Ireland: Strong first half of 2017

Labour input growing by 4% while Government met its H1 deficit target

July 2017

Gníomhaireacht Bainistíochta an Chisteáin Náisiúnta
National Treasury Management Agency

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Summary

Ireland's headline GDP is distorted;
yet underlying growth remains healthy

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Ireland's headline numbers distorted; underlying growth strong but Brexit will slow pace in next 12-18 months

- **GDP and GNP are exaggerated by the activity of multinational companies; Underlying metric show Ireland is one of the fastest growing economies in the euro area**
  - The National Accounts are distorted by the assets of several companies and some entire firms being reclassified as resident in Ireland. Thus GDP and GNP series have little information content. All other metrics show the economy is growing. A modified domestic demand measure suggests growth of c.5% in real terms.
  - Employment is expanding, unemployment is at 6.3%; Labour input is growing by 4.0%.
  - Consumption grew by 2.7% in the year to Q1 2017. Core retail sales suggest continued consumer demand.
  - There is pent up demand for investment e.g. housing supply is lagging demand, leading to soaring rents.

- **Brexit will slow Irish growth in 2017**
  - The UK may enter recession after its vote to leave the EU: for every 1% drop in UK GDP Ireland's output may fall by anywhere between 0.3-0.8%. We are likely to see some impact this year; it was imperceptible in 2016.

- **Government debt and deficit metrics are also distorted by GDP revisions; analysis should include other measures of Ireland's debt serviceability**
  - Government debt-to-GDP fell to 72.8% in 2016; and the GG deficit to 0.5%. The inflated GDP denominator means other metrics of debt serviceability are required to complement debt as a ratio of GDP.
  - Debt-to-GNI* (106%), Debt-to-GG Revenue (274%), interest cost as a share of revenue (8.5%) and the average interest rate on Ireland's debt (3.1%) are superior measures for comparison with other sovereigns (2016 figures).
  - Excluding the distortions, Ireland's fiscal picture is improving. Ireland is in primary surplus, revenue data in recent quarters has been steady and spending is relatively restrained.

Funding in 2017: more than €10bn of €9-13 billion complete

- **Funding in 2017 - €9-13billion of long-term bonds planned**
  - NTMA has issued €9.5bn in benchmark bonds so far:

    January: The NTMA raised €4 billion through the syndicated sale of a new 20-year benchmark Treasury Bond maturing in May 2037. The funds were raised at a yield of 1.734%.

    February: €1.25bn issued in a dual auction of the 2022s and 2026s (yields of 0.09% and 1.03% resp.).

    March: A dual-auction of the 2026s and 2045s raised €1.25bn (yields of 1.046% and 2.187%).

    April: A dual-auction of the 2023s and 2026s raised €1.25bn (yields of 0.202% and 0.936%).

    June: A dual-auction of the 2026s and 2045s raised €1bn (yields of 0.72% and 1.915%).

    July: A dual-auction of the 2022s and 2045s raised €0.75bn (yields of -0.009 % and 1.953%).
  - In April, the NTMA issued its first inflation-linked bond: €610m 23-year tenor, 0.25% coupon + Irish HICP excluding tobacco.
  - The investor base continues to expand: International investors bought 97% of the bonds on offer in January, led by Germany/Austria (31%), the UK (25%), and the Nordics (10%).
  - Among investor categories, the bias of the deal was to real money: asset/fund managers took 36%, banks bought 28% and pension funds/ insurance companies purchased 16%.
  - The NTMA has also raised funds through a private placement and non-competitive auction phases

- **100-year paper issued in 2016**
  - In 2016, the NTMA issued its first 100-year note by private placement. The €100m sold yielded 2.35%.

Ireland's bond market performance has been underpinned by prudent domestic policy and ECB action

Yield (%)

24
19
14
9
4
-1

EU/IMF Programme Entry
Rising ELA
EU/IMF loan rate reduction
OMT
NTMA issuance recommences
Moodys Downgrade
EU/IMF Programme Exit
NTMA resumes bond auctions
ECB QE
Ireland's 1st 100-year note
Brexit

Jan 10 Jul 10 Jan 11 Jul 11 Jan 12 Jul 12 Jan 13 Jul 13 Jan 14 Jul 14 Jan 15 Jul 15 Jan 16 Jul 16 Jan 17 Jul 17

10 Year 2 Year

Source: Bloomberg (weekly data)

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Ireland: “A”grade from all major credit rating agencies

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	Feb. 2016
Moody's	A3	P-2	Positive	May 2016
DBRS	A(high)	R-1 (middle)	Stable	Mar. 2016
R&I	A	a-1	Stable	Jan. 2017

Section 1: Macro

GDP/GNP are misleading; GNI*, employment and consumption best reflect reality

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Distortions to GDP/GNP make them poor indicators of economic performance

%

30
25
20
15
10
5
0
-5
-10
-15

Substantial activity from multinationals in 2015/16 distorted the national accounts (see Annex for reasons)

1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017f

Domestic Demand
Net Exports
Change in Inventories
GDP Change
Forecast

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Source: CSO; Department of Finance

New GNI* metric is a better measure of underlying economic activity; grew by 9.4% nominally in 2016

- GDP headline numbers do not reflect the "true" growth of Ireland's incomes due to MNCs.
- Reasons for 2015/16 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.
- GNI* only available in nominal terms at present.
- In time, GNI* will be published on a constant price basis as well as at a quarterly frequency.

National Account – Current Prices (€ Billions, y-o-y growth rates)	2015	2016
Gross Domestic Product (GDP)	262bn (34.7%)	275.6bn (5.2%)
minus Net Factor Income from rest of the world		
= Gross National Product (GNP)	206bn (25.0%)	226.7bn (10.1%)
add EU subsidies minus EU taxes	1.2bn	1.0bn
= Gross National Income (GNI)	207.2bn (24.9%)	227.7bn (9.9%)
minus retained earnings of re-domiciled firms	-4.6bn	-5.8bn
minus depreciation on foreign owned IP assets	-25.0bn	-27.8bn
minus depreciation on aircraft leasing	-4.6bn	-5.0bn
= GNI*	172.9bn (11.9%)	189.2bn (9.4%)

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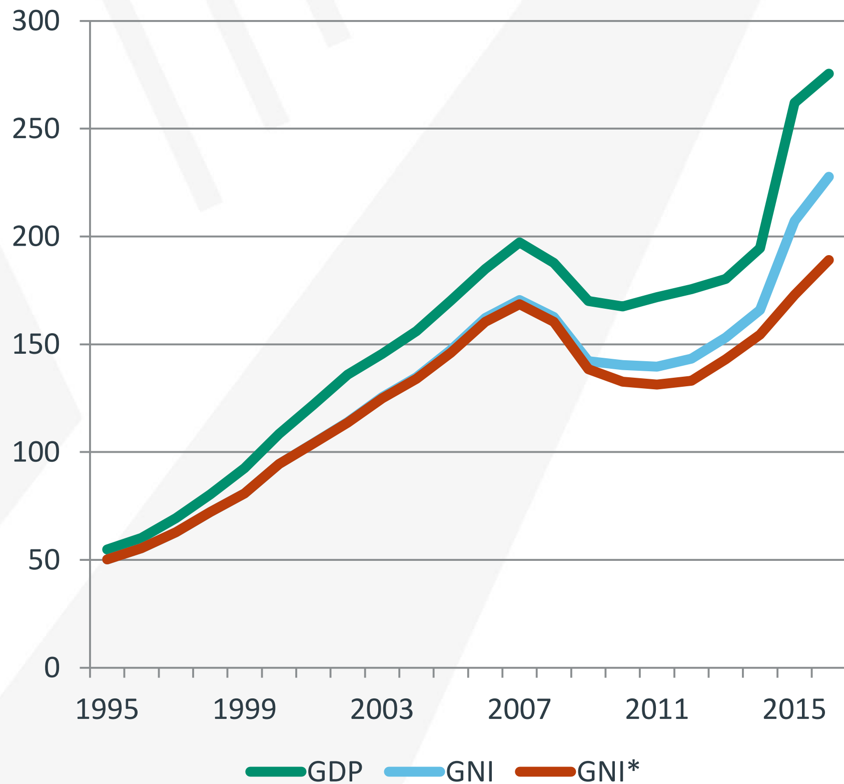
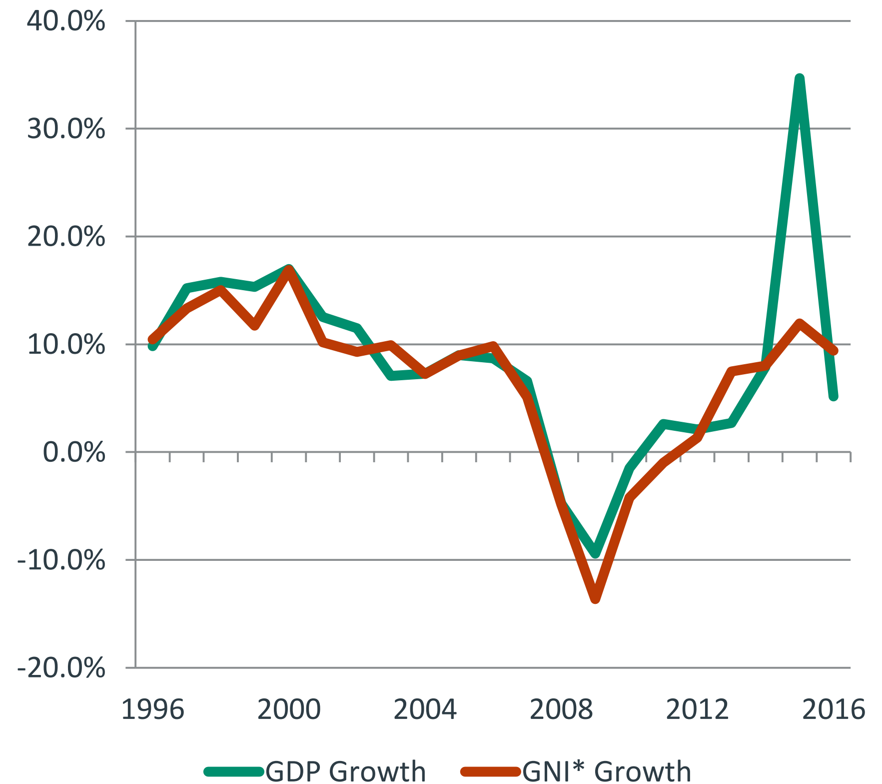
Source: CSO;

GNI* gives a more realistic picture of Irish recovery

GNI* was €189bn in 2016; 12% higher than in 2007 (current prices)



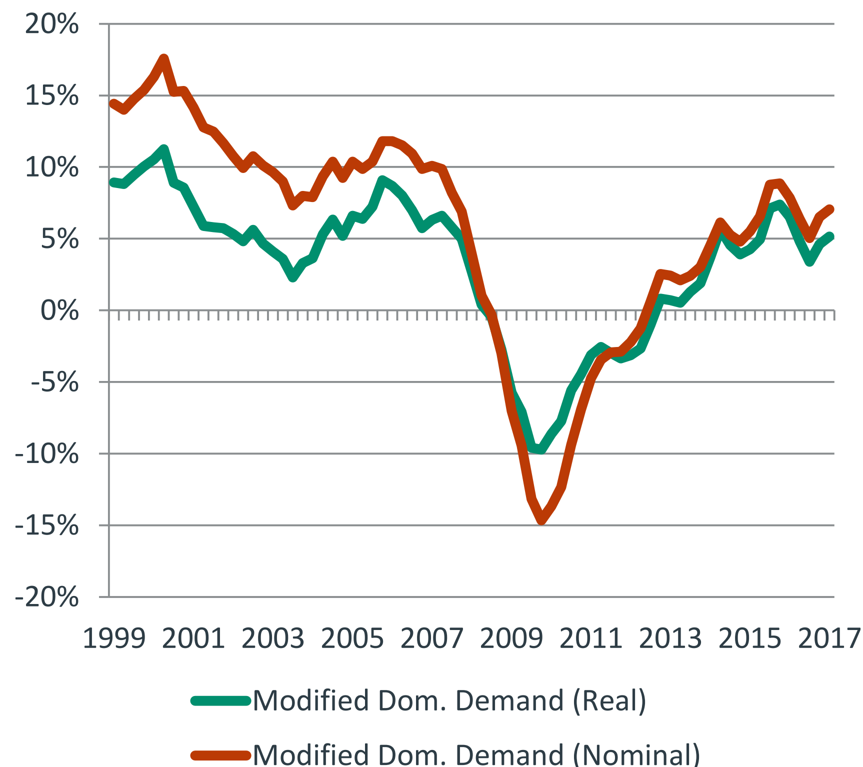
GNI* growth rate averaged 7.6% since 2011 (current prices)



Source: CSO

Modified Final Domestic Demand (MFDD) can give a more timely gauge of economic activity

- MFDD also seeks to strip out the impacts of the MNC distortions.
- The measures omits parts of aircraft leasing and IP imports from investment to give a modified measure of domestic demand.
- The measures includes:
  - private consumption
  - government consumption
  - building investment
  - Elements of machinery & equipment Investment
  - Elements of intangible asset Investment
- This measure pegs nominal growth closer to 7.1% at Q1 2017 (y-o-y). In real terms, growth y-o-y in Q1 was 5.2%.

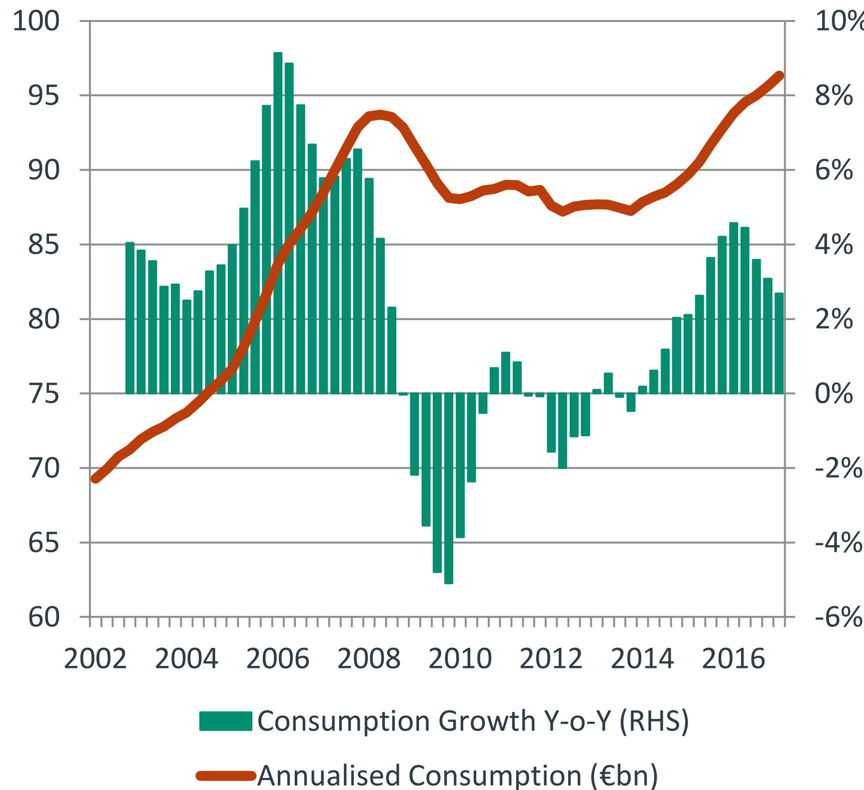


Source: CSO

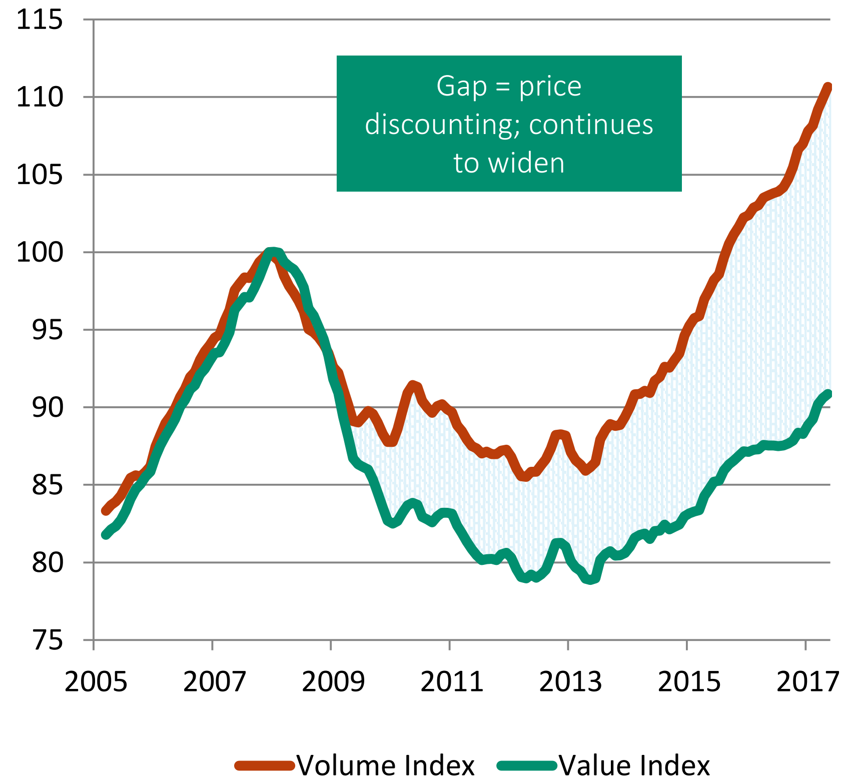
Note previous versions of the NTMA Investor Presentation included a metric UDD which was very similar in its construction to MFDD.

Consumption is now a large contributor to economic growth – and is unaffected by MNC distortions

Private consumption grew at 2.7% y-o-y in Q1 2017



"Core"* retail sales up 4.1% y-o-y in value in May (peak=100)



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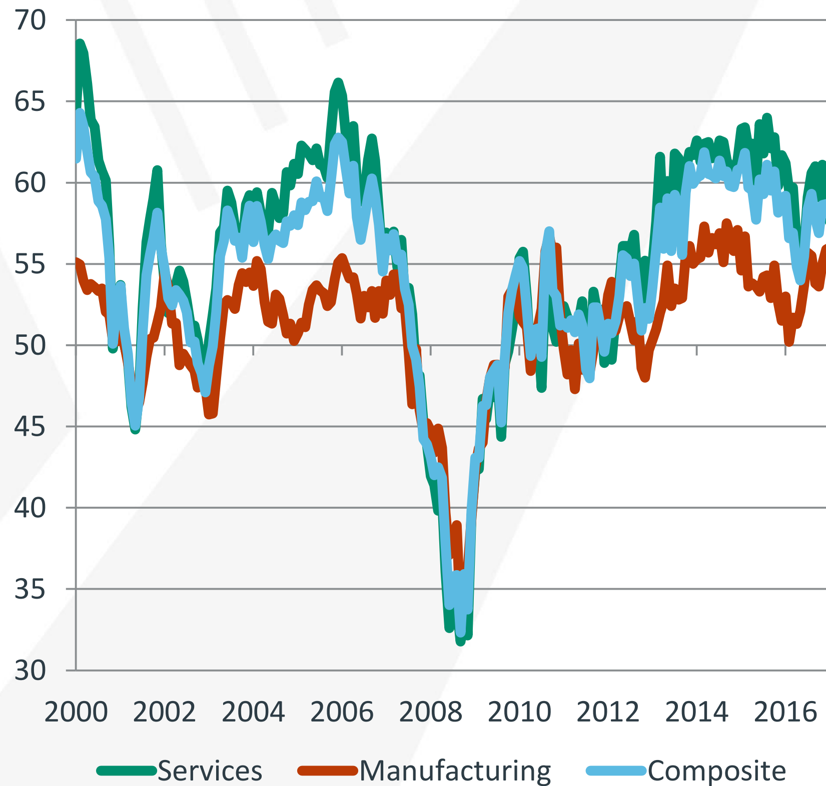
Source: CSO, CSO (retail sales)

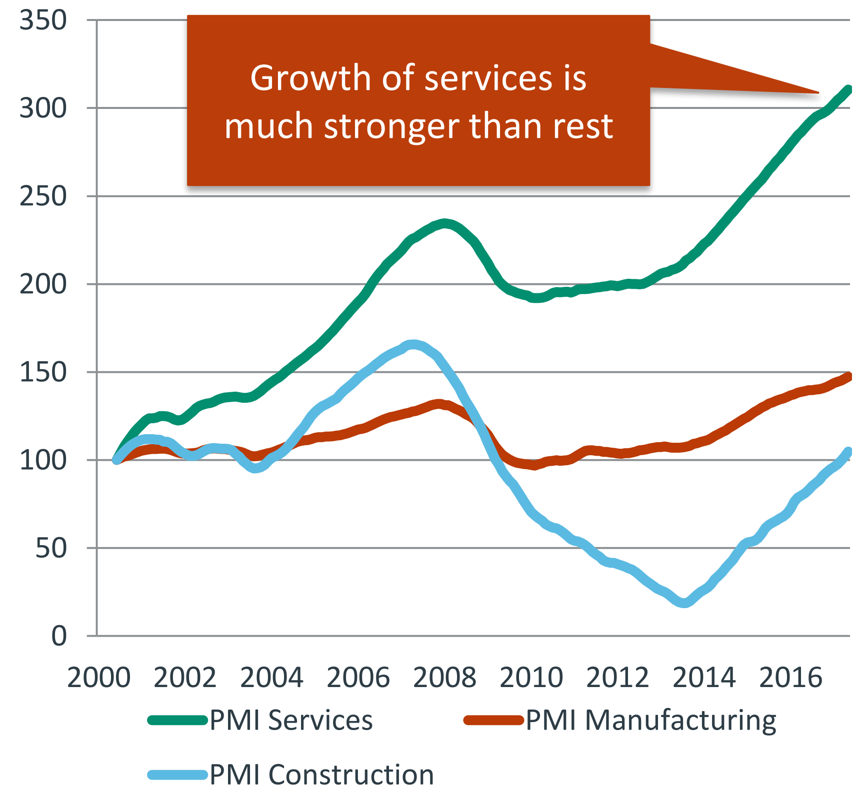
** excludes motor sales; 3m average*

High frequency indicators also show Ireland's recovery is broad based

Ireland composite PMI is expanding – manufacturing hurt in mid-2016 by Brexit



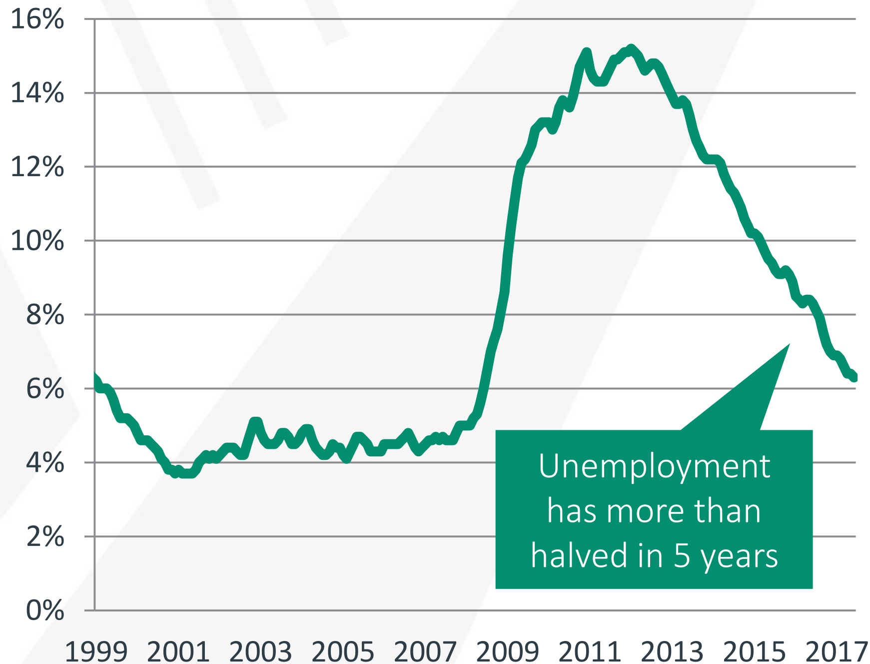
Recovery is broad based (PMI chg. as cumulative index level, June 2000=100)



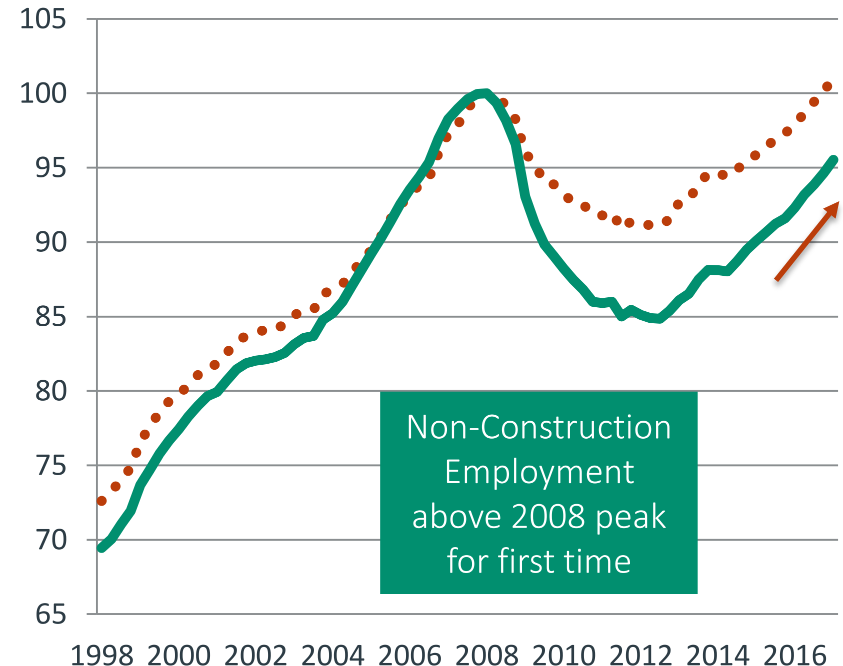
Source: Markit; Bloomberg; Investec ; NTMA workings

Labour market has rebounded since 2012; unemployment continues to fall with over two million now employed

Unemployment rate: 6.3% in June 2017



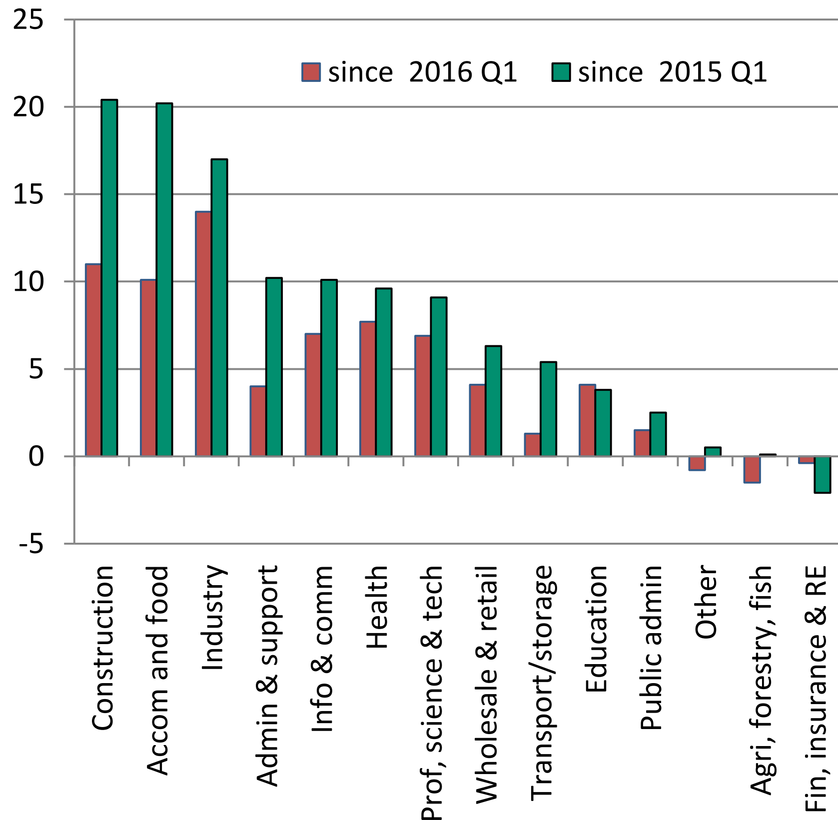
Employment up 12.6% from cyclical low (2008 peak = 100)



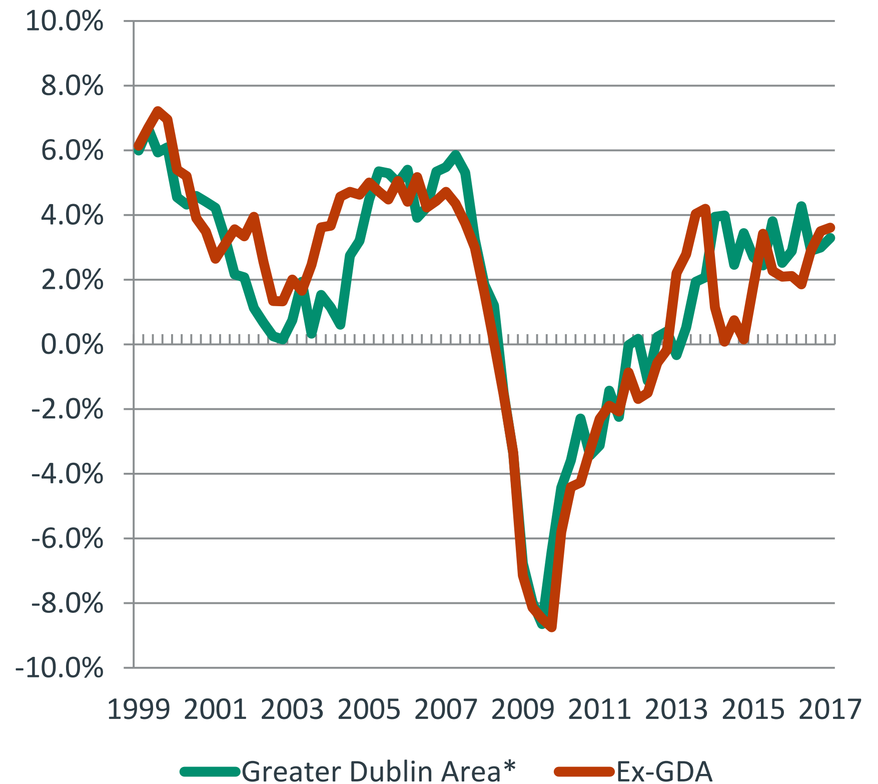
Source: CSO

Employment growth is broad based by sector and region

Nearly all sectors have seen employment growth in year to Q1 2017 (000s)



Employment growing across all regions in Ireland – faster now in ex-GDA*



* Greater Dublin Area = Dublin, Meath, Wicklow and Kildare

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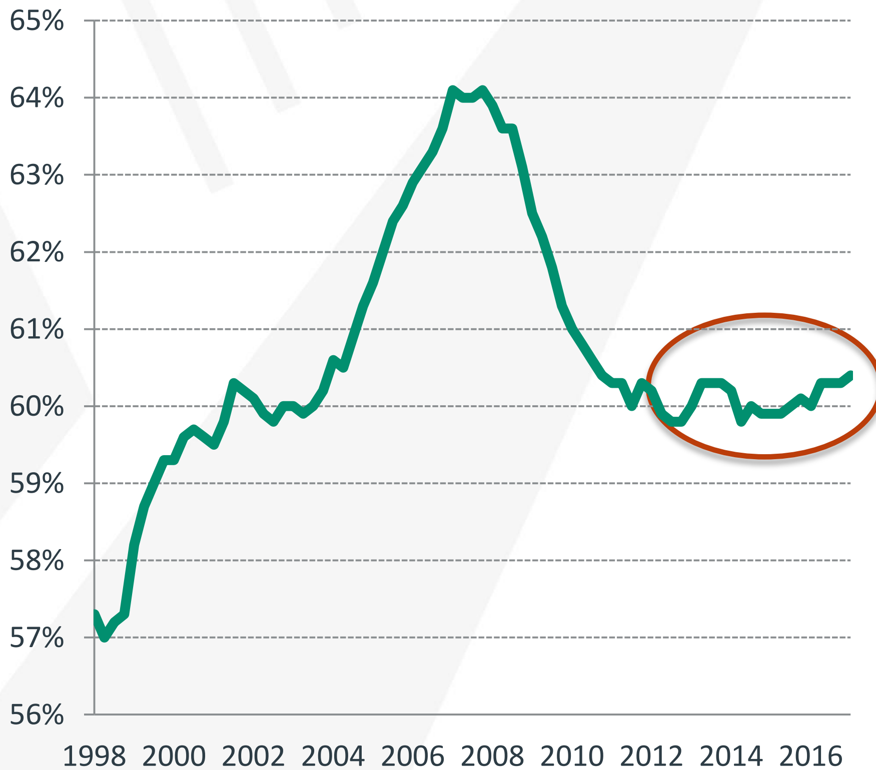
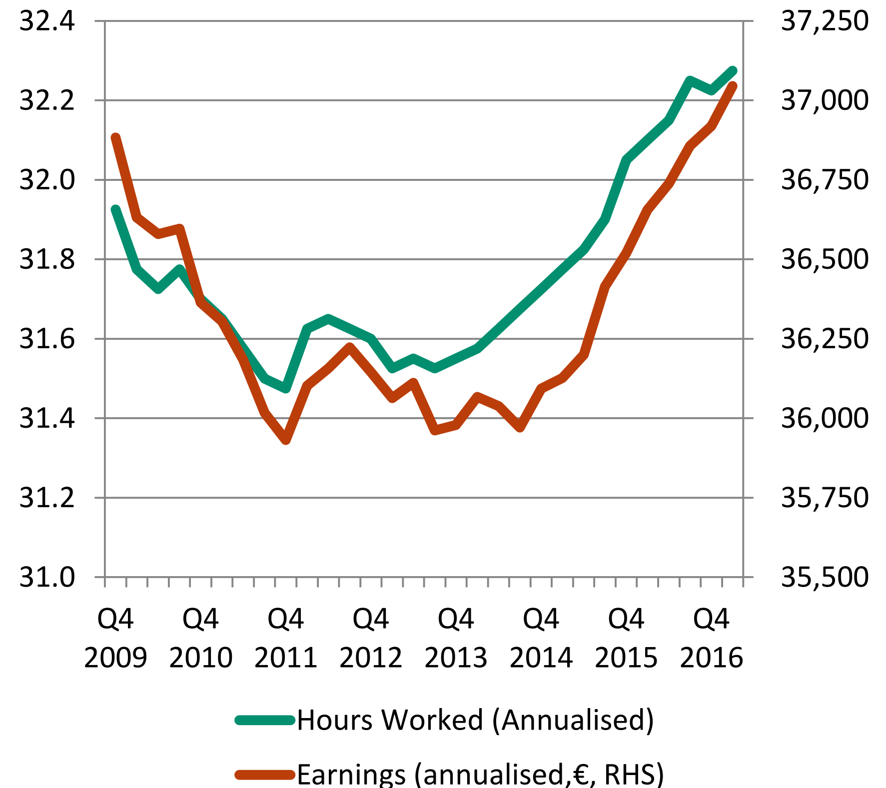
Source: CSO

Labour participation has not yet recovered – similar to US; Wages only now rising, pointing to slack in the market

Participation rate hovering around 60%



Wages and hours worked beginning to recover, although pockets of excess capacity remain



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Source: CSO, CSO (Earnings)

Wide disparity in wages across sectors

10%
8%
6%
4%
2%
0%
-2%
-4%
-6%
-8%
-10%
-12%
-14%

60,000
55,000
50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0

Info & Comm
Wholesale/Retail
Admin & Support
Industry
Transport/Storage
Accom & Food
Prof, science & tech
Construction
Arts & Rec
Fin, Insurance & RE
Public admin
Health
Education

% difference in 4Q average hourly earnings vs 2008-2010 peak
2017 Q1 average annual earnings (€, RHS)

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Source: CSO, NTMA analysis

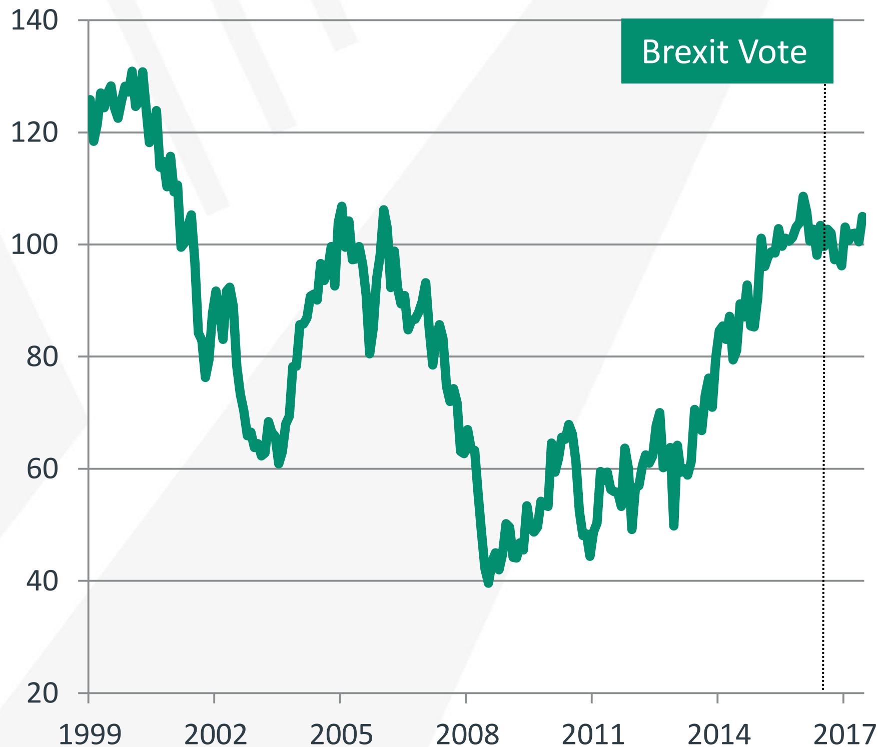
Unemployment falling across Europe; falling faster here

	Q4 2013 %	Q4 2014 %	Q4 2015 %	Q4 2016 %	Q1 2017 %
Germany	5.1	4.9	4.5	**3.9**	**3.9**
Netherlands	7.6	7.1	6.7	**5.5**	**5.2**
Sweden	8.0	7.8	7.1	**6.9**	**6.7**
Ireland	12.2	10.4	9.1	7.0	6.8
Belgium	8.5	8.5	8.6	**7.2**	**7.0**
EU 28	10.7	9.9	9.0	**8.3**	**8.1**
Euro area	11.9	11.4	10.5	**9.7**	**9.5**
France	10.2	10.4	10.2	**10.0**	**10.1**
Portugal	15.4	13.5	12.3	**10.4**	**9.9**
Italy	12.4	12.7	11.5	**11.8**	**11.7**
Spain	25.8	23.7	20.9	**18.6**	**18.2**
Greece	27.6	25.9	24.3	**23.4**	**22.9**

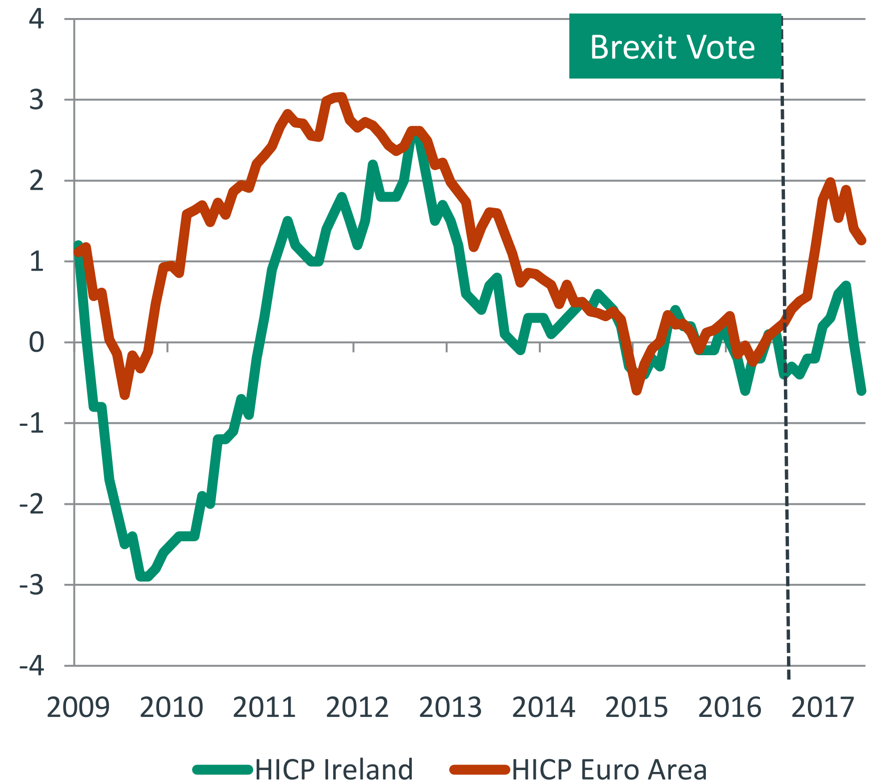
Source: Eurostat, 15-74 age basis

Rising employment and house price rises lift confidence; stagnating consumer prices underpin real income…

Consumer confidence had recovered, though Brexit may have impacted



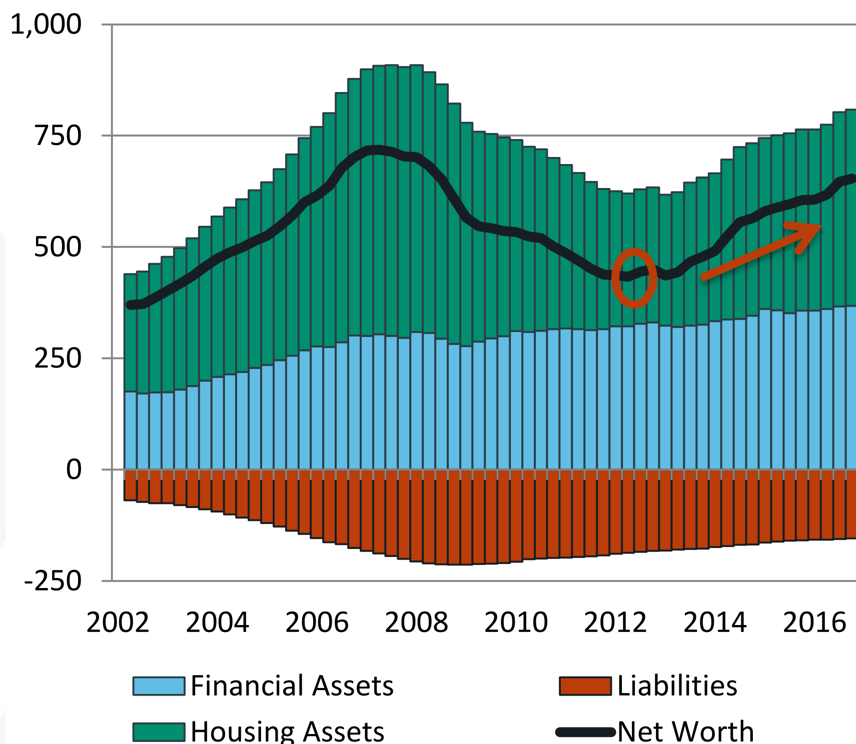
Inflation in Ireland lower than EA due to sterling weakness



Source: KBC, ESRI, CSO; Eurostat

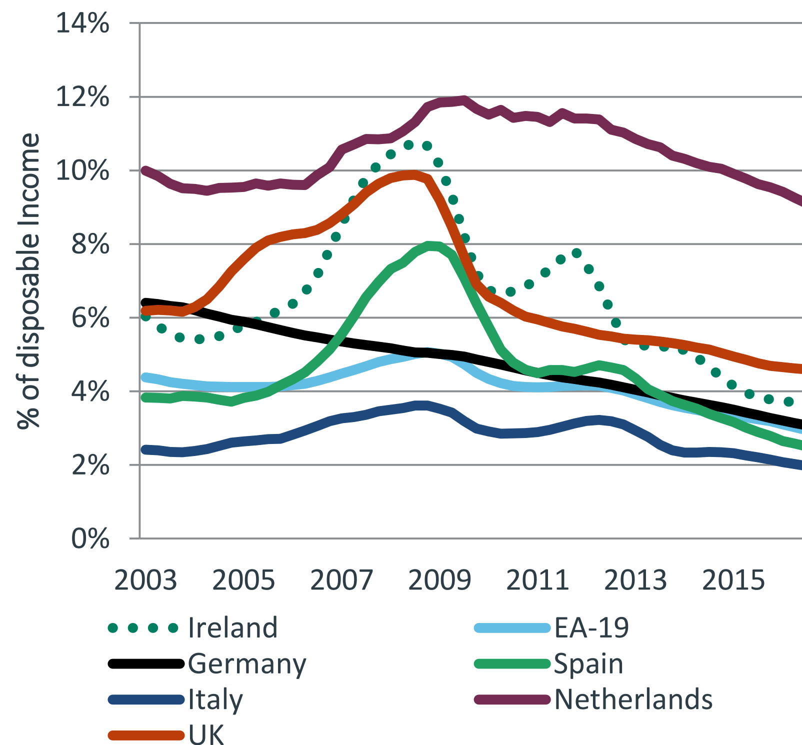
… while household deleveraging continues; rising house prices bolster household balance sheets

Household net worth (€bn) improved since 2012 underpinning consumer spending



Source: CBI, NTMA Calculations

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



Source: CBI, Eurostat NTMA calculations
Note: Non-trackers bare 90% of the interest burden

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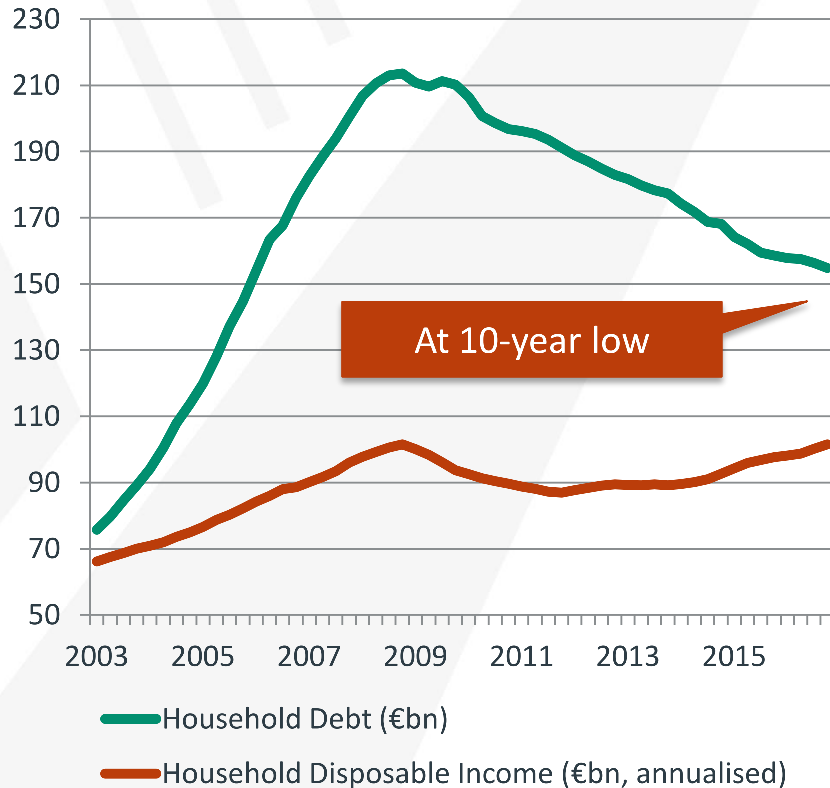
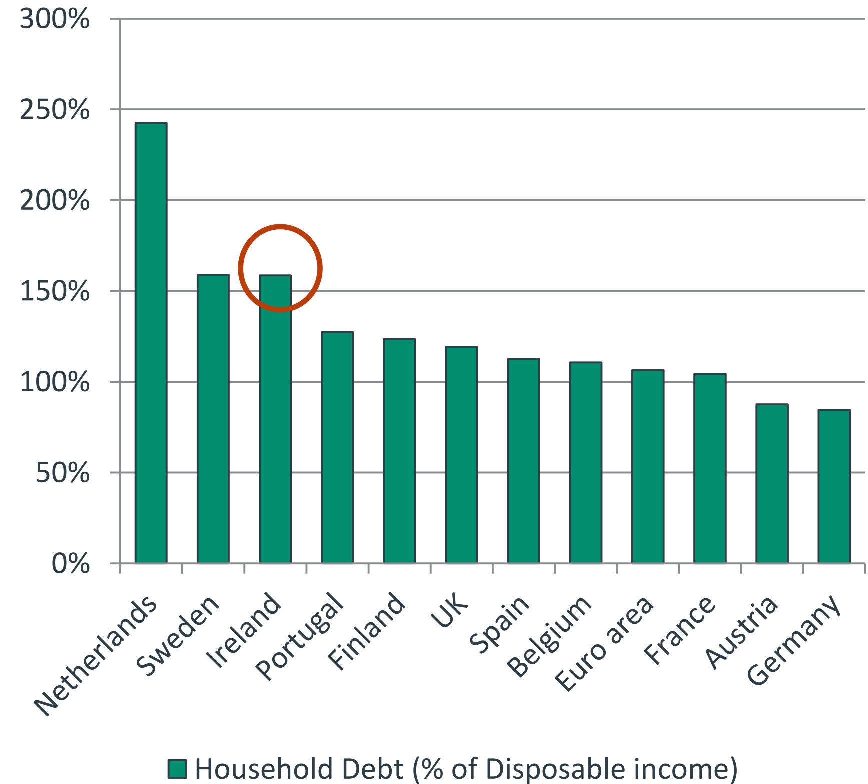
Private debt levels are high but improving

Household debt down €55bn from peak



Source: CBI

Debt to after-tax income* improving (154%) but among highest in Europe



Source: Eurostat

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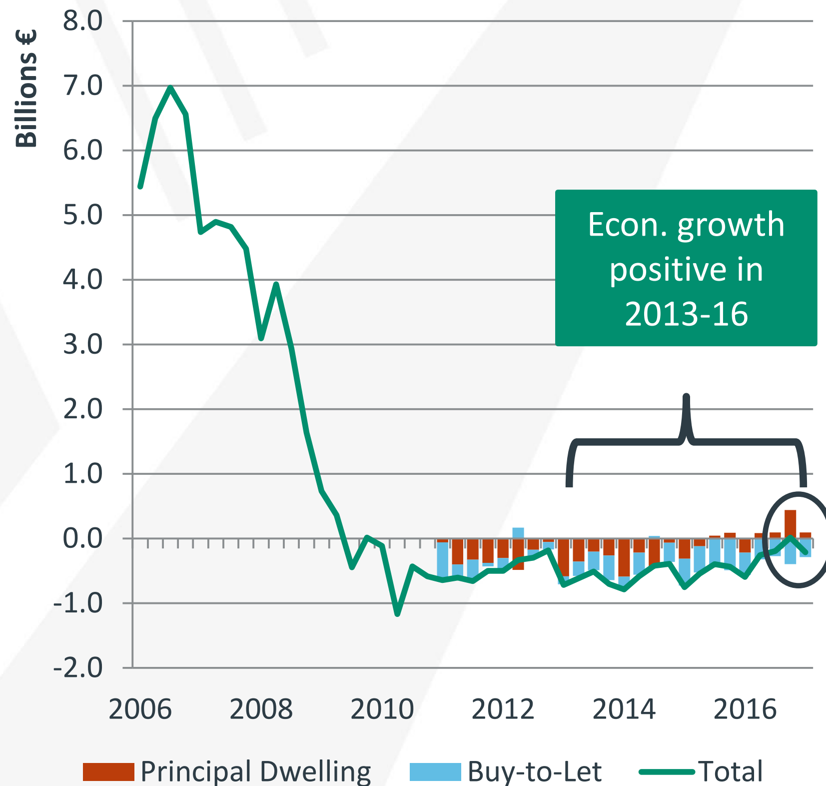
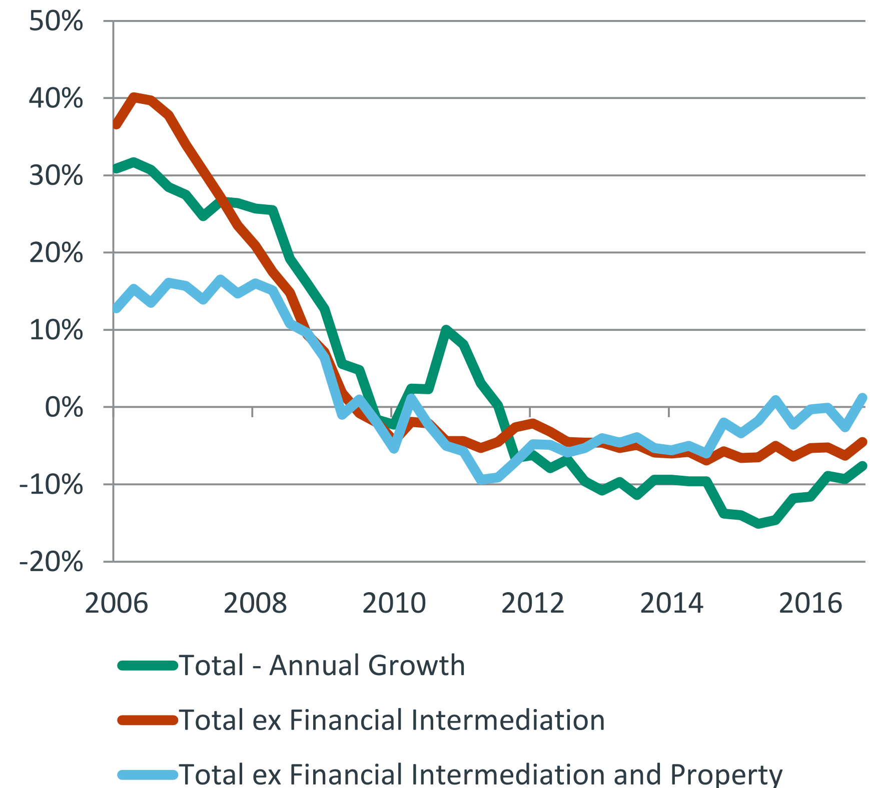
*Measure includes both loans and other liabilities.Excluding other liabilities, debt-to-income ratio is 142%

Recovery has not been driven by credit





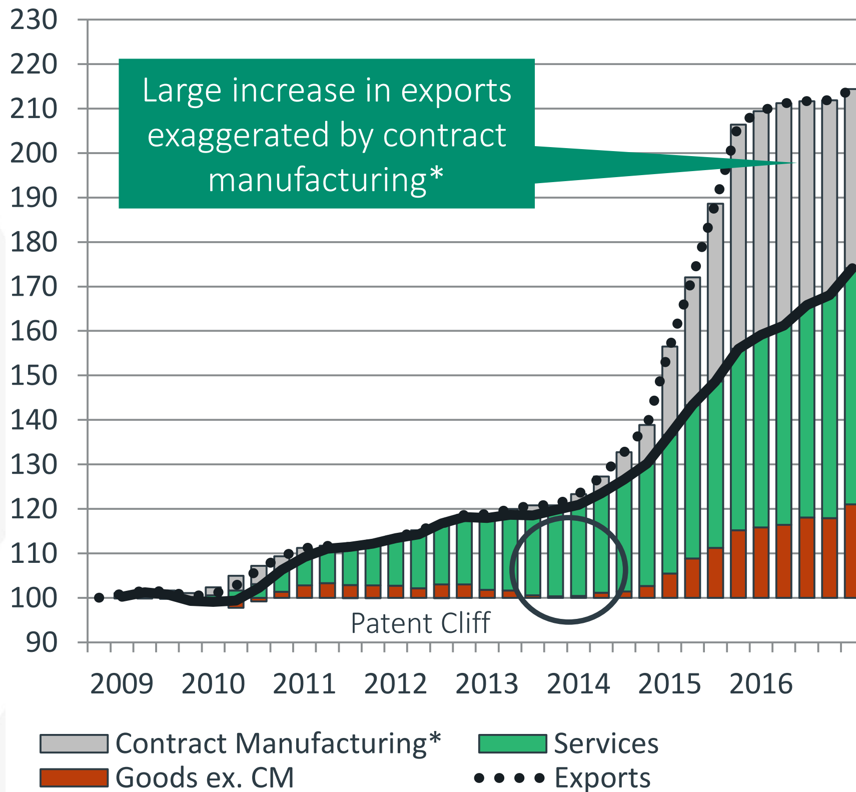
Source: CBI

Gross household saving rate is close to the EU average

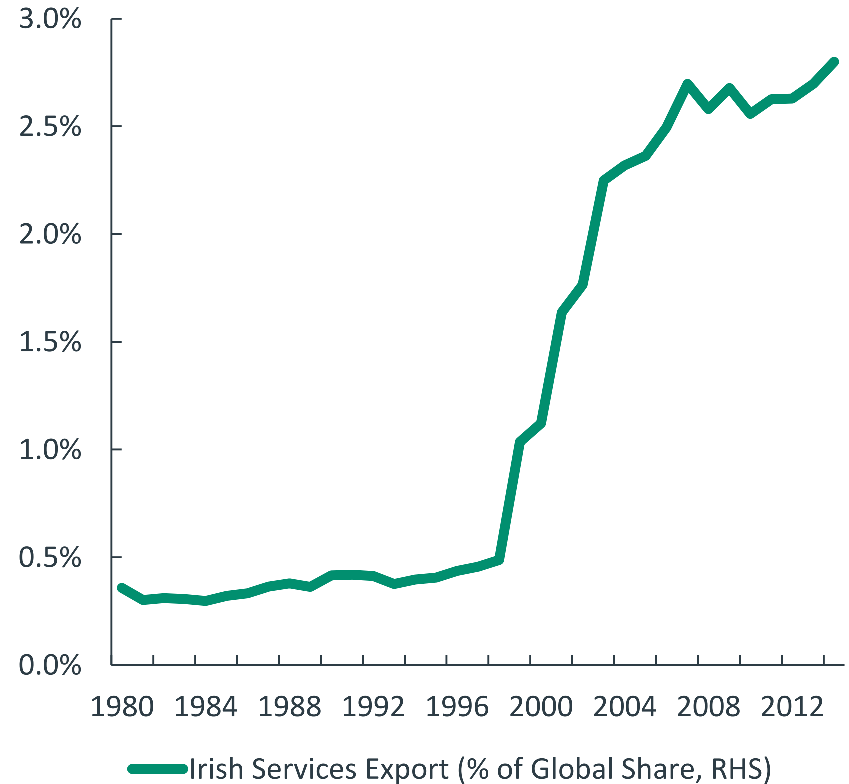
Source: Eurostat, CSO

Service exports have been very strong post-crisis; goods exports excluding contract manufacturing slower

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



Ireland has tripled its share of global service exports in the last 15 years



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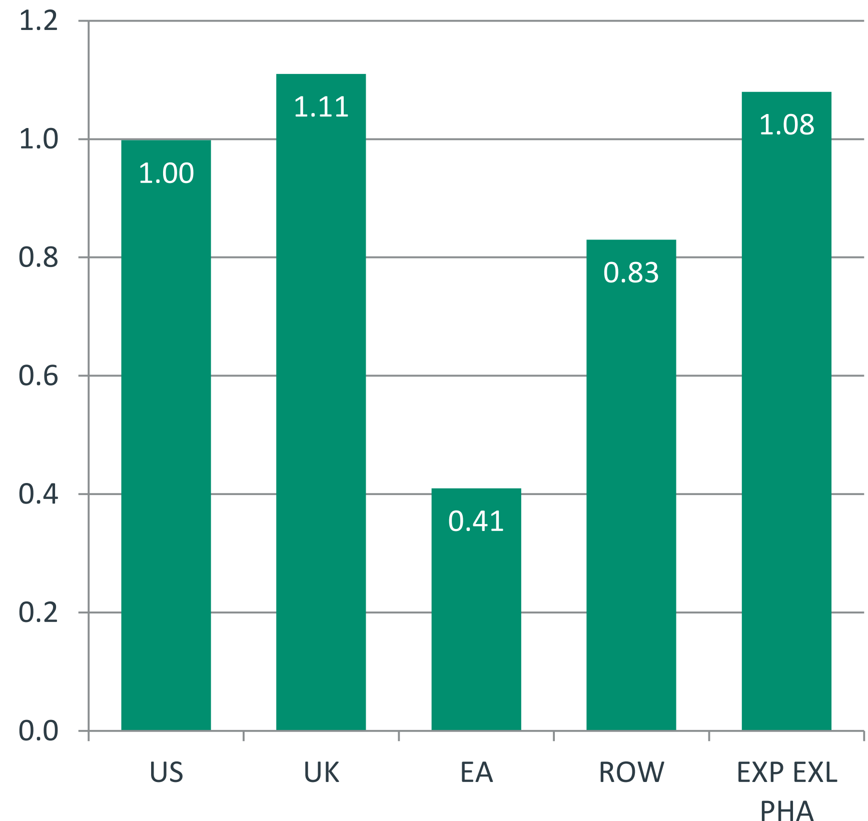
*Source: CSO, NTMA calculations , * Contract manufacturing proxy used see pg. 30; WTO*

Ireland's goods exports respond vigorously to euro movements – in both directions

- A 1% depreciation of the euro increases Irish goods exports to the US by 1%
- The equivalent response for exports to the UK is 1.1% and to the rest of world is 0.8%. Brexit has the opposite effect on Irish exports.
- The EUR/USD exchange rate has a positive effect (elasticity of 0.4) on Irish goods exports to the euro area, due to Ireland-based multinational companies' exports to EA for onward sale to the rest of the world
- The elasticity of total goods exports excluding pharma to the exchange rate >1

Source: CSO; NTMA empirical analysis

Note: All coefficients significant at 99% level; not affected by contract manufacturing. Time period is 1998 to 2016 Q2. For longer time periods, the UK elasticity is smaller (closer to 0.4-0.5 for 1981 onwards).



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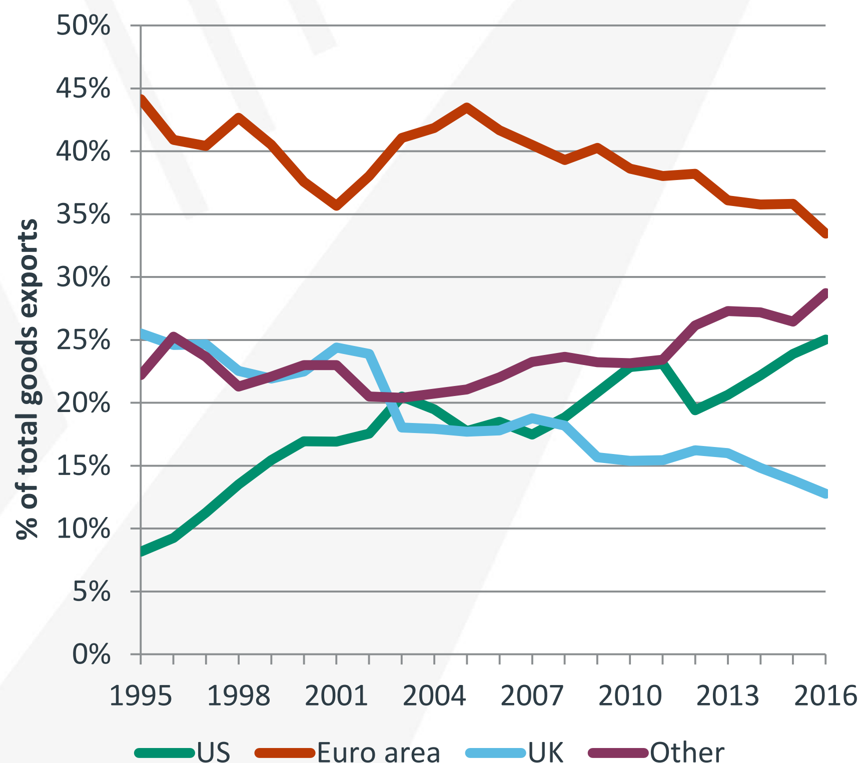
Ireland's openness has been critical to Irish success; Brexit hinders export-led growth

Ireland benefits from export diversification by destination



Source: CSO

Breakdown of Irish trading partners % of total

	Goods			Services		Total	
2016	Exp.	Imp.	2015	Exp.	Imp.	Exp.	Imp.
US	25.0%	12.6%	US	10.0%	21.0%	16.0%	18.4%
UK	12.8%	23.4%	UK	19.4%	8.0%	16.7%	13.6%
EA	33.5%	27.9%	EA	29.3%	26.4%	32.1%	26.8%
China	3.1%	5.9%	China	2.8%	0.3%	2.4%	2.2%
Other	25.6%	30.2%	Other	38.5%	44.4%	32.8%	39.0%

Source: CSO, NTMA calculations; Data not affected by contract manufacturing

Section 2: Fiscal & NTMA Funding

Fiscal accounts are robust;
GDP revisions mean we need to look beyond usual debt ratios

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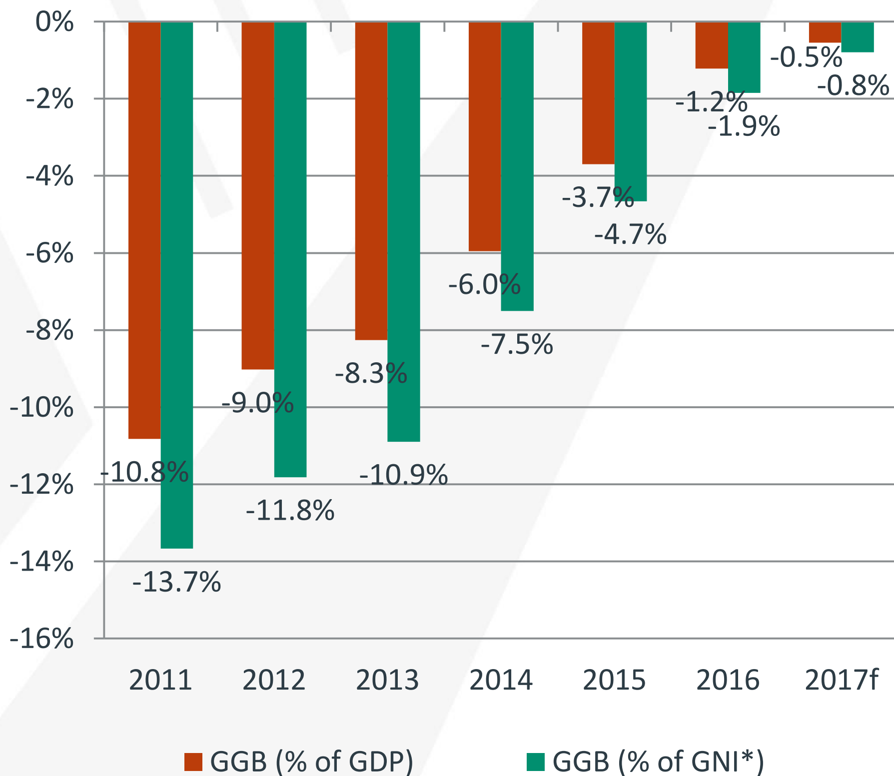
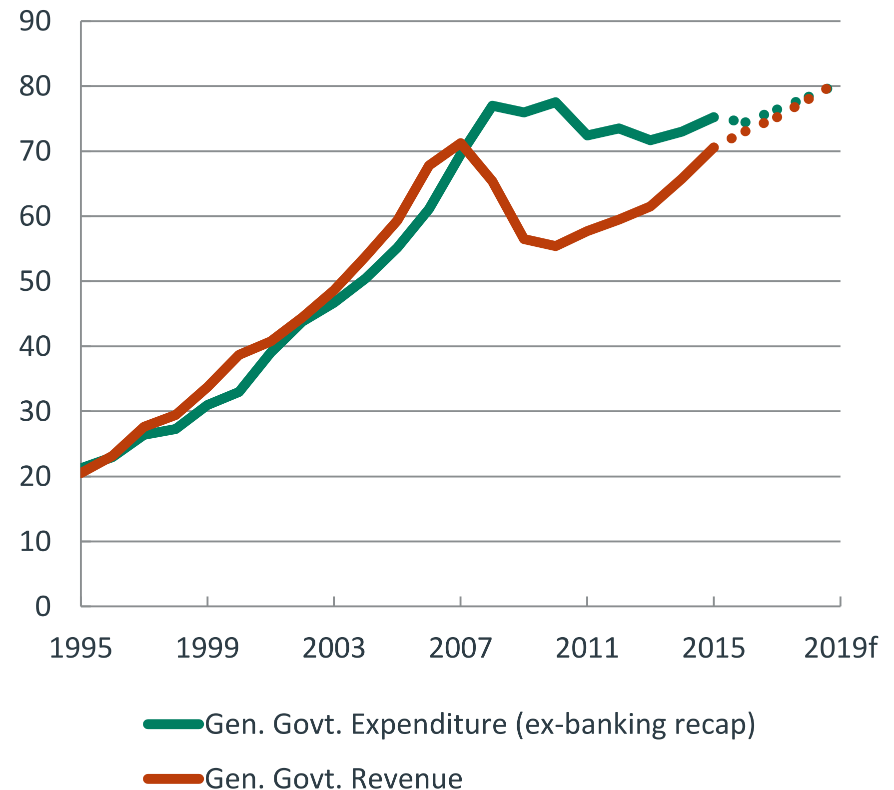
Irrespective of GDP moves, Ireland has had six straight years of fiscal outperformance

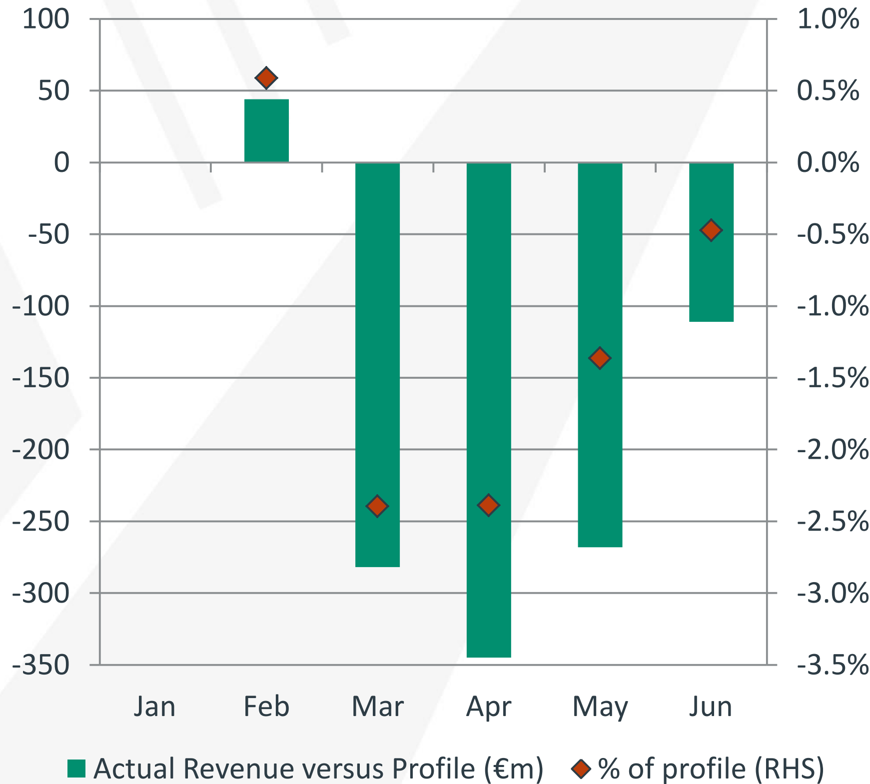




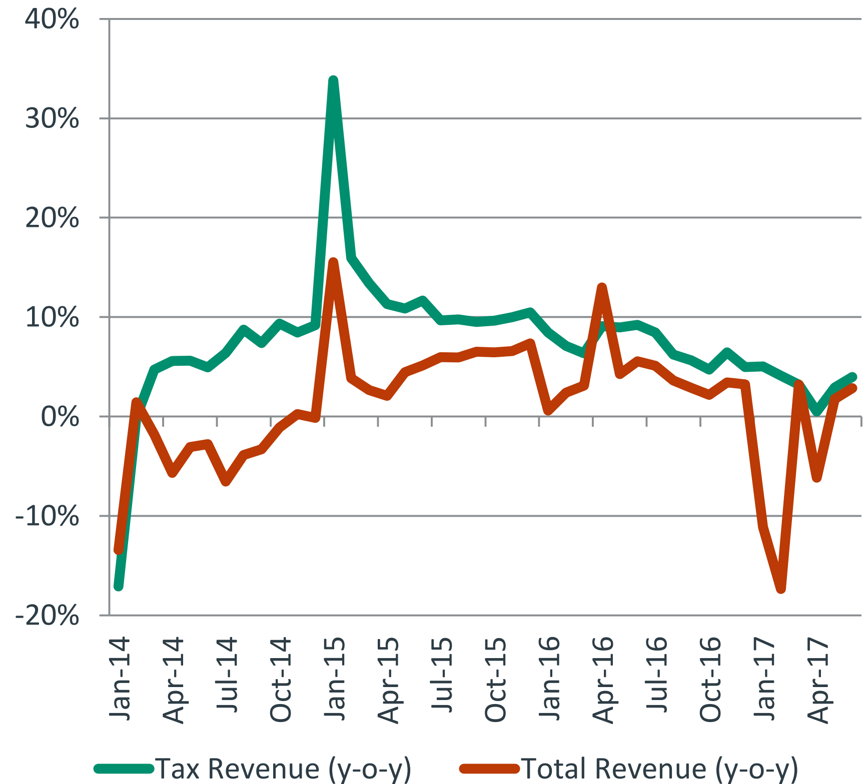
Source: Department of Finance, CSO

Despite deviations in earlier months, govt. revenue figures are almost back in line with expectations

At end-H1, govt. revenue close to expected profile despite deviations earlier in 2017



Tax and total revenue growing in line with economic growth



Source: Department of Finance

Ireland has confirmed debt sustainability: debt is falling naturally through "snowball" effect

€4.8bn primary surplus in 2016

10
€bns
5
0
-5
-10
-15
-20
-25

10%
5%
0%
-5%
-10%
-15%
-20%
-25%

1995 1997 1999 2001 2003 2005 2007 2009 2011 2013 2015 2017 f

Underlying Primary Balance
Interest
GGB underlying
Structural Balance (% potential GDP, RHS)

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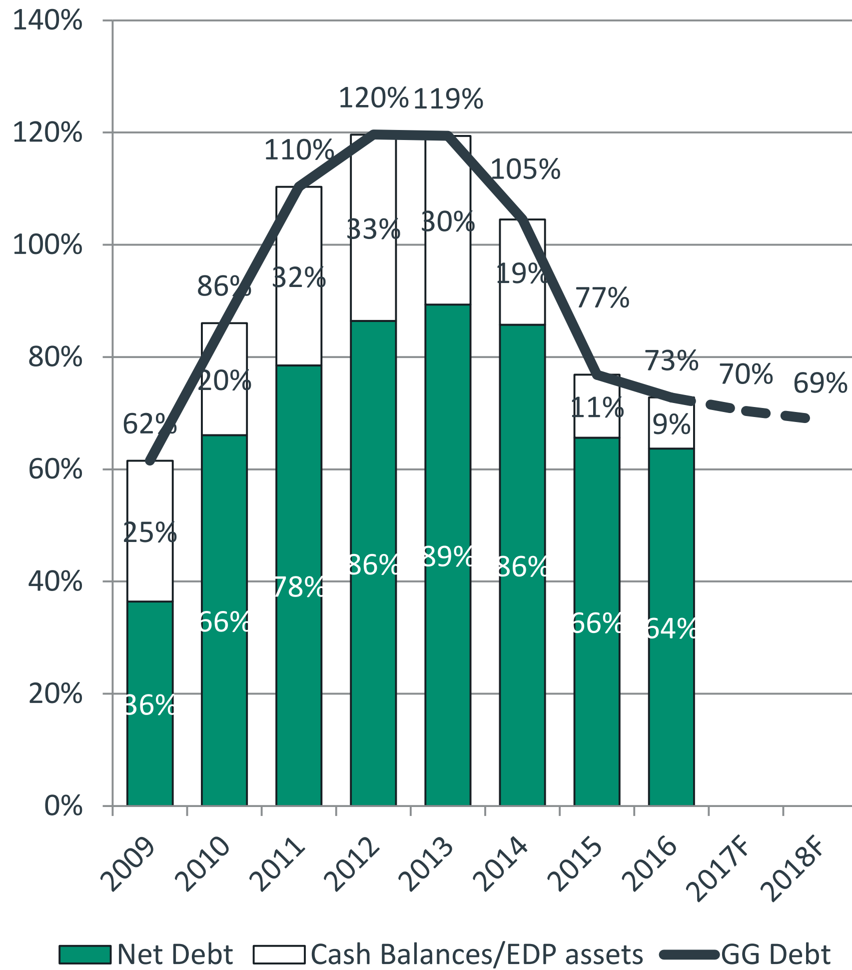
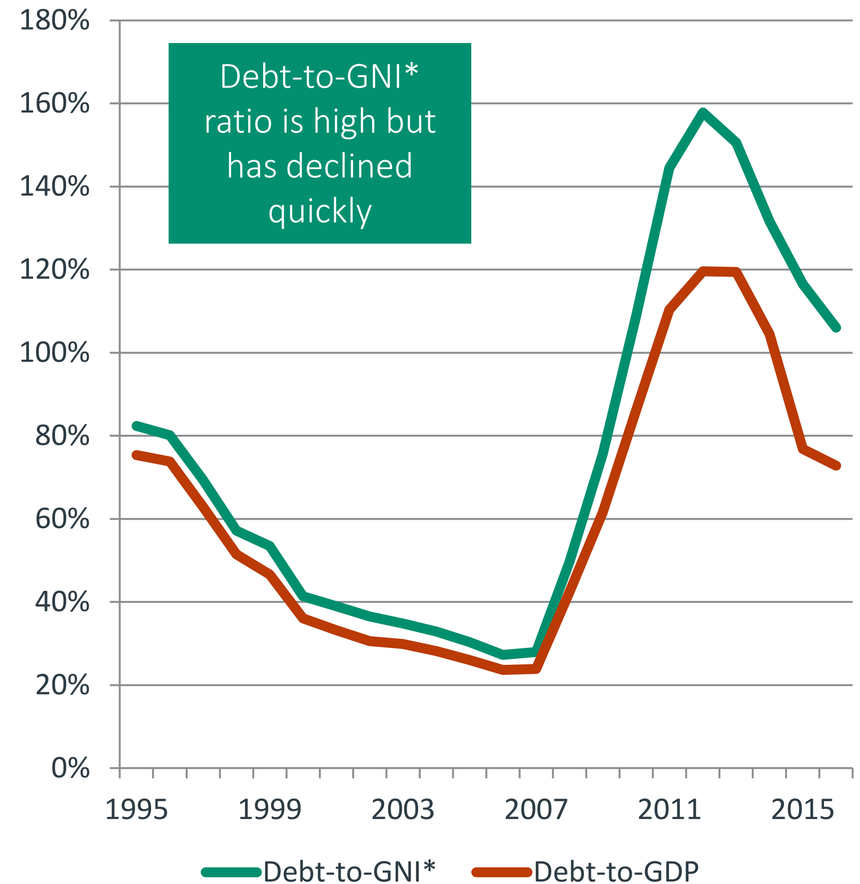
Source: CSO; Eurostat; IMF

Gross Government debt fell to 72.8% of GDP in 2016; GG debt to GNI* fell to 106%; reality somewhere in between





Source: CSO; Department of Finance, NTMA calculations

Alternative debt service metrics must also be used for Ireland e.g. General Government debt to GG Revenue

400%
350%
300%
250%
200%
150%
100%
50%
0%

2002 2004 2006 2008 2010 2012 2014 2016 2018F 2020F

Ireland Spain Italy Belgium EA-19

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Source: CSO; Department of Finance

Better to use broad range of debt serviceability metrics

2016	GG debt to GDP %	GG debt to GG revenue %	GG interest to GG rev %
Greece	179.0	360.0	6.5
Portugal	130.4	302.8	9.8
Italy	132.6	281.3	8.4
Cyprus	107.8	274.9	6.6
Ireland	72.8	274.6	8.5
Spain	99.4	262.5	7.4
UK	85.2	217.3	6.3
Belgium	106.0	208.7	5.6
EA19	89.3	193.0	4.8
EU28	83.6	186.1	4.8
Slovenia	79.7	182.6	7.3
France	96.5	181.8	3.6
Austria	84.6	170.9	4.2
Germany	68.3	151.7	3.1
Netherlands	62.3	141.4	2.5
Slovakia	51.9	130.0	4.1
Finland	63.6	117.2	2.0

Source: Eurostat, NTMA calculations

Over 50% of Irish debt stock held by “sticky” sources

Billions €

250
200
150
100
50
0

2006 2008 2010 2012 2014 2016

IGBs* Retail Eurosystem Holdings Other Debt** Total Debt

Source: CSO, ECB, NTMA Analysis
**excludes those held by Eurosystem. Euro system holdings include SMP, PSPP and CBI holdings of FRNs. Figures do not include ANFA holdings which are likely to further increase the Eurosystem’s holdings.*
*** 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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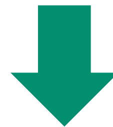
EU fiscal rules set the "tramlines" for Ireland's fiscal policy

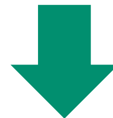
2016 – 2019 Preventive Arm

Objective:
Balanced budget in structural terms



Requirements of Preventive Arm

1. Ireland must improve its structural balance by 0.6% of GDP in 2017 and meet its medium-term objective of -0.5% of potential GDP structural balance by 2018.
2. Ireland must comply with the Expenditure Benchmark. The Benchmark explicitly sets the rate at which public expenditure can grow in the absence of revenue-raising measures.



Adherence to these rules will be judged ex-post. The revised GDP data may hamper the judgement of Ireland's performance under the SGP

Maturity profile – modest refinancing in 2017 and 2018

Billions €

25
20
15
10
5
0

2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031-35 2036-40 2041-45 2046-50 2051-53

Bond (Fixed & ILB) IMF EFSM EFSF Bond (Floating Rate) Bilateral

Source: NTMA

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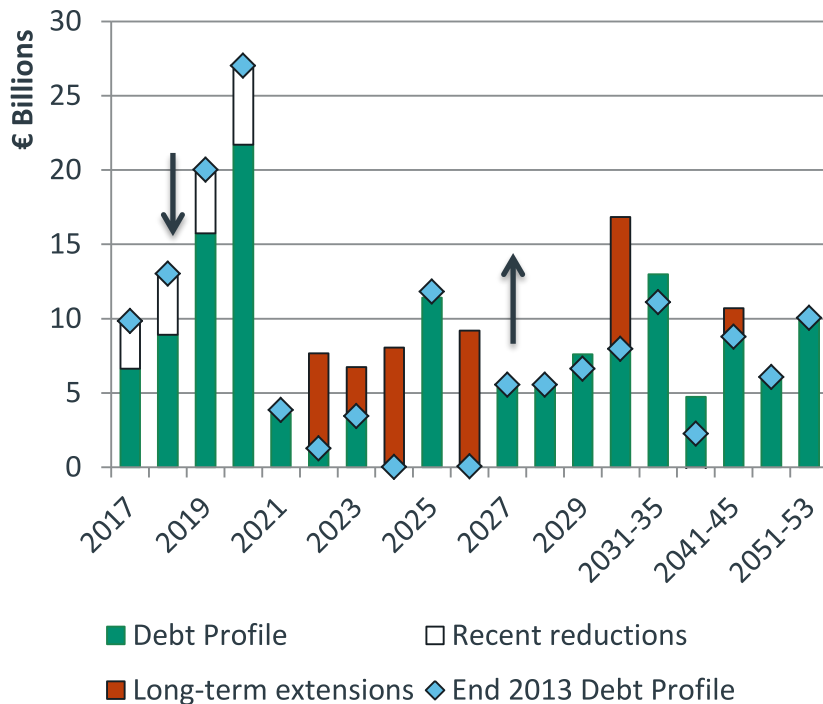
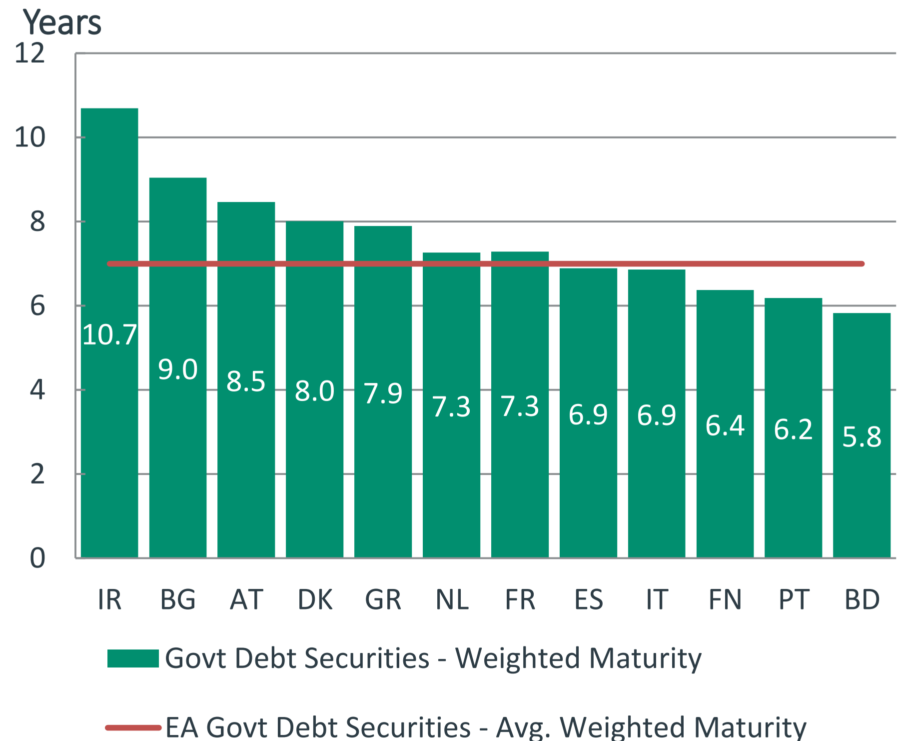
Note: EFSM loans are subject to a 7-year extension that will bring their weighted-average maturity from 12.5 years to 19.5 years. It is not expected that Ireland will refinance any of its EFSM loans before 2027. As such we have placed the EFSM loan maturity dates in the 2027-31 range although these may be subject to change.

We improved our 2017-2020 maturity profile significantly in recent years

Various operations since 2013 have led to an extension of maturity…



…Ireland compares favourably to other European countries



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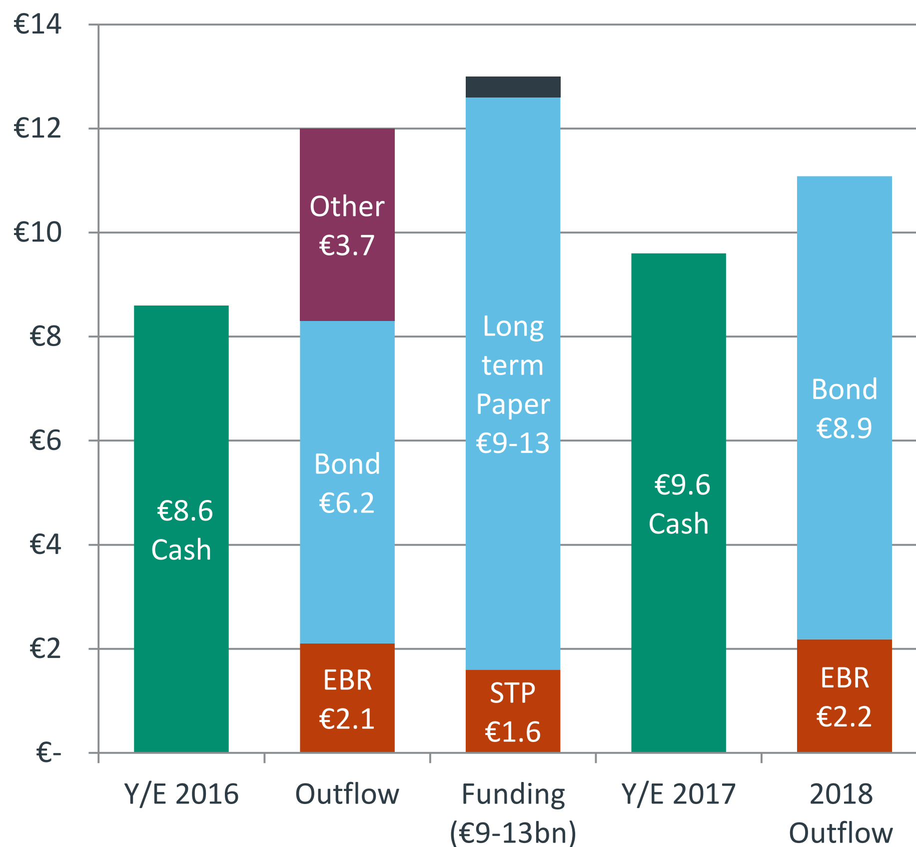
Source: NTMA; ECB

**excludes programme loans. Ireland's maturity including these loans is still c.11 years.*

NTMA funded approximately three to four quarters in advance; 2017 issuance to be larger than 2016

- With only two major redemptions in 2016/17 issuance was lower in 2016 than in recent years.
- Our next bond redemption will be in October 2017 - €6.2bn.
- NTMA expects to issue €9-13bn worth of long term bonds in 2017. By end-Q2, the NTMA issued €9.35bn.
- Exchequer cash balance at end H1 2017 was €21.5bn.

Source: NTMA



- EBR is the Exchequer Borrowing Requirement (Department of Finance estimate)
- Cash balances excludes non-liquid asset classes such as Housing Finance Agency (HFA) Guaranteed Notes.
- Other Outflows includes contingencies, including for potential bond purchases.
- Other Funding includes Retail (State Savings).
- Rounding may occur.

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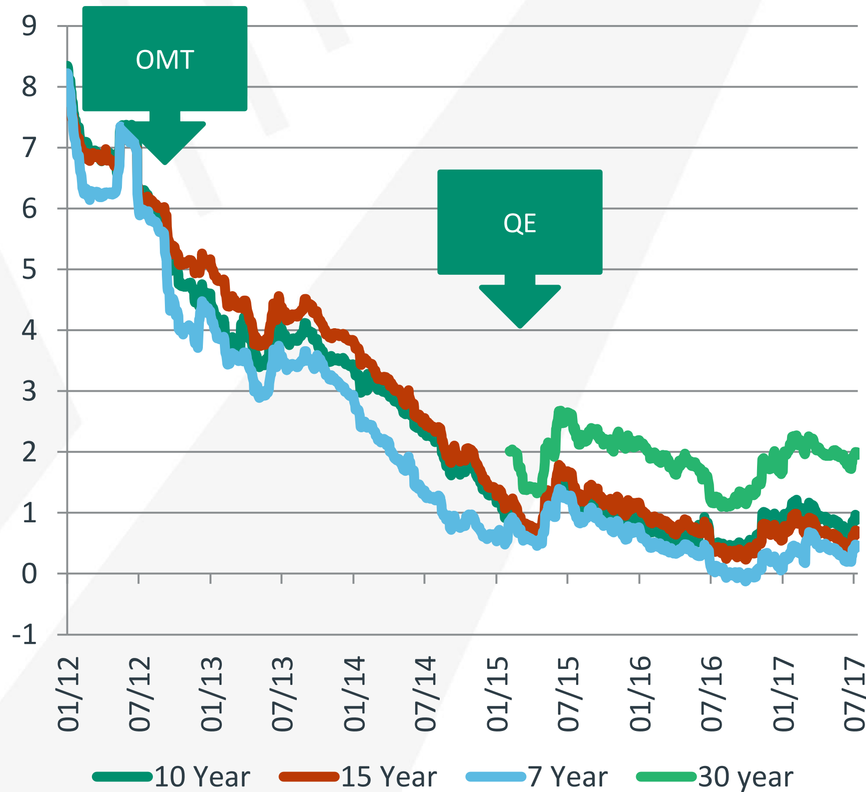
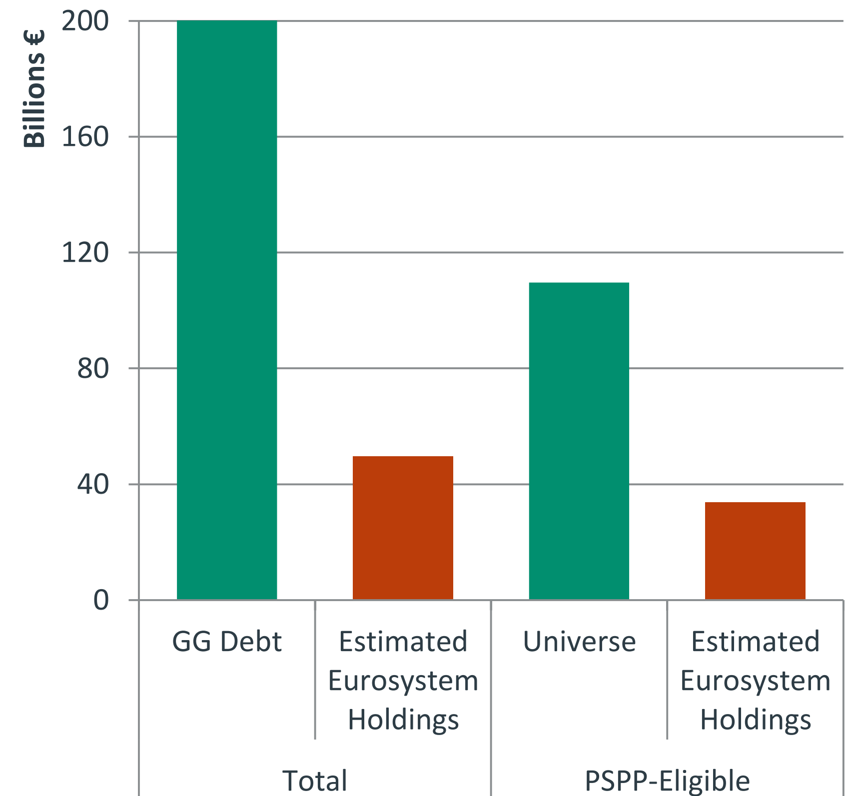
ECB action has helped Ireland's bond performance

OMT and QE (PSPP) have both helped Ireland and other EA sovereigns



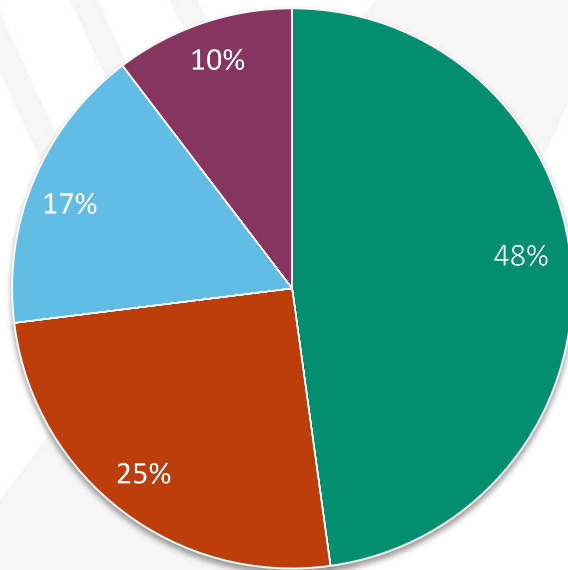
Purchases of IGBs under PSPP will slow in 2017 to c.€6bn but still significant



Source: DataStream, Bloomberg; ECB, NTMA Analysis
Note: As of end-Q1 2017

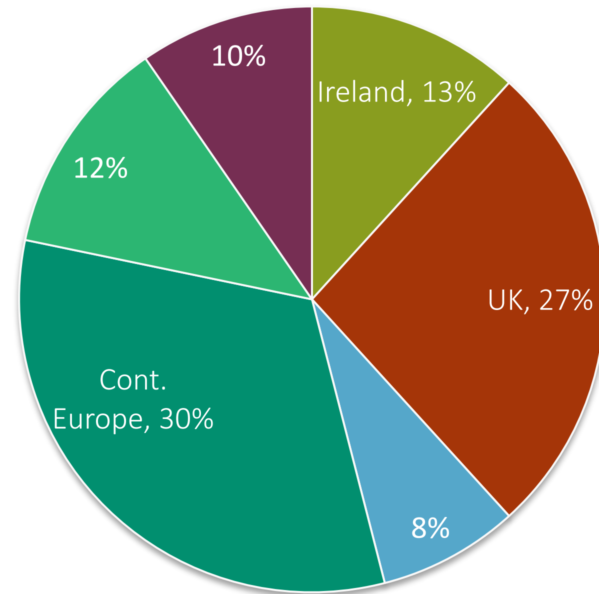
Investor base for Government bonds is wide and varied

Investor breakdown: Average over last 8 syndications



- Fund/Asset Manager
- Banks/Central Banks
- Pensions/Insurance
- Other

Country breakdown: Average over last 8 syndications



- Ireland
- UK
- US and Canada
- Continental Europe
- Nordics
- Other

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Source: NTMA

Central Bank of Ireland holdings increase domestic share of Irish Government bonds (IGBs) through PSPP

€ Billion				
End quarter	Dec 2014	Dec 2015	Dec 2016	**Mar 2017**
1. Resident	50.8	50.8	54.6	**55.4**
(as % of total)	(43.7%)	(40.6%)	(44.9%)	**(43.5%)**
– Credit Institutions and Central Bank*	45.9	46.9	51.1	**52.1**
– General Government	1.6	0.8	0.5	**0.4**
– Non-bank financial	2.9	2.8	2.7	**2.6**
– Households (and NFCs)	0.4	0.3	0.3	**0.3**
2. Rest of world	65.5	74.2	67.1	**71.9**
(as % of total)	(56.3%)	(59.4%)	(55.1%)	**(56.5%)**
Total MLT debt	116.3	125.1	121.6	**127.2**

Source: CBI

Breakdown of Ireland's General Government debt

€ Billion	2011	2012	2013	2014	2015	2016
Currency and deposits (mainly retail debt)	58.4	62.1	31.4	20.9	20.7	21.3
Securities other than shares, exc. financial derivatives	94.0	87.3	112.7	119.1	125.6	124.0
- Short-term (T-Bills, CP etc)	3.8	2.5	2.4	3.8	1.2	2.3
- Long-term (MLT bonds)	90.2	84.8	110.3	115.3	124.4	121.8
Loans	37.3	60.6	71.3	63.3	54.9	55.2
- Short-term	0.6	1.9	1.4	1.3	1.1	0.7
- Long-term (official funding and prom notes 2009-12)	36.8	58.7	69.8	62.0	53.8	54.5
General Government Debt	189.8	210.0	215.3	203.3	201.1	200.6
EDP debt instrument assets	55.2	58.7	54.6	36.8	29.6	*25.1*
Net Government debt	134.5	151.3	160.7	166.5	171.5	175.5

Source: CSO (2016)

Section 3: Brexit

Brexit is likely net negative for Ireland but opportunities may arise too

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Negative for the Irish economy: each 1% drop in UK GDP may lower Ireland's GDP by between 0.3-0.8%

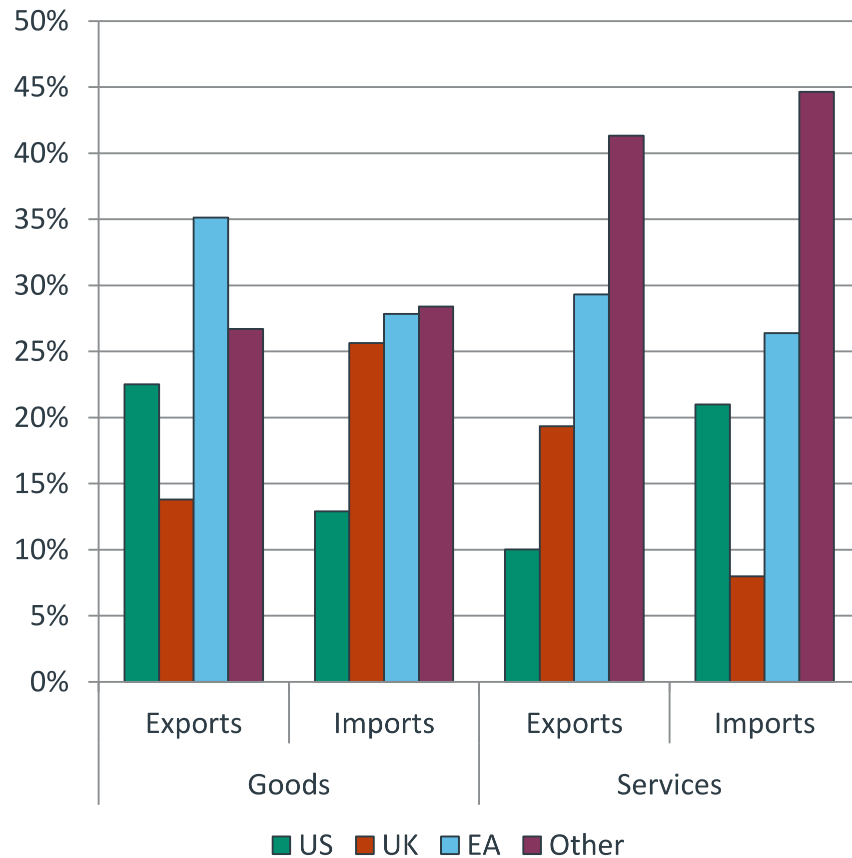
Cons

- Trade
  - Lower demand from UK/ tariffs
  - FX: £ lower v € (1% annual avg. move = 1% hit to Irish exports to the UK)
  - British market as test-bed less feasible
- Higher import prices possible in long-term: tariffs may outweigh FX benefit
- EU political situation may deteriorate
- Banking sector likely to suffer because of its UK operations
- Political economy (border?, ally on direction of EU economic policy)
- Regions suffer (agriculture, tourism), while Dublin may benefit (via FDI that leaves Britain)

Pros

- Increased FDI, as multinationals avoid turmoil
  - Financial services (passporting)
  - Other multinationals - especially IT and business services
- Commercial property occupancy could rise; there may also be an influx of well paid workers
- ECB and fiscal response in Europe
- Some trade offsets
  - Irish companies may steal EU market share from British ones

Trade channel is likely to be negatively impacted



- **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 25-30% 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 17% of Ireland's total exports, but Ireland is more dependent than that, when you consider the employment related to those exports
- **SMEs (particularly agri-food and tourism) likely to be more affected than larger companies by the introduction of tariffs and barriers to trade**

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Source: CSO (2015)

There could be significant trade impacts on Ireland in drastic "hard" Brexit scenario

- Lawless and Morgenroth (2016) have conducted analysis of the trade effects of applying the WTO tariffs for external EU trade to UK trade - i.e. a significant "hard" Brexit scenario.
- By matching over 5200 products to the WTO tariff applicable to external EU, the authors find that such an outcome would result in significantly different impacts on trade across countries. Ireland would be the hardest hit.
- Also given the heterogeneity of tariff levels, some sectors in Ireland would be disproportionately affected: food and textiles especially.
- This scenario analysis may overstate the eventual outcome on Irish/UK trade from Brexit, but it is not implausible were negotiations to end in deadlock.

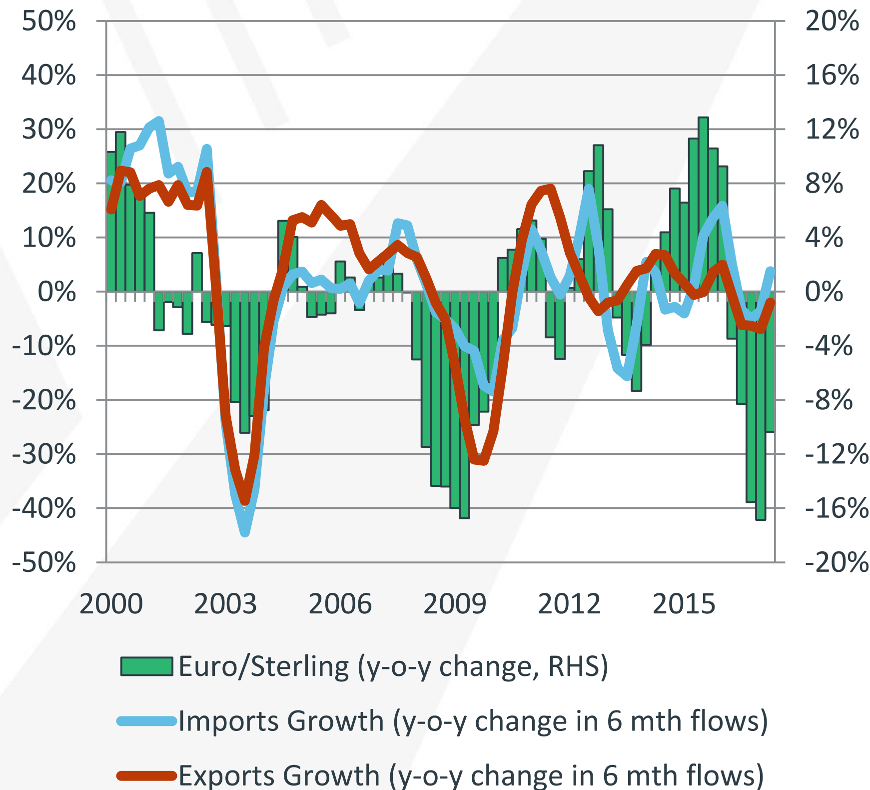
Estimated Trade Reductions in "WTO rules Hard Brexit" Scenario

	% of exports lost with UK	% of total exports lost	% of UK exports lost with EU partner	% of total UK Exports lost
Ireland	**30.6**	**4.2**	**27.6**	**1.5**
Belgium	35.1	3.1	25.7	1.0
Spain	38.6	2.9	25.6	0.7
Germany	34.1	2.5	19.4	2.0
Denmark	39.8	2.5	24.4	0.2
Portugal	33.0	2.2	27.7	0.1
EU Total	**30.5**	**2.1**	**22.3**	**9.8**
Poland	30.6	2.1	20.8	0.3
NL	22.1	2.0	15.6	0.9
Italy	29.9	1.7	26.9	0.8
France	24.9	1.6	20.9	1.2
Greece	28.4	1.2	27.2	0.1

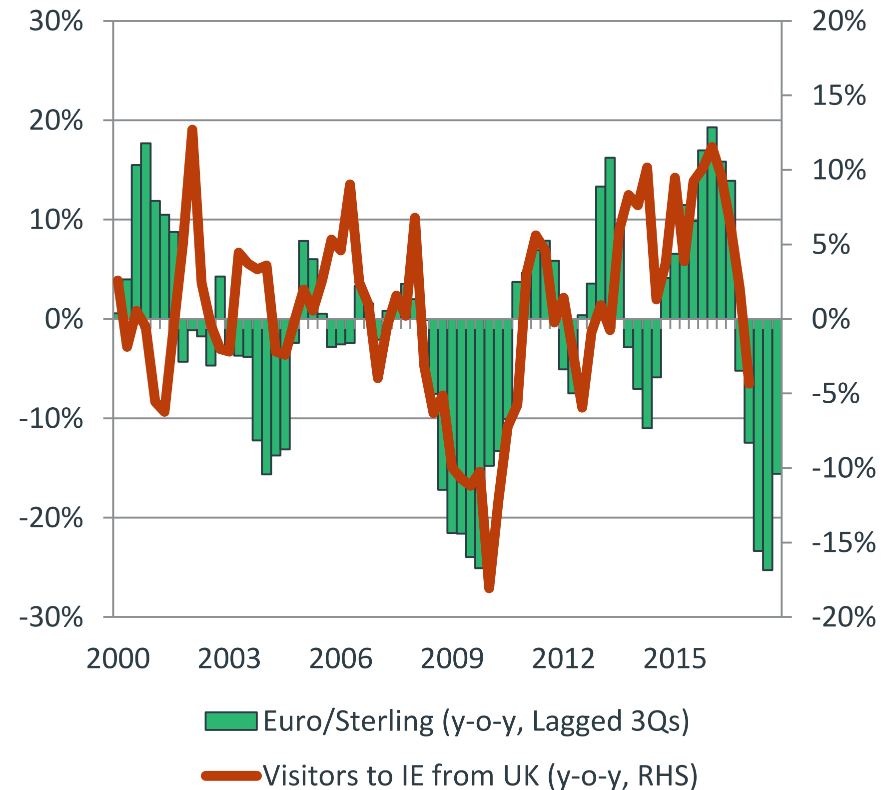
Source: ESRI Research 2016

Effects of Brexit already visible from currency impact

IE/UK goods trade has slowed since early 2016 on back of currency moves…



…as has UK visitor numbers (note time lag)



Source: CSO; DataStream; CSO

Foreign firms in the UK might consider relocation following 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 likely to compete with Frankfurt, Paris and Amsterdam for financial services, if the UK (City of London) loses EU passporting rights on exit. There may be opportunities too in the clearing of trades in €.
- Ireland's FDI opportunity will depend on the outcome of post-exit trade negotiations.

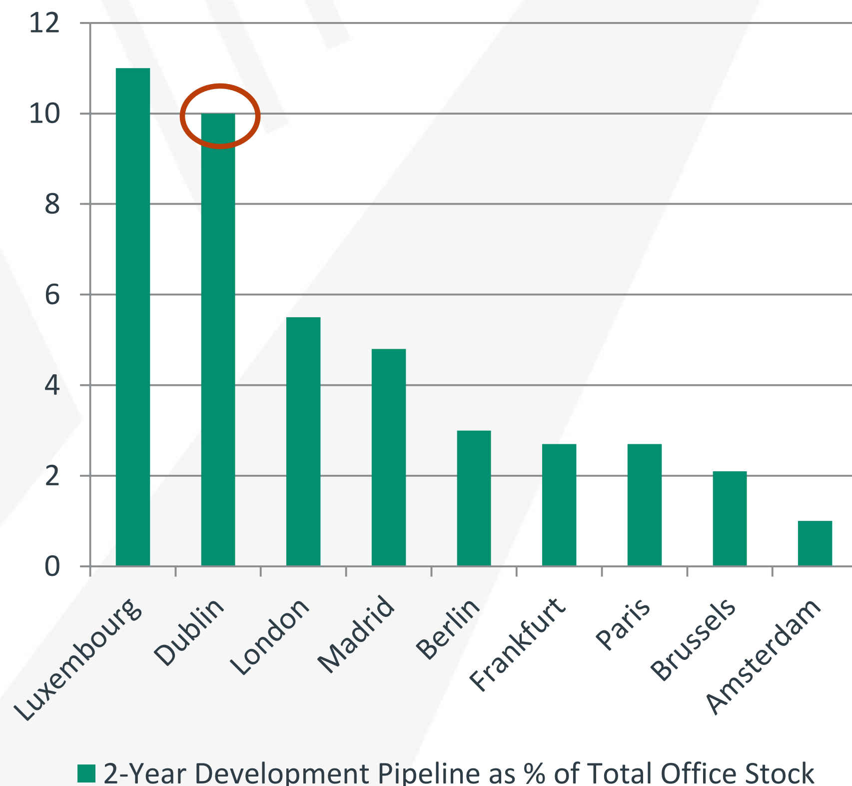
Why choose Ireland

Research has shown that FDI decisions are based on a wide range of factors:

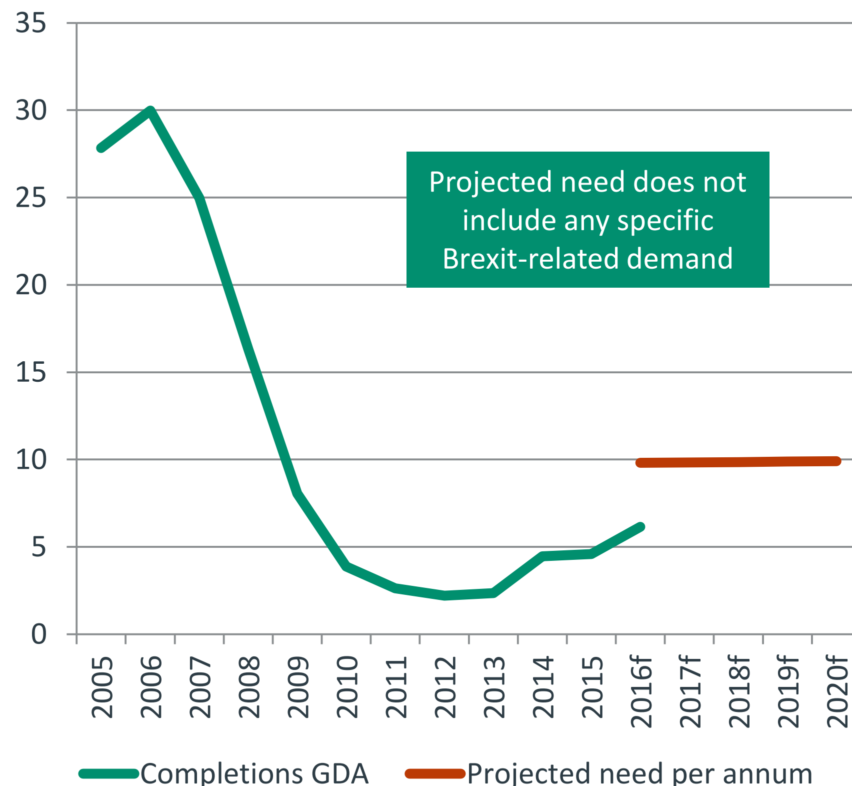
- EU Membership
- Common language (important for US companies)
- Law system (Ireland and UK both have common law structure)
- Pro-business environment
- Corporate tax
- Educated workforce
- Cost competitiveness
- Regulatory environment (financial sector)

FDI: Dublin in particular could benefit

Office space is not an issue for attracting firms to Dublin



Residential property may be a bottle-neck in Greater Dublin Area in the short-term (000s)



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Source: CBRE; CSO, NTMA analysis
** GDA = Greater Dublin Area = Dublin, Meath, Wicklow and Kildare*

Irish banks have exposure to UK market: challenging environment following Brexit

BoI UK exposure

	End-2016	% of Group Total
Total Income	€600m	19.3%
Credit Outstanding	€33.4bn	40.0%
Operating Profit	€188m	15.6%
Impairment charge	(€99m)	55.6%

AIB UK exposure

	End-2016	% of Group Total
Total Income	€310m	11.8%
Credit Outstanding	€9.3bn	14.3%
Operating Profit	€171m	13.6%
Impairment writeback	€37m	12.6%

Source: Published bank accounts

Section 4: Long term fundamentals

Ireland's long run future looks bright. Key is retaining competitiveness by keeping wages and, hence, costs down

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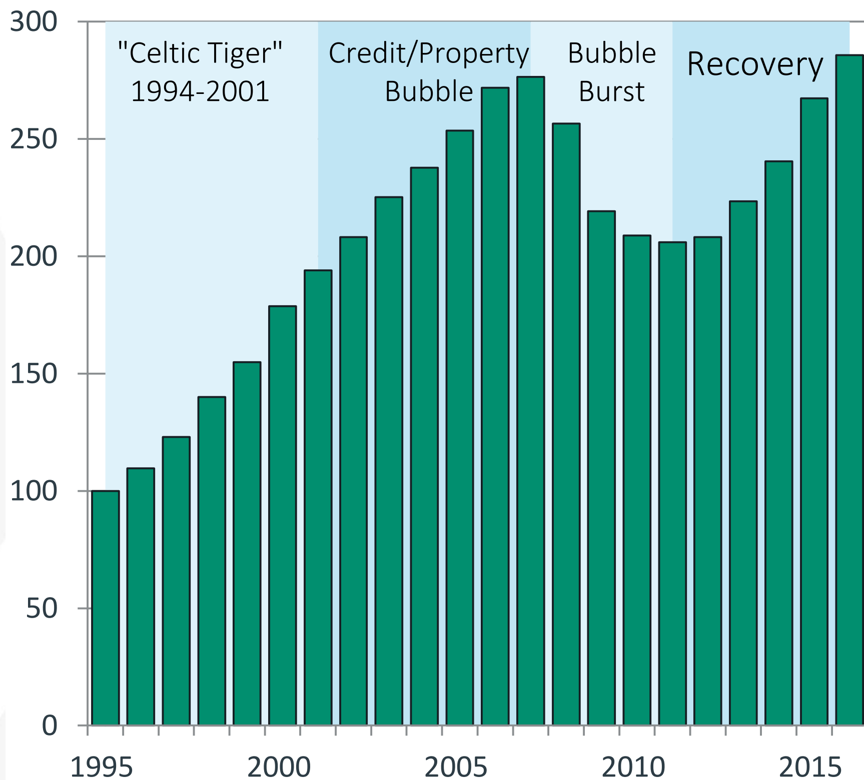
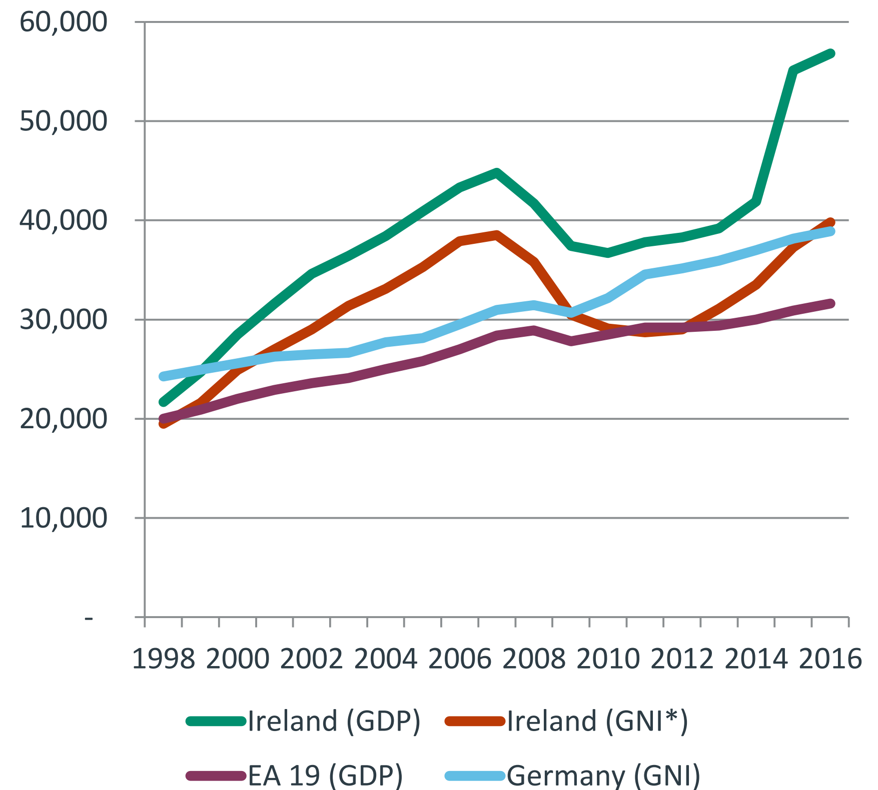
Much rebalancing has taken place; GNI* per capita surpassed 2007 levels in 2016

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



Ireland's GNI* per capita compares favourably to EA counterparts



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Source: CSO

Ireland's current account in surplus but heavily affected by MNC activity and re-domiciled PLCs

Historically-high current account surplus (% of GDP) is flattered by re-domiciled PLCs and intangible assets

Source: CSO

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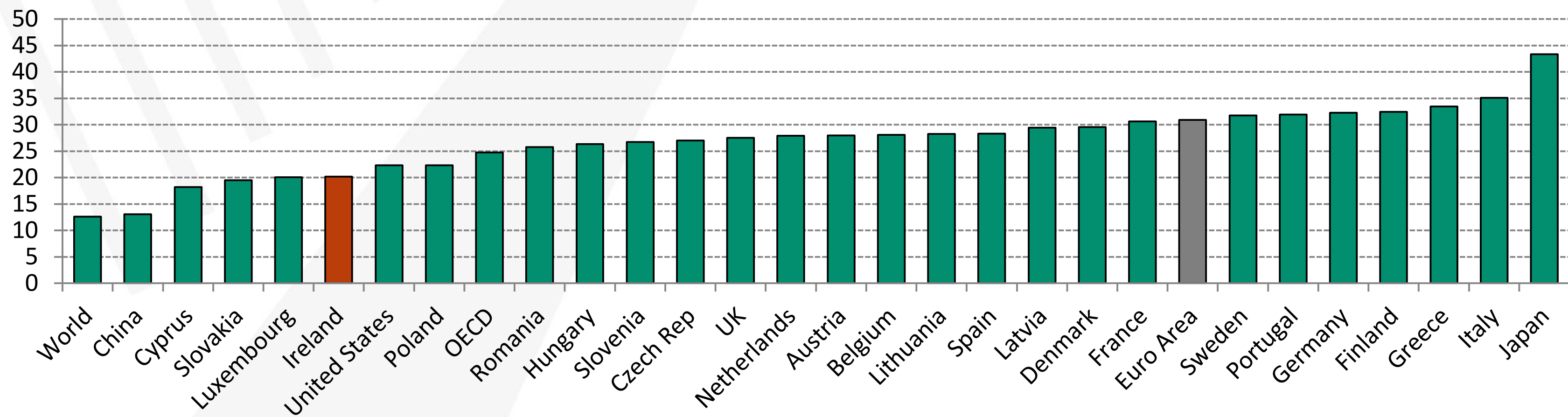
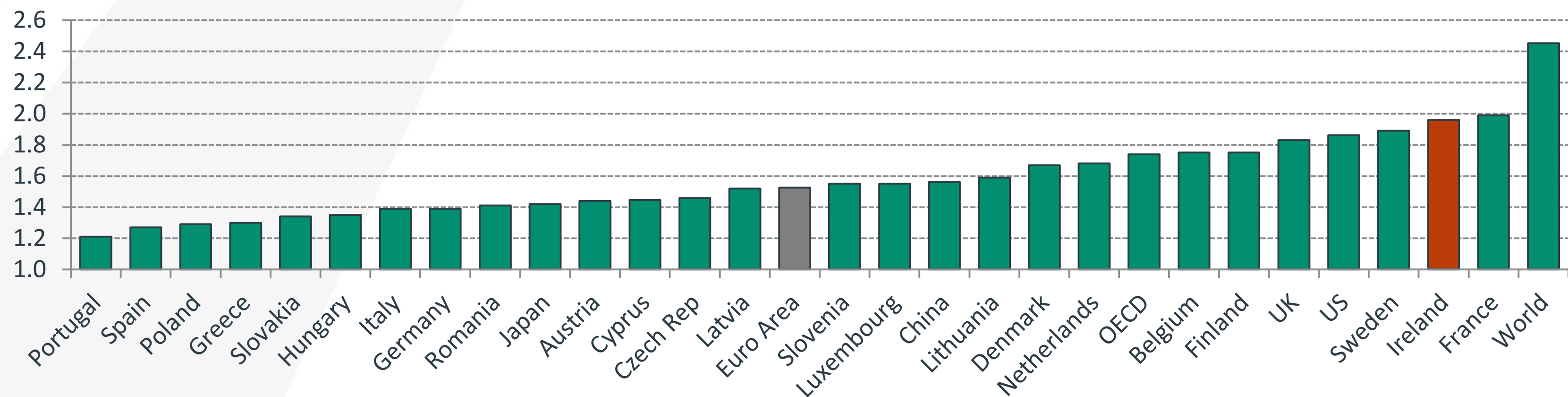
* For discussion on the undistributed profits of redomiciled PLCs see Fitzgerald, J. (2013), 'The Effect of Redomiciled PLCs on GNP and the Irish Balance of Payments'

Favourable population characteristics underpin debt sustainability over longer term

Old age dependency ratio (65+ : ages 15-64) compares well against OECD countries



Fertility rates in Ireland are above typical international replacement rates



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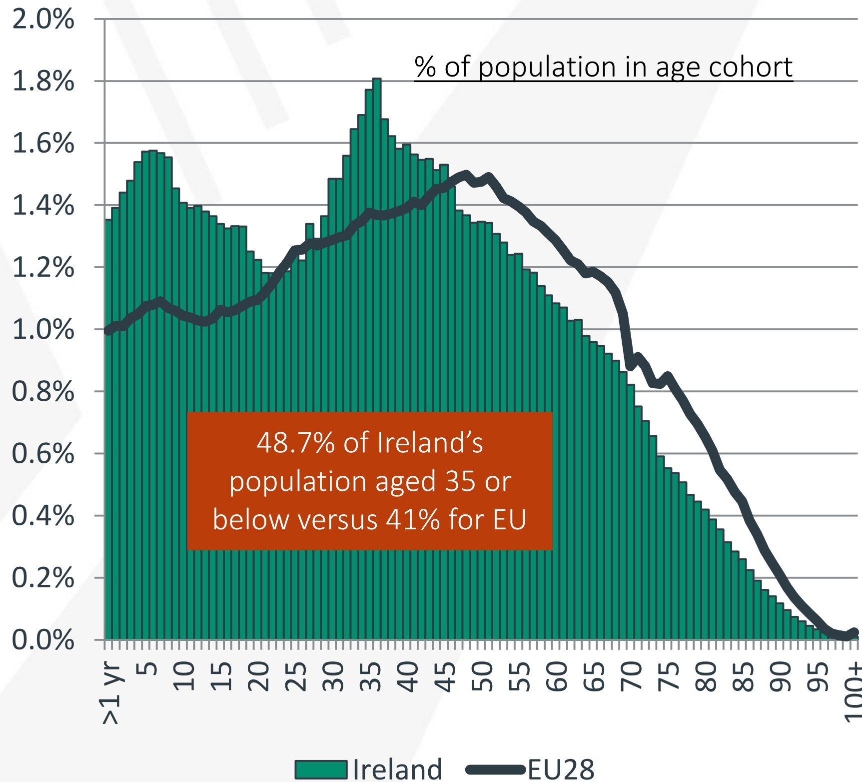
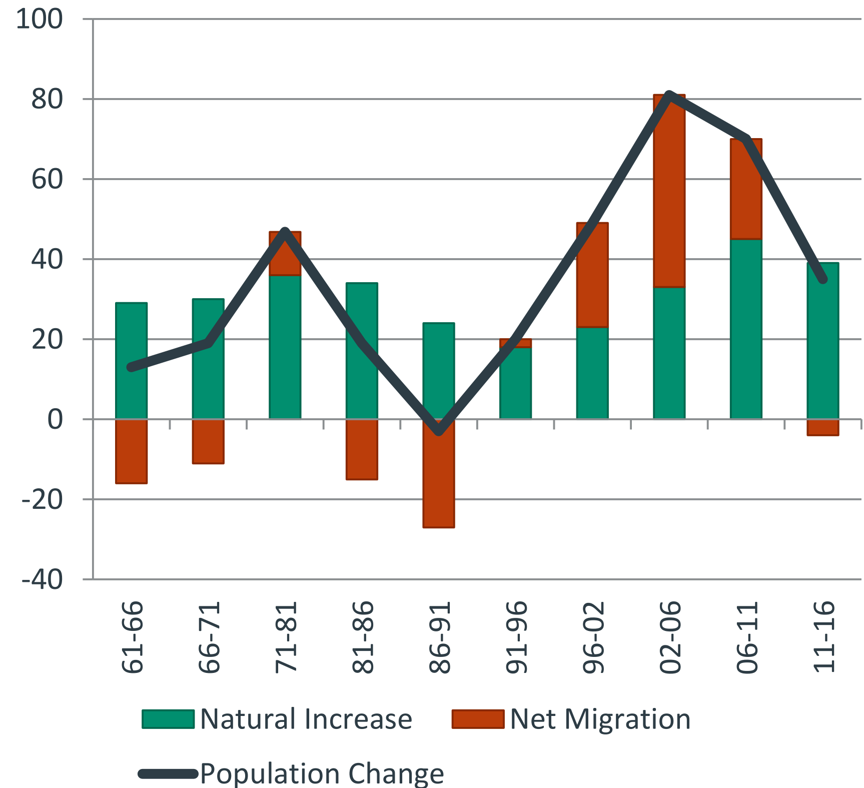
Source: World Bank WDI (2015 for OAD ratio, 2014 for Fertility)

Ireland's population jumped to 4.76m in 2016 – up 175,000 on the 2011 Census

Ireland's population profile healthier than the EU average



Net migration negative (000s) in recent years but improving alongside economy



Source: Eurostat (2016) CSO; CSO

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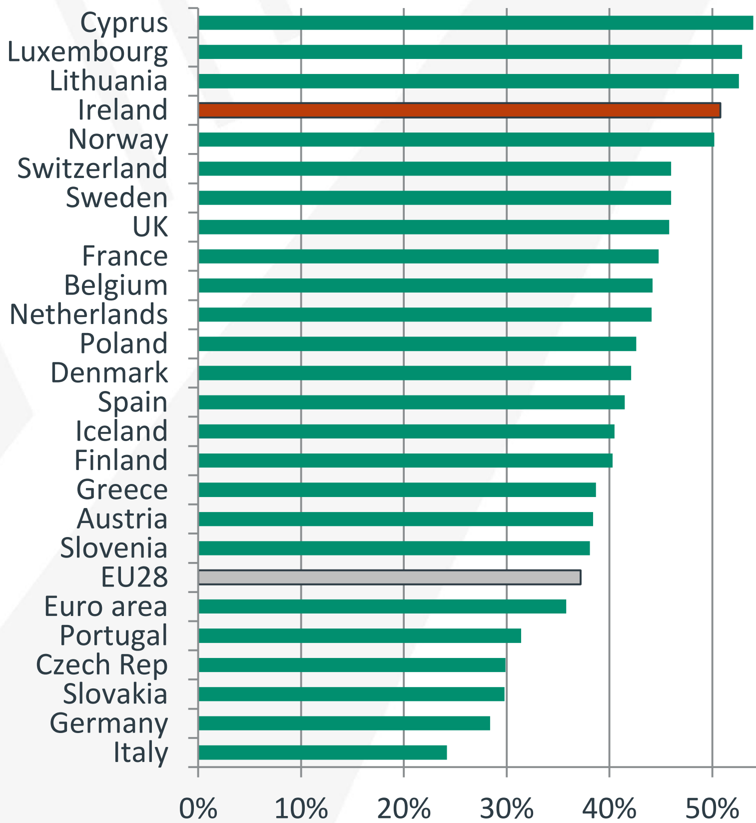
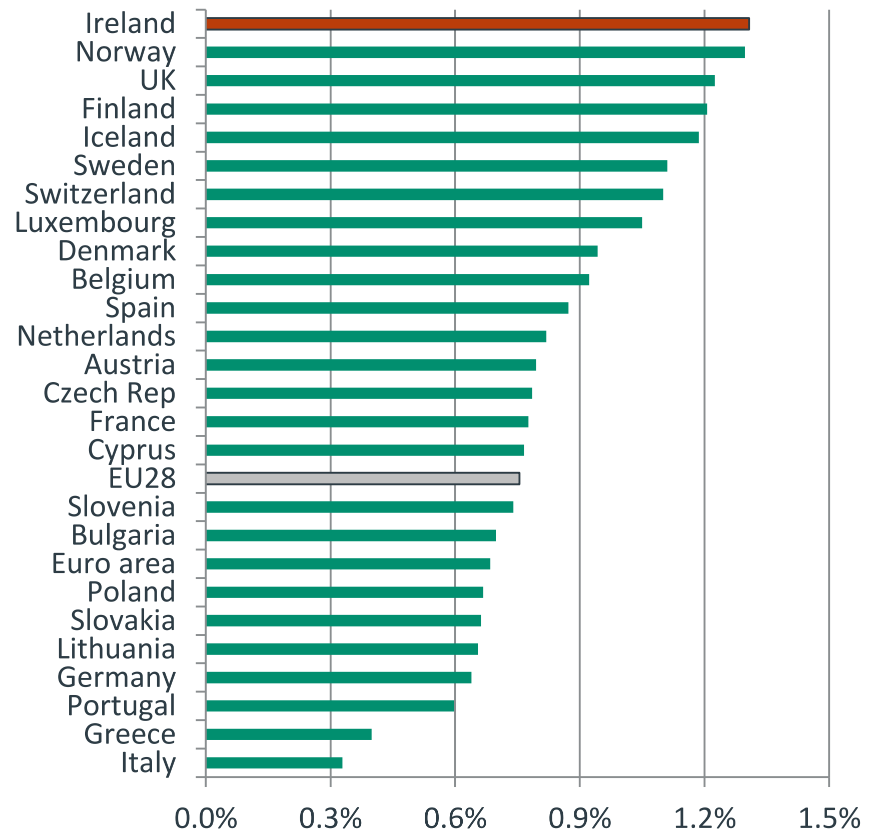
- Census 2016 data suggest net migration might have been much lower than previously thought.

Workforce is young and educated - especially so in IT

Ireland has one of the largest % of 25-34 years old with a third-level degree…



…and the highest % of population working in IT with a third-level degree

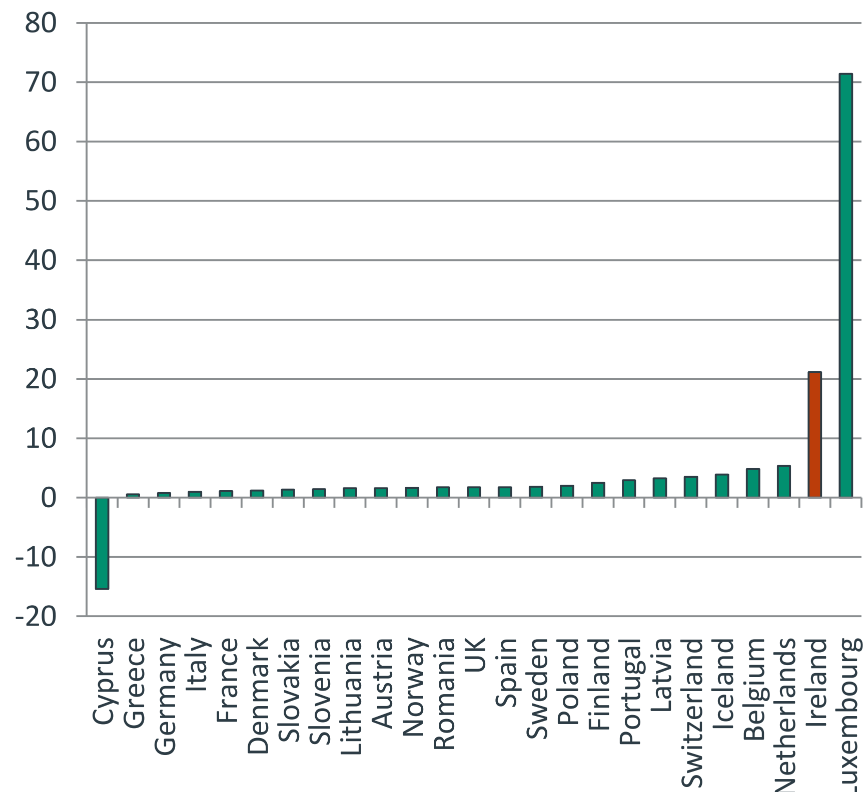


Source: Eurostat

Ireland continues to attract foreign investment: educated workforce one key reason

Average PISA score for selected countries across maths, reading and science

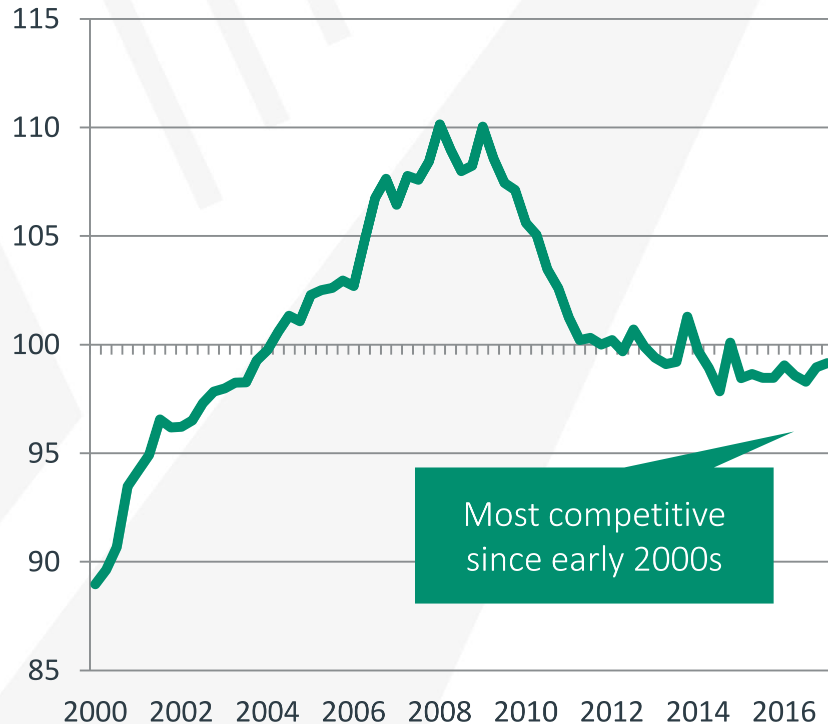
Average FDI inflows p.a. % of GDP, 2011 – 2015



*Source: OECD; Unctad (UN) database * Malta excluded for presentation purposes – average FDI inflow of 143% of GDP over period.*

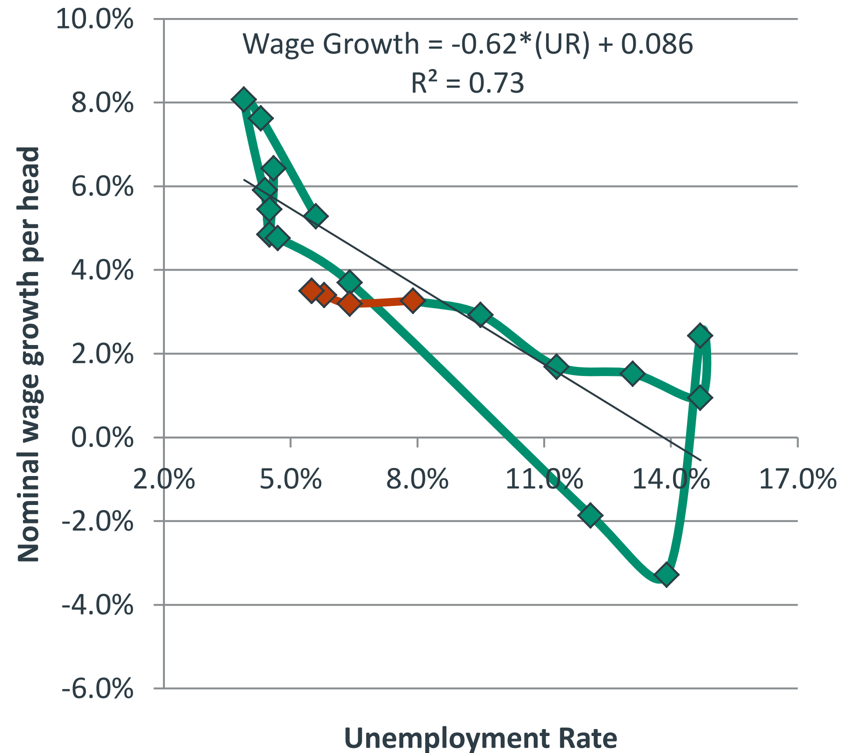
Ireland really competitive now, so we need to avoid repeat of mid-2000s

Nominal Labour Cost Ratio – IE vs Euro Area



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

Wage growth a natural consequence of improving labour conditions (1999-2021)



*Source: CSO, NTMA analysis *red dots are SPU2017 forecasts (2017-2021); Non-Agriculture employment /wage data*

Section 5: Property

Property prices are rising thanks to lack of supply and strong capital inflows

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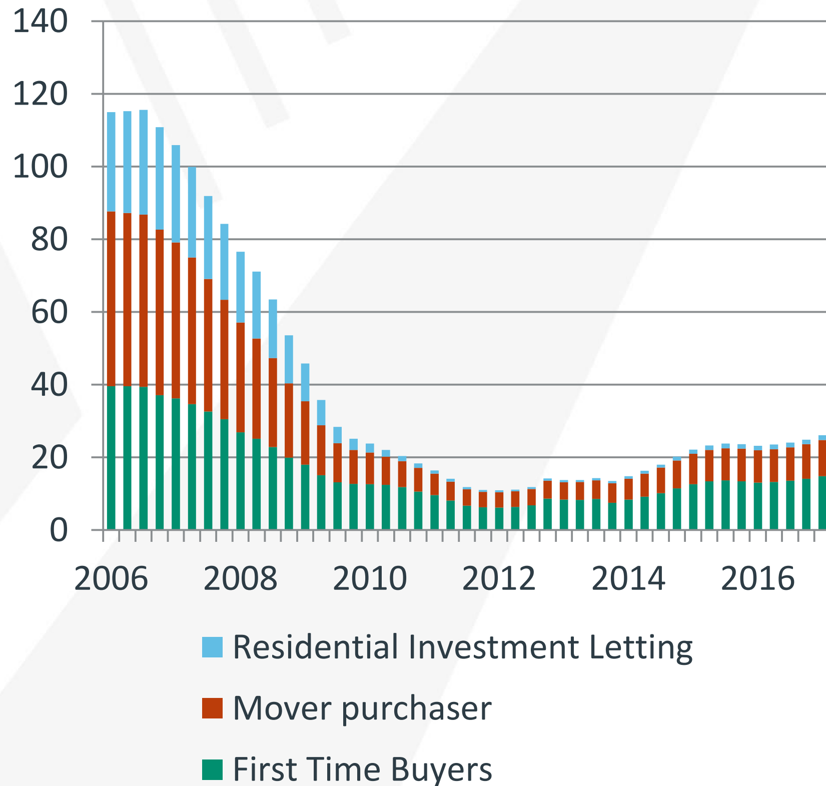
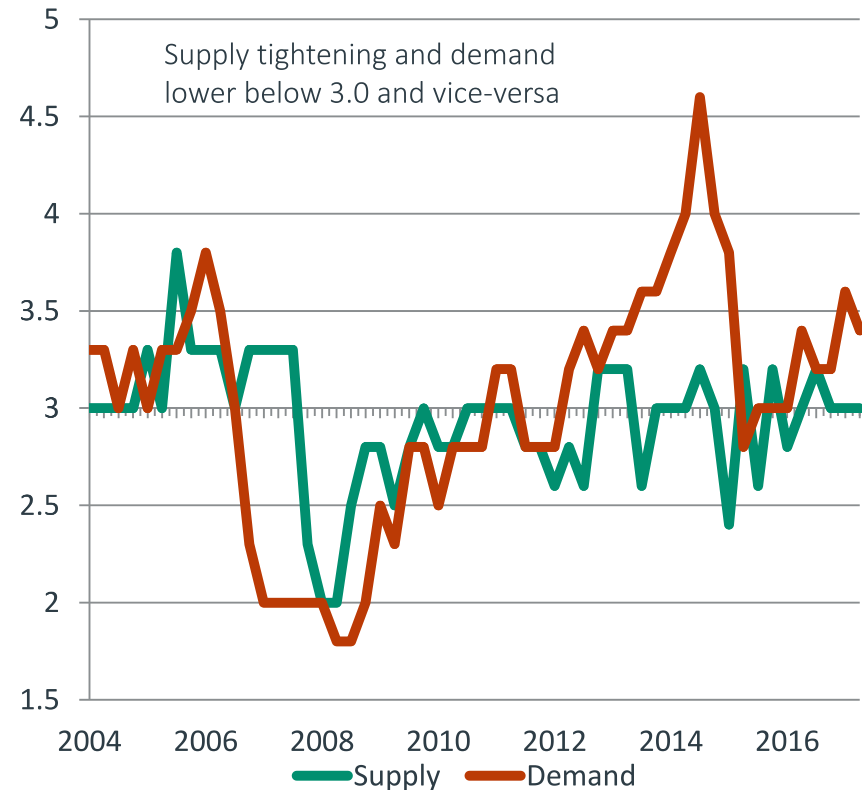
Demand has picked up again having cooled in 2015; amendments to CBI rules have spurred further demand

Mortgage drawdowns rise from deep trough (000s)



Source: BPFI *4 quarter sum used

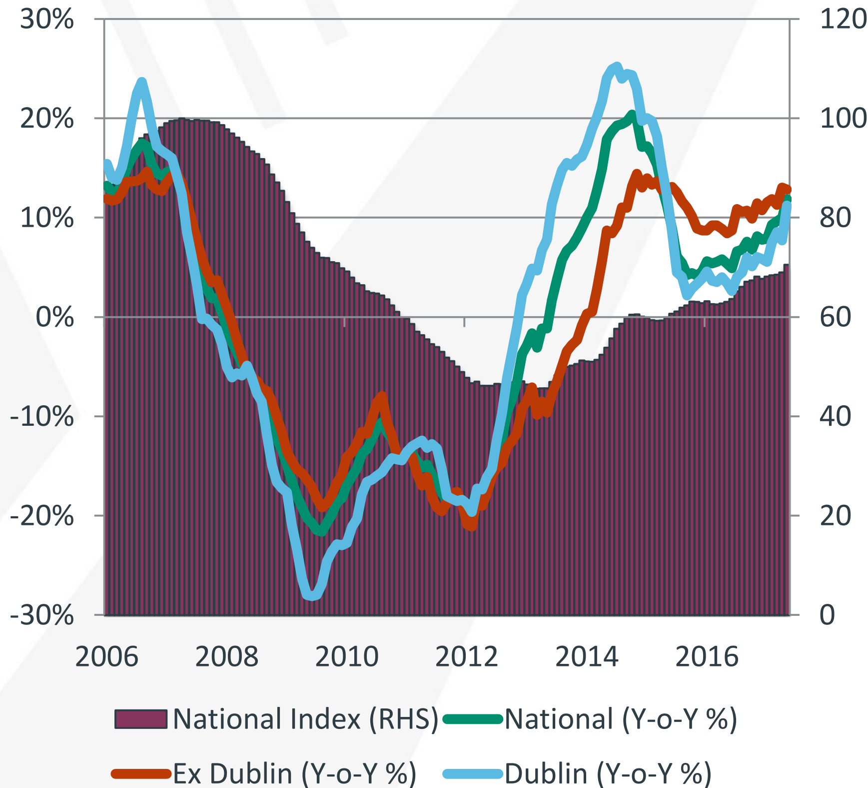
Demand increased following CBI rules adjustment



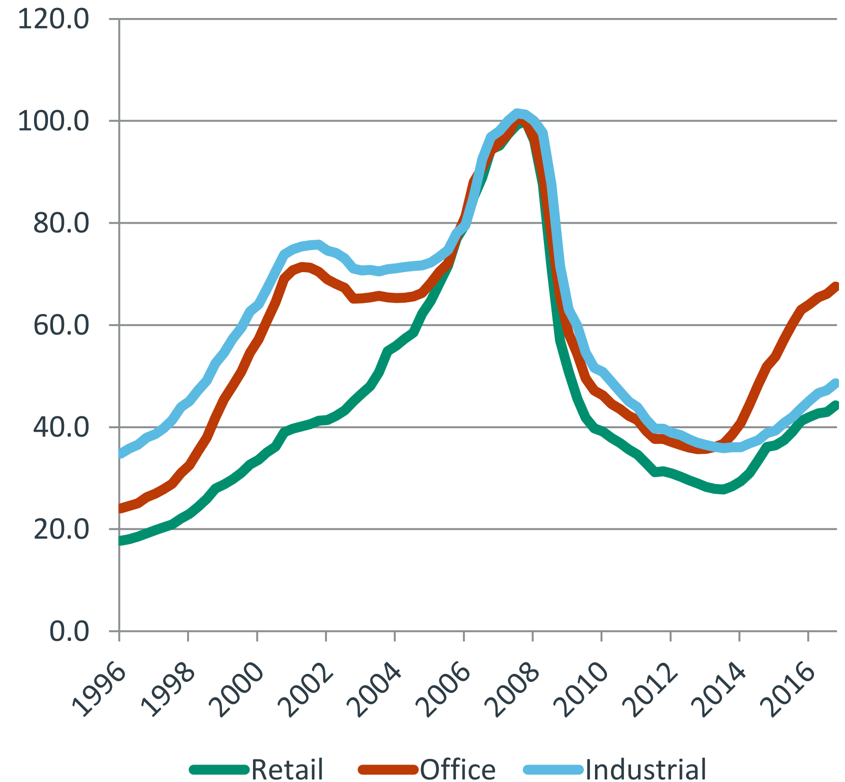
Source: ECB and CBI (Bank lending survey)

Property prices have rebounded strongly since 2012 (peak = 100 for all indices)

House prices rising strongly but some way off peak (Y-o-Y change, RHS peak =100)



Office leads commercial property



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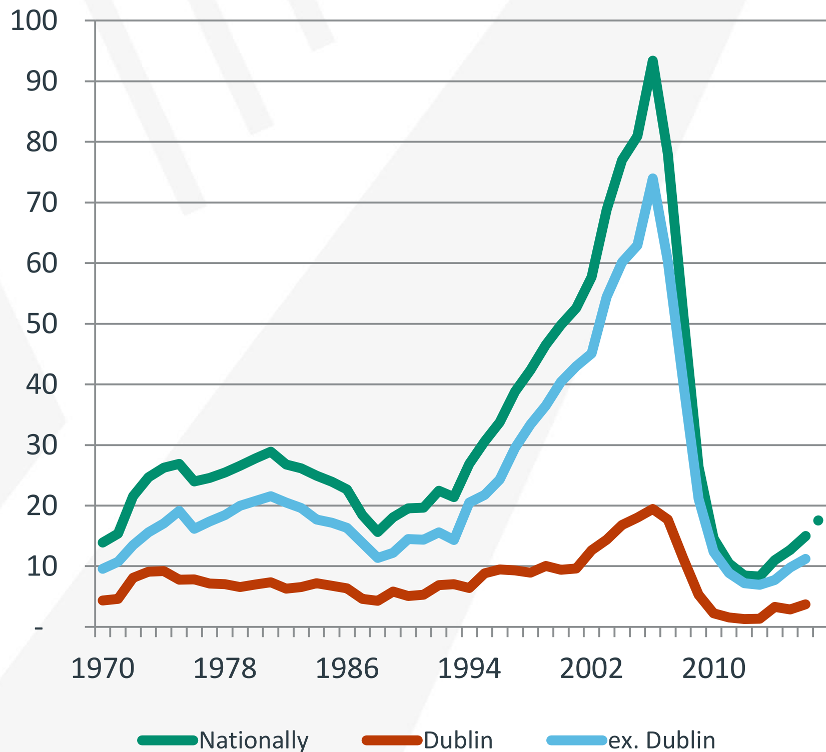
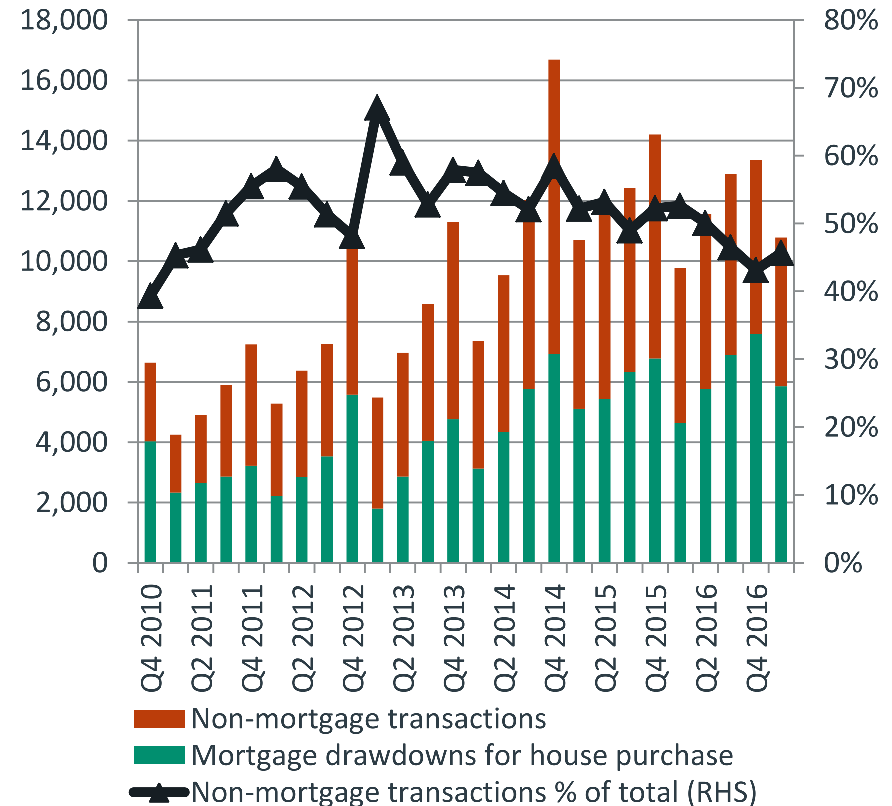
Source: CSO (averaging of price index used for annual figures); IPD

Residential market continues to be boosted by non-mortgage purchasers although impact has lessened

Housing Completions above 14,000 in 2016 but low historically (000s)



Non-mortgage transactions still important but falling below 50% of transactions



Source: DoHPCLG, BPFI; Property Services Regulatory Authority

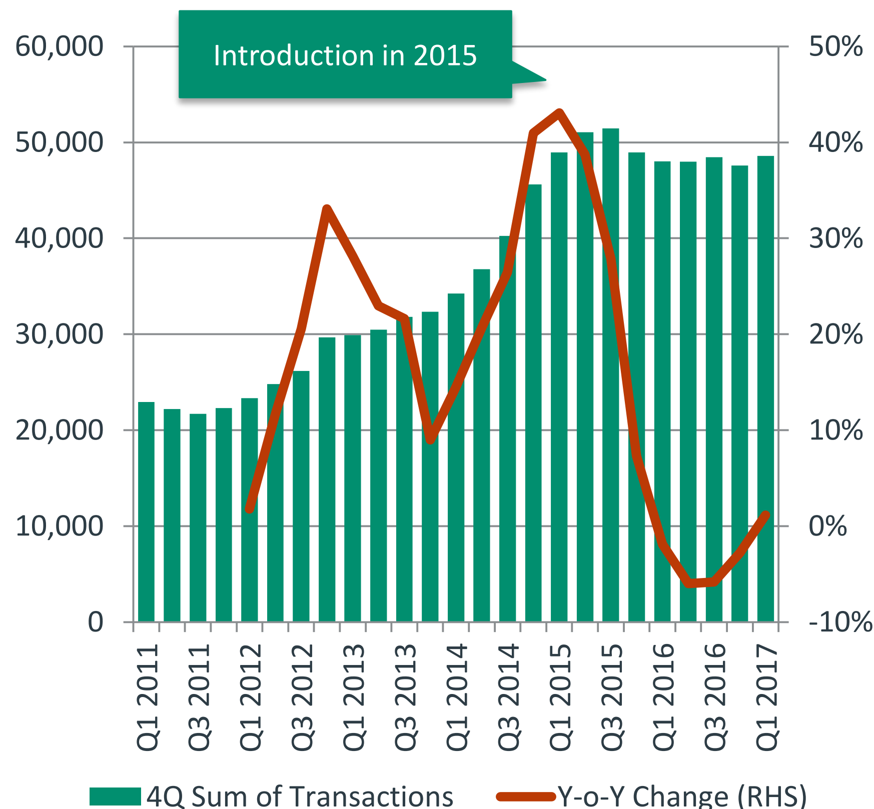
Note: Non-mortgage transactions are implied by difference between total transactions on property price register and BPFI mortgage data

CBI's macro-prudential rules increase resilience of banking and household sector

CBI's amended macro-prudential rules

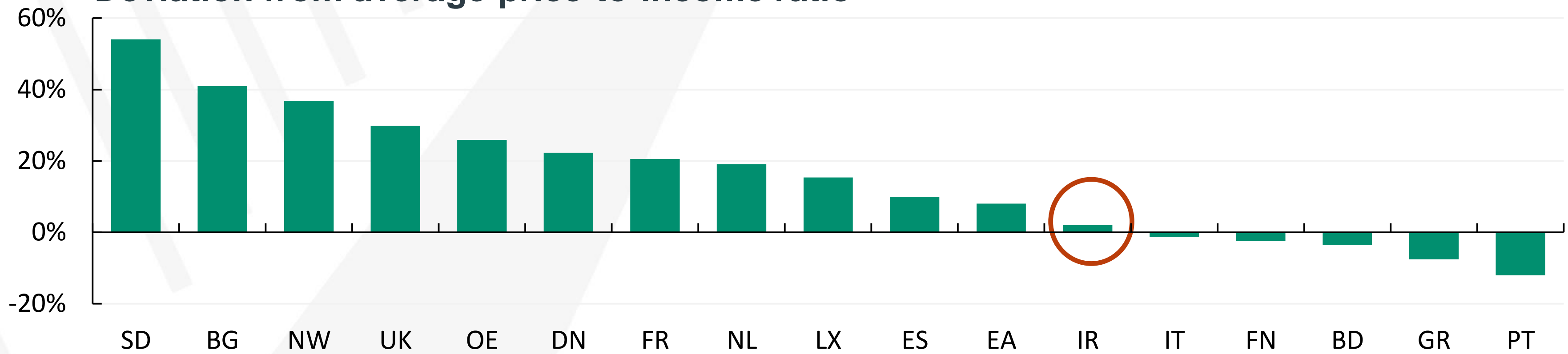
- First time buyers (FTBs) can borrow 90% of the value of a home (10% minimum deposit). Five per cent of the total new lending to FTBs will be allowed above the 90% LTV limit.
- For second and subsequent buyers (SSBs), banks must restrict lending for primary dwelling purchase above 80 per cent LTV to no more than 20 per cent of new lending to SSBs.
- Bank must restrict lending for primary dwelling purchase above 3.5 times LTI to no more than 20 per cent of that aggregate value
- Banks must limit Buy-to-Let loans (BTL) above 70 per cent LTV to 10 per cent of all BTL loans.

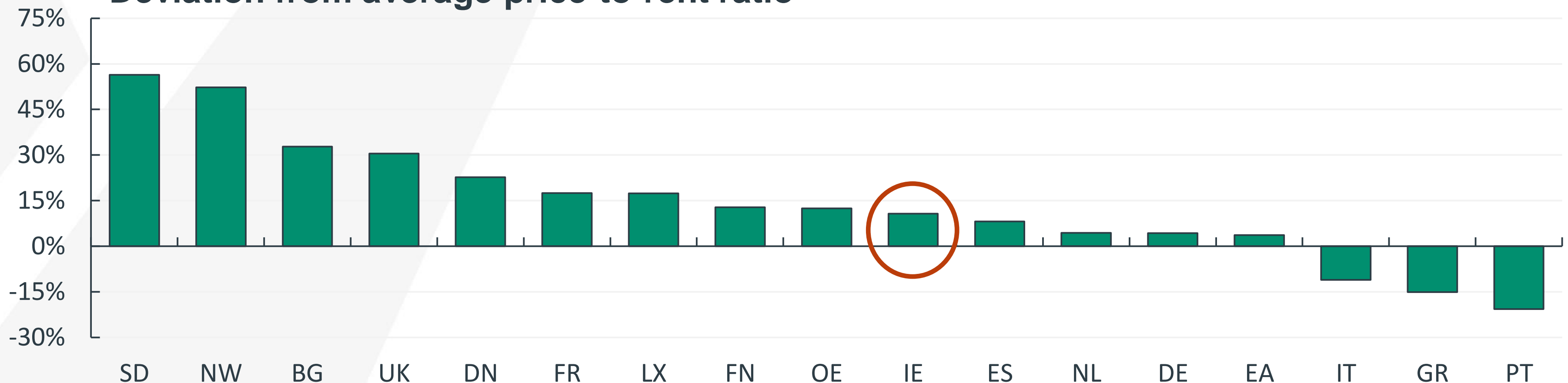
Transactions have slowed since macro-prudential rules introduced



Source: Residential Property Price Register

Irish house price valuation is still attractive relative to other European countries





Source: OECD, NTMA Workings

Note: Measured as % over or under valuation relative to long term averages since 1980. All data updated to Q3 2016

Real commercial property prices down 40% from peak (index 1983 = 100)

Source: IPD; NTMA

Section 6: Other Areas

Previous contingent liabilities have become “contingent assets” for the State

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Ireland could be viewed to have “contingent assets” but not Apple

- Banking
  - Banks are now profitable; Income, Cost and Balance sheet metrics are much improved.
  - Interest rates on mortgages and to SMEs still high compared to EU.
  - An IPO of AIB stock (28.8%) was completed in June. This returned c. €3.4bn to the Irish Exchequer.
- NAMA
  - NAMA has repaid 98% of its senior debt; it forecasts a profit of €3bn subject to market conditions.
- IBRC
  - Liquidation of the IBRC could return c. €0.8 - €1.1bn to the Irish Exchequer in the coming years.
  - In 2016, €280m was returned to the Exchequer as interim dividend.
- Apple
  - Aside from these “contingent assets” Ireland is charged with recouping €13bn plus interest from Apple after the EC state-aid ruling. Ireland is appealing the decision as is Apple and does not expect to use these monies. The ruling does not change the State’s fiscal position or the NTMA’s funding plans.

All three pillar banks in profit for at least 24 months

<u>State Ownership</u>

Allied Irish Bank	Bank of Ireland	Permanent TSB
71% owned*	14% owned	75% owned

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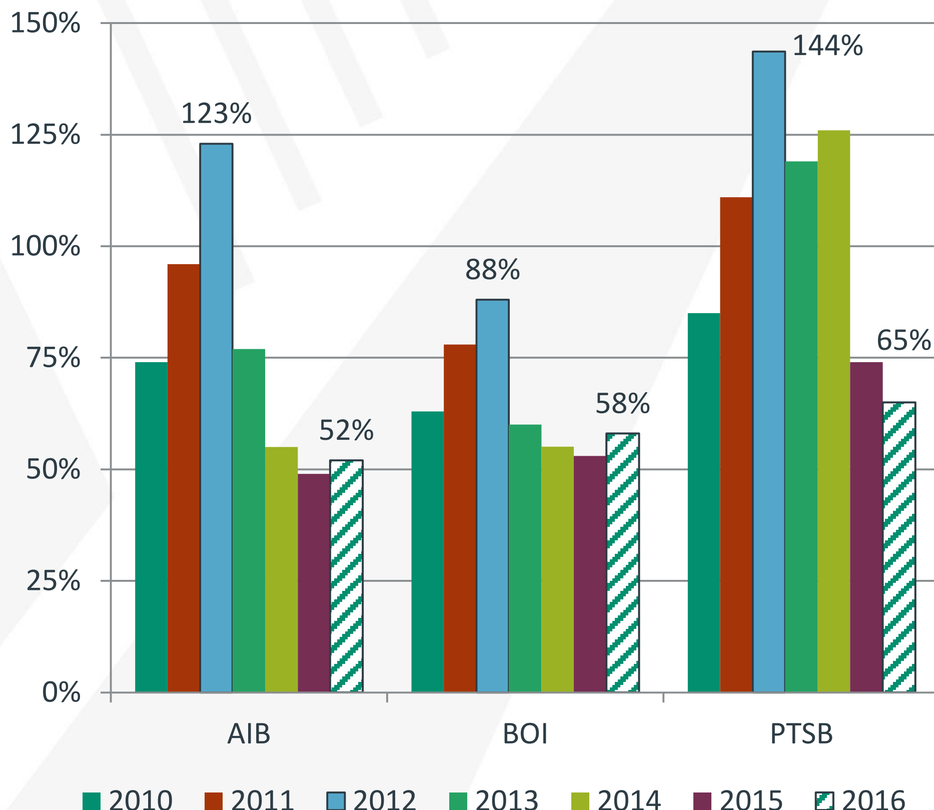
Source: Annual reports of banks - [BOI](), [AIB](), [PTSB]()

- *Post IPO*

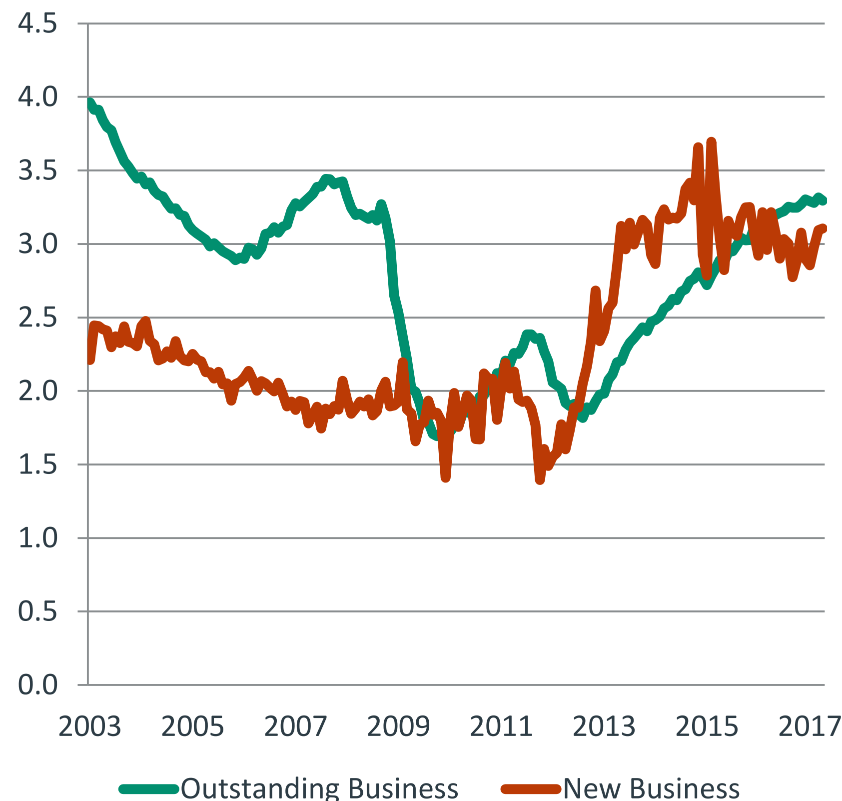
Banks fundamentally rebuild their profitability

Cost income ratios improve dramatically



Source: Annual reports of Irish domestic banks

Net interest margins (%) recover



Source: CBI, NTMA Calculations

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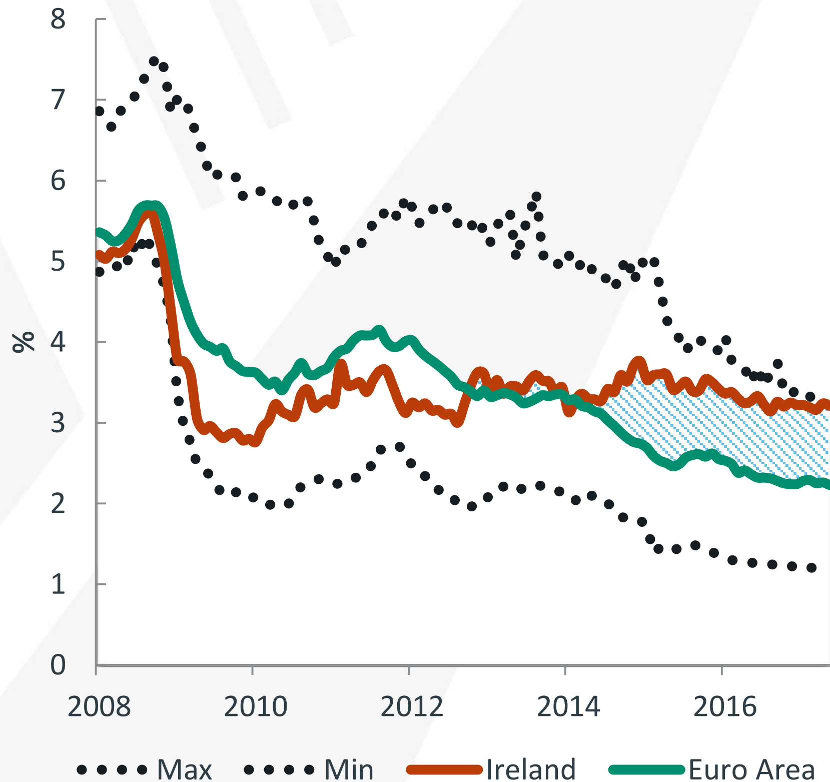
Note: Margins are derived from weighted average interest rates on loans and deposits to and from households and non-financial corporations

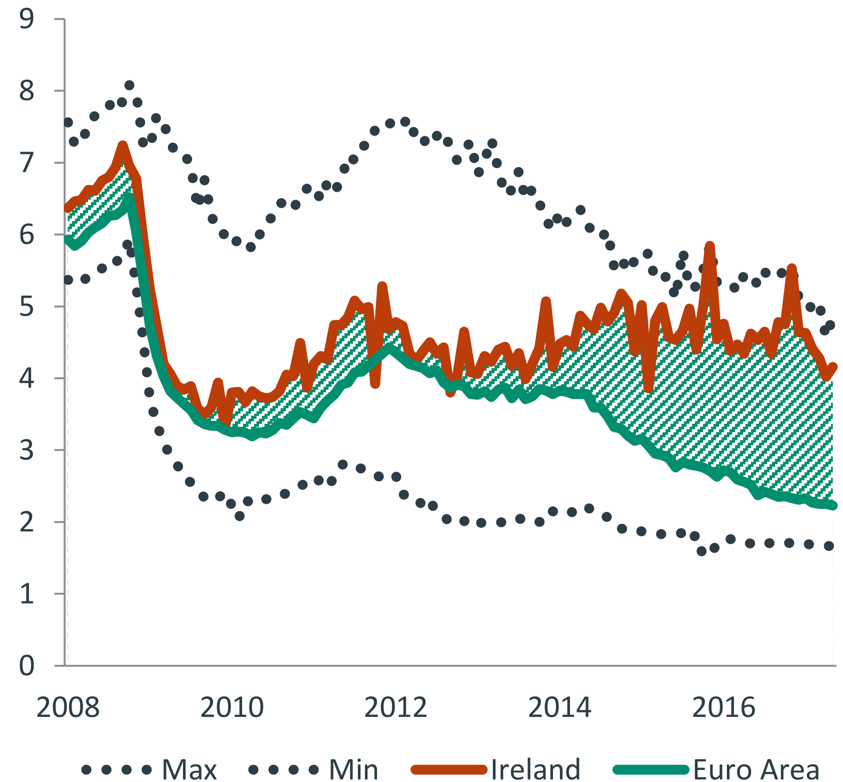
Profitability aided by higher interest rates than EA peers

Ireland's interest rates on lending for house purchase the highest in euro area



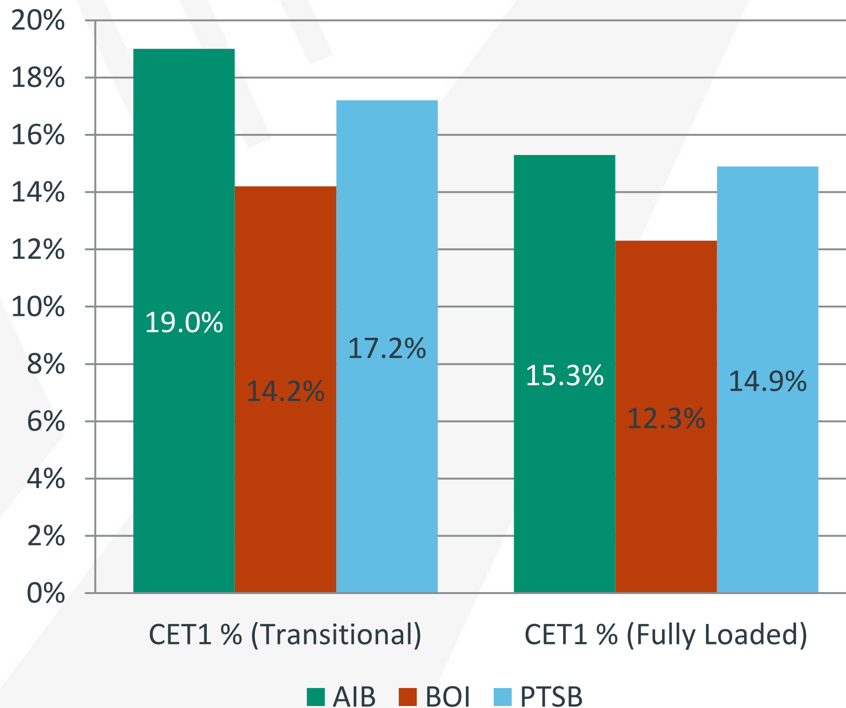
Source: ECB

Rates on SME loans* over euro area average

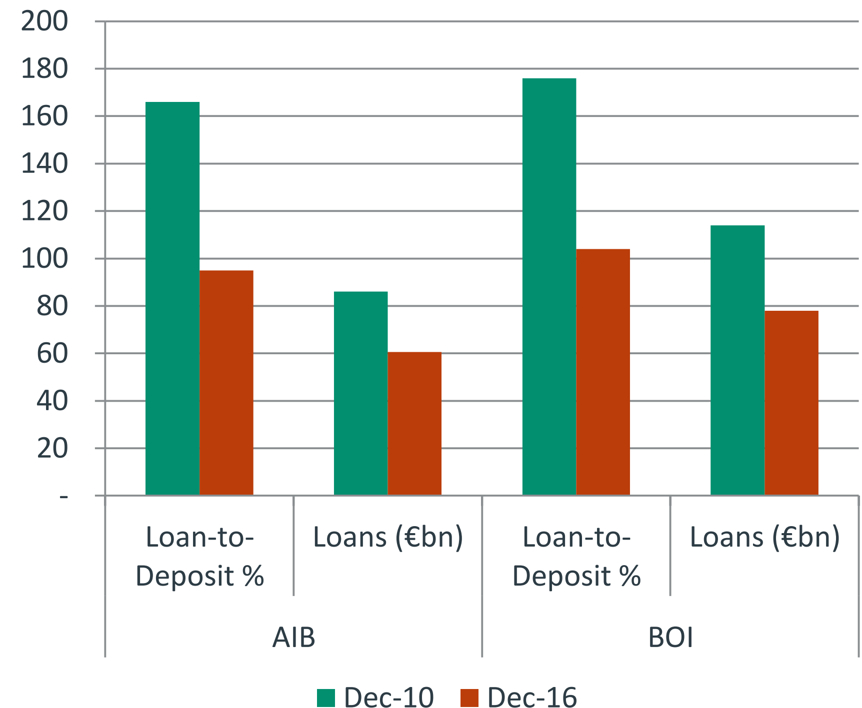


*SME loans proxy of loans <1year and <€1m to Non-Financial Corporates

Capital ratios strengthened as banks slimmed down and consolidated



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.

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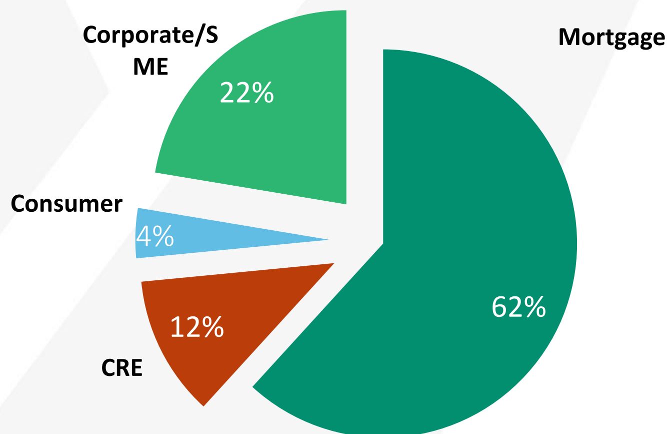
Asset quality continues to improve; impaired loans and provisions fall in 2016

All 3 PCAR Banks (€bn)	Dec-14	Dec-15	Dec-16
Total Loans	197.1	186.5	168.9
Impaired	43.1	29.0	21.0
(Impaired as % of Total)	21.9%	15.5%	12.4%
Provisions	23.5	14.7	10.4
(Provisions as % of book)	12.0%	7.9%	6.2%
(Provisions as % of Impaired)	54.5%	50.6%	49.5%

Loan Asset Mix (three banks Dec 16)



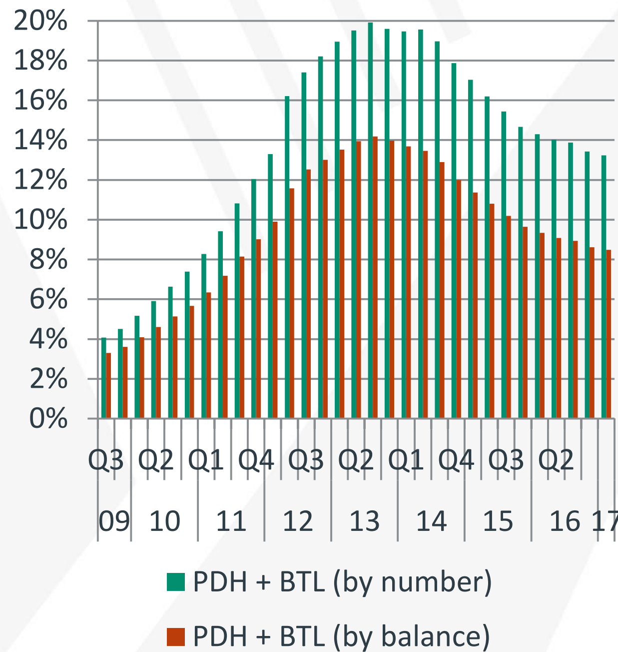
Source: Published bank accounts

Impaired Loans % (Coverage %)[1] by Bank and Asset					
		Dec-14	Dec-15	Dec-16	*Book (€bn)*
BOI	Irish Residential Mortgages	12.6(46)	9.3(52)	6.9(54)	24.3
	UK Residential Mortgages	2.0(23)	1.6(22)	1.4(23)	23.9
	Irish SMEs	25.6(51)	21.9(52)	17.0(54)	8.8
	UK SMEs	16.9(44)	11.1(51)	7.6(53)	1.9
	Corporate	5.6(54)	4.6(59)	43.5(63)	9.3
	CRE - Investment	37.2(46)	28.5(53)	22.7(57)	9.3
	CRE - Land/Development	89.5(74)	84.8(76)	69.6(73)	1.0
	Consumer Loans	6.4(98)	4.1(105)	2.7(94)	3.6
		18.2(50)	**11.6(56)**	**8.4(56)**	**82.4**
AIB	Irish Residential Mortgages	22.6(40)	16.6(38)	13.1(44)	33.4
	UK Residential Mortgages	11.6(59)	10.8(50)	10.8(46)	1.8
	SMEs/Corporate	21.4(68)	11.5(63)	8.0(60)	17.5
	CRE	56.9(62)	37.4(61)	29.0(53)	9.4
	Consumer Loans	27.2(69)	19.9(70)	13.9(58)	3.1
		29.2(51)	**18.6(47)**	**14.0(44)**	**65.2**
PTSB	Irish Residential Mortgages	25.5(46)	23.6(49)	23.4(49)	20.7
	UK Residential Mortgages	1.5(60)	3.9(39)	0.0(0)	0
	Commercial	74.0(60)	35.8(69)	29.6(113)	0.2
	Consumer Loans	29.7(94)	27.0(93)	22.3(88)	0.3
		24.5(51)	**21.1(49)**	**23.1(51)**	**21.3**

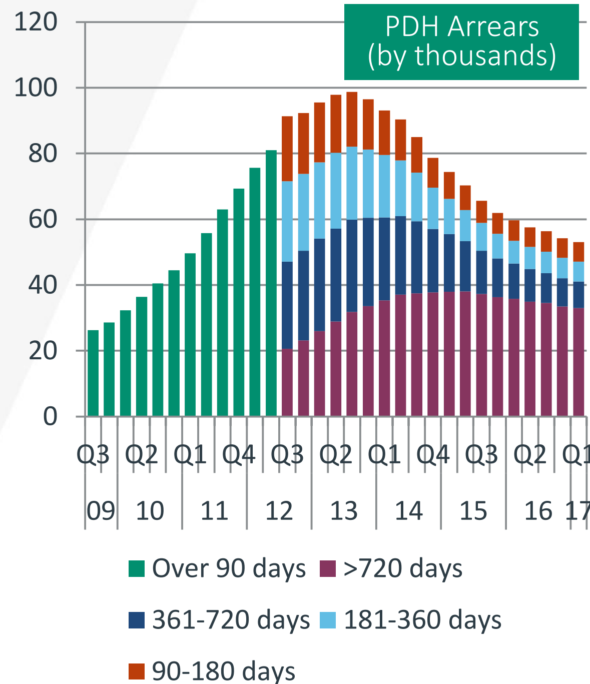
[1] Total impairment provisions are used for coverage ratios (in parentheses)

Irish residential mortgage arrears are improving across all duration categories; environment still dysfunctional

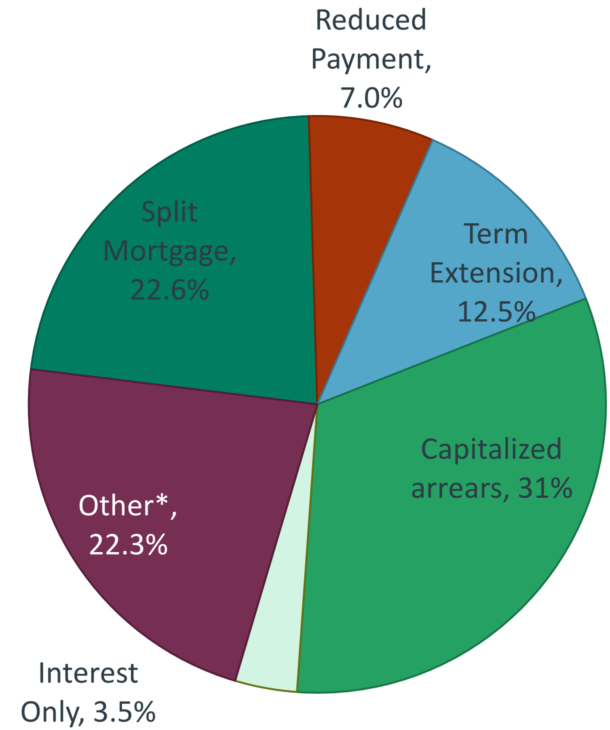
Mortgage Arrears (90+ days)



Source: CBI



Total Restructurings



- PDH mortgage arrears have fallen steadily since 2013. The smaller BTL market (c. 25% of total) has higher arrears but also saw declines in the same period.
- 121K PDH mortgage accounts were classified as restructured at end Q1 2017. Of these restructured accounts, over 85% were meeting the terms of the restructured arrangement.

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* 'Other' comprises accounts offered temporary Interest rate reductions, payment moratoriums and long-term solutions pending six months completion of payments.

NAMA: 98% of its original senior debt has been repaid: only €500m left

- **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 €29.7bn (98%) of €30.2bn of original senior debt**
  - NAMA is meeting and exceeding its senior debt redemption targets well ahead of schedule. It remains on course, subject to market conditions, to redeem all senior debt (€30.2 billion) by end-2017 and its subordinated debt (€1.6 billion) by 2020.
- **NAMA remains on course to deliver a surplus for Irish taxpayers which is currently estimated at €3bn, according to its management team - if current market conditions remain favourable.**
- **In October 2015, NAMA announced a new initiative to develop up to 20,000 housing units by 2020 – subject to commercial viability.**

NAMA's residential development funding programme

- **In reaction to the lack of housing supply, NAMA hopes to fund 20,000 housing units to the market by 2020 subject to commercial viability**
- **The focus will be on starter homes and will be concentrated in the Greater Dublin Area**
  - 75% of units will be houses, 25% apartments
  - 93% of units in Greater Dublin Area (Dublin, Wicklow, Kildare & Meath)
- **Progress of its building programme has been strong so far**
  - 4,840 units completed since the start of 2014 to March 2017;
  - Another 2,064 under construction; 1,114 soon to be commenced*;
  - Planning permission have been granted for another 7,475;
  - Planning applications lodged or will be lodged in 2017 for a further 10,500 units
- **Existing NAMA commitments are unaffected by this new programme**
  - Plans for all senior debt to be repaid by end 2017 and subordinated debt repaid by March 2020 are still in train.

*The units in this category are a combination of residential projects for which funding has been approved and preparations are under way to commence construction in Spring 2017. It also includes funding for developments where the next phase of residential construction will start once an earlier phase is completed.

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 that allowed stateless companies to book sales and production in this State. This provision was closed on December 31st 2014.
- Although the ruling centres on tax guidance dating back as far back as 1991, Apple will only pay the taxes forgone for the period 2003-14 inclusive: EC law means the ruling only applies to the ten years preceding its first enquiry (2013) into Apple's tax affairs.
- **Apple is appealing the ruling as will the Irish Government.** We expect this process to be lengthy. Pending the outcome of the appeal, Apple is expected to pay approximately €13bn plus interest to the Irish Government, which is expected to sit in escrow.
- This case has nothing to do with Ireland's corporate tax rate. It relates to advice regarding one element of the corporate tax code which has since been eliminated. In its press release the EC stated: **"This decision does not call into question Ireland's general tax system or its corporate tax rate".**
- The NTMA has made no allowance for these funds. In any case, if the appeal is unsuccessful it is possible that other EU countries where Apple makes sales would seek a share of back tax.

Annex

Explainer on MNCs distortions to National Accounts

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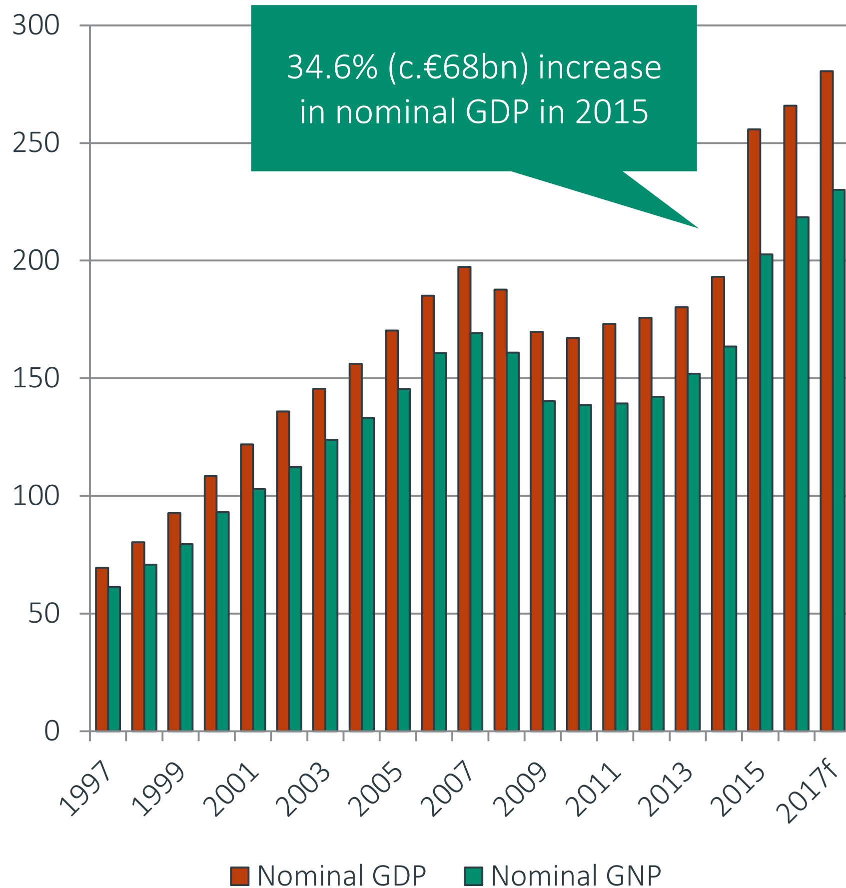
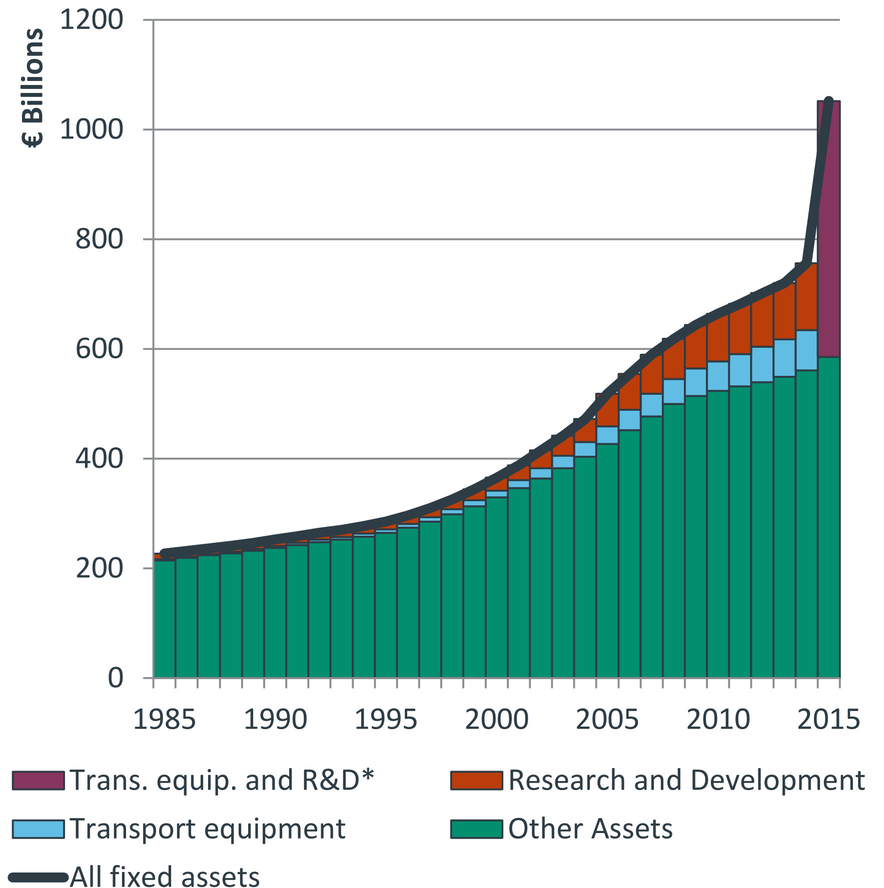
Reclassification of several companies and "onshoring" of IP led to step change in GDP & capital stock in 2015



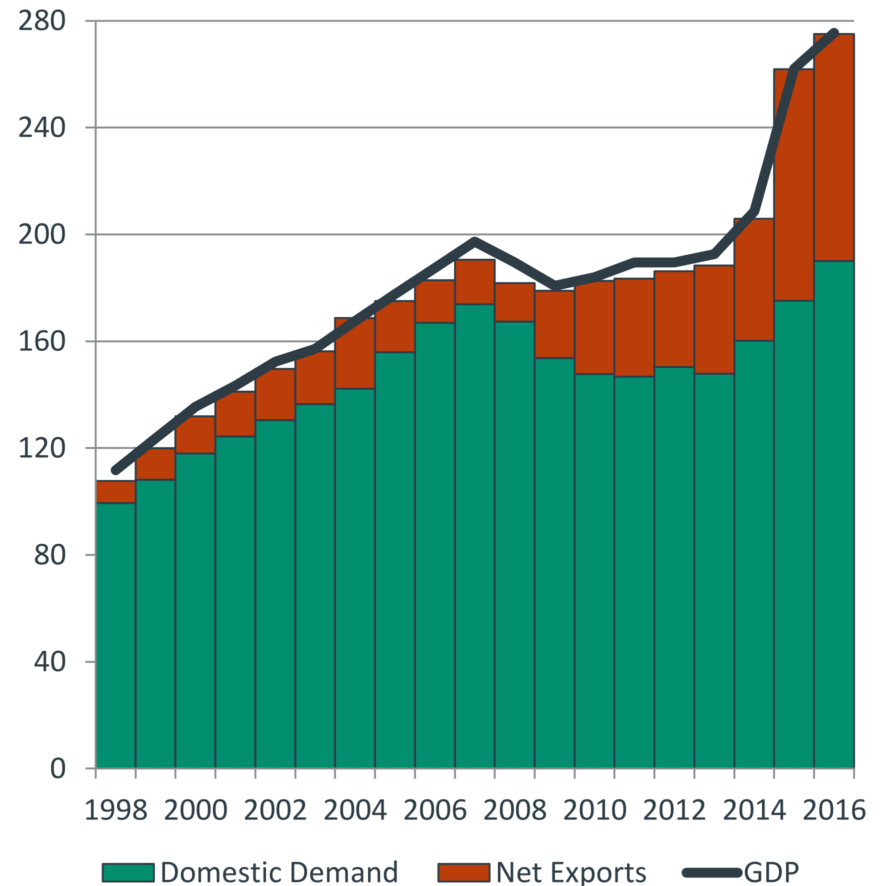


Source: CSO; Department of Finance

**due to confidentiality some sector data for 2015 has been restricted*

The change in capital stock resulted in large increase in net exports

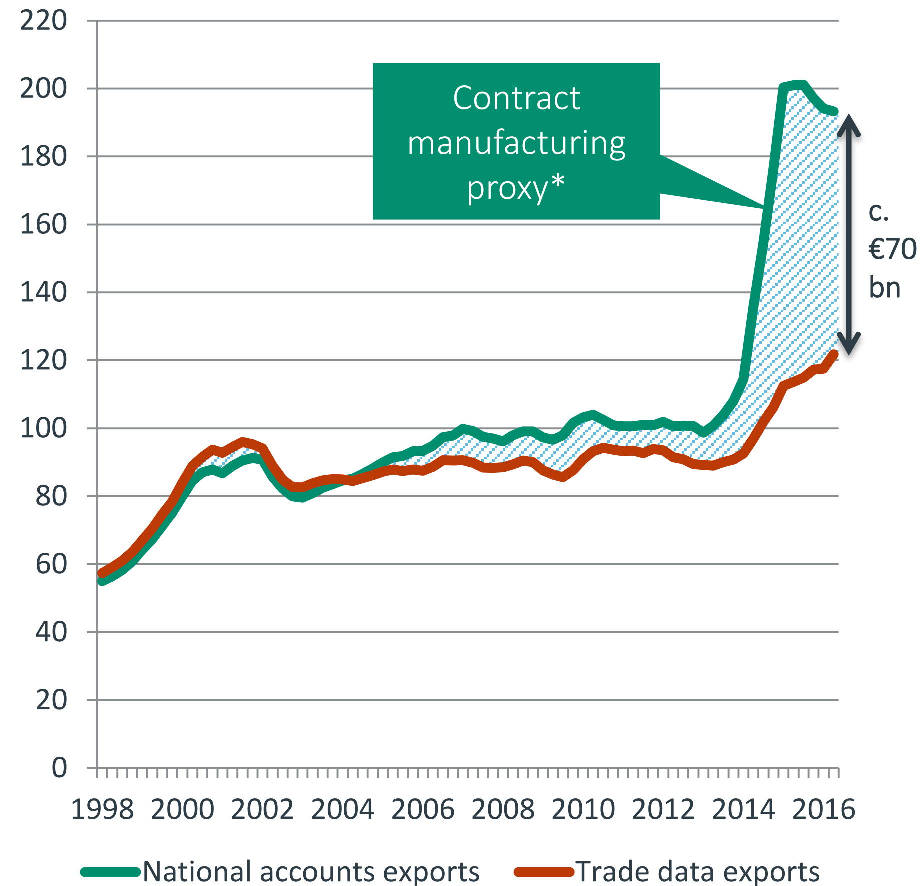
- The capital stock expanded in 2015 by c. €300bn or c. 40%. This is due to:
  - Re-domiciling/inversions of several multinational companies
  - The "onshoring" of IP assets into Ireland by multinationals
  - The movement of aircraft leasing assets in Ireland.
- The transfer of whole entities and assets of this size is not something seen before in Ireland.
- Goods produced by the additional capital were mainly exported. Complicating matters, the goods were produced through "contract manufacturing" (explained in detail overleaf).
- Little or no employment in Ireland results from this contract manufacturing.



Source: CSO

Contract manufacturing (CM) overstates the extent of goods export growth in the last two years

- 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.**
- Previously, contract manufacturing did not have a significant net impact on GDP as the company would send royalties back to where the intellectual property (IP) was "owned" – it was a royalty import. Now that the IP is here, Ireland's GDP is artificially inflated.



Source: CSO, NTMA Calculations

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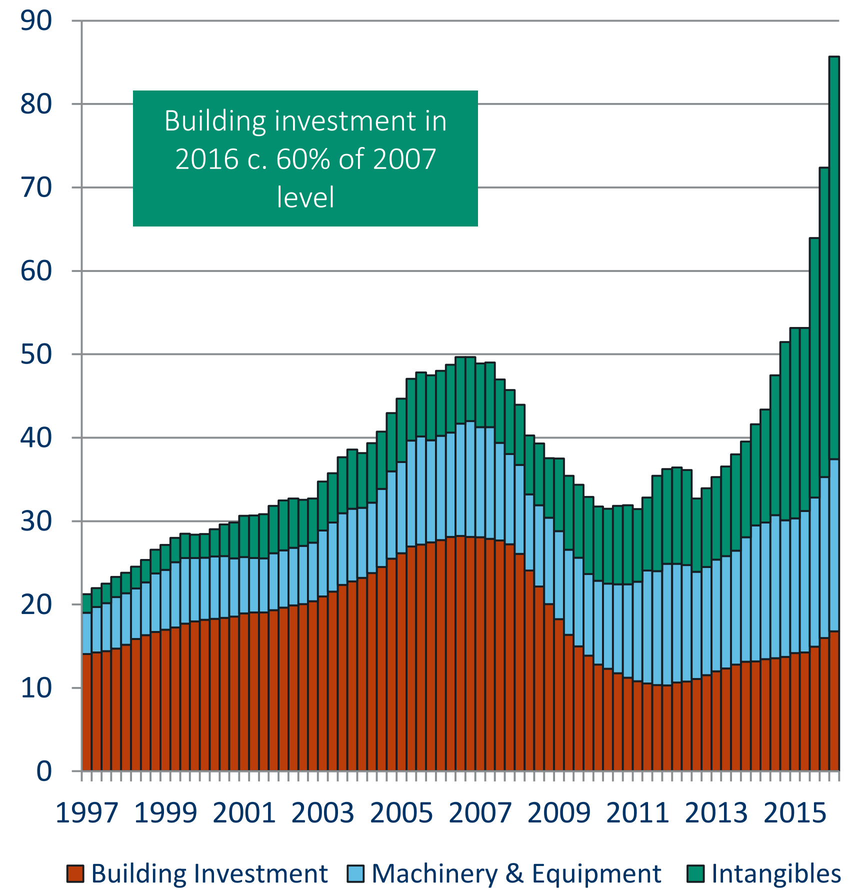
*Contract manufacturing proxy is calculated by taking the difference between the monthly International trade exports statistics and the National Accounts/BOP measure for goods exports. The monthly data is based on the actual volume of goods flowing through Ireland's various ports/airports whereas the national accounts/BOP makes adjustments for, among other items, contract manufacturing.

Investment distorted by multinationals importing IP into Ireland

- Investment is now above the pre-crisis level due to MNCs importing intangibles in 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 23.6% y-o-y Q1 2017 highlighting pent up demand for housing.
- **However, building investment is a much smaller part of overall investment - in 2016 Q4 it was c.60% of the unsustainable 2007 level.**



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Source: CSO,

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