An Roinn Airgeadais
Department of Finance

Ms Margaret Falsey
Committee Secretariat
Committee of Public Accounts
Leinster House
Dublin 2

Ref: PAC32-I-877

3rd May, 2018

Dear Margaret

In response to your letter dated 24th April 2018, please find attached further information on the issues raised at the meeting which I undertook to supply to the Committee.

In relation to IBRC, there was some discussion in relation to the provision of certain documentation relating to the Special Liquidation. This documentation has not been requested by the Committee. As previously indicated, should the documentation be formally requested by the Committee the Department will provide it on a confidential basis with appropriate redactions for personal or commercially sensitive information.

If any further information or detail is required, please do not hesitate to contact my office.

Yours sincerely

P. P. **Derek Moran**

Secretary General

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1. A note on the components of the national debt figure and confirmation as to whether the HSE contingent liabilities on medical negligence are included.

National Debt as managed by the NTMA is the net debt incurred by the Exchequer accounting for cash balance and other financial assets. It is distinct from General Government Debt (GGD) which is the consolidated measure used for comparison across the EU.

The national debt figure is composed of both medium/long-term debt and short term debt. Medium and long-term debt consists of Irish Government Bonds, EU/IMF Programme Funding, European Investment Bank and bilateral loans, and the miscellaneous debts category including derivatives.

Irish Government Bonds are issued by the NTMA and carry medium-to-long term maturity dates. The EU/IMF Programme Funding item refers to repayments to the IMF and European bodies following the three-year financial support programme agreed in November 2010. EIB loans are loans agreed with the European Investment Bank, primarily financing infrastructure spending, while bilateral loans are loans agreed with a single country. The miscellaneous category includes an array of individual debt sources including derivatives, e.g. technical financial instruments valued based on underlying assets.

The short term debt consists of short-term debt instruments: Euro Commercial Paper and Treasury bills; borrowings from funds under the control of the Minister for Finance, and a miscellaneous category of short term debt including EFSF interim fund in 2011.

Commercial Paper refers to short term promissory notes (i.e. a promise to pay the bearer a certain amount upon maturity) with a maturity of less than one year. The Euro Commercial Paper programme is listed on the Irish stock exchange. Treasury bills are zero-coupon (i.e. interest is only paid in an accrued lump sum upon maturity) instruments sold through auction with maturity dates ranging from one month to one year.

Borrowings from funds under the control of the Minister for Finance refers to short term Exchequer borrowing to fulfil funding requirement drawn from a number of funds controlled by the Minister.

As with the medium/long-term debt category the miscellaneous item includes a number of other short-term debt sources. The EFSF interim fund debts in 2011 refer to payments to the European Financial Stability Facility following the post-2010 financial support programme.

The national debt also includes a range of State Savings schemes, including fixed-term deposit accounts and Prize Bonds. However, money invested as part of the Post Office Savings Bank (PSOB) scheme does not form part of the National Debt as these funds were primarily provided through short-term advances and Bond purchases.

As defined in European Council Regulation No. 479/2009 contingent liabilities are not included as part of debt calculations. As such HSE contingent liabilities on medical negligence are not included in the debt figure calculation.

2. A note on the public bodies that do not meet financial reporting standards

Government Accounting section, Department of Public Expenditure and Reform have stated that they will reply separately to the PAC on this matter.

3. A note on the contribution to the EU budget, how it is calculated and a note on the additional costs associated with the EU budget contribution since 2013.

Member State contributions to the EU Budget are calculated by the EU Commission in line with the provisions outlined in Own Resource Decision (ORD) Regulation (2014/335) which was ratified by all Member States in 2016. The new Own Resources rules apply **retroactively** as of 1 January 2014. The ORD lays down three sources of EU revenue, or 'Own Resources':

- **Customs duties**: including those on agricultural products, in respect of trade with non-member countries and levies on sugar production within the Union. These are collectively known as "Traditional Own Resources" (TOR).

- **Contributions based on VAT**: a uniform rate of 0.3 % is levied on the harmonised VAT base of each Member State.

- **GNI-based contributions**: the amount due is calculated by taking the same proportion of each Member State's Gross National Income (GNI). As the EU is not allowed to borrow, revenue must equal expenditure. The GNI-based resource is the Budget-balancing item; it covers the difference between total expenditure in the Budget and the revenue from the other resources, subject to the overall Own Resources ceiling.

The total amount calculated by the European Commission is a function of a number of factors including each individual Member States' GNI level, and the implementation levels of the budget on an annualised basis.

Costs associated with the EU budget contribution since 2013

Regarding the costs associated with the EU budget since 2013, a number of issues have impacted on Ireland's EU budget contribution over the past number of years, the main ones being:

- As referenced above, various factors impact on Ireland's contributions to the EU including the enactment of a new MFF in 2014 (the previous one which expired in 2013).

- Growth in Ireland's GNI - The GNI element of Ireland's contributions represents on average c. 70% of our contributions in any individual year. Therefore, the growth experienced by the Irish economy in recent years has fed into increased contributions.

Further, in 2016 Ireland paid its proportion of the revised Own Resources Decision (ORD), Council Decision 2014/335, which was implemented by Ireland in June 2016. The ORD gave legal effect to the changes associated with the financing of the EU Budget for the current Multi-annual Financial Framework 2014-2020. The net impact of the decision was to alter the share of Member State contributions to the EU budget, and resulted in Ireland contributing a larger share to the overall budget. In total the revisions to the ORD cost Ireland €344m and this was paid over in 2016.

Table 1. IE approach to EU Receipts / Contributions (€m)					
Year	Public Sector Receipts	Direct Mgmt Receipts	Total Receipts	Cash Contribs. to EU budget	**Net Position**
	1	**2**	**3 = 1+2**	**4**	**5 = 3 - 4**
2010	€ 1,885	€ 80	€ 1,966	€ 1,352	**€ 613**
2011	€ 1,950	€ 80	€ 2,030	€ 1,350	**€ 681**
2012	€ 1,838	€ 109	€ 1,947	€ 1,393	**€ 553**
2013	€ 1,673	€ 113	€ 1,786	€ 1,726	**€ 60**
2014	€ 1,420	€ 84	€ 1,504	€ 1,686	**-€ 182**
2015	€ 1,783	€ 148	€ 1,931	€ 1,952	**-€ 21**
2016	€ 1,622	€ 156	€ 1,778	€ 2,023	**-€ 245**

Source: D/Fin

Contributions in 2017 amounted to €2,016m. Full details on receipts will not be available until later in 2018. Further, below are the latest forecasts for the EU budget for the coming years.

Table: EU Budget Forecast for SPU				
	2018	**2019**	**2020**	**2021**
New Forecast	€ 2,675	€ 2,900	€ 2,900	€ 2,925

4. A note on the local government figures of general government analysed by local authority

Regulation (EU) 473/2013 on common provisions for monitoring and assessing draft budgetary plans and ensuring the correction of excessive deficit of the euro-area Member States requires the main parameters of sub-sectors of general government to be included in the Budget. For Ireland the local government sector is the on sub-sector of general government.

Table 12 of the Economic and Fiscal Outlook publication, part of the Budget 2018 day documents, sets out this estimate based on data provided by the Department of Housing, Planning and Local Government. This table is reproduced below.

An analysis by the 31 individual local authorities is not available.

Table 12: estimate of local government income and expenditure for 2018, € million

	2018
General government revenues / inflows	**6,922**
Rates / NPPR (net of bad debt provision for rates)	1,511
Property income	1,364
Other receipts	419
Inflows from central government[1]	3,535
Inflows from operations in financial instruments[2]	93
	0
General government expenditure / outflows	**6,925**
Compensation of employees[3]	1,834
Interest paid to non-government[4]	5
Social benefits (transfers in kind to households)	644
Capital transfers (capital grants paid)	2,258
Other expenditure (net of bad debt provision for rates)	2,073
Outflows to central government[5]	67
Outflows from operations in financial instruments[6]	44
Local government balance	**-4**

Figures may not sum due to rounding.
1. Grants and subsidies.
2. Loans.
3. Including pensions.
4. Interest paid other than to the HFA, OPW or NTMA.
5. Interest and principal paid to the HFA, OPW and NTMA.
6. Principal repaid, other than to the HFA, OPW or NTMA.
Source: Department of Housing, Planning and Local Government.

5. A note on the payment to Kinsale Energy Limited

The payment of €2,926,458 was in respect of remittances due to PSE Kinsale under Article X of the 1959 Parent Agreement and Section 55 of the Petroleum and Other Minerals Development Act, 1960 (as amended by Section 251 of the Finance Act 1992):

(i) For the year ended 31 December 2015 and year ended 31 December 2016 and
(ii) In respect of oilfield decommissioning expenditure for the year ended 31 December 2014.

For information, PSE Kinsale Energy Ltd (a subsidiary of Petronas who acquired Marathon Petroleum Ireland in 2009) is entitled to a remittance of the amount by which the total tax and royalty paid in any accounting period exceeds 40% of the 'net income' as defined in that Article. This level of remittance is restricted to the lesser of the following two amounts

- An amount equal to the excess of total tax and royalty over the said 40% of net income or
- An amount equal to the taxes paid on income and profits.

6. A note on how the contribution from the EU to the Irish Economy are accounted for

Our interpretation of this request is founded on the discussion that EU funds are not accounted for as part of the Finance Account. This query specifically related to CAP amounts – as they are payments from the EU to farmers processed by Dept of Agriculture, Food and the Marine, as an agent.

The Central Fund derives from Article 11 of Bunreacht na hÉireann which states that " *All revenues of the State from whatever source arising shall, subject to such exception as may be provided by law, form one fund, and shall be appropriated for the purposes and in the manner and subject to the charges and liabilities determined and imposed by law.* " In the case of the Department of Agriculture, Food and the Marine (DAFM), it accesses funds available under CAP on behalf of beneficiaries in its role as Paying Agency for EAFRD (**European Agricultural Fund for Rural Development)** and EAGF (**European Agricultural Guarantee Fund)**. The EAGF and EAFRD funds are implemented in shared management between the Member States and the Union. This means among others that the Commission does not make payments directly to the beneficiaries of aid; this task is delegated to the Member States and for Ireland this role is undertaken by the DAFM.

EAFRD expenditure is co-financed by the Exchequer and any associated EAFRD receipts are represented on the DAFM Vote.

EAGF funding primarily finances direct payments to farmers and measures to regulate agricultural markets and these supports are generally funded 100% from EAGF. Therefore, EAGF receipts are not "revenues of the State" and are not represented as part of the Vote A&A. They are accounted for and audited in a separate fund. However, EU receipts are noted in supporting notes on the Appropriation Account Note 6.

The applicability of EU laws in Ireland is facilitated by Article 29 of Bunreacht na hÉireann. Notwithstanding these provisions, the annual Estimate for FEOGA-funded expenditure managed by the DAFM is published in the Revised Estimates Volume.

7. An Update on the Apple Escrow Fund and further progress updates as necessary.

The recovery of the alleged Apple state aid will be effected by the establishment of an Escrow Fund whereby the final release will happen only when there has been a final determination in the European Courts over the validity of the European Commission's *Decision of 30.8.2016 On State Aid SA.38373 (2014/C) (ex 2014/NN) (ex 2014/CP) implemented by Ireland to Apple*.

Over the last number of months, there has been considerable progress on the establishment of the infrastructure associated with and underpinning the Escrow Fund. On 24 April 2018 the Minister for Finance, on behalf of the Government, and Apple signed the Escrow Framework Deed which sets out the detailed legal agreement regarding the recovery of the alleged State aid. The signing of the Escrow Framework Deed is a significant milestone with regard to the commencement of the recovery of the alleged State aid from Apple as the Escrow Framework Deed is the overarching agreement which will govern the collection and ultimate allocation of the funds.

The Escrow Fund is the preferred vehicle to collect the alleged State aid of approximately €13 billion plus EU interest from Apple. It ensures that Ireland complies with its legal obligations to recover the alleged State aid from Apple while also ensuring that the interests of the taxpayer are adequately protected in the event that the European Courts determine, at a future date, that the sums must be returned to Apple. In broad terms, the arrangements include the agreement that all claims of ownership and access to these vast sums of money is suspended until the European Courts have concluded the proceedings that the Government and Apple have brought against the European Commission.

This followed recent announcements regard the Escrow Agent / Custodian and the Investment Managers. On 7 March 2018 it was confirmed that the Bank of New York Mellon, London Branch, has been selected as preferred tenderer for the provision of escrow agency and custodian services following a competitive tender process. On 23 March 2018 it was confirmed that Amundi, BlackRock Investment Management (UK) Limited and Goldman Sachs Asset Management International have been selected as preferred tenderers for the provision of investment management services.

The signing of the Escrow Framework Deed by both the Minister for Finance and Apple now allows for the formal appointment of the Escrow Agent / Custodian and the Investment Managers. The legal arrangements with both the Escrow Agent /Custodian and the Investment Managers are close to completion. It is anticipated that the funds will flow into the Escrow Fund in significant tranches during the course of Q2 and Q3 of 2018 until all the alleged state aid is recovered. It is expected that the full recovery will be effected by the end of Q3 2018.

8. A note on the liability for Waterford Glass pensioners and how decision was arrived at to pay liability.

The European Court of Justice (ECJ) delivered a judgement on 25 April 2013 arising from an investigation of complaints under Directive 2008/94/EC on the protection of employees in the event of the insolvency of their employer and the resultant contractual obligations that derive under the transposition of that Directive by the Irish Government.

The ECJ found in favour of the plaintiffs who were 10 former Waterford Crystal Workers. It held that the Irish Government had failed to transpose the Directive in such a manner as to protect the rights of the plaintiffs to old-age benefits under a supplementary pension scheme established by their employer.

Following a mediation process with UNITE (under the auspices of the Workplace Relations Commission), the mediation process was entered into by all parties on the basis it would provide a comprehensive framework for addressing all outstanding claims. Following mediation meetings the Mediator, Kieran Mulvey, issued a series of determinations and recommendations.

The Government accepted the recommendations to resolve the matter. The recommendations included payment of a cash lump sum by way of compensation to each deferred member of the Waterford Crystal factory and staff schemes amounting to €1,200 per year of service in the pension scheme.

The underpinning statutory arrangements are in Section 4 of the Social Welfare and Pensions (No. 2) Act 2014 which inserted Section 48B to the Pensions Act 1990. This provided for the Minister for Finance, at the request of the Minister for Employment and Social Protection, following consultation with the Minister for Public Expenditure and Reform, to pay moneys from the Central Fund to an approved person for the purpose of the discharge by the approved person of the liabilities of an eligible pension scheme. The Minister for Finance, following consultation with the Minister for Public Expenditure and Reform, authorised the Minister for Employment and Social Protection to be the approved person.

The bulk of members were paid under the terms of this settlement. Subsequent arbitration determinations were in relation to a number of workers who invoked the dispute resolution process in relation to the offers made to them under the terms of the settlement. As at September 2017

- Lump sums totalling €43.882 million have issued to 1,712 individuals;
- Actuarial lump sums totalling €2.159 million have issued to the next of kin of 22 scheme members who died before reaching pension age;
- 392 individuals, including 10 widows of scheme members, will receive pension payments in 2017 at an approximate cost of €4 million;
- Approximately 60 new pensioners will qualify for payment in 2018;
- Ex-gratia payments totalling €114,500 have issued to 63 individuals on foot of the recommendation of the mediator in respect of contract service periods.

9. A detailed briefing on the different models for measuring of national output/income ie GDP, GNP, GNI and GNI* and the comparative effect on the national debt ratio to output.

Please see attached document which details the different models for measuring national output/income, ie GDP, GNI and GNI*.

GDP and 'modified GNI' – explanatory note

April 2018[1]

Section 1 – Introduction and background

Globalisation and, in particular, the increasing fragmentation of production across national borders, presents significant challenges for statisticians in measuring the size of an economy. For economic analysts, there is an additional challenge, namely the real-time interpretation of movements in conventional measures of economic activity such as Gross Domestic Product and Gross National Income and what these changes mean for the short-term evolution of the economy.[2] For policy-makers, these issues complicate the design of policies designed to stabilise demand, potentially leading to sub-optimal outcomes.

As one of the most globally-integrated economies in the world, and with a large foreign-owned footprint, interpreting conventional measures of economic activity is especially challenging in an Irish context. Indeed, interpretation has become increasingly complicated in recent years due to a number of relatively new phenomena, including *inter alia* the inclusion of intangible assets such as intellectual property in the capital stock.

The purpose of this short note is to outline the differences between conventional measures of economic activity and the main[3] alternative metric ('modified' Gross National Income') that is now produced by the Central Statistics Office. The origins of the note lie in a request from the *Public Accounts Committee* for additional information following discussions with officials from the Department of Finance (19th April 2018).[4]

At the outset, it must be stressed that macroeconomic data in Ireland are compiled in line with international standards – the data measure what they are designed to measure. Instead, the fault-lines begin to emerge in the interpretation of the data, with the information-content of key macroeconomic aggregates in Ireland more limited than elsewhere.

This document is structured as follows. Standard, internationally-recognised measures of economic activity are explained in section 2, which also outlines the key shortcomings of these metrics when applied in an Irish context. In section 3, key factors underpinning the growing divergence between Gross National Income and domestic income levels in recent years are documented while, in section 4, so-called 'modified Gross National Income' (also known as GNI*) is explained. Section 5 highlights the key uses for the alternative metric, before some conclusions are drawn in section 6.

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[1] This report was produced by the Economic Division of the Department of Finance, and does not necessarily reflect the views of the Minister of Finance or the Irish Government.

[2] It is beyond doubt that forecasting short-term trends in highly globalised economies has become increasingly difficult in recent times with Ireland being a textbook example.

[3] Other alternative metrics produced by the Central Statistics Office – such as domestic demand excluding investment in aircraft and intellectual property – are not considered in detail in this document.

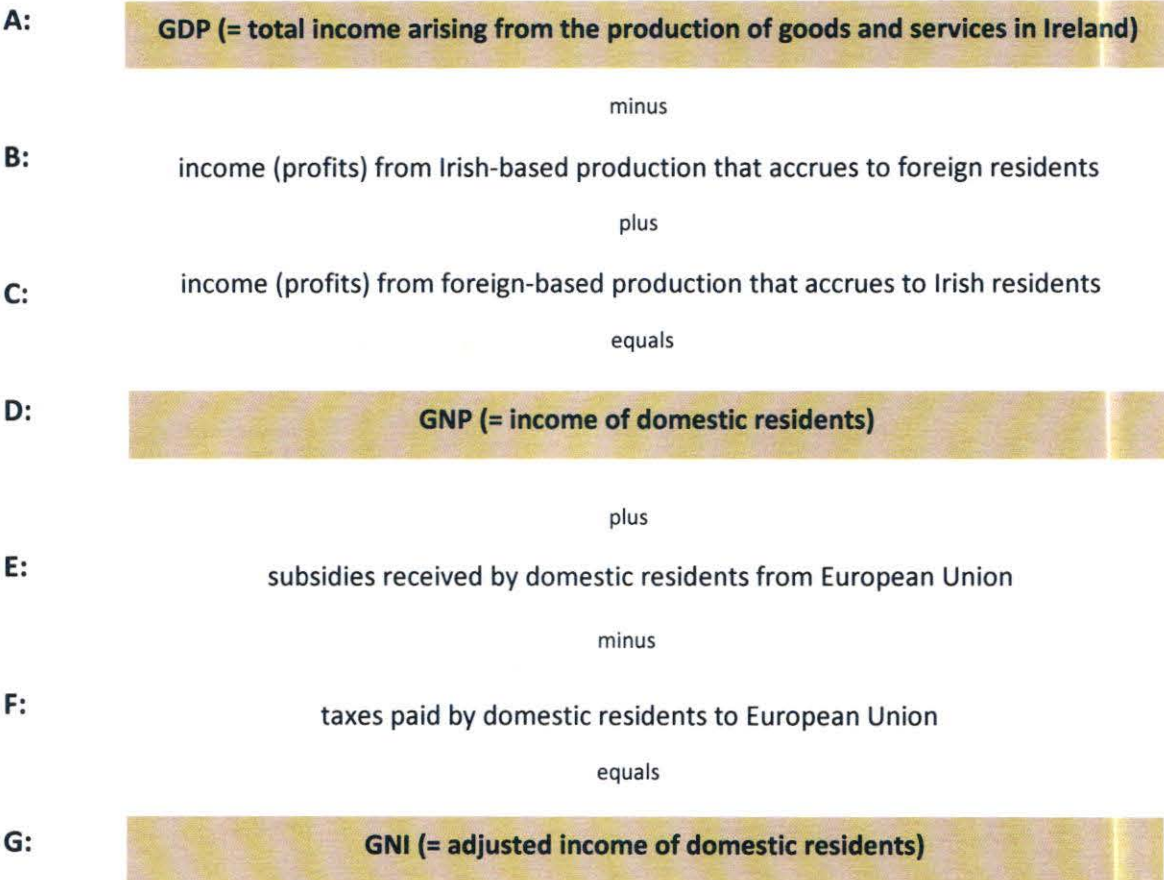
[4] Transcript available at:
http://oireachtasdebates.oireachtas.ie/debates%20authoring/debateswebpack.nsf/committeetakes/ACC2018041900002?opendocument#L01300.

Section 2 – conventional measures of economic activity

The standard international measure of economic activity is Gross Domestic Product (hereafter 'GDP'), which measures the total value of goods and services produced in an economy during a particular period (quarterly or yearly). When adjusted for price developments, movements in the level of GDP show how production is evolving over time.

Goods and services are produced by capital and labour (the factors of production), so that the income arising from the production of goods and services must accrue to the owners of capital (in the form of profits) or to labour (in the form of wages). In most countries, the owners of capital (e.g. the owners of factories, lorries, software, etc.) are domestic residents while, in the vast majority of countries, the owners of labour are also domestic residents.[5] As a result, the profit and labour income arising from the production of goods and services usually accrues to domestic residents, i.e. GDP measures the flow of income to domestic residents in a particular period.[6]

Figure 1: 'walk' from GDP to GNI



Source: Department of Finance illustration.

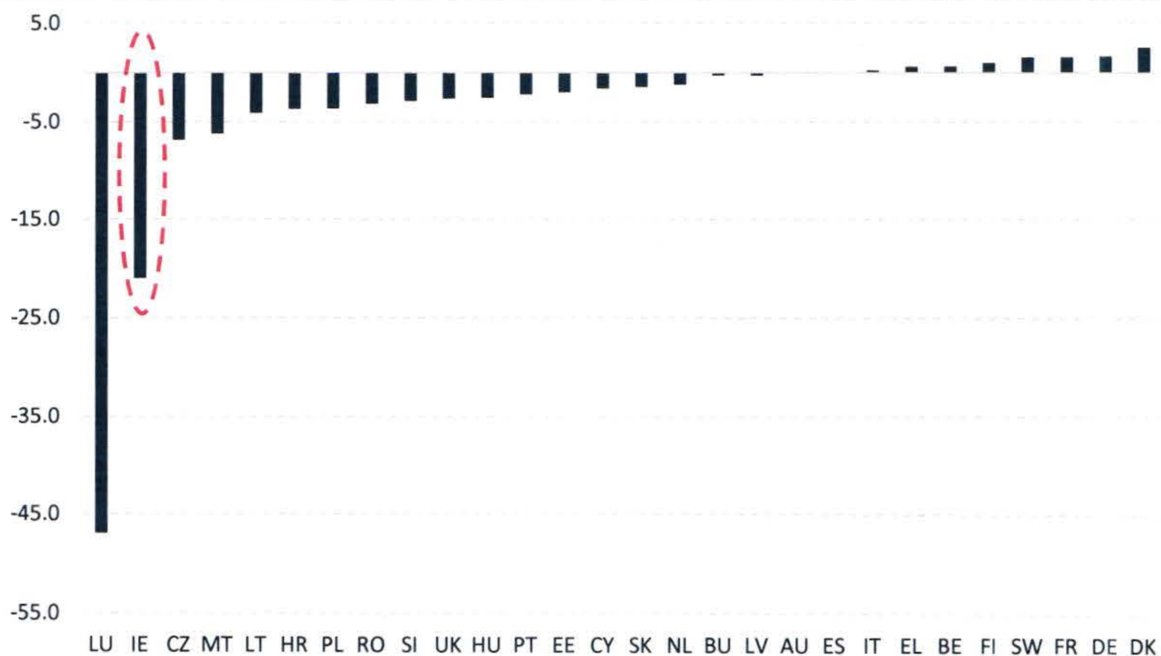
[5] A notable exception is the case of Luxembourg where c. 40 per cent of workers cross the border on a daily basis.

[6] It is important to remember that GDP is a flow concept – it measures the flow of income over time. As such, it does not measure the stock of wealth and is, therefore, a proxy (as opposed to an actual measure) for living standards of a country.

Ireland is somewhat unusual, however, in that the owners of a large part of the capital stock are, in fact, non-residents. This situation has arisen from the importance of inward foreign direct investment to the Irish economy from the 1960s onwards. As the pace of globalisation has accelerated over the past few decades, the Irish economy has become progressively more and more embedded in global supply-chains. An important consequence of this is that a significant part of the income arising from the production of goods and services in Ireland accrues to the foreign owners of capital assets based in Ireland. Hence, the GDP aggregate overstates the living standards of Irish residents.

Gross National Product (hereafter 'GNP'), on the other hand, removes the profits of foreign-owned firms (and, symmetrically, includes the profits earned by the foreign operations of Irish-owned firms) and, accordingly, provides a better measures of the income accruing to domestic residents. While most countries do not produce figures for GNP, European Union Member States are legally obliged to produce figures for Gross National Income (hereafter 'GNI').[7] GNI is a very similar concept to that of GNP – the main difference between the two aggregates is that GNI adjusts domestic incomes for taxes paid to the EU and for subsidies received from the EU (see figure 1 and noting that the sum of lines E and F is small).

Figure 2: difference between nominal GDP and GNI in the EU, per cent of GNI



Source: *Eurostat*.

Figure 2 shows the difference between GDP and GNI (expressed as a percentage of GNI) across the EU Member States in 2016. As is evident, Ireland and Luxembourg are outliers with, in Ireland's case, the level of GNI over one-fifth lower than the level of GDP. For most Member States, the difference is fairly minor (for all but four Member States, the difference is in the + / - 5 per cent range).

[7] GNI is an important variable in the calculation of Member States contribution to the EU budget.

In summary, therefore, for most (advanced) countries, the level of GDP is a reasonable approximation of living standards. For small economies where the factors of production are highly mobile across national borders (such as Ireland and Luxembourg in the EU), GNP and GNI are more meaningful. This is the main reason why economists in Ireland have traditionally focussed on GNP as a better approximation of Irish living standards than on GDP.

Section 3 – the disconnect between domestic income levels and GNP / GNI

While the level of GNP (or GNI) has historically been a better approximation of Irish living standards, several factors have emerged in recent years that have resulted in an increasing disconnect between the GNP / GNI aggregates and the living standards of domestic residents.

3.1: redomiciled plcs / inversions

An important factor inflating the level of GNP / GNI since the late-2000s has been the phenomenon of multinational firms relocating (or 'inverting') their group headquarters to Ireland. These so-called re-domiciled publically limited companies conduct little or no activity in Ireland but, as they are considered Irish resident, their retained earnings artificially boost Irish income levels, i.e. profits on their global operations are, in national accounting terms, treated as profit inflows to Ireland (included in line C in figure 1).[8] It is important to stress that, because Ireland has double-taxation agreements with most of the countries where the substantive activity takes place, the profit income liable for corporation tax is almost zero. Indeed, by raising the level of GNI without generating additional revenue, this type of activity imposes a cost on the national finances via higher contributions to the EU budget.

3.2: aircraft leasing sector

Ireland is an important hub for multinational firms engaged in aircraft leasing, with around 50 per cent of the world's leased commercial aircraft managed here.[9] Given the scale of this activity, this sector has a significant impact on the level of GNP / GNI. For instance, balance of payments data show that operational leasing exports (the bulk of which arise from the aircraft leasing sector) have recorded a three-fold increase between 2008 and 2016 and now account for around 9 per cent of all service exports.

The growth of this sector has driven a wedge between measured GNP / GNI and actual income levels. This is because the Irish-resident firms own the aircraft and, as a result, the assets are included in the Irish capital stock (even though the aircraft may never cross Irish airspace). The depreciation bill associated with these assets is large, artificially inflating GNP / GNI by suppressing profit outflows from the sector. This is a capital-intensive sector with the domestic activity generated by the sector – the pay-bill and taxation paid – amounted to less than 0.2 per cent of GDP in 2016.[10]

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[8] Profit inflows are retained in Ireland with a corresponding outflow only arising when a dividend is paid to the foreign owner.

[9] Source: *'A better result for you – Opportunities for aviation finance companies to use Ireland'*, PwC 2014.

[10] See *'Aircraft leasing in Ireland 2007 – 2016'*, Central Statistics *Office, 1 February 2018*, available at: http://www.cso.ie/en/releasesandpublications/ep/p-ali/aircraftleasinginireland2007-2016/incomeandexpenditure/.

The calculation assumes that there is no significant additional domestic costs/profits associated with the sector.

3.3: on-shoring of intellectual property assets

In response to the recommendations set out in the OECD's Base Erosion and Profit Shifting ('BEPS') exercise, some multinational firms that had previously housed their high-income generating intellectual property (IP) assets offshore have been moving these assets 'on-shore' This phenomenon began around 2015 and, under the current classification system, intangible assets are included in the capital stock of the destination jurisdiction.[11]

From an Irish perspective, there is some evidence to suggest that 'first mover advantage' may be at work. In particular, it would seem that, in the on-shoring decision, some firms appear to be co-locating their IP assets where they have existing sizeable productive capacity. As a result, there have been several instances of highly valuable IP assets being on-shored to Ireland. It is important to stress that, in most cases, the on-shoring is GDP-neutral in the short-term; this is because the investment in IP is offset by a corresponding increase in imports.

In 2015, however, a small number of firms relocated their entire balance sheets to Ireland, with these balance sheets mainly consisting of IP assets, i.e. the IP was on-shored by way of balance sheet relocation rather than purchased by an Irish-resident subsidiary. As a result, the stock of capital assets in Ireland rose by nearly 50 per cent (from €764 billion to €1.06 trillion) in a single year, an unprecedented pace of increase. This increase in the capital stock, together with the composition of the assets (IP assets depreciate more rapidly than most physical assets) led to an effective doubling in the national depreciation bill that year. The effect of this was to raise the level of GDP by 26 per cent.[12]

While the ultimate owners of the IP are non-resident, the impact of the high rate of depreciation is to reduce profitability and, hence, to supress the profit outflows to the foreign owners. As a result, the level of GNP / GNI rose by 16 per cent in 2015.

In summary, therefore, the level of GNP / GNI has been inflated in recent years by the inclusion of foreign profits of 'inverted' firms (notwithstanding that the profits do not benefit Irish residents) and the depreciation bill associated with foreign-owned assets that are included in the Irish capital stock (notwithstanding that the bill must be borne by non-residents and not by Irish residents).

Section 4 – modified GNI

On foot of the exceptional growth rate recorded in 2015, as well as the growing disconnect between standard macroeconomic aggregates and actual income levels, an *Economic Statistics Review Group* (hereafter the 'Group') was established by the Central Statistics Office (CSO) in 2016. The remit of the Group was to advise on alternative measures that would provide better indicators of economic trends in Ireland.

[11] The System of National Accounts (SNA) 2008, adopted by the United Nations, was adopted in a European context via the European System of Accounts (ESA) 2010. One of the main changes relative to the previous standard (ESA 1995) was the capitalisation of intangible assets, i.e. under ESA 2010 intangible assets are included in the capital stock of Member States where these assets are located.

[12] Of course not all of the increase in activity that year was due to this phenomenon.

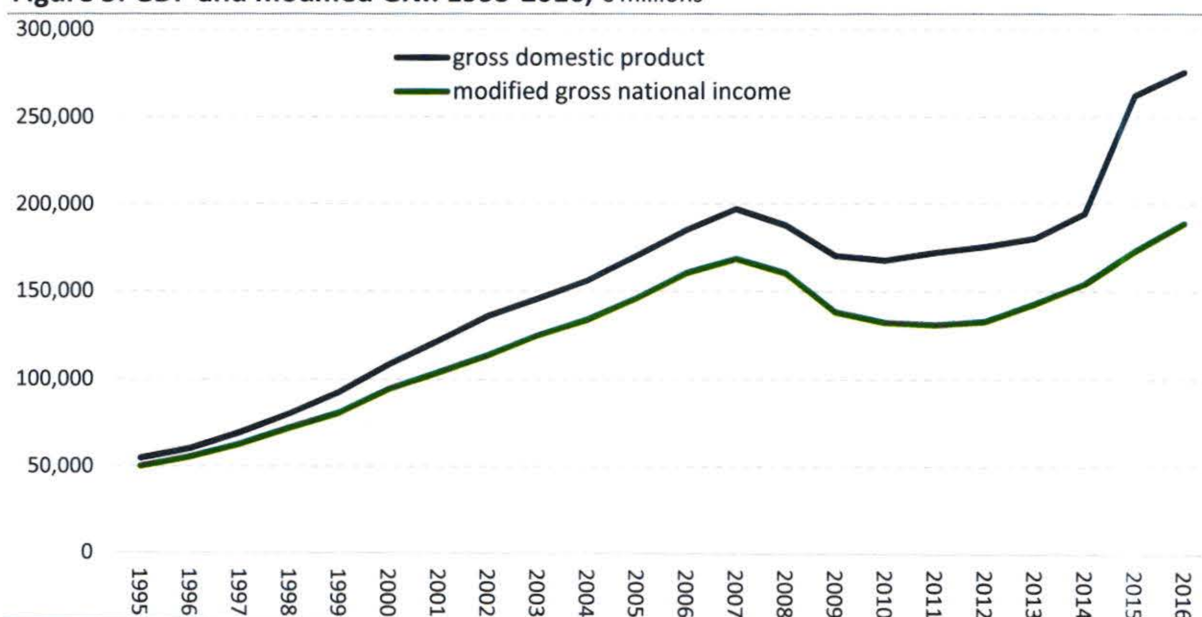
One of the key recommendations of the Group was for the CSO to develop a new indicator of the size of the economy that excludes the effects of globalisation.[13] In July 2017, the CSO published an alternative measure of the size of the economy, so-called 'modified Gross National Income' (sometimes called GNI*). This aggregate is equal to GNI but excludes the following:

- retained earnings of firms that have re-domiciled to Ireland;
- the depreciation of foreign-owned intellectual property assets located in Ireland; and,
- the depreciation of aircraft owned by aircraft-leasing companies.

The rationale for excluding the retained earnings (sometimes called undistributed profits) of inverted firms is these profits do not accrue to Irish residents and will, at some stage, be paid out to the non-resident owners of the firm by way of dividends. In relation to depreciation of Irish-based, but foreign-owned, IP and aircraft, these are costs borne by the foreign shareholders and not by Irish residents and, accordingly, should be excluded from actual incomes.[14]

Figure 3 shows the evolution of modified GNI since 1995 (first data-point) and compares it with the evolution of GDP over the same period. The key takeaway from the graph is the gradual widening of the gap between GDP and GNI during the 2000s, followed by a sharp divergence from the beginning of this decade onwards. The step-change evident in 2015 means that modified GNI amounted to **€189.2 billion** in 2016, around one-third lower than GDP (the latter was an estimated **€275.6 billion** in 2016).[15]

Figure 3: GDP and modified GNI: 1995-2016, € millions



Source: CSO.

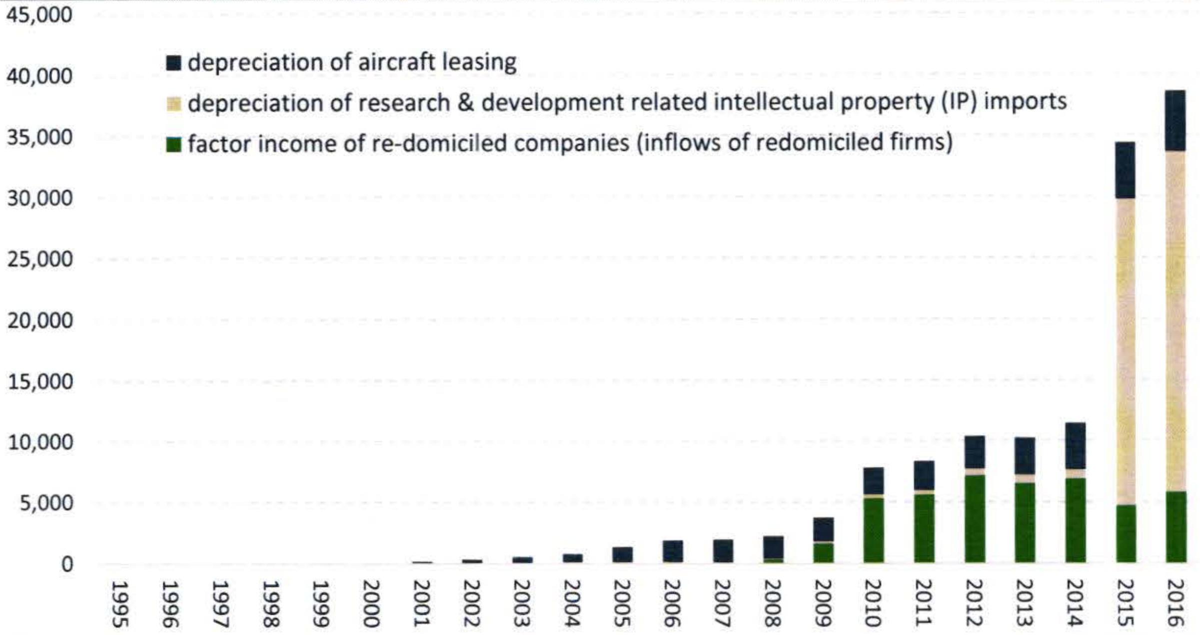
[13] The final report of the ESRG is available at: http://www.cso.ie/en/media/csoie/newsevents/documents/reportoftheeconomicstatisticsreviewgroup/Economic_Statistics_Review_(ESRG)_Report_Dec_2016.pdf

[14] GNI and GNI* are both gross measures of income, i.e. they include the cost of depreciation.

[15] Figures for both aggregates last year will be published in the summer.

Figure 4 shows the main differences between GNI and modified GNI from the mid-1990s. The difference between the two aggregates was non-existent during the second half of the 1990s and relatively minor during the 2000s. From the beginning of this decade, however, a noticeable gap emerged, initially due to the impact of 'inversions'. The graph makes clear that, while depreciation of aircraft leasing and profit inflows of re-domiciled firms are important, the key difference between the two metrics since 2015 has been the depreciation of IP-related assets included in the Irish capital stock. Of the c. €39 billion difference between the two variables in 2016, nearly three-quarters (72 per cent) arose because of the depreciation of intellectual property assets.

Figure 4: difference between GNI and modified GNI: 1995-2016, € millions



Source: CSO.

Section 5 – key uses of modified GNI

Modified GNI is currently only available in nominal terms, i.e. the CSO has not yet adjusted the series for the effect of price developments. Moreover, the new metric is only available on an annual basis, as opposed to quarterly as is the case for both GDP and GNP. As a result, this aggregate is of limited use for the purpose of short-term conjunctural analysis.

However, because the modified GNI aggregate is a better approximation of the size of the Irish economy, it is an important indicator for fiscal purposes, especially for 'ratio analysis' where it provides significant added value. In particular, the Department of Finance has frequently highlighted the shortcomings of the debt-to-GDP ratio as a measure of the debt burden.[16] Now that the modified measure is available, the Department supplements the Government's European budgetary requirements (*Stability Programme Update, Draft Budgetary Plan*) with debt-to-GNI* figures (see figure 5). On this basis, Ireland's debt ratio

[16] See, for instance, *Annual Debt Report*, Department of Finance, June 2017 available at: http://www.finance.gov.ie/wp-content/uploads/2017/07/annual-debt-report-2017.pdf

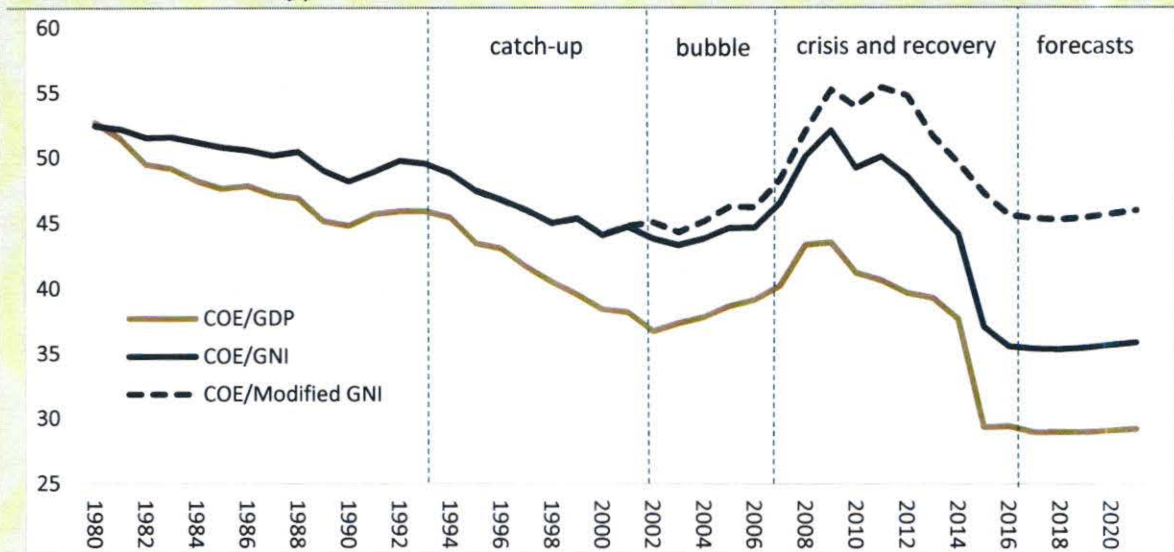
Box 1: Use of 'modified GNI' – analysis of the labour income share

According to standard aggregates, the share of national income going to wages in Ireland has fallen consistently in recent decades. As a result, Eurostat data show that the wage bill expressed as a fraction of GDP in Ireland is the lowest in the European Union.

However, the decline in the labour income share of value added is clearly overstated by the significant growth of the multinational sector since the 1980's and, more recently, by distortions arising in parts of the multinational sector which artificially inflate (non-labour) activity in Ireland, most notably with the exceptional growth rate recorded in 2015.

The publication of modified GNI, which excludes the statistical distortions arising from globalisation, enables a more meaningful analysis of trends in the labour income share over time. The figure below shows the compensation of employees (the national wage bill) as a fraction of three different aggregates: nominal GDP / GNI / modified GNI.[17] Expressed as a fraction of modified national income, the labour share experienced a steady modest decline in the 1980's which accelerated during the 'catch-up' period. In the bubble period, the labour share increased modestly reflecting *inter alia* a pick-up in wage growth and a stronger contribution to growth from the labour intensive domestic sector, in particular the relatively low productivity construction sector. The sharp increase during the crisis and reversal during the recovery reflect *inter alia* the counter-cyclical behaviour of the wage share.

Labour income share, per cent



Source: CSO, Department of finance

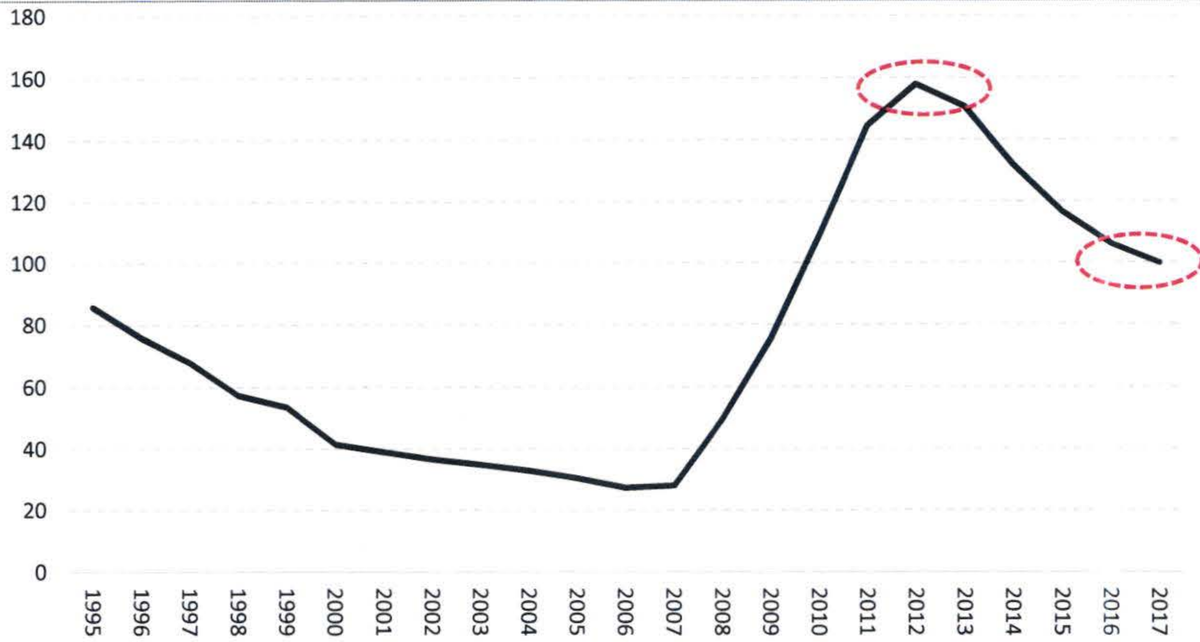
In contrast to the headline metrics, the modified labour share is now broadly back in line with its share during the 'catch-up' period. Modified GNI also enables more appropriate cross-country comparisons of the labour share and it's evolution over time. Figure A1 (in the annex) compares Ireland's labour share with the EU15 average since 1980. As figure A1 makes clear, while Ireland's labour share is far more volatile than the EU, it has been broadly in line on average in recent decades. Ireland is therefore much closer to European norms on this metric than the headline figures suggest.

[17] GNI and GNI* shares are identical before 2000. R&D service imports are deducted from modified GNI from 2002 onwards to correct the inconsistency between the NIE and BOP which inflates GNI and modified GNI (Coffey, 2017).
http://economic-incentives.blogspot.ie/2017/10/the-current-account-where-do-we-stand.html

peaked at nearly 160 per cent in 2012 and, while it has subsequently fallen, it remains at around 100 per cent.

In a similar vein, the Department publishes figures for government revenue and expenditure as a percentage of GNI* in order to highlight that Ireland is closer to European norms on this aggregate.

Figure 5: debt ratio, per cent of modified GNI



2017 = Department of Finance estimate.
Source: CSO.

Section 6 – conclusion

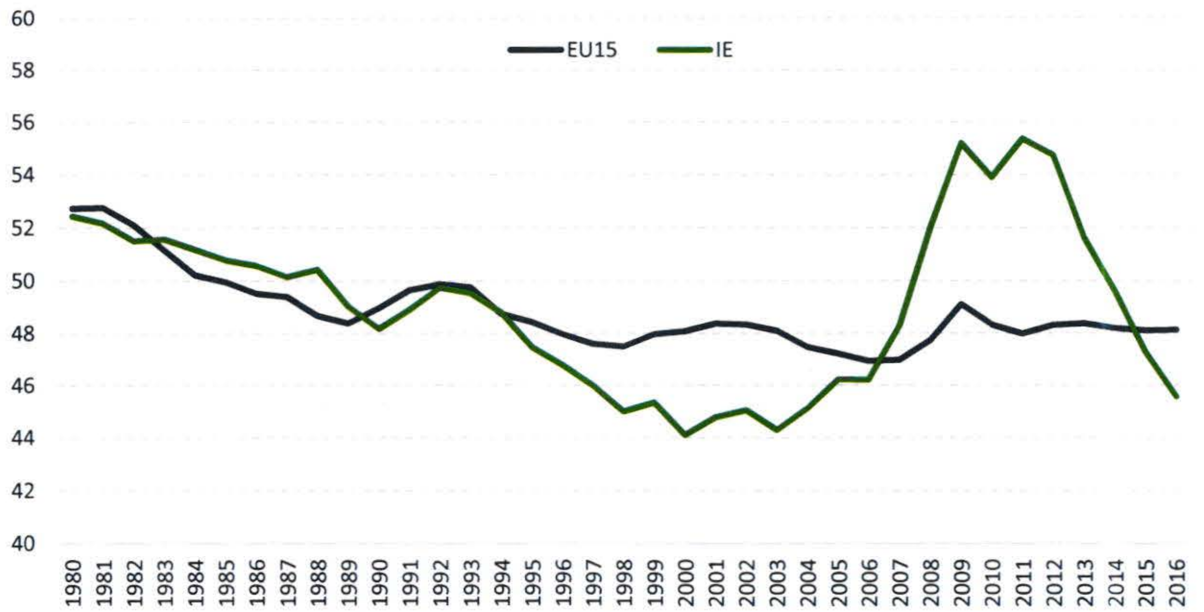
It is important to stress that, from a legal perspective, the CSO is compelled to produce existing macroeconomic statistics (GDP, GNP, etc.) in accordance with internationally-agreed methodologies. Similarly, our international obligations are still assessed on these bases (e.g. the EU budget contribution is still based on GNI, compliance with the *Stability and Growth Pact* is assessed on the basis of GDP). There is no prospect of any change in this in the short- or medium-term.

Having said that, in formulating domestic policies, modified GNI is an important input. The Department of Finance will continue to publish the debt-to-GNI* ratio in all relevant publications in order to overcome the shortcomings of the debt-to-GDP ratio and to provide a better understanding regarding the 'true' burden of debt.

Furthermore, once modified GNI is available on a 'real' basis, it could potentially become a better indicator of the cyclical position of the economy. Real-time information on the cyclical position of the economy is crucial in formulating appropriate, counter-cyclical budgetary policy. Until such time as this is available, the Department will continue to analyse a wider suite of indicators, including domestic demand (excluding the volatile components) and labour market variables, in order to fully inform its assessment of the economic cycle.

Appendix

Figure A1: Irish labour income share relative to EU15 average, per cent of GDP / modified GNI



Note: Modified GNI is used for Ireland.
Source: CSO, AMECO, Department of Finance.