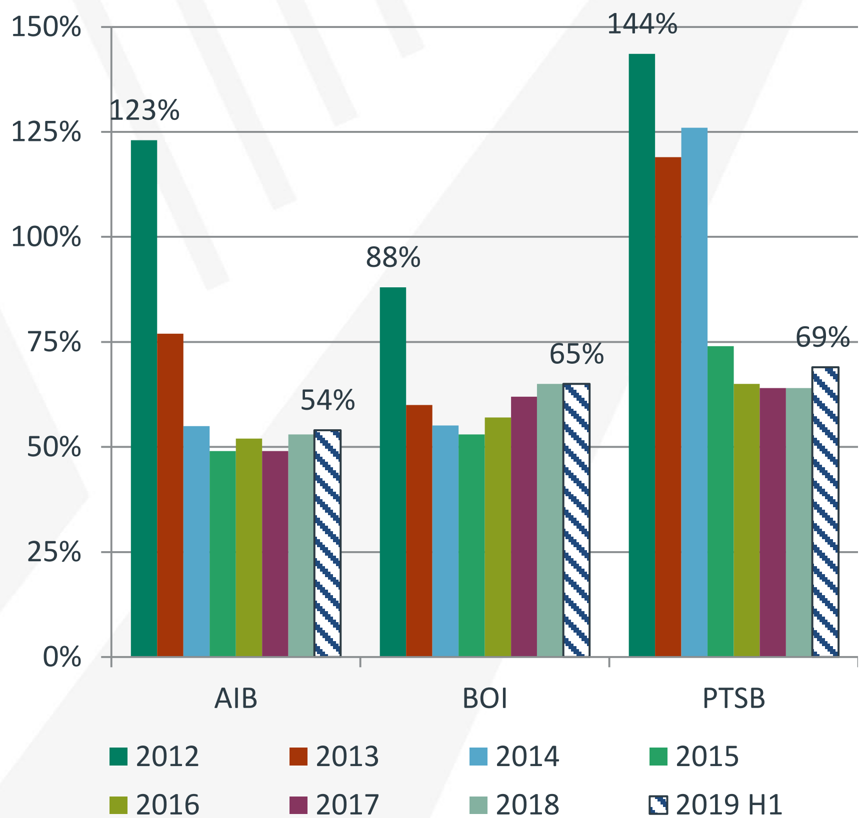




Source: Annual reports of banks - BOI, AIB, PTSB
Profit measures are before exceptional items (2019H1 annualised)

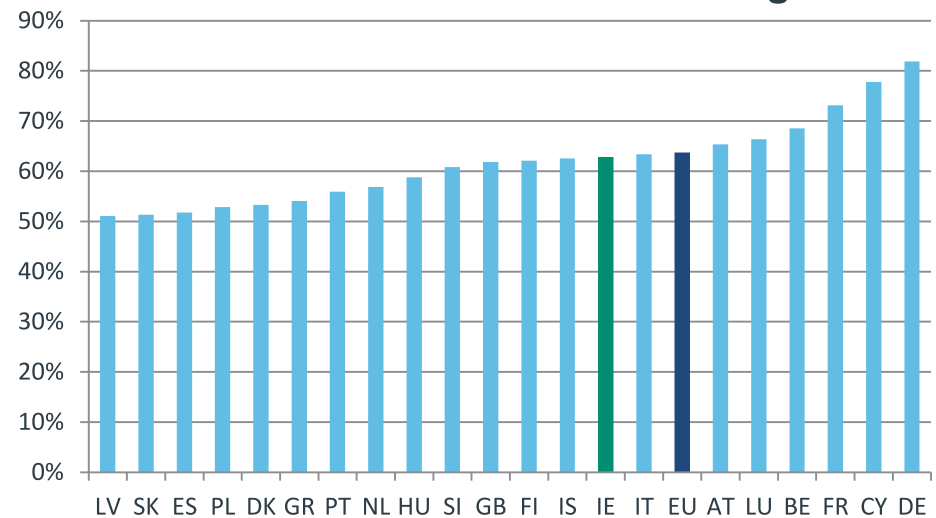
Domestic bank cost base reduced over time

Cost income ratios improve dramatically…

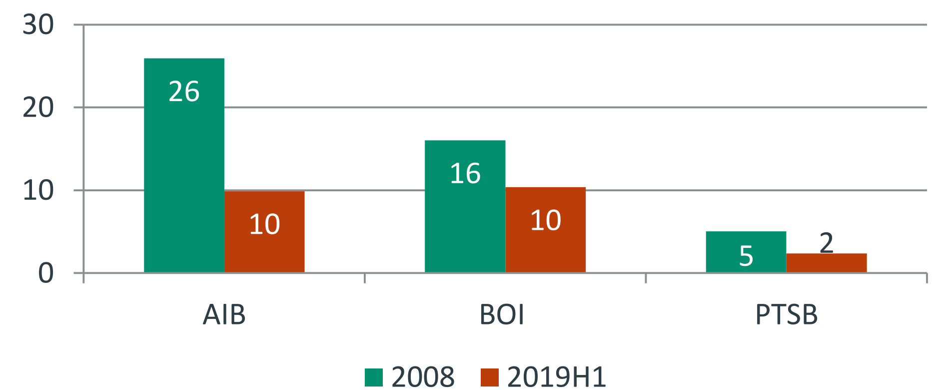


Source: Annual reports of Irish domestic banks

… and IE banks* below EU average



Staffing (000s) halved post crisis

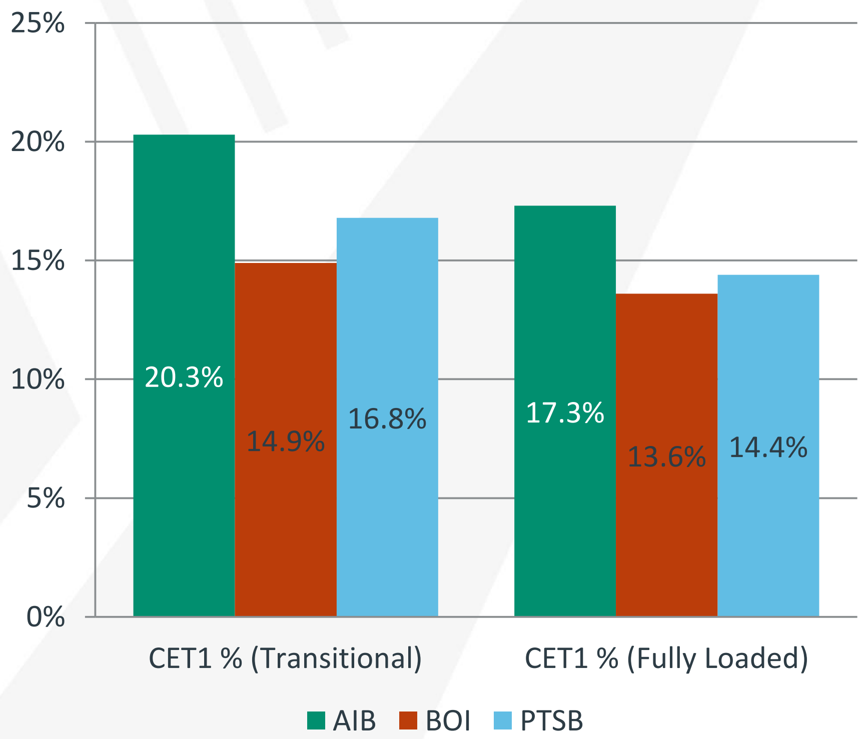


Source: Annual reports of Irish domestic banks, EBA

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

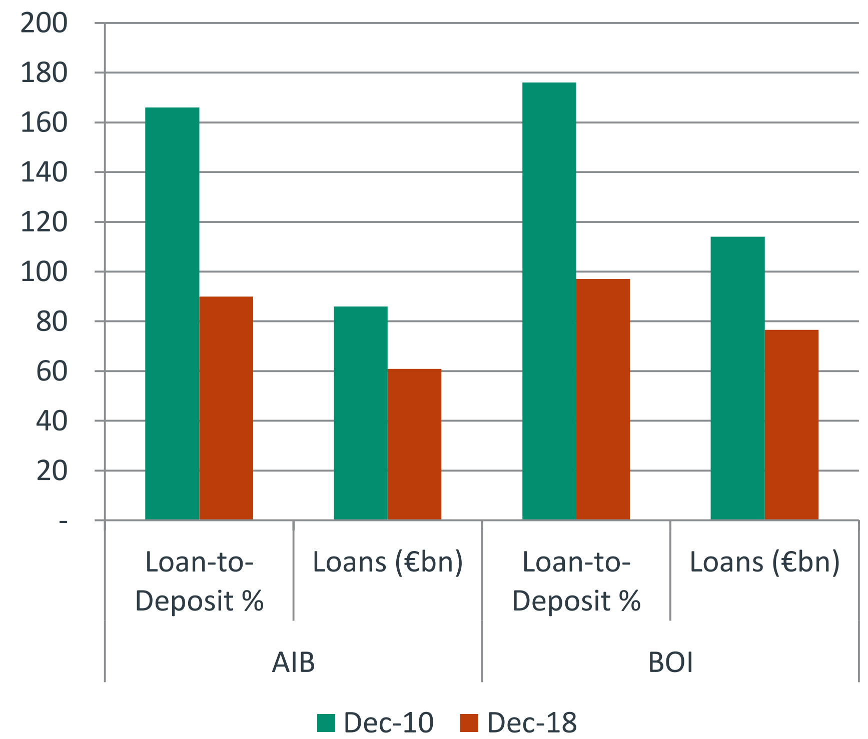
Capital ratios strengthened as banks were slimmed down and consolidated

CET 1 capital ratios (Jun 2019)



Source: Published bank accounts

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



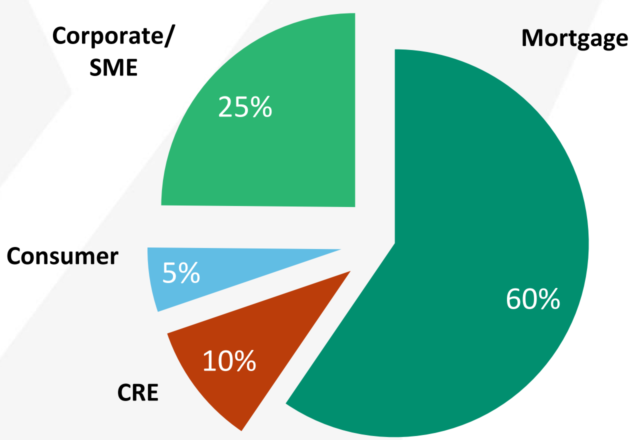
Source: Published bank accounts

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

Pillar banks sold non-performing loans during 2018, as asset quality continues to improve

All 3 Pillar banks (€bn)	Dec-17	Dec-18
Total Loans	162.4	158.2
Non-performing Exposures	22.0	12.7
(NPE as % of Total)	13.5%	8.0%
Provisions	7.3	4.4
(Provisions as % of book)	4.4%	2.8%
(Provisions as % of Impaired)	33.2%	34.6%

Loan Asset Mix (3 banks Dec 18)



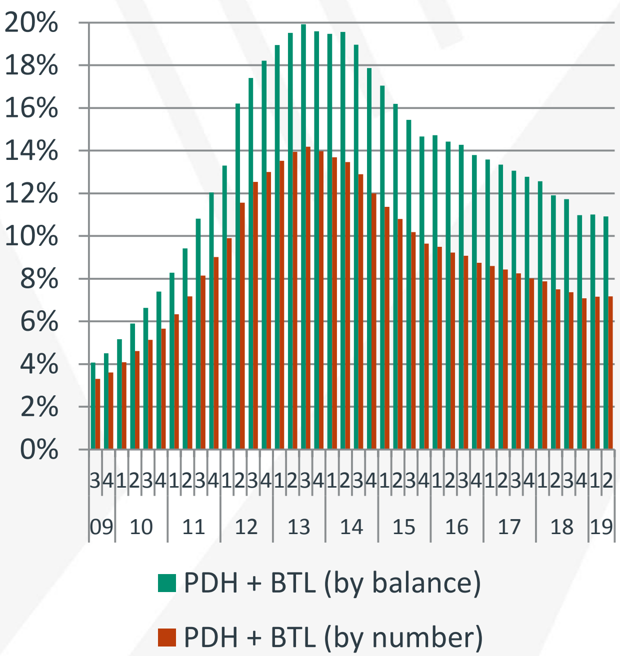
Non-performing exposures % of total loans[1] (loss provision % of NPE)		Dec-17	Dec-18	Book (€bn)
BOI	Irish Residential Mortgages	11.0(24)	9.5(21)	23.7
	UK Residential Mortgages	1.9(14)	2.3(15)	21.7
	Irish SMEs	15.4(46)	11.2(49)	7.6
	UK SMEs	8.6(42)	6.1(53)	1.6
	Corporate	3.0(69)	2.6(60)	10.3
	CRE - Investment	17.9(43)	10.7(44)	7.7
	CRE - Land/Development	39.4(55)	14.0(54)	0.6
	Consumer Loans	2.1(98)	2.1(140)	5.1
		8.3(36)	6.3(35)	78.4
AIB	Residential Mortgages	14	10.1 (20)	32.3
	SMEs/Corporate	11	5.2 (36)	19.6
	CRE	33	18.0 (29)	7.9
	Consumer Loans	18	11.1 (50)	3.1
		16	9.6	62.9
PTSB	Residential Mortgages	21.7(44)	8.8(39)	12.4
	Buy-to-let Mortgages	21.8(64)	12.9(113)	4.0
	Commercial	30.3(104)	33.3(76)	0.2
	Consumer Loans	15.4(92)	7.5(112)	0.3
		21.7(50)	10.0(64)	16.9

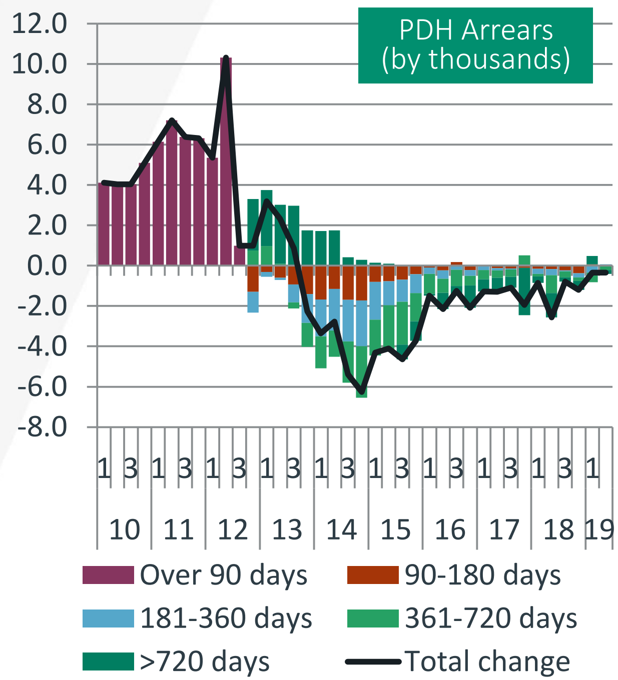
Source: Published bank accounts

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

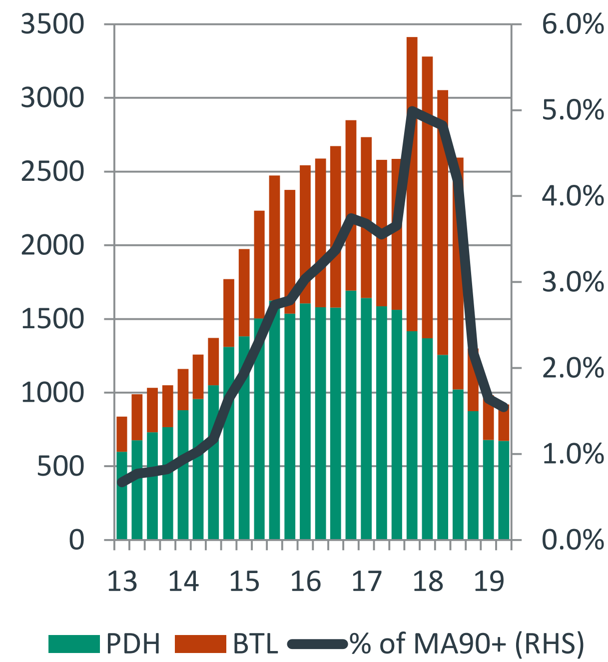
Irish residential mortgage arrears are still improving; but there are legal bottlenecks to normalisation

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

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* 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

NAMA has repaid its senior debt of over €30bn; likely to deliver surplus of around €4bn – half of which in 2020

- NAMA's operating performance is strong
  - Acquired 12,000 loans (over 60,000 saleable property units) related to €74bn par of loans of 780 debtors for €32bn
  - NAMA continues to generate net profit after impairment charges.

- It has repaid 100% of €30.2bn of original senior debt
  - NAMA exceeded its senior debt redemption targets well ahead of schedule. It remains on course, subject to market conditions, to redeem its small amount of subordinated debt by 2020.

- NAMA could deliver a surplus for Irish taxpayers of about €4bn, according to its management team - if current market conditions remain favourable.
  - The surplus is already factored into the budgetary arithmetic. NAMA plans to return €2bn of the €4bn to the Exchequer in 2020.

- NAMA initiative to develop up to 20,000 housing units by 2020 – subject to commercial viability.
  - Progress has been strong so far: 11,700 units were completed in 2014 – 2019;
  - Another 1,900 are under construction or have had funding approved;
  - A further 4,500 have planning permission granted.

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

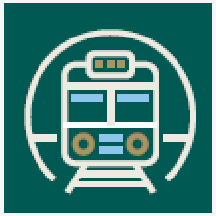
Sustainable Management of Water and Environmental Resources

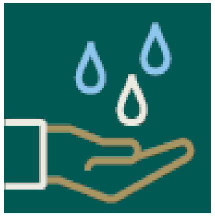
€6.8 billion

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

Annex

Explanatory charts about the distortions to Ireland’s National Accounts

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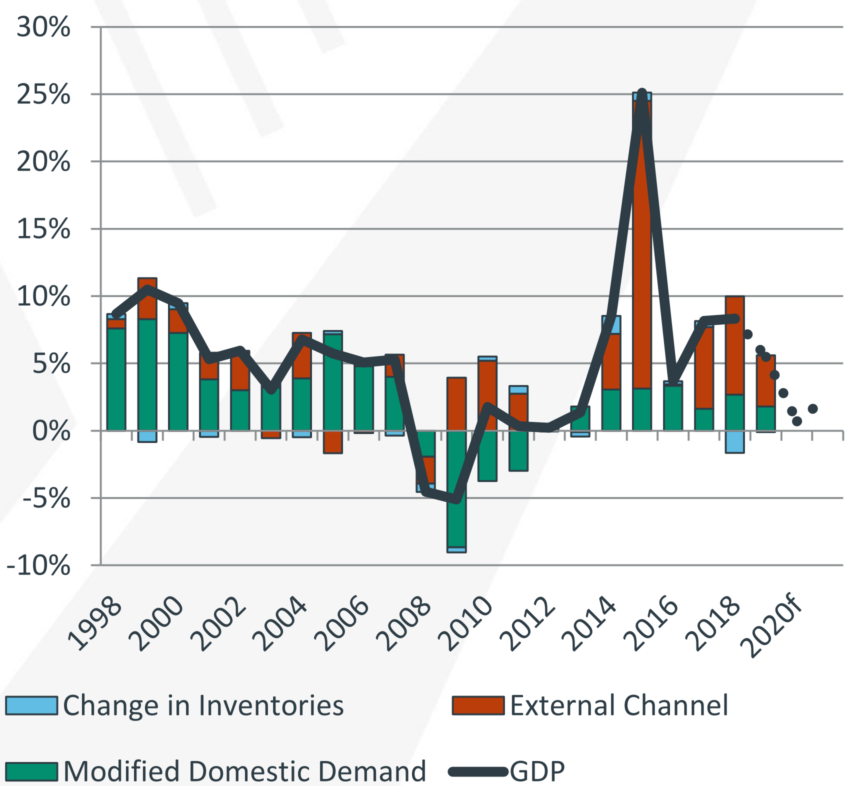
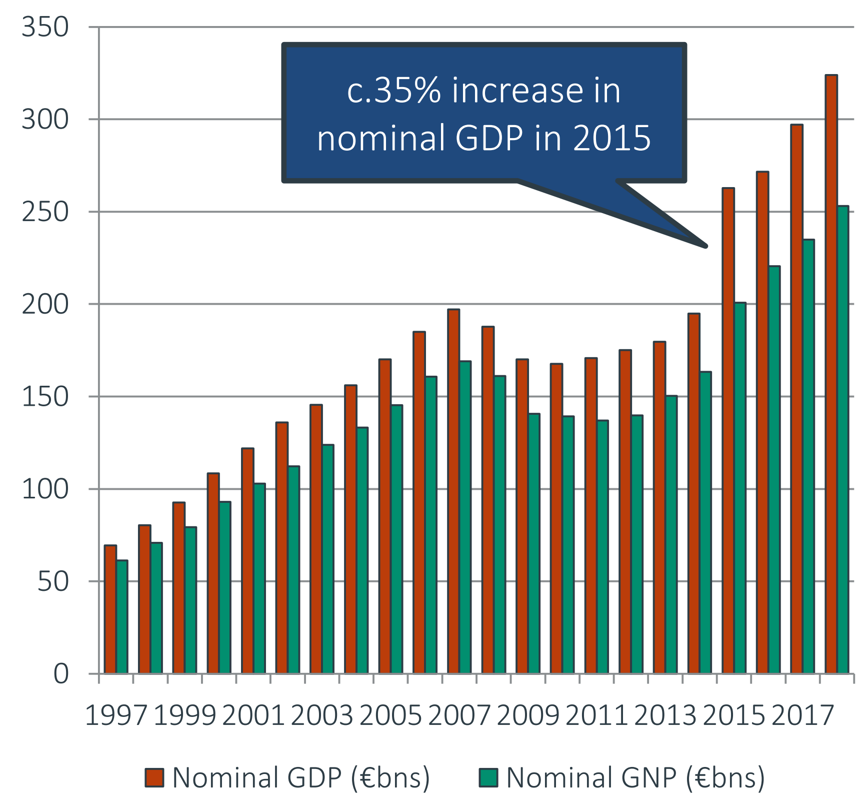
Distortions to GDP/GNP make them sub-optimal indicators of economic performance

Substantial activity from multinationals distorts the national accounts



Reclassification of several companies and "onshoring" of IP led to step change in GDP



Source: CSO; Department of Finance

The change in capital stock resulted in large increase in net exports – mostly through contract manufacturing (CM)

The capital stock expanded in 2015 by c. €300bn or c. 40%. This is due to:

- Re-domiciling/inversions of several multinational companies
- The "onshoring" of IP assets into Ireland by multinationals
- The movement of aircraft leasing assets in Ireland.

Goods produced by the additional capital were mainly exported. Complicating matters, the goods were produced through "contract manufacturing".

CM occurs where a company in Ireland engages another abroad to manufacture products on its behalf.

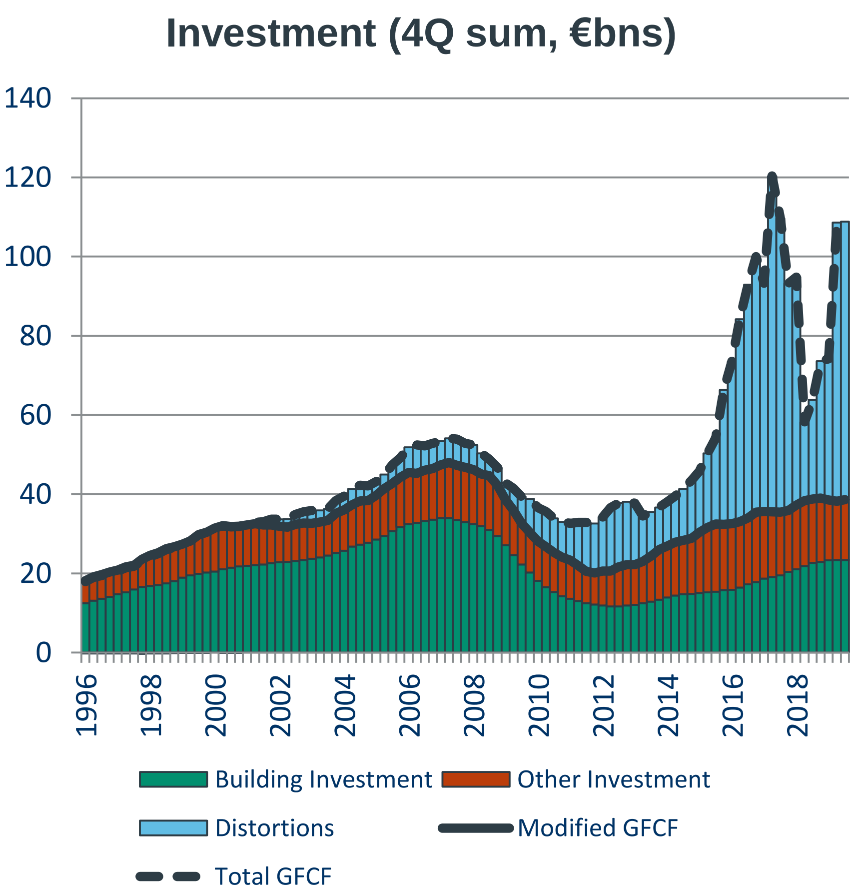
Crucially, the foreign contract manufacturer supplies a manufacturing service to the Irish entity but the overseas contractor never takes ownership of the product. When the product is sold abroad, a change of economic ownership takes place between Ireland and the country where the product is sold. <u>This export is recorded in Ireland's statistics even though it was never produced in Ireland.</u>

Little or no employment in Ireland results from this contract manufacturing.

Source: CSO

Investment distorted by multinationals importing intellectual property (IP) into Ireland

- Investment is above the pre-crisis level due to MNCs importing intangibles into Ireland.
- Ireland has become an ICT hub in recent years with this investment impacting the real economy.
- However the recent sharp increase in intangibles investment overstates Ireland's position and should be discounted accordingly.



Source: CSO,

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

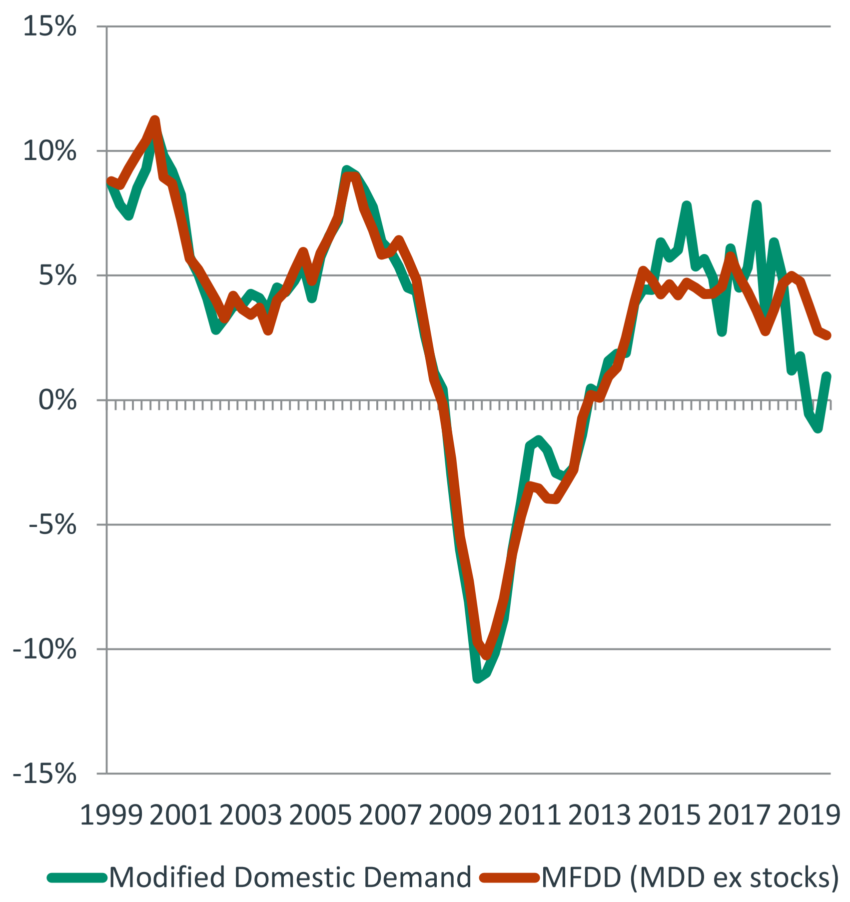
- GDP headline numbers do not reflect the “true” growth of Ireland’s income due to MNCs.
- Reasons for 2015-18 MNC distortions:
  - Re-domiciling/inversions of several multinational companies
  - The “onshoring” of IP assets into Ireland by multinationals
  - The movement of aircraft leasing assets in 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

Modified Domestic Demand (MDD) – which ignores exports - is best cyclical indicator

- GNI* is useful but not timely. MDD and MFDD are released on a quarterly and real basis.
- MDD ignores the net exports channel. It also omits aircraft leasing and IP imports from investment.
- The measure includes:
  - Private and government consumption
  - Building investment
  - Some machinery & equipment investment
  - Some intangible asset investment
  - Value of physical changes in stock. This last piece is impacted by MNCs and is quite volatile.
- MDD has Ireland growing negatively in Q1 2019 mainly due to volatility in stocks.
- When stocks are excluded, (i.e. using Modified Final Domestic Demand) real underlying growth was 2.6% in Q3 2019. Since 2014, annual growth has averaged 4.3% when looking at MFDD.



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Source: CSO, four quarter sum growth rate used to strip out substantial quarterly volatility. Note MDD includes inventories. Large inventories in Q4 2016 added a further degree of volatility into MDD data.

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