Ireland's economic growth continues; risks ahead

Brexit risk has been de-escalated but not eliminated

October 2019



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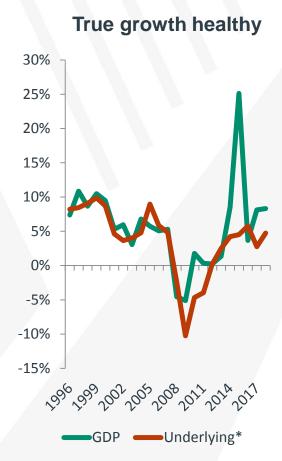
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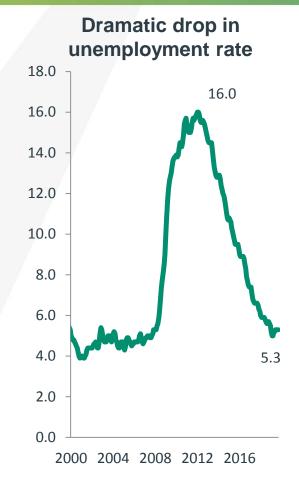
Page 65: Other Data

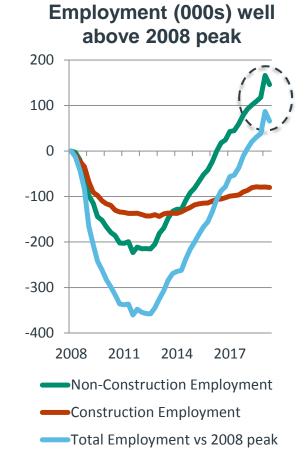
Page 74: Annex (GDP distortions explainer)



Domestic economy growing: averaging around 4.5 per cent from 2014-18



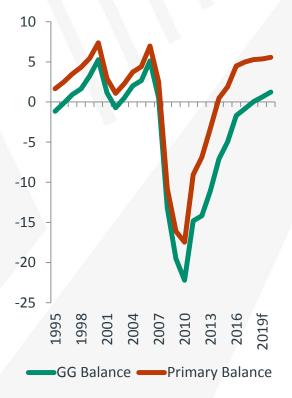






Primary surplus, improving debt dynamics and cash balances provide protection

Six years of primary surplus likely (€bn)



Ireland is improving its debt dynamics by the month

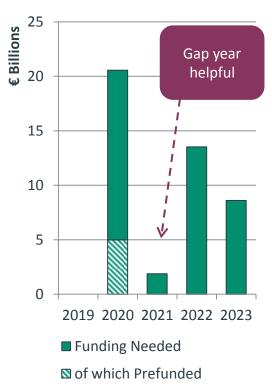
Debt-to-GNI* (100% 2019f, from 166% peak)

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

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

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

Cash-balance provides near-term protection (€bn)





Main risks are external and outside of Ireland's control

Brexit

An extension means the immediate risk is gone.

But risk remains. "Hard" Brexit could occur after in January if deal collapses or if transition period is not extended.

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 cycle may be elongated by Fed policy

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

€15bn (of €14-18bn) issued in 2019; well positioned given prefunding and maturity lengthening

Pre-funded

Ireland is pre-funded until the end of Q1 2020

10 years

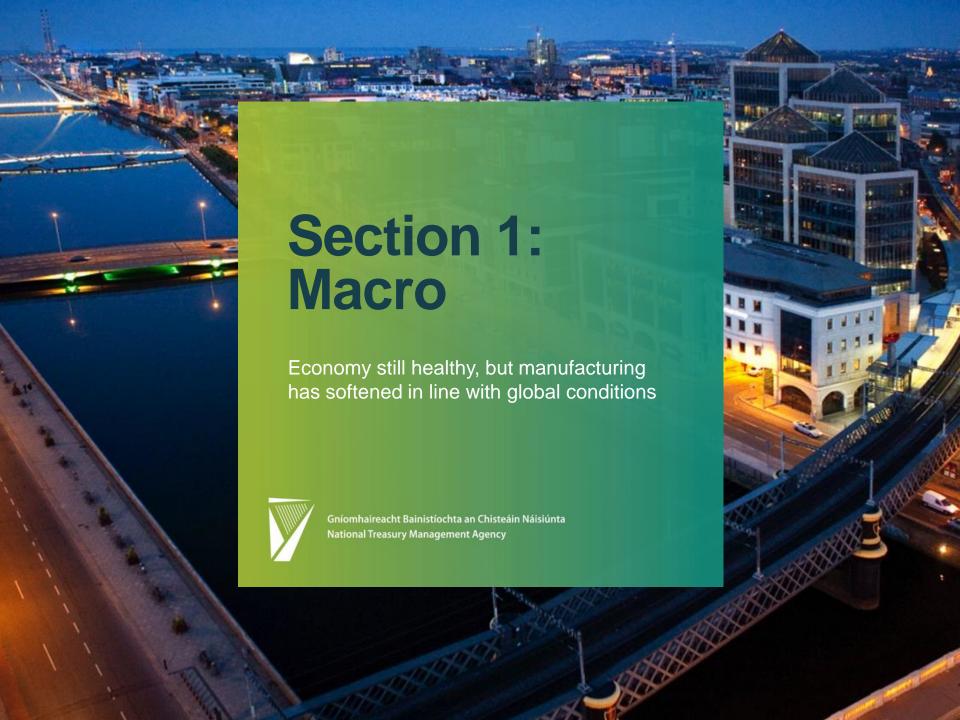
One of the longest weighted average maturities in Europe

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

A+/A2/A+

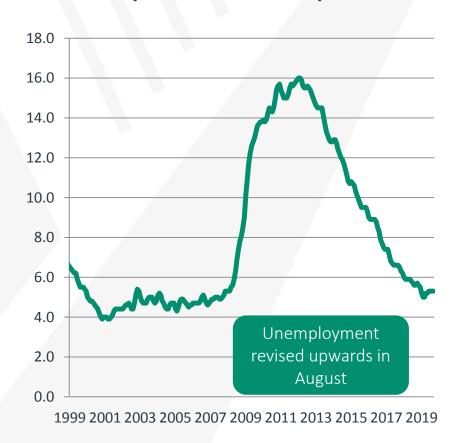
Ratings from main agencies

Ireland's debt sustainability is improving, although Brexit is holding back rating upgrades

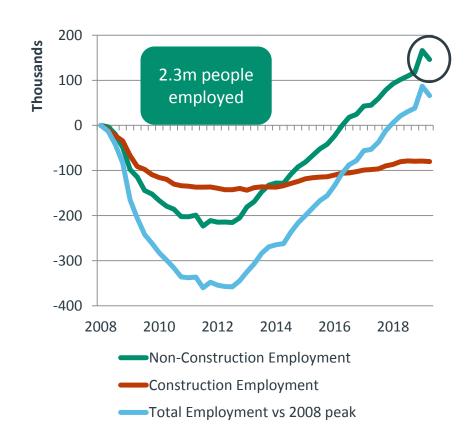


Labour market best illustrates Ireland's growth story – Ireland is at or very close to full employment

Unemployment rate: down to 5.3% in September 2019 from peak of 16%

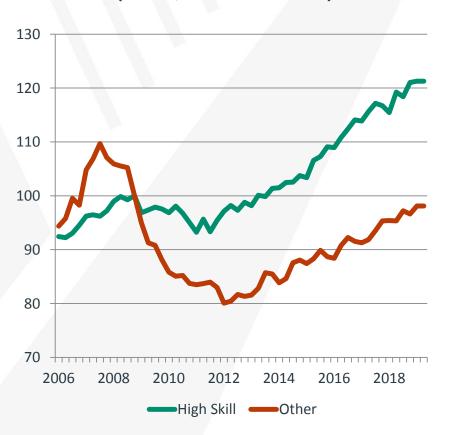


Total employment back above previous peak as 150K non-construction jobs added on net

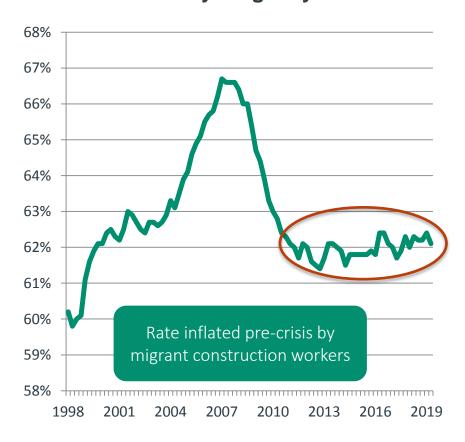


High-skill employment an important driver; though labour participation rate has been slow to recover

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

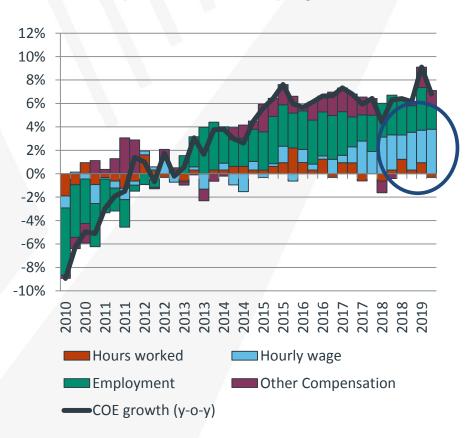


Labour participation has not yet fully recovered as young stay in school

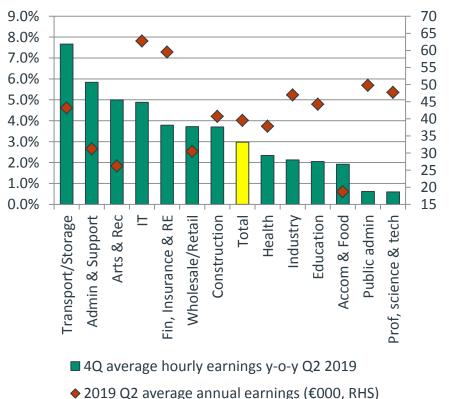


Wages growth evident in 2018/19 but uneven across sectors

Wage growth a driver for increase in compensation of employees...



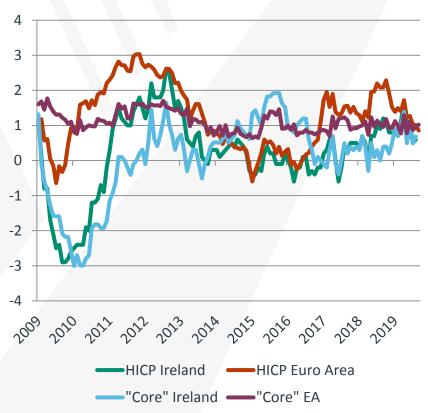
... but disparities remain across sectors





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

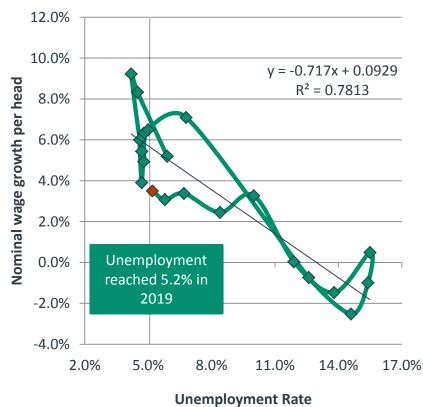
Inflation (%) in Ireland similar to rest of euro area currently – Brexit ref. impact has gone



Source: <u>CSO</u>, Eurostat

Gníomhaireacht Bainistíochta an Chisteáin Náisiúnta National Treasury Management Agency

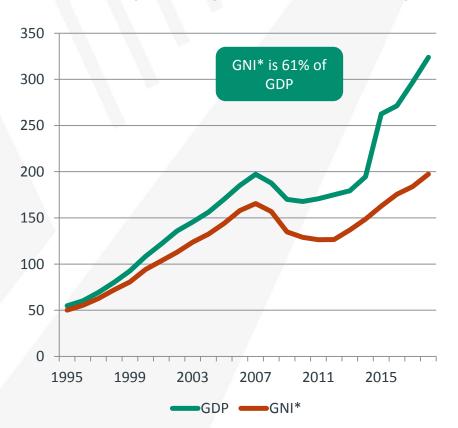
At full employment, wage growth could be an issue if Brexit outcome is benign



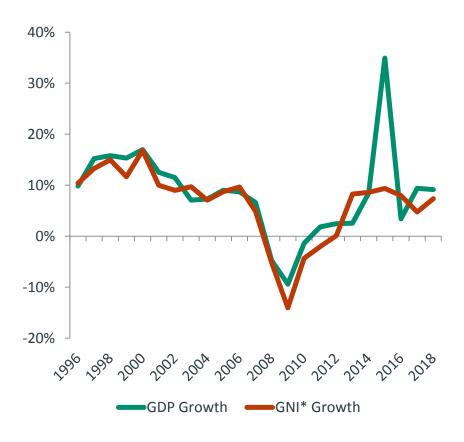
Source: CSO, NTMA analysis; Non-Agriculture employment /wage data on yearly basis (1999-2018)

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)

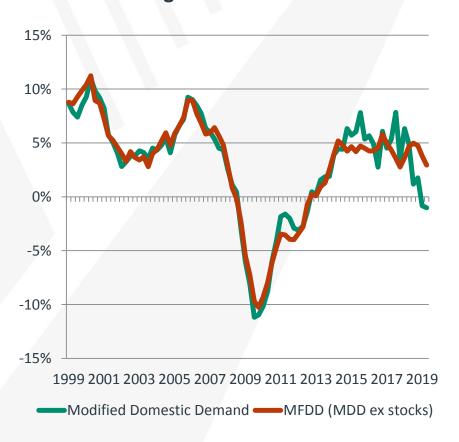


GNI* growth rate averaged 8% in 2013-2018 (current prices or cash basis)

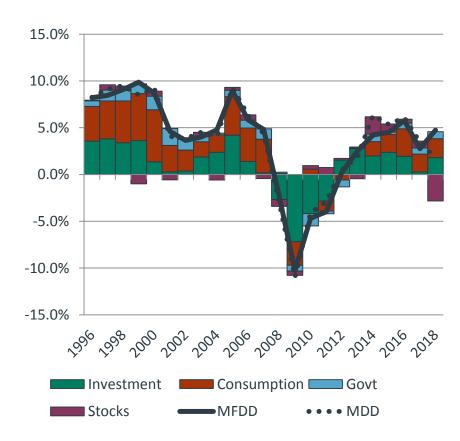


When looking for price-adjusted timely data, modified final domestic demand is the best measure

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



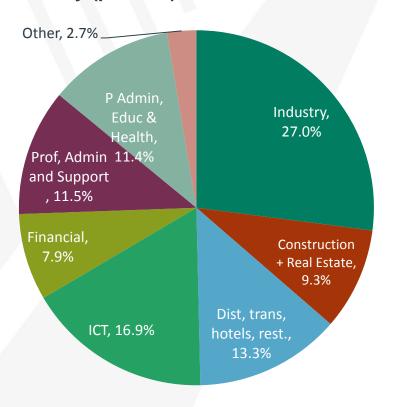
Unusually large changes in multinational stock levels distort the MDD measure



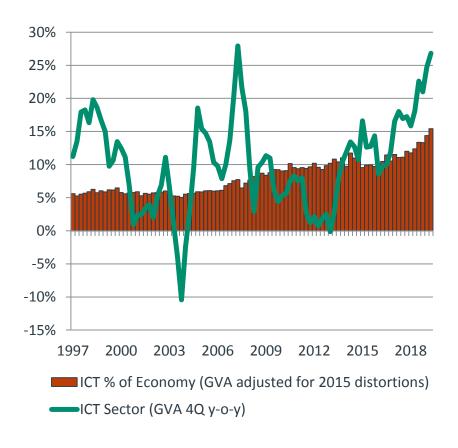


Economy has been driven by multinational growth – in particular ICT; sector grew 25% in 2018 alone

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



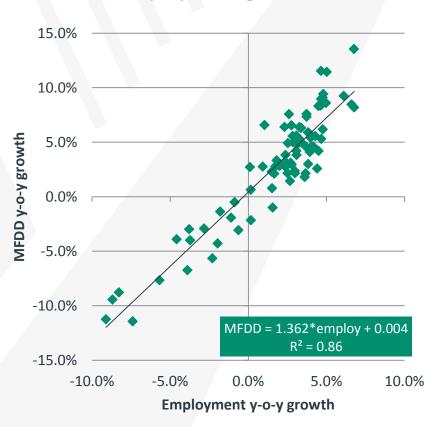
Information and communication sector has seen exceptional growth in recent years



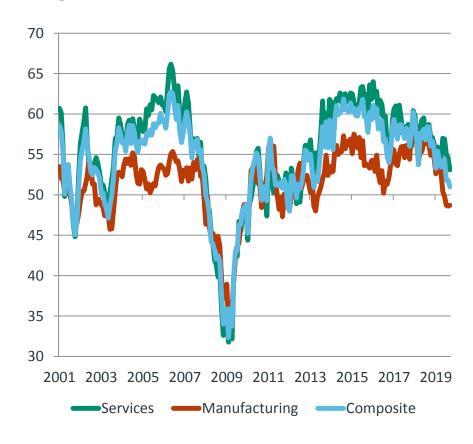


Manufacturing is declining like elsewhere in the world; services are robust but growth has decelerated

MFDD growth is heavily correlated with employment growth

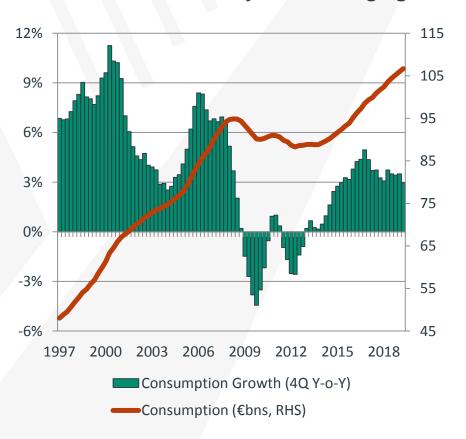


Ireland's PMIs slipping much like rest of globe – services still above 50 however

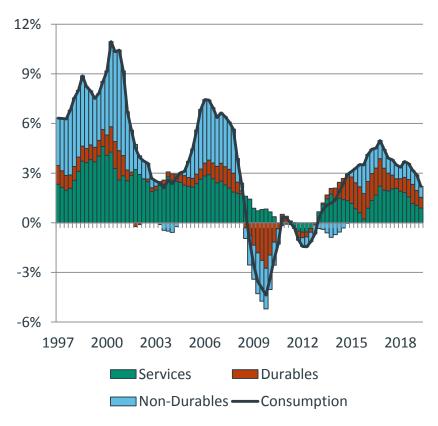


Consumer spending growth consistent around 3% mark

Private consumption expanded by 3.4% in 2018 – steady trend emerging



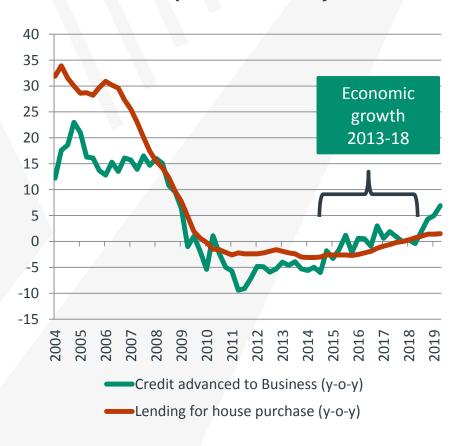
Services driving latest growth in spending



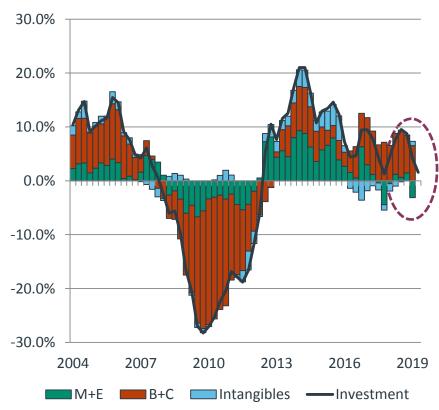


Crucially the recovery was not driven by credit; debt reduction ended as recently as 2018

Lending for house purchase only edging into positive territory



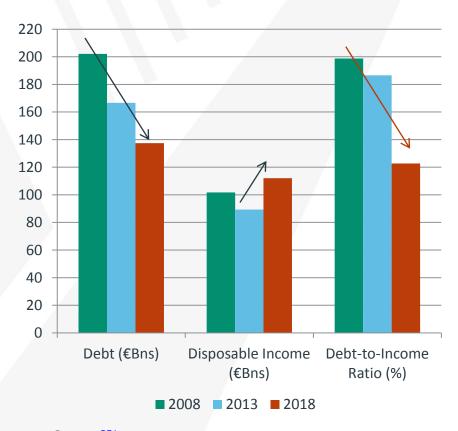
Modified investment led solely by building & construction; mach. & equipment sluggish



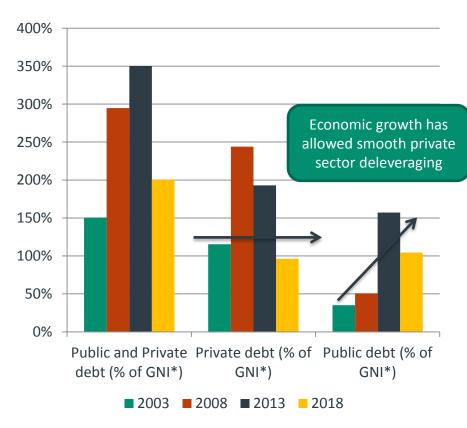


Private debt levels remain elevated but Ireland has used recovery period to repair balance sheets

Household debt ratio has decreased due to deleveraging and increasing incomes



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



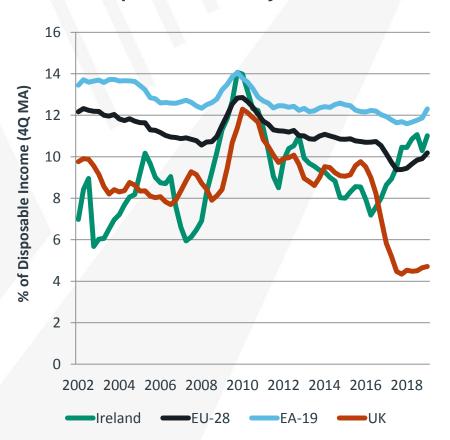
Source: <u>CBI</u>



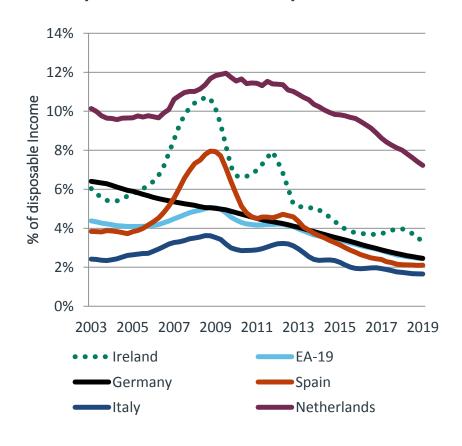


Saving rate around EU average – pointing towards households being more prudent

Gross household saving rate lower than peak but healthy 8-11%



Interest burden down to below 4% of disposable income from peak of 11%





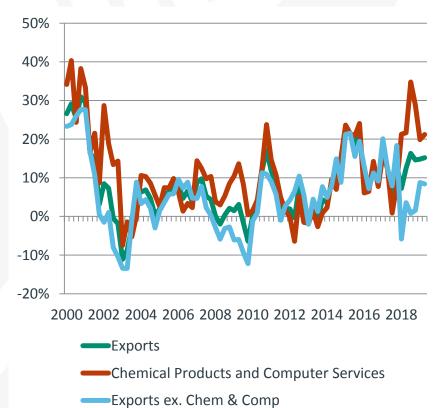
External environment worst since 2012 for Ireland? Brexit deal would alleviate short term risks

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

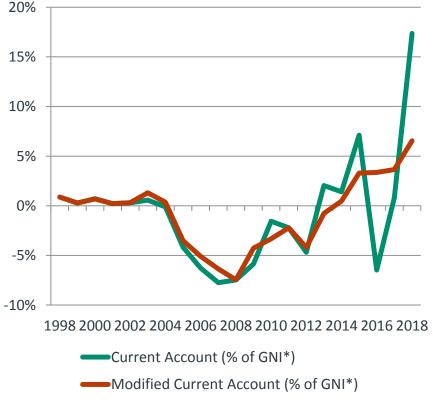


Outside Pharma and ICT, export growth has slowed in recent quarters; Ireland is living within its means

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



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

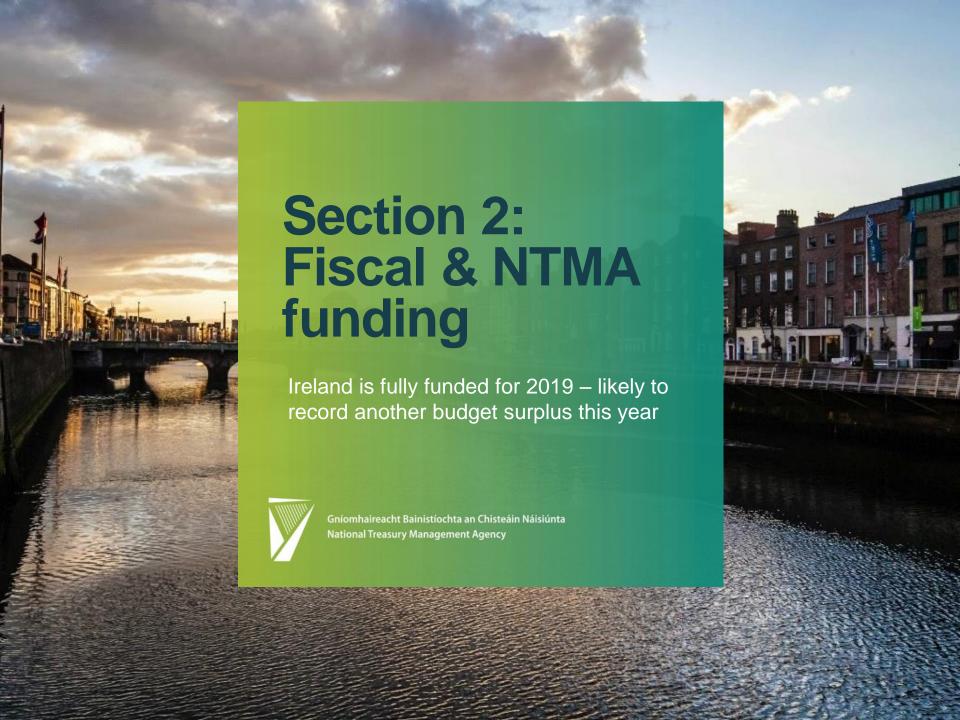




Nominal values, exports excludes contract manufacturing.

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.





€15bn issued in MLT in 2019; well positioned given prefunding and maturity lengthening

Pre-funded

Ireland is pre-funded until the end of Q1 2020

10 years

One of the longest weighted average maturities in Europe

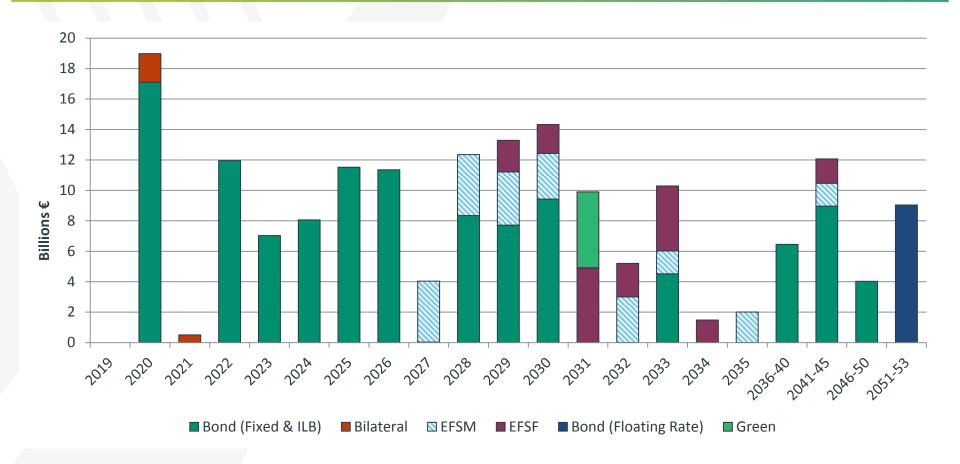
NTMA has used QE period to lengthen maturities, lower interest costs and repay its IMF loans early

A+/A2/A+

Ratings from main agencies

Ireland's debt sustainability is improving, which suggests that ratings may rise to double-A territory further barring shocks

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



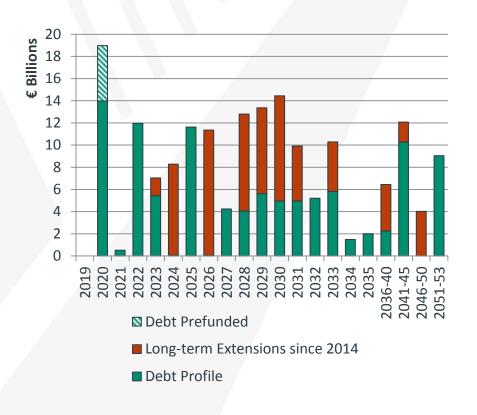


Source: NTMA

Note: EFSM loans are subject to a 7-year extension that will bring their weighted-average maturity from 12.5 years to 19.5 years. 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.

The NTMA took advantage of QE to extend debt profile

Various operations have extended the maturity of Government debt ...



Source: NTMA: ECB

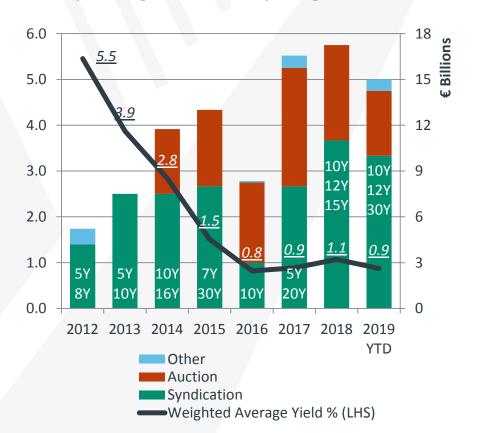
...lreland (in years) now compares favourably to other EU countries



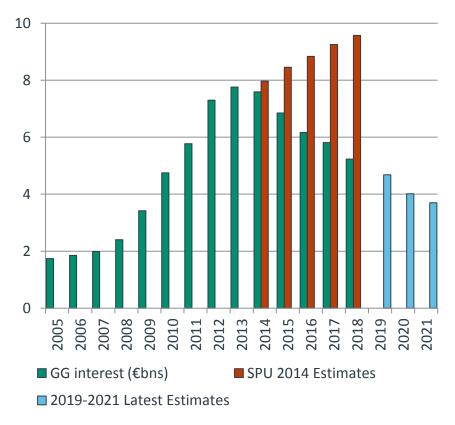


ECB policy and NTMA's funding strategy have lowered the State's interest burden

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



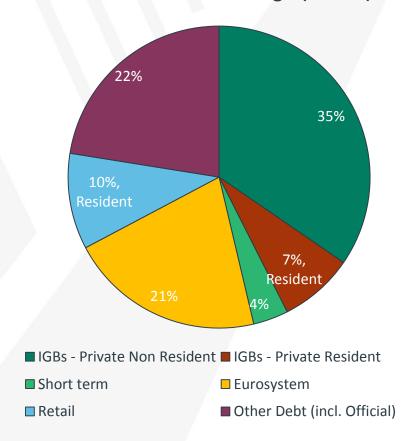
Interest costs forecasted pre-QE to be c.€10bn; will drop below €5bn by end 2019



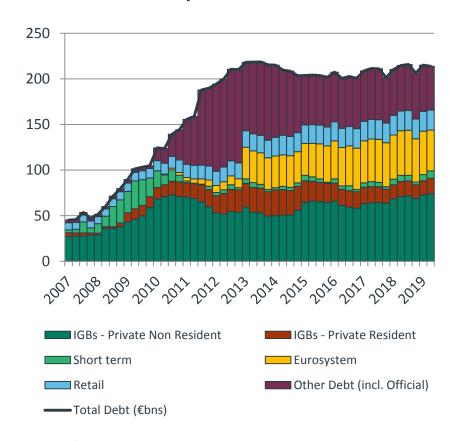


Diverse holders of Irish debt – sticky sources account for over 50%

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

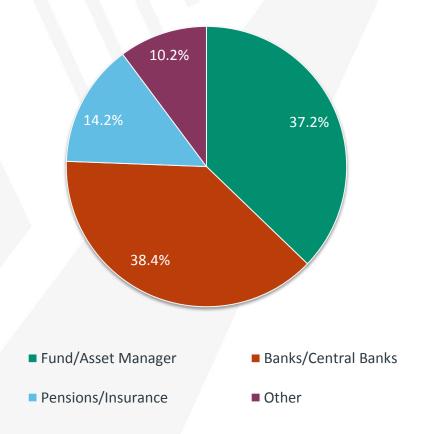




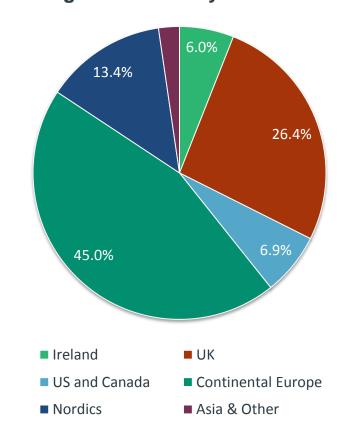
Source: CSO, Eurostat, CBI, ECB, NTMA Analysis
IGBs excludes those held by Eurosystem. Eurosystem holdings include SMP, PSPP and CBI holdings of
FRNs. Figures do not include ANFA. Other debt Includes IMF, EFSF, EFSM, Bilateral as well as IBRCrelated liabilities. Retail includes State Savings and other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

Investor base for Government bonds is wide and varied

Investor breakdown: Average over last 5 syndications

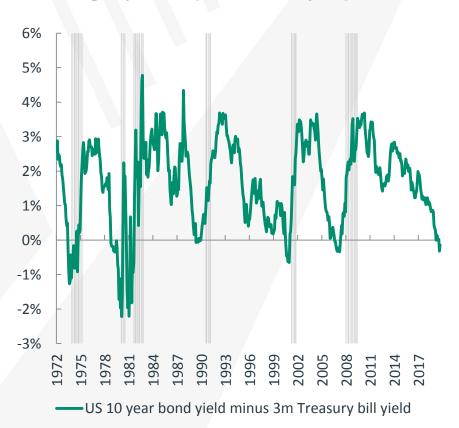


Country breakdown: Average over last 5 syndications

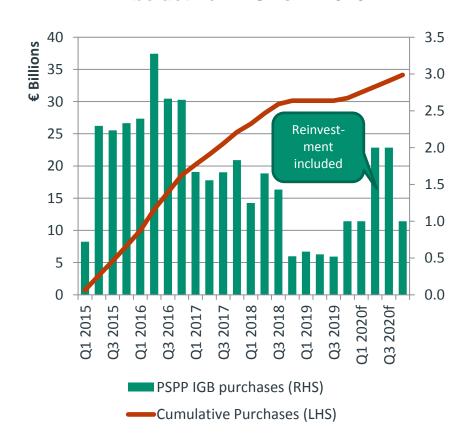


Late cycle risks mixed for Ireland: yield curve sets recession clock ticking but central banks are now easing

US yield curve has inverted (albeit only slightly so far): will history repeat?

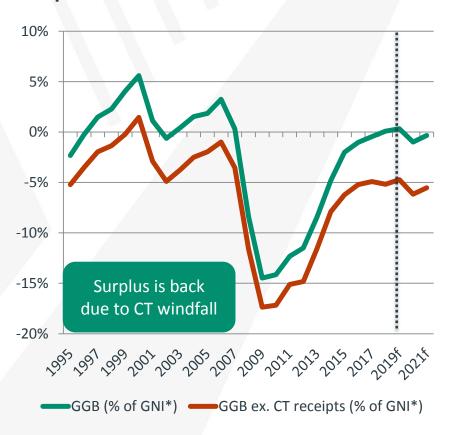


PSPP restarting + re-investment means ECB will be active In IGBs in 2020

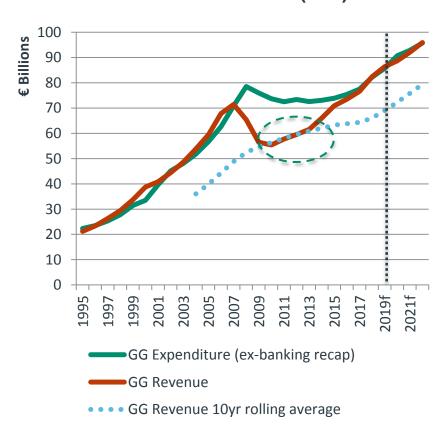


Ireland recorded full budget surplus for first time in 11 years in 2018: 2019 likely to show surplus also

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



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



Ireland tapped the 2031 Sovereign Green Bond in October – bond now €5bn in size

€2bn

Final order book of over €11bn

Vast majority were non-Irish
investors of which many from

UK, Germany, Austria, France,

Nordics, Benelux

0.229%

2031 maturity priced at MS+24 bps

New demand

Highly diverse investor base with good demand from the established centres for green investment

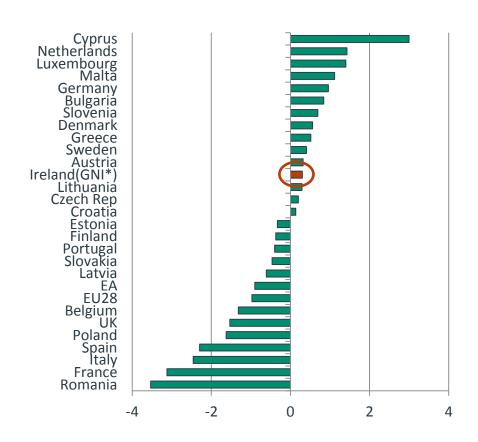
- Green Bond Framework aligned with the ICMA Green Bond Principles (see slide 78)
- 1 in 5 euros in the National Development Plan to be spent on green projects (see slide 79)

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

15.0% 10.0% 5.0% 0.0% -5.0% -10.0% -15.0% -20.0% Surplus is back -25.0% due to CT windfall -40% Primary Balance (% of GNI*) Debt Stabilising PB (% of GNI*)

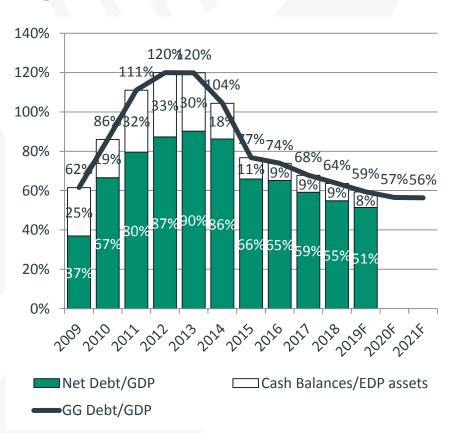
2019 GGB Deficit/Surplus (% of GDP) forecasts; Ireland in the middle in Europe





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



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	378.8%	6.7%	181.1%
Italy	284.5%	7.9%	132.2%
Portugal	279.2%	7.9%	121.5%
Cyprus	256.8%	6.7%	102.5%
<u>Ireland</u>	<u>250.1%</u>	<u>6.4%</u>	<u>63.6%</u>
Spain	249.8%	6.2%	97.1%
UK	218.3%	6.2%	86.8%
Belgium	197.4%	4.6%	102.0%
EA19	184.0%	4.0%	85.1%
France	183.9%	3.5%	98.4%
EU28	177.8%	4.1%	80.0%
Slovenia	162.8%	4.6%	70.1%
Austria	151.8%	3.3%	73.8%
Germany	133.7%	2.0%	60.9%
Slovakia	122.6%	3.2%	48.9%

Source: Eurostat, Department of Finance

** 107% Debt to GNI* ratio in 2018

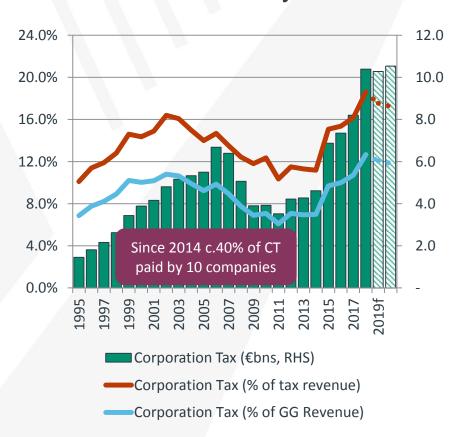
^{* 2018} Interest % of GG Revenue would be closer to 6% excluding the interest paid to CBI (of which 80% is **Gníomhaireacht Bainistíochta an Chisteáin Náisiúnta** returned to the State), much of which accrues because of the holdings of the CBI's legacy holding of Irish FRNs



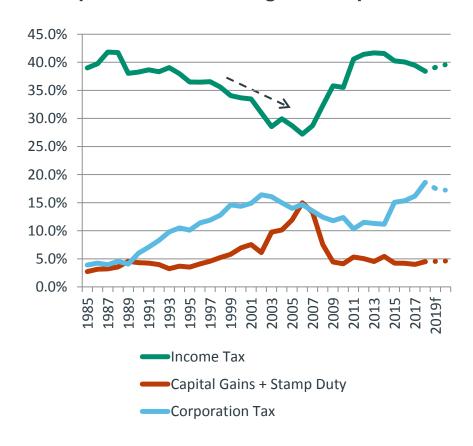
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Corporation tax revenue keeps surprising positively, but each year the concentration risk increases

Corporation tax receipts have more than doubled in four years



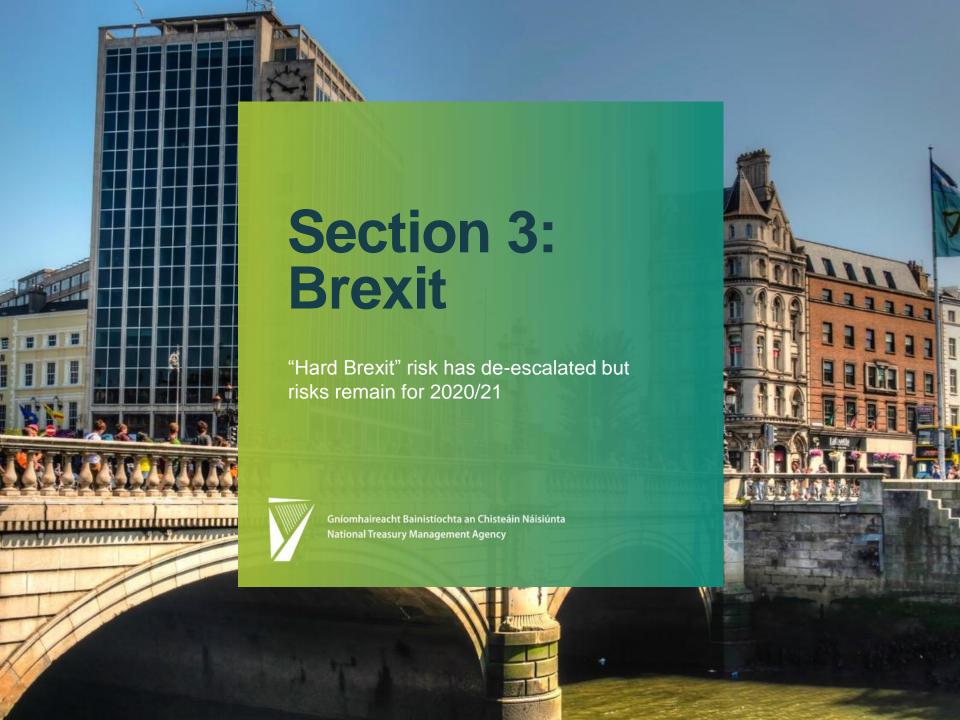
Income tax base intact (% tax revenue) - not comparable to narrowing of base pre-crisis



Ireland: "A" grade from all major credit rating agencies; Net debt level is a positive for Ireland relative to peers

Rating Agency	Long- term	Short- term	Outlook/ Trend	Date of last change
Standard & Poor's	A+	A-1	Stable	June 2015
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	Α	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



Brexit Deal solves many issues for Ireland but does not completely eliminate the risk of a Hard Brexit

Northern Ireland border issued solved if current Deal is ratified after election

- Northern Ireland will remain within the UK customs union but will abide by EU custom 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 need to checked but goods going to UK will be.
- 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 some 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 (ends 2020) in which a long term trade deal is negotiated.
- UK government has stated its intention to seek a free-trade arrangement as the long term future relationship.
- This is a departure from Theresa May's government position which kept all of the UK in the EU customs union.
- The upshot is that the trading relationship will be less close and negotiations difficult.
- There is only one year to negotiate what normally takes several years. <u>Risk that Hard Brexit occurs if</u> <u>the transition period is not extended.</u>

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

Cons

Pros

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

Short term

None, bar flood of cheap agricultural product?

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 badly 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

	Goods (2018)			vices 117)	Total (2017)	
	Exp.	Imp.	Exp.	Imp.	Exp.	Imp.
US	27.7	16.9	11.6	27.0	18.3	25.0
<u>UK*</u>	11.4	21.9	<u>16.4</u>	9.3	<u>15.1</u>	<u>13.7</u>
NI	1.6	1.6	n/a	n/a	n/a	n/a
EU-27	39.0	37.9	29.9	25.7	32.8	27.4
China	3.9	5.9	2.5	1.5	3.2	2.8
Other	18.0	17.4	39.5	36.6	30.5	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 20-25% of its goods from the UK. Consumer goods, capital equipment and inputs into the export process will become cheaper thanks to FX.

There is significant employment related to Ireland's trade with the UK

 The UK might only account for 15% of Ireland's total exports, but Ireland is more dependent than that, considering the employment related to those exports

SMEs account for over 55% of IE exports to UK. They are likely to be more adversely affected than larger companies by the introduction of tariffs and barriers to trade

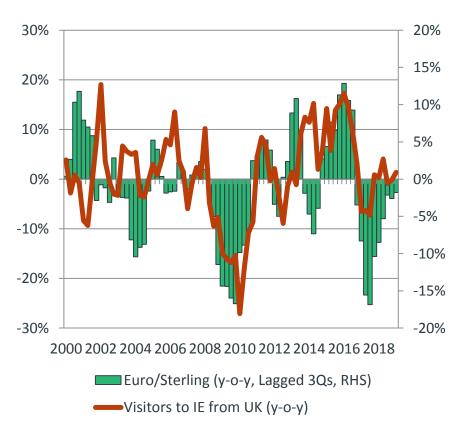


Agri-food and tourism most at risk from tariff/non-tariff barriers

Agriculture industry has not diversified from UK



Tourism numbers linked heavily to currency moves



Land Bridge is an important factor – a few facts

The UK Land bridge is a term used to describe a route to market that connects Irish importers and exporters to international markets via the UK road and ports network

3m tonnes

Yearly, three million tonnes of goods are transported between Ireland and the Continent by the UK Land bridge.

These are split into: one million tonnes of imports and two million tns. of exports

Double speed

Land bridge cuts in half the time it takes to get goods to the continent.

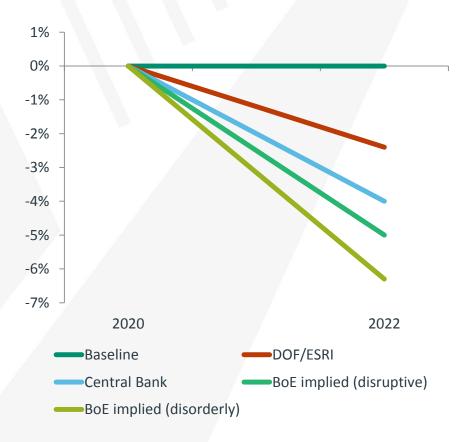
20 hours versus 40 hours via direct sea-route to France.

40% of goods exports

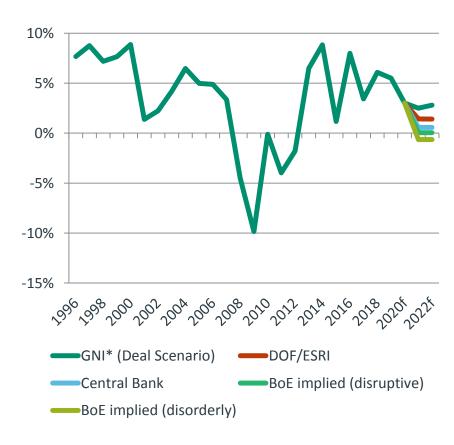
Around 40% of goods exports to EU go via the UK landbridge (in value and tonnes).

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





Hard Brexit impact estimates all show similar story – return to WTO rules would be big 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%



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







J.P.Morgan









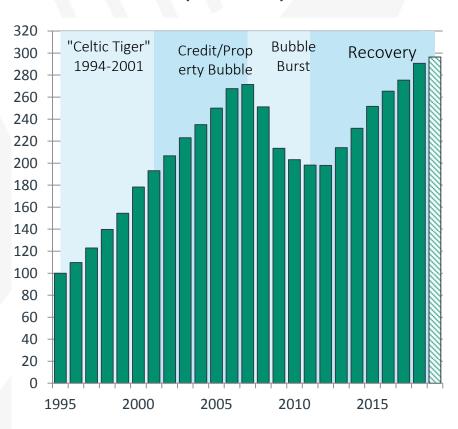




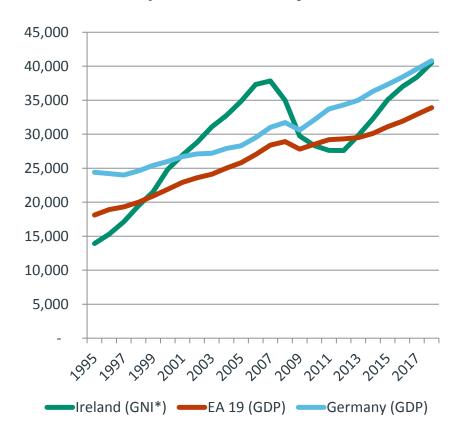


Much rebalancing has taken place – Ireland's structural growth drivers have reasserted

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

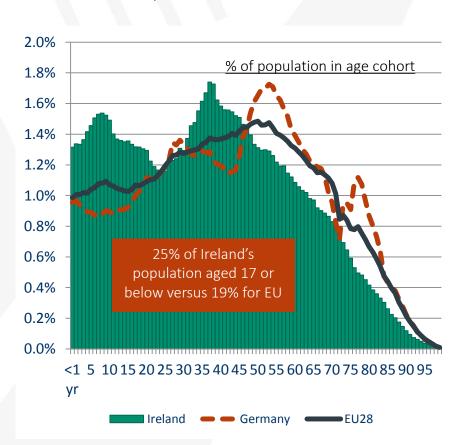


Ireland's GNI* per capita hit 2007 levels and compares favourably to EA

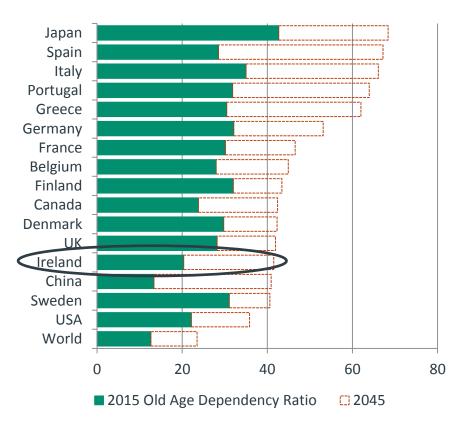


Ireland's population profile healthier than the EU average

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

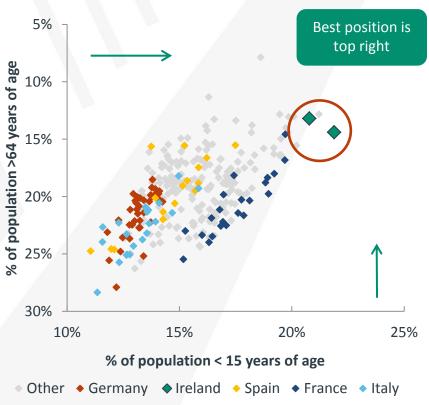


Ireland's population will remain younger than most of its EA counterparts



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

Regional data show Ireland's mix of young and old among the best in EU



Source: Eurostat; Regional NUTS2 basis Note: Each dot is a NUTS2 region in the EU. Y-axis is inverted Ireland's Working-Age Population expected to grow in coming years (2019-2028)

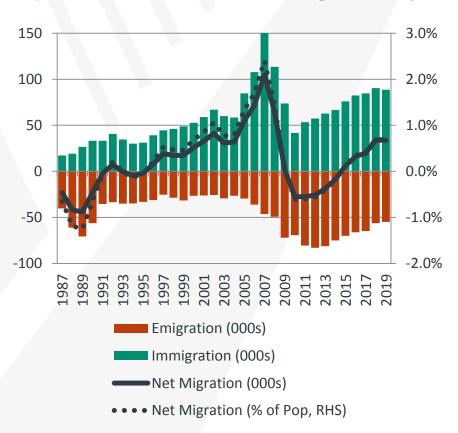


Source: Oxford Economics forecasts



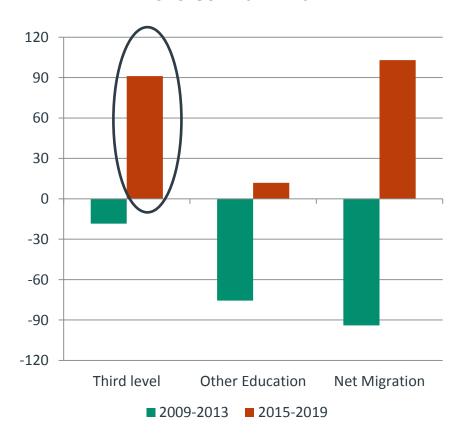
Openness to immigration has been beneficial to Ireland

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



Source: CSO

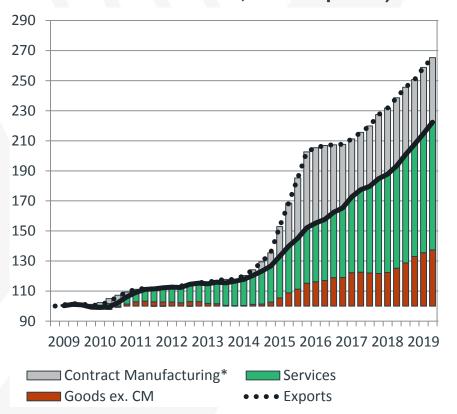
Highly educated migrants moving to Ireland "Reverse Brain Drain"





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

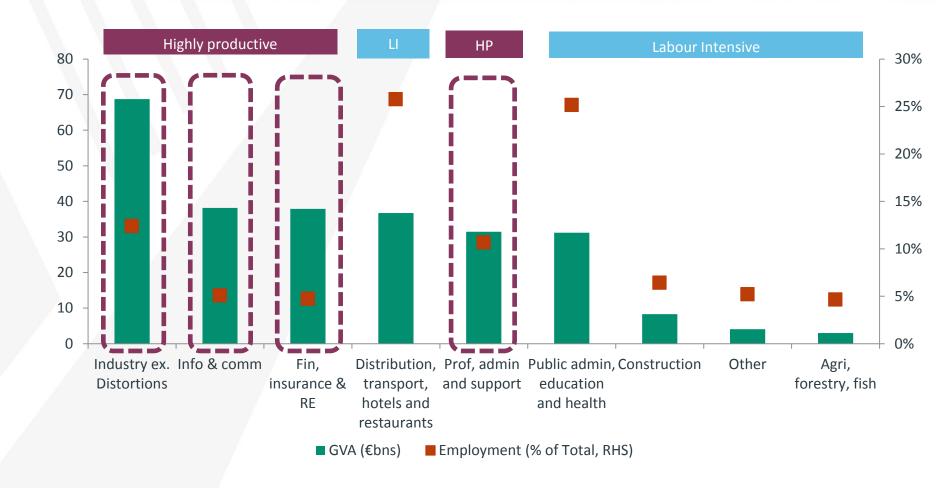
Cumulative post-crisis total exports (4Q sum to end-2008 = 100, current prices)



Ireland benefits from export diversification by destination

		ods 18)	Services (2017)		Total (2017)	
	Exp.	Imp.	Exp.	Imp.	Exp.	lmp.
US	27.7	16.9	11.6	27.0	18.3	25.0
<u>UK*</u>	11.4	21.9	<u>16.4</u>	<u>9.3</u>	<u>15.1</u>	<u>13.7</u>
NI	1.6	1.6	n/a	n/a	n/a	n/a
EU-27	39.0	37.9	29.9	25.7	32.8	27.4
China	3.9	5.9	2.5	1.5	3.2	2.8
Other	18.0	17.4	39.5	36.6	30.5	31.1

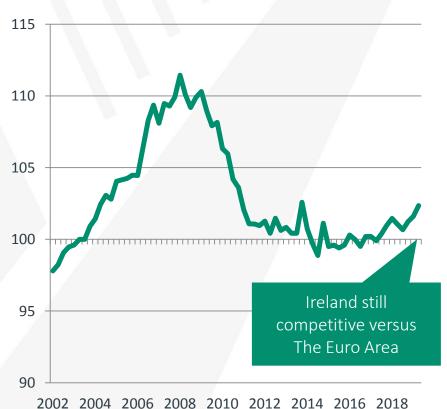
All this leads to mixture of highly productive and labour intensive sectors in Ireland





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

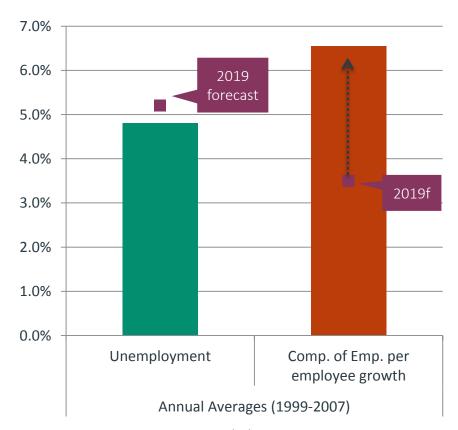
Nominal Labour Cost Ratio - IE vs Euro Area



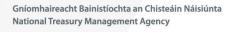
Costs/EA Nom. Labour Costs

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

Unemployment back towards 1999-2007 level, but wage growth about half

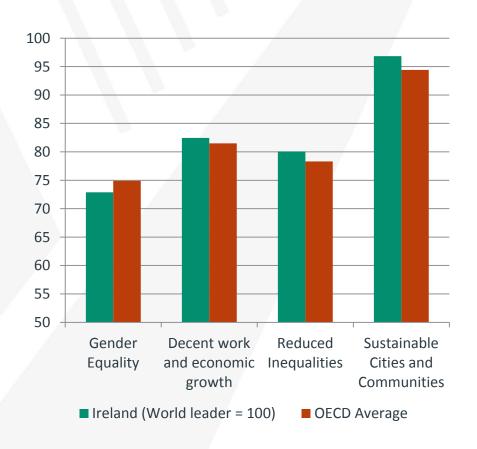


Source: CSO, Eurostat, NTMA calculations



Ireland is a good place to live and do business

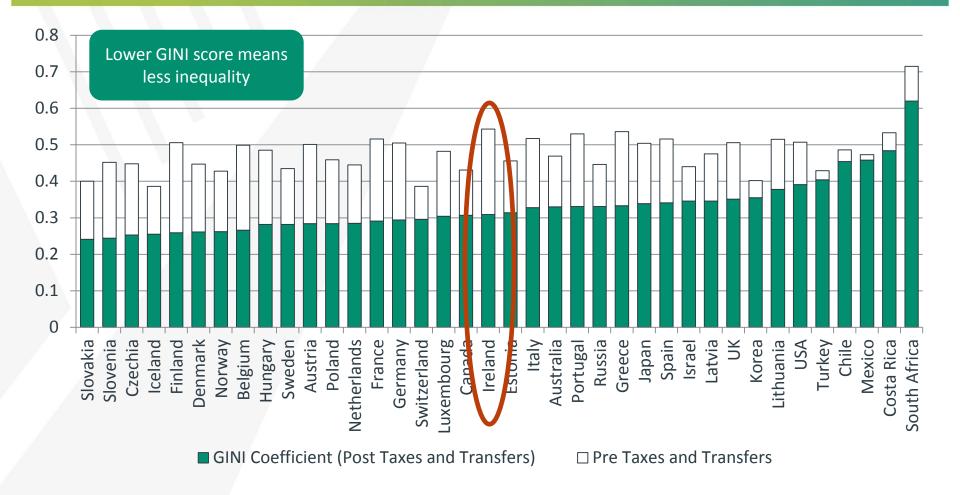
Ireland is close to OECD norms socially



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	<u>74.8</u>	<u>52.8</u>
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	<u>73.1</u>
Population who feel safe walking alone at night (%)	75.0	73.7	67.4

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





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 OFCD level on tax issues.

OECD' 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 likely be re- allocated from small countries to large countries. Such a proposal will reduce Ireland's corporation tax base but we can't judge the magnitude of the impact.
- Nothing has been decided but proposals are currently in the public consultation phase.

Pillar Two: proposal for minimum global tax

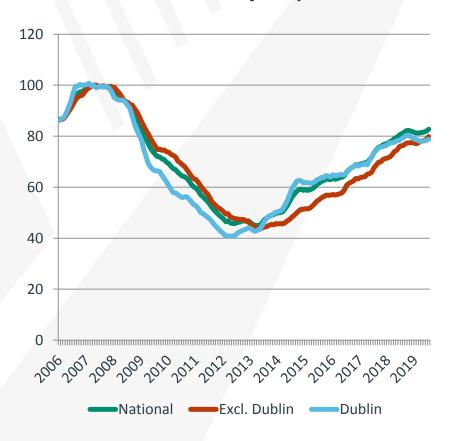
- Pillar Two the basic idea is to introduce a minimum tax rate with the aim of reducing incentives to shift profits.
- Where income is not taxed to the minimum level, there would an "income inclusion rule" which operates as a 'top-up' to achieve the minimum rate of tax.
- The obvious questions arise:
 - what is the appropriate minimum tax rate?
 - who will get the 'top-up' payment?
 - Is the minimum rate taxed at a global 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.



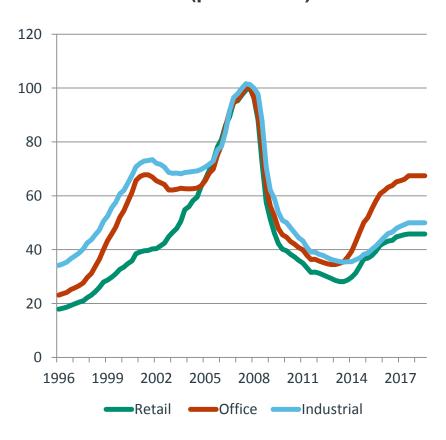


Property prices have levelled off over the last year

House prices rising strongly but some way off peak



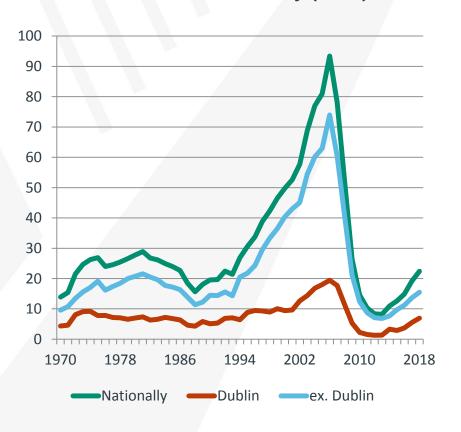
Office leads commercial property (peak = 100)



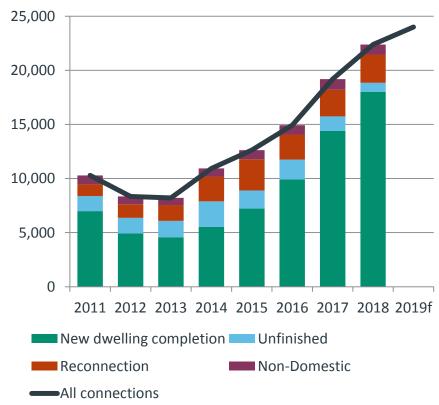


Housing supply still below demand; price inflation has moderated as supply slowly catching up

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



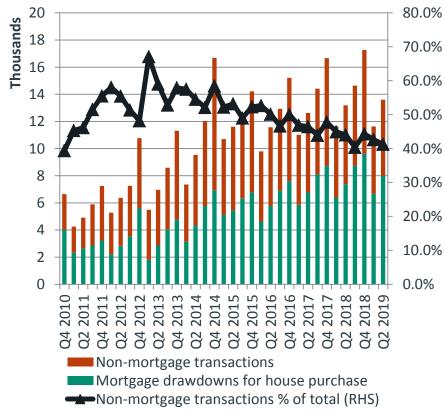
* Housing completions derived from electrical grid connection data for a property. Reconnections of old houses or connections from "ghost estates" overstate the annual run rate of new building.

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

Mortgage drawdowns rise from deep trough (000s)



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

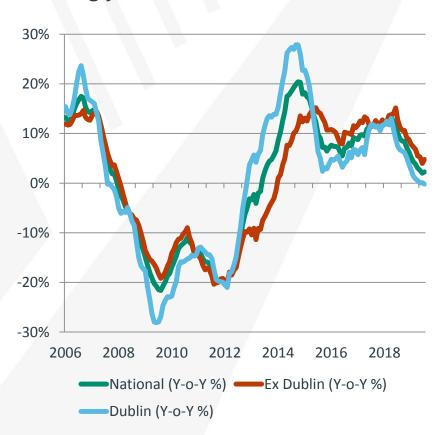


Source: BPFI; Residential Property Price Register

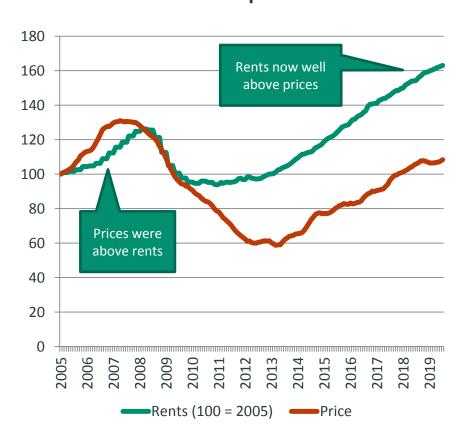


Residential property prices have steadied in recent quarters; rents continue to increase

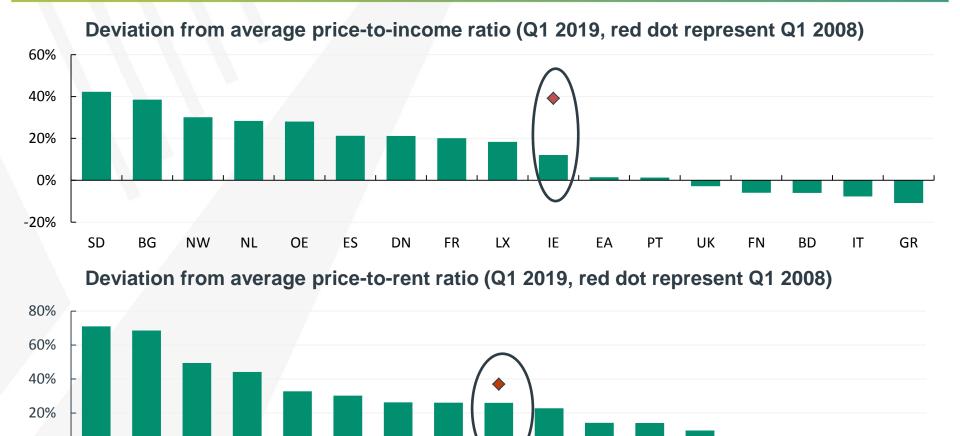
Residential property prices have rebounded strongly since 2012 but steadied in 18/19



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



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





NW

UK

DN

BG

0%

SD

-20%

LX

IT

GR

FN

OE

EΑ

BD

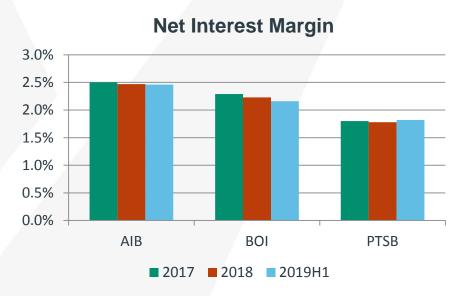
NL

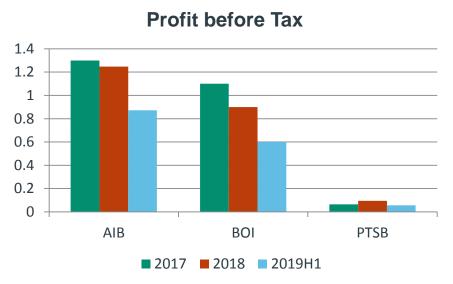


Ireland has legacy banking-related assets – equity in banks and expected NAMA surplus

- 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

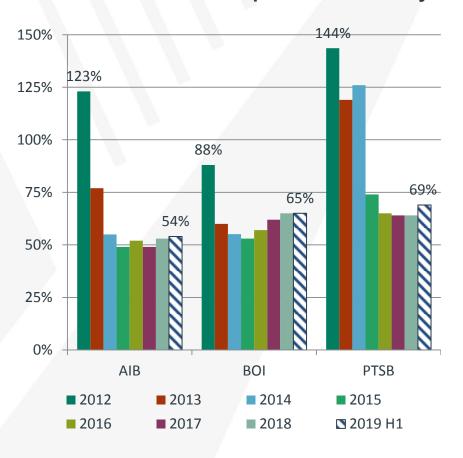


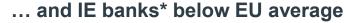


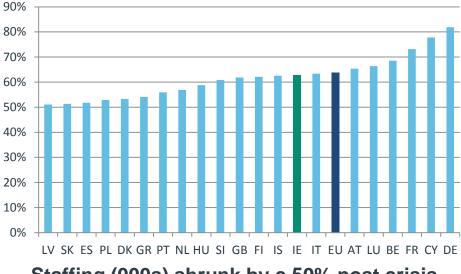


Domestic bank cost base reduced over time

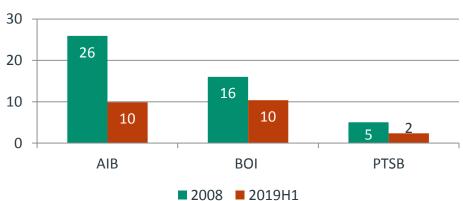
Cost income ratios improve dramatically...

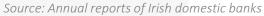






Staffing (000s) shrunk by c.50% post crisis







Source: Annual reports of Irish domestic banks, EBA

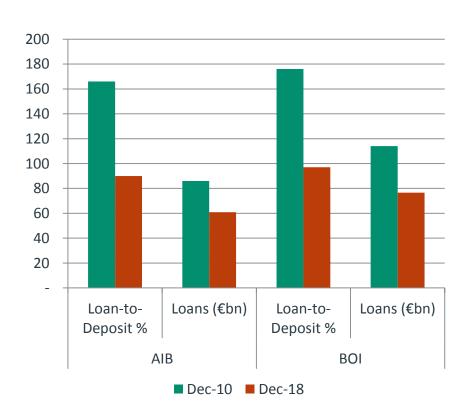
* EBA data includes three domestic banks as well as Ulster Bank, DEPFA & Citibank.

Capital ratios strengthened as banks were slimmed down and consolidated

CET 1 capital ratios (Jun 2019)

25% 20% 15% 20.3% 10% 17.3% 16.8% 14.4% 5% 0% CET1 % (Transitional) CET1 % (Fully Loaded) ■ AIB ■ BOI ■ PTSB

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



Source: Published bank accounts

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%

Non-performing exposures % of total loans¹ (loss provision % of NPE) Dec-17 Dec-18 Book (€bn) BOI Irish Residential Mortgages 9.5(21) 23.7 11.0(24) 1.9(14) **UK Residential Mortgages** 2.3(15) 21.7 11.2(49) Irish SMEs 7.6 15.4(46) **UK SMFs** 1.6 8.6(42) 6.1(53) 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 2.1(98) 2.1(140) Consumer Loans 5.1 6.3(35) 8.3(36) 78.4

Corporate/ SME	Mortgage
25%	
Consumer 5%	60%
CRE 10%	

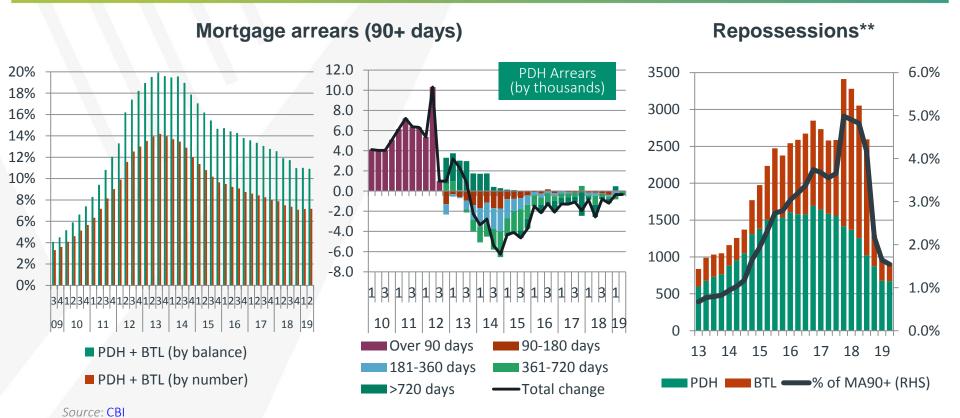
Loan Asset Mix (3 banks Dec 18)

AID				
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
				ì
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

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



• 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



^{*} 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 from 2020 onwards

- 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 €4.0bn, according to its management team if current market conditions remain favourable.
- NAMA initiative to develop up to 20,000 housing units by 2020 <u>subject to commercial viability</u>.
 - ▶ Progress has been strong so far: 9,700 units were completed in 2014 2018;
 - Another 3,000 are under construction or have had funding approved;
 - ▶ A further 6,400 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 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 CO₂ 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

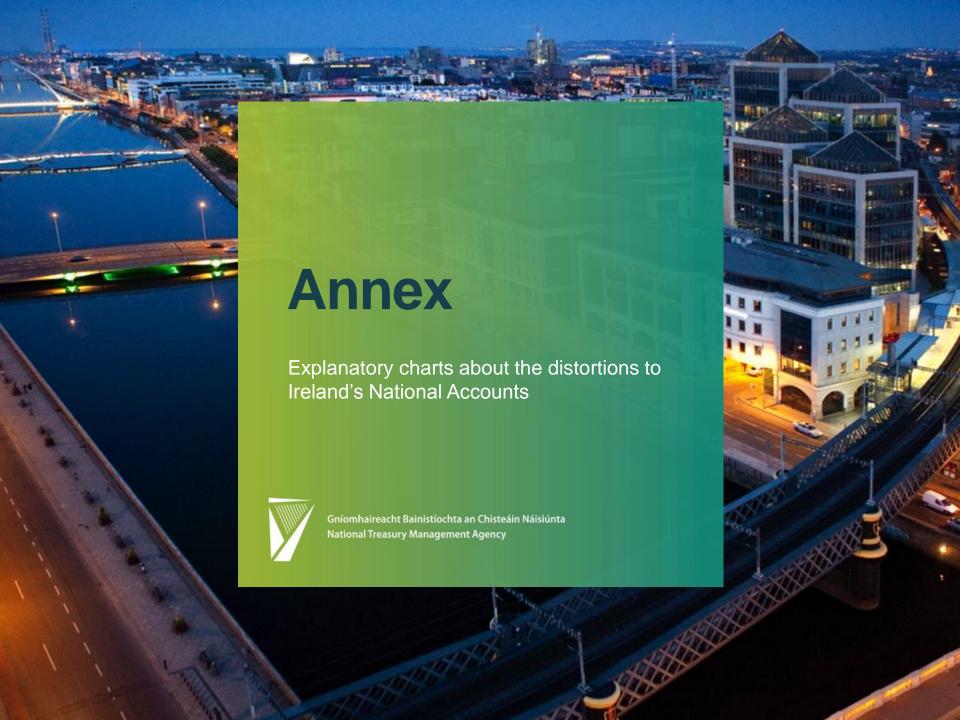
Total:€23 billion (13% of GNI*)





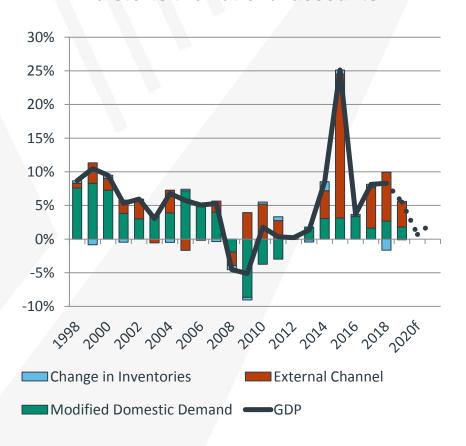
Further details are available at ntma.ie



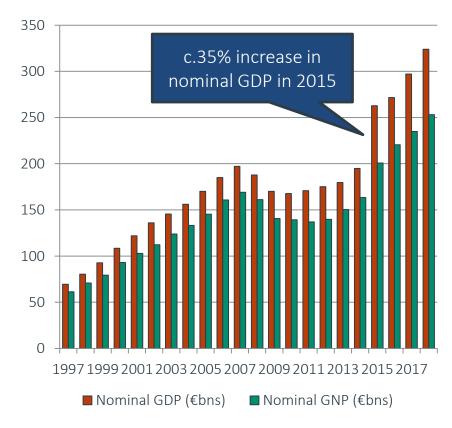


Distortions to GDP/GNP make them sub-optimal indicators of economic performance

Substantial activity from multinationals distorts the national accounts



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



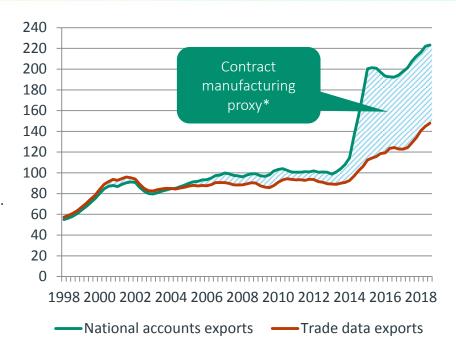
The change in capital stock resulted in large increase in net exports – mostly through contract manufacturing (CM)

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. This export is recorded in Ireland's statistics even though it was never produced in Ireland.

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

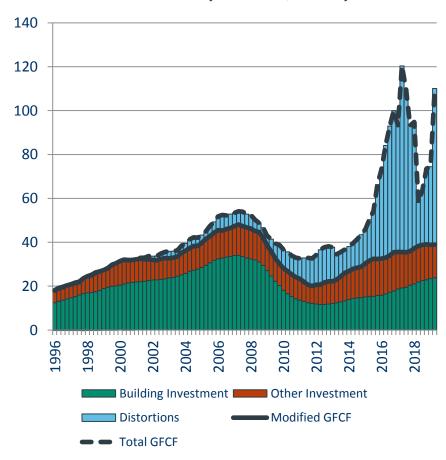
Source: CSO



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.
- Building investment grew by 8.2% in H1 2019 versus H1 2018 highlighting pent up demand for housing.

Investment (4Q sum, €bns)





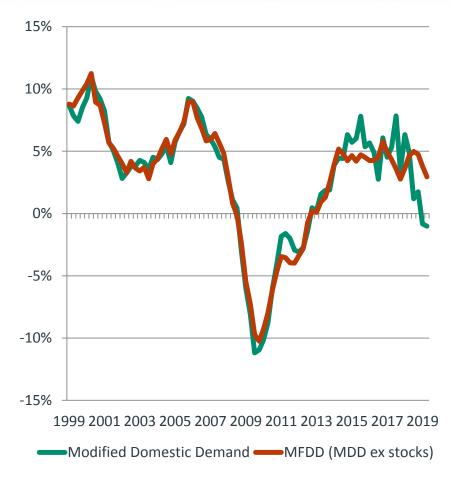
GNI* is a better measure of underlying economic activity than GDP/GNP; best as a level rather than a growth metric

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

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) <u>real underlying growth was 2.8%</u> in Q2 2019. Since 2014, annual growth has averaged 4.3% when looking at MFDD.





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