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IRELAND

TECHNICAL ASSISTANCE REPORT—PUBLIC INVESTMENT MANAGEMENT ASSESSMENT

November 2017

This Technical Assistance report on Ireland was prepared by a staff team of the International Monetary Fund. It is based on the information available at the time it was completed in July 2017.

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FISCAL AFFAIRS DEPARTMENT

Ireland

Public Investment Management Assessment

Carolina Renteria, Jason Harris, Richard Allen, and Simon Groom

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F I S C A L A F F A I R S D E P A R T M E N T

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GLOSSARY

C&AG	Comptroller and Auditor General
CBA	Cost-Benefit Analysis
CEA	Cost Effectiveness Analysis
CER	Commission of Energy Regulation
CSO	Central Statistics Office
CWMS	Capital Works Management Framework
C&AG	Comptroller and Auditor General
DHPLG	Department of Housing, Planning and Local Governments
DPER	Department of Public Expenditure and Review
DTTaS	Department of Transport, Tourism and Sport
EC	European Commission
EIR	Eircom Limited
EU	European Union
ESA	European System of National and Regional Accounts
FTE	Fiscal Transparency Evaluation
GFS	Government Finance Statistics
GNI*	Gross National Income
IGGES	Irish Government Economic and Evaluation Service
LGF	Local Government Fund
LPT	Local Property Tax
MEAT	Most Economically Advantageous Tender
NDFA	National Development Finance Agency
NESC	National Economic and Social Council
NPF	National Planning Framework
NSS	National Spatial Strategy
NTMA	National Treasury Management Agency
OGP	Office of Government Procurement
PFM	Public Financial Management
PFP	Public Financial Procedures
PfPG	2016 Programme for a Partnership Government
PGO	Paymaster General's Office
PISA	Programme for International Student Assessment
PSB	Public Sector Benchmark
PSC	Public Spending Code
PPP	Public-Private Partnership
SOE	State-Owned Enterprise
TAP	Treasury Approval Point
TII	Transport Infrastructure Ireland
VFM	Value for Money

PREFACE

At the request of the Department of Public Expenditure and Reform, a mission from the IMF's Fiscal Affairs Department visited Ireland during the period July 5–29, 2017 to carry out a Public Investment Management Assessment (PIMA). The mission was led by Carolina Renteria, (Division Chief, Fiscal Affairs Department) and included Jason Harris (Senior Economist, FAD), Richard Allen (FAD expert), and Simon Groom (FAD expert).

The mission had a closing meeting with the Minister of Finance and Public Expenditure and Reform, Mr. Paschal Donohue, where the main findings and recommendations were discussed, and an introductory meeting with Mr. Robert Watt, Secretary General, Department of Public Expenditure and Reform (DPER). Meetings were held with William Beausang and team (DPER); representatives from the Department of Finance (DoF); Ray O'Leary and team, Department of Transport, Tourism and Sport (DTTaS), and representatives from Transport Infrastructure Ireland and the National Transport Authority; David Walsh, Maria Graham, Niall Cussen, Paul Hogan and teams, Department of Housing, Planning and Local Government, and representatives from local and regional authorities and An Bord Pleanála; Emma Leonard, Tom Plunkett and team, Department of Education and Skills, and representatives from the Higher Education Authority; Greg Dempsey and team, Department of Health, and representatives of the Health Services Executive (HSE); John Dillion, NewERA; Gerard Cahillane, National Development Finance Agency, and representatives from sectoral regulators and the Central Statistics Office; Paul Quinn and David O'Brien, Office of Government Procurement; Micheal Manley, Brian Carroll, Ciaran O'hObáin and teams Department of Communications, Climate Action and Environment; Geraldine Heavey and Ted Browne, Electric Supply Board (ESB); Andy Harkness, Colette Drinan Office of the Comptroller and Auditor General; Niall Conroy and team, Irish Fiscal Advisory Council (IFAC); and Edgar Morgenroth, Economic and Social Research Institute (ESRI).

The mission held a workshop on Spatial Planning and Urban Development at which Peder Baltzer (FAD expert), Nikos Karadimitriou (Expert, European Commission), and Merja Toikka (Coordinator for Ireland, European Commission) discussed relevant international experiences with a group of Irish experts (Jim Walsh, Niamh Moore-Cherry, William Brady and Larry O'Connell).

Another workshop was held to follow up on the implementation of the Fiscal Transparency Evaluation report on Ireland, published in 2013, and explain FAD's new fiscal stress test tool with DPER, DoF, and IFAC.

The mission would like to express its appreciation for the hospitality and courtesy extended by the authorities, and the excellent cooperation. The mission is especially grateful to Paddy Howard, Brendan Ellison, and William Beausang from DPER for their leadership, collaboration, and coordination efforts.

EXECUTIVE SUMMARY

Emerging from the deep economic and financial crisis in the late 2000s, Ireland is seeking to resume the buildup of public infrastructure that is efficient, cost-effective and boosts the country's long-term growth of productivity and output. This follows a period of crisis-driven underinvestment, when Ireland's investment rates lagged its EU comparators, resulting in a decline in the public capital stock from the advanced economy average achieved before the crisis.

There are ample signs of infrastructure needs. An inadequate supply of infrastructure is perceived as the most important barrier for doing business in Ireland by the World Economic Forum's survey. A fast-growing population is placing even greater demands on existing infrastructure. Six years of low spending have resulted in backlog of maintenance and rehabilitation needs. From a broader perspective, an IMF policy paper[1] provides evidence of a positive relationship between public investment, aggregate demand and potential growth. And an OECD study[2] found that Ireland is one of the countries that could benefit most from a reallocation of public expenditure from spending on salaries, and goods and services to capital investment.

To support Ireland's economic and social development to 2040, the government is preparing a new spatial planning strategy (the National Planning Framework, NPF). This framework, and an associated ten-year capital plan—both of which will be released at the end of 2017—will support the government's efforts to redirect infrastructure investment into areas that cut across traditional departmental and sector boundaries, and give a strong emphasis to the development of urban areas outside Dublin, including four new Metropolitan Areas. Ensuring that the various national, sectoral, regional, and local plans are aligned, integrated and realistic will be essential in delivering these lofty expectations.

Much like the broader Irish economy, public investment boomed in the mid-2000s, followed by a bust due to the financial and economic crisis. Annual investment increased from an average of 2½ percent of GDP in the 1990s to a peak of 5 percent of GDP in 2007, resulting in a 10 percent of GDP increase in the public capital stock. This rapid change in investment patterns, including the launch of a public-private partnerships (PPPs) program, took Ireland from well below European and advanced economy investment levels, to an average level in the early 2000s, and to well above the average by 2007. The need for fiscal consolidation resulted in a sharp reversal, sending investment levels back down to the level of the 1990s as a percentage of GDP. Even so, the shortfalls should not be overstated: in 2015, Ireland's public capital stock as a percentage of Gross National Income (GNI*)—the Central Statistics Office

[1] Making Public Investment More Efficient (IMF 2015).

[2] Economic Policy Reforms (OECD, 2009).

(CSO)'s best estimate of the underlying size of the Irish economy was higher than the UK and only slightly lower than Germany.

Comparing the quality and quantity of infrastructure to the size of the capital stock shows shortcomings in the effectiveness of past investment spending. This report draws on data from opinion surveys and quantitative indicators of infrastructure in key sectors such as education, health, electricity, roads and water and the amount spent, to assess the efficiency of investment in Ireland. It estimates an efficiency gap of 23 percent compared to the rest of the world, and a larger gap of 58 percent compared to advanced countries alone. Improving public investment management would enable Ireland to bring the efficiency of its infrastructure closer to the frontier of best practice in advanced countries, and deliver more "bangs for the buck" from infrastructure spending.

Overall, Ireland manages its public infrastructure relatively well, with strengths and weaknesses across each of the three phases of the public investment management cycle. While falling short of the average for the advanced G20 countries, its overall performance is considerably stronger than the global average. The findings are summarized in Table 1, which highlights:

- **Planning phase:** Ireland's fiscal rules (which are in line with EU requirements) support public capital formation, and public corporations are well regulated and have relatively good public investment management practices. However, there is a proliferation of sector strategies, with weak results frameworks, and limited information on cost estimates. Spending on PPPs could also be brought more firmly within the fiscal envelope.
- **Allocation phase:** Implementation of multi-year budgeting has improved the allocation of resources for projects, but the planning process is still inadequately linked to decisions on funding. Moreover, there is room to improve the methodological rigor, sequencing, and effectiveness of the project appraisal and selection processes.
- **Implementation phase:** Funding for ongoing projects is adequate, even under the ongoing fiscal consolidation process, and generally good project management practices are in place. However, more attention needs to be given to the management of assets, including prioritizing spending on the maintenance of infrastructure assets.

A summary of recommendations is provided in Table 2. Because Ireland has put in place advanced institutions of public investment management in many areas, the recommendation focus on only issues identified by the mission as requiring further attention.

Table 1. Ireland: Summary Assessment

Phase / Institution			Institutional Strength	Effectiveness
A. Planning	1	Fiscal rules	**Good:** European fiscal rules, including structural balance and debt reduction targets are broadly complied with.	**Medium:** Fiscal rules are highly complex, and volatile Irish GDP makes them difficult to comply with.
	2	National and sectoral planning	**Medium:** A wide array of national and sector strategies are published, but loosely connected to DPER's capital plan and not well costed.	**Medium:** Information on capital projects, costs and performance targets in the NSP/sector/SOE plans is of varying specificity and quality.
	3	Central-local coordination	**Medium:** Borrowing by local governments is restricted by law, but SNGs have little flexibility in their spending envelope or choice of projects.	**Medium:** Decisions on investments by local governments are largely formula-driven from the center, though there are consultations with central departments.
	4	Public-private partnerships	**Good:** PPPs are regulated by a comprehensive framework of laws and procedural guidelines, aligned with international good practice.	**Medium:** Overall spending on PPPs has increased considerably, as allowed by the current fiscal rules.
	5	Regulation of infrastructure companies	**Good**: Infrastructure markets are either open to international competition, or operate as well regulated domestic monopolies.	**Good:** Foreign companies account for a high market share, three-quarters of the public companies publish their financial reports
B. Allocation	6	Multi-year budgeting	**Medium:** Medium-term capital expenditure ceilings are in place, though medium-term forecasts are patchy, and no information of major projects is included in the budget.	**Medium:** Ceilings are not always adhered to, as increased revenues and fiscal space are allocated. No public reporting of lifetime project costs or benefits.
	7	Budget comprehensiveness	**Good:** Data on capital spending by extra-budgetary funds is limited, with EU-funded spending included in the budget, and investment by Public Corporations is well managed.	**Medium:** Information on PPP and SOE investments is published separately from the main budget documents.
	8	Budget unity	**Good:** Estimates of capital and recurrent spending are well integrated in the budget, and follow a GFS/ESA-compliant classification.	**Medium:** Data on spending on individual investment projects is fragmented; little information on maintenance spending.
	9	Project appraisal	**Good:** Economic appraisal using standard methodologies, which include risk analysis is required for all projects >€20 million. Central support provided by the Irish Government Economic and Evaluation Service (IGEES).	**Good**: Standard appraisal methodologies are consistently applied for major projects. Effective ongoing capacity building. Non-publication of appraisals is an issue.
	10	Project selection	**Medium:** DPER reviews all economic appraisals, but limited external input. Selection criteria exist, but are not unified. Pipelines exist at department/sector level.	**Medium:** Reviews during budgeting are cursory and not attentive to changes in project scope and cost; application of selection criteria is not transparent.
C. Implementation	11	Protection of investment	**Medium:** Capital outlays are appropriated annually; virements between capital and current expenditure are subject to DPER approval; carryover of up to 10 percent is allowed.	**Good:** Strong legal institutions ensure continuity of funding for ongoing projects, even during severe fiscal consolidation, and the virement facility is used exceptionally.
	12	Availability of funding	**Good:** The legal/procedural basis for cash management is comprehensive, and well aligned with international good practice.	**Good:** Cash forecasting and cash management are well executed across government, with timely release of funds.
	13	Transparency of execution	**Medium:** Open and competitive procurement in line with EU directives; monitoring largely performed at department level; no ex post audits of individual projects.	**Medium:** C&AG's office focused on financial rather than performance auditing; departmental monitoring works well; active monitoring at DPER level is under-developed.
	14	Project management	**Good:** Project management structures and guidance are well established, including rules for adjustments and fundamental review; post project review mandatory for major projects.	**Medium:** Fundamental review of projects is very infrequent. Non-publication of post-project reviews is not good for lesson-learning and transparency.
	15	Assets accounting	**Low:** A comprehensive asset survey is not carried out, but data are available for some sectors. No information on infrastructure assets in financial accounts.	**Medium:** Mixed ownership of state infrastructure assets leads to confusion over responsibilities, and is a major challenge to asset management. CSO compile estimates of capital stock and depreciation.

Table 2. Ireland: Summary of Recommendations

Phase of PIM	Recommendation	Inst.	Page
A. Planning Sustainable Levels of Investment	**Improve linkages between planning and budgetary decision-making** • Integrate the spatial, sectoral and 10-year capital funding plans so that they coherently link to each other; with information on priorities, estimated project costs and infrastructure gaps, timelines for implementation, and performance targets. • Update and reduce the number of planning strategies, and integrate them both vertically (with the NPF and capital plan) and horizontally (across other relevant sectors). • Establish a common analytical framework for the work of the DPER, sectors and semi-state entities on estimating demand pressures and infrastructure gaps. • Establish a standard presentation in sector plans of data investment projects, their cost, and performance targets; and ensuring that, to the extent possible, these data are aligned with information in the capital plan and the budget. • Establish an Infrastructure Projects Unit within the DPER, to provide advisory services to the Minister on appraisal and selection of projects, and to carry out studies of infrastructure bottlenecks, financing, and evaluation of lessons learnt.	2	26, 47
	Management of PPPs • As part of DPER's review of PPPs, consider replacing the current fiscal cap on unitary/availability payments with a rule that scores the total capital cost of a PPP against departments' capital envelopes to assess full fiscal impact. • Consider imposing restrictions on PPPs that are more likely to impose a future fiscal burden and consider "raising the bar" by requiring PPPs to achieve higher net cost savings compared to the public-sector benchmark. • Add an annex to the budget documents that provides comprehensive information on PPPs and concessions, broken down by sector and project, include a projection of future commitments over the remaining years of the contracts. • Make public the results of CBA of PPP projects, and the criteria used to select them. • Conduct more ex post reviews of PPP projects, and disseminate the results; give more weight in these reviews to the economic and social impact of PPPs.	4	32, 33
B. Allocating Investment	**Monitoring investment projects** • Develop the "Capital Tracker" database as a tool for forecasting investment requirements to (i) ensure that the annual profiles of approved projects fit within the available capital expenditure ceilings; (ii) improve the allocation of unapproved projects; and (iii) track the progress of projects that are underway. • Further develop the Capital Tracker database to provide more comprehensive information on: the annual cost profile; implementation of project, including a clear separation of capital and recurrent costs; and data on adjustments to project design and costs, implementation delays and results.	6 and 8	36, 38, 39
	Budgeting maintenance of public assets • Within the spending envelope set by the 2017 Stability Programme, increase the share of the budget directed toward maintenance and rehabilitation expenditure to prevent further degradation of the existing capital stock. • Sharpen the focus in the budget process on the level of spending required to maintain infrastructure at a steady-state level. Use the recommended government-wide register of nonfinancial infrastructure assets, based on existing sectoral registers, to determine appropriate maintenance levels.	8	39

Table 2. Ireland: Summary of Recommendations (concluded)

Phase of PIM	Recommendation	Inst.	Page
	Appraisal of investment projects • Reinforce the appraisal of investment projects to ensure that weaker projects are prevented from proceeding and riskier projects are identified early, then planned and managed accordingly: • Publish project assessments with key economic performance indicators and underlying assumptions. • Use the review of the PSC to harmonize, update, and extend appraisal methodologies and parameters, make it more accessible to users, and align it with complementary guidance. • Strengthen rules on the use and application of cost-benefit analysis (CBA) and other appraisal techniques: (i) review the thresholds for CBA/CEA, and upgrade departments' capabilities; (ii) update, extend and harmonize parameter value; and (iii) develop more detailed guidance for projects below the threshold, where multi-criteria analysis is required. • Mandate the IGEES to develop sector-specific methodological guidance in collaboration with departments.	9	43
	Selection of investment projects • Introduce a more structured quality-at-entry process, involving three sequenced "business case" assessments at different stages of project preparation, and a wider range of assessment dimensions (concept stage, appraisal stage and prior to contract signature). • Align critical decision-points with the business case assessments and ensure objective review of each assessment to inform decisions. • Closely correlate surety of funding—in the annual budget, medium-term capital plan and long-term capital plan—with the maturity of the business case for the project. • Enhance DPER's role as the coordinator and gatekeeper of the appraisal and selection process by mandating the Infrastructure Projects Unit (to be established) to: (i) lead on the design and implementation of the improved "business case" model for the appraisal of major projects; (ii) act as objective reviewer, signing-off on major projects for each business case; (iii) gather and collect information on all (or major) investment projects that are planned, prioritized or approved for decision making; and (iv) publish a summarized report covering all sectors, including investment by PPPs and public corporations.	10	26, 47
C. Implementing Investment	**Ex post review of investment projects** • Strengthen the ex post assessment of major projects to improve the design of future projects; and publish departmental ex post reviews of projects. • Encourage the C&AG to carry out performance audits of major investment projects. • Prepare a biennial summary of government-wide lessons from the reviews of the 10 largest projects completed.	14	55
	Monitoring of public assets • Improve asset management and the allocation of maintenance funding by developing a central register of infrastructure assets valued at either book (initially) or (ultimately) market value.	15	56

I. PUBLIC INVESTMENT IN IRELAND: CONTEXT

1. Much like the broader Irish economy, public investment underwent a boom in the mid-2000s, followed by a bust due to the financial and economic crisis in the late 2000s. Annual investment increased from an average of 2½ percent of GDP in the previous decade to a peak of 5 percent of GDP in 2007, resulting in a 10 percent of GDP increase in the public capital stock (Figure 1). This rapid change in investment patterns, including the launch of a public-private partnerships (PPPs) program, took Ireland from well below European and advanced economy investment levels to around average in the first part of the 2000s and to well above average by 2007 (Figure 2). The financial crisis, slowdown in growth, and need for fiscal consolidation resulted in a sharp reversal, sending investment levels back down to 1990s levels, as a percent of GDP.

Figure 1. Public Investment and Capital Stock
(Percent of GDP)

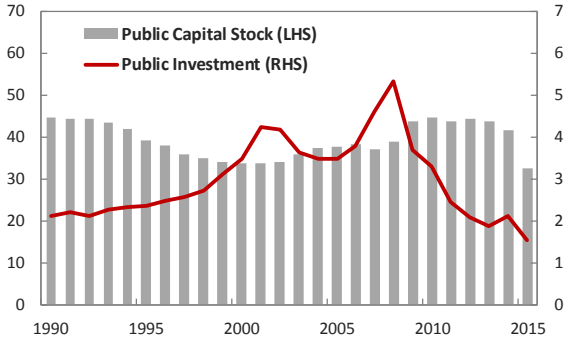
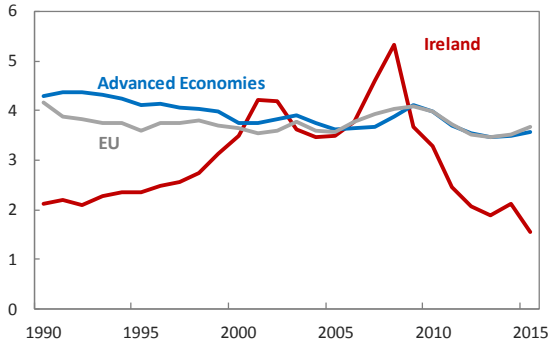


Figure 2. Public Investment: Ireland vs. Other Countries
(Percent of GDP)



Source: Staff estimates.

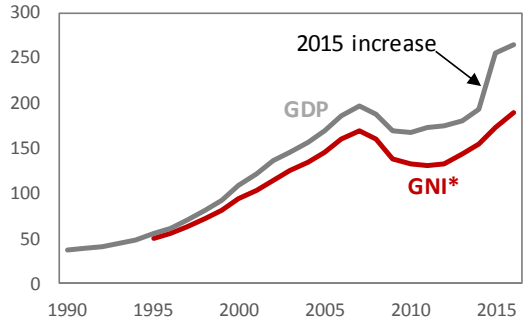
2. However, measuring investment and the size of the capital stock against the size of GDP is problematic. As has long been recognized, even though they are in line with international statistical standards, the GDP figures in Ireland do not reflect the true state of either the size or structure of output. This is due to the accounting rules, the holding company regime, and the tax-driven activities of multi-national enterprises in Ireland, which have a large statistical impact, out of line with their relevance to underlying economic activity. These factors have long overstated the size of GDP, but the issue came to a head in 2015, when real GDP growth was revised from 7.8 to 26.3 percent.[3] Because of this one-time upward shift, all GDP-based ratios are heavily distorted and need to be assessed with caution.

3. Mindful of the needs of users, the Irish Central Statistics Office has released a modified GNI* that provides a better measure of the underlying size of the Irish economy.

[3] See the 2016 Article IV report and Supplement for further details.

GNI*, which excludes the impact of re-domiciliated companies and the depreciation attributable to relocated capital assets, is considerably smaller than the standard GDP figure (Figure 3).[4] Consequently, standard metrics usually presented as a share of GDP would look worse when expressed as a percent of GNI*. For instance, the change in the denominator brings the 2015 ratio of government debt from 79 percent of GDP to 116 percent of GNI* (Table 3). This report uses the GNI* measure for Ireland, while continuing to use ratios to GDP for other countries.

Figure 3. GDP v GNI*
(EUR billions)



Source: CSO

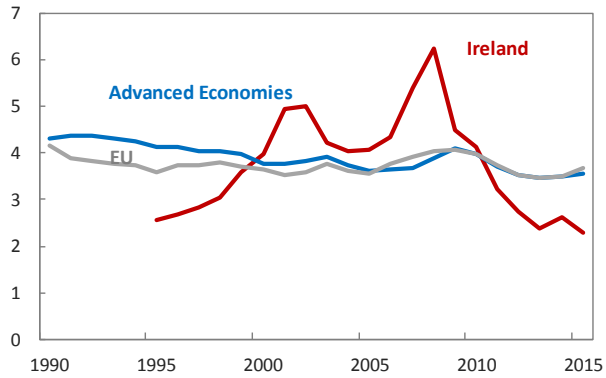
Table 3. Ireland: Key Ratios, 2015

	Ratio to:	
	GDP	GNI*
Fiscal Balance	-1.9	-2.8
Debt	78.7	116.3
Public Capital Stock	32.4	47.9
Public Investment	1.6	2.3

Source: CSO

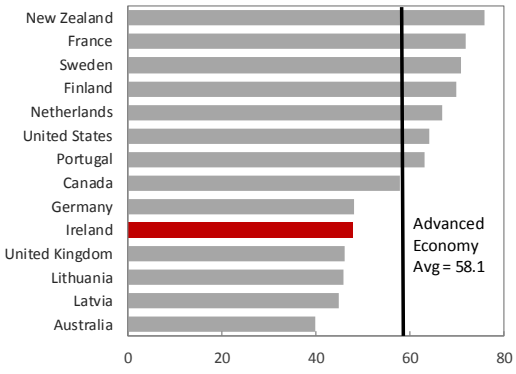
4. Using the GNI* series shows how large the pre-crisis boom was, and brings Ireland's public capital stock to the mid-range of advanced economies (Figure 4). Nevertheless, the post-2008 reduction in output still reduces Ireland's public investment ratio to well below advanced economy averages, levels that are insufficient to offset depreciation. This resulted in the capital stock declining from around the advanced economy average in 2008 to the current level of 48 percent of GNI*, around the same level as the UK and Germany (Figure 5).

Figure 4. Public Investment Comparison
(Percent of GDP/GNI*)



Source: Staff estimates, CSO.

Figure 5. Public Capital Stock, 2015
(Percent of GDP/GNI*)



[4] http://www.cso.ie/en/methods/nationalaccounts/newdevelopmentsandinformationnotes/

5. Semi-state commercial enterprises (public corporations) account for an additional 1.2 percent of GNI* of public investment, with a capital stock of 10 percent of GNI*. In 2015, almost two-thirds of their investment was devoted to energy and water assets, some of which was allocated to offshore assets. The importance of the state enterprise sector in Ireland is in the mid-range of English speaking countries for whom data are readily available for both investment and the capital stock (Figures 6 and 7).

Figure 6. Public Sector Investment, 2015
(Percent of GDP/GNI*)

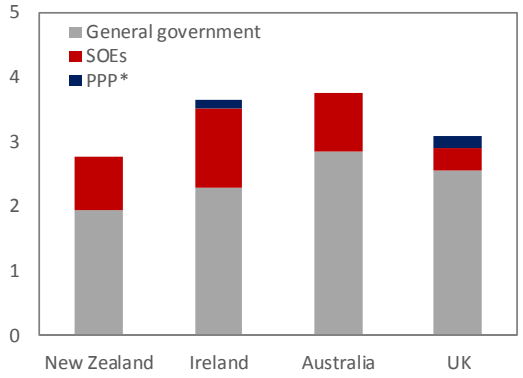
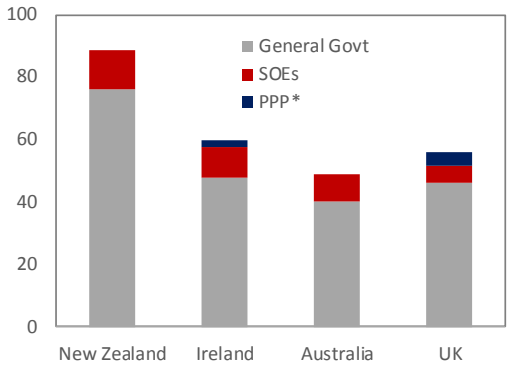


Figure 7. Public Sector Capital Stock, 2015
(Percent of GDP/GNI*)



Source: Staff estimates, NewERA, DPER, Australian, NZ and UK Government Financial Statements.

6. Investment in public-private partnerships (PPPs) compensated for cuts in public spending during the financial crisis and subsequently (Figures 8 and 9). Such investment benefitted from permissive fiscal rules (see Institution 4 below), and is generally treated as outside the general government, thus providing an inventive for government departments to bring forward proposals for new projects.

Figure 8. PPP Capital Stock: Ireland vs. Other Countries (Percent of GDP/GNI*)

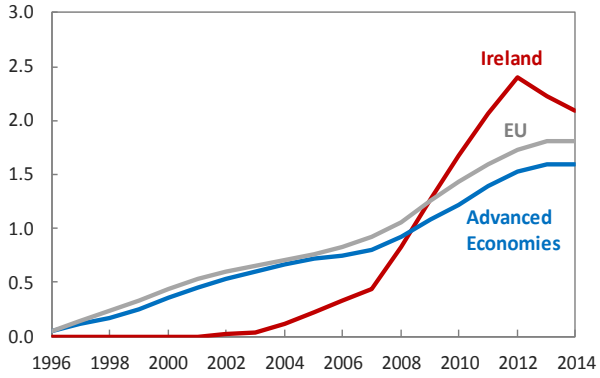
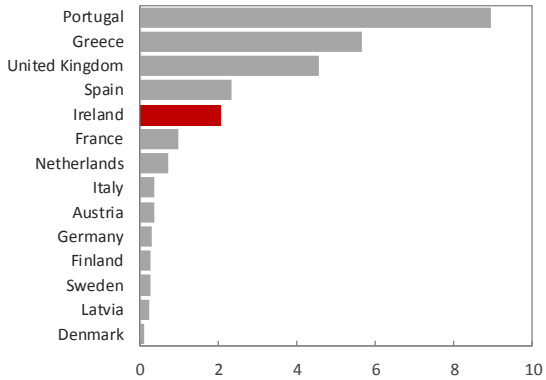


Figure 9. PPP Capital Stock, 2015
(Percent of GDP/GNI*)



Source: European Investment Bank, World Bank and staff estimates.

7. Most of Ireland's investment spending is done at the national level (Figures 10 and 11). Ireland's investment at the subnational level is one of the lowest in Europe, commensurate

with the overall volume of subnational spending. With respect to the balance between current and capital spending, Ireland's capital share is slightly lower than the average for advanced countries, but at a similar level to the UK, Germany, and Spain.

Figure 10. Public Investment Spending by Level of Government, 2013
(Percent of GDP/GNI*)

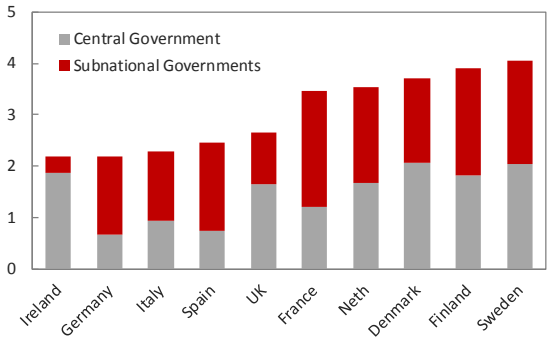
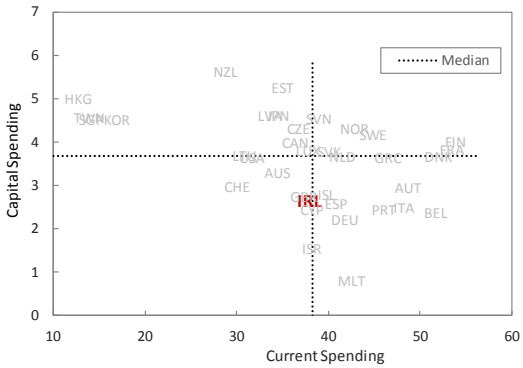


Figure 11. Capital v Current Spending, 2015
(Percent of GDP/GNI*)



Source: OECD, Eurostat and IMF.

8. The composition of Ireland's capital stock by function is notable in some respects (Figures 12 and 13). The first is housing's large share of the capital stock, relative to the advanced economy average. This share is likely to increase further as the government expands investment in social housing at a faster pace than other areas. The second is the relatively high share of assets related to environmental protection, while the third is the very low share of capital spending on defense relative to the average in advanced countries.

Figure 12. Public Capital Stock by Function

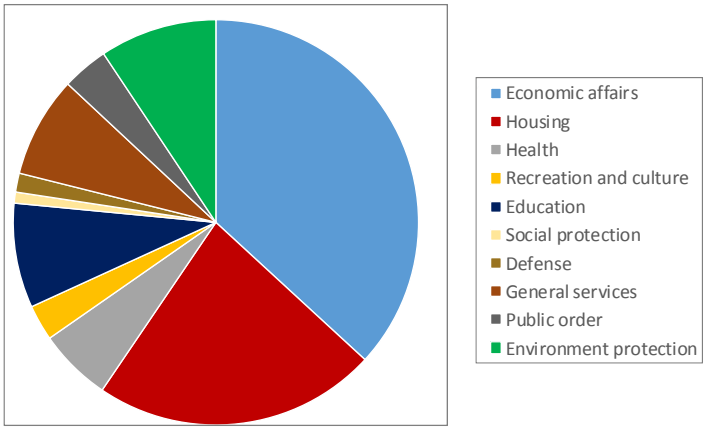
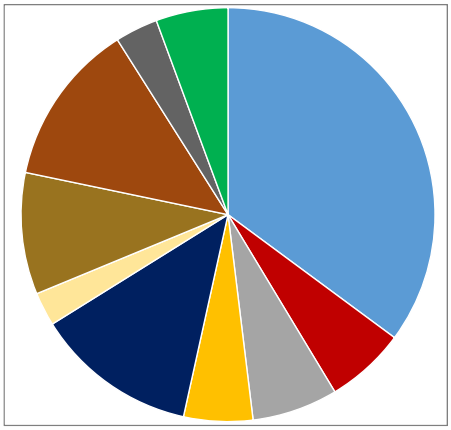


Figure 13. Advanced Economies Capital Stock by Function



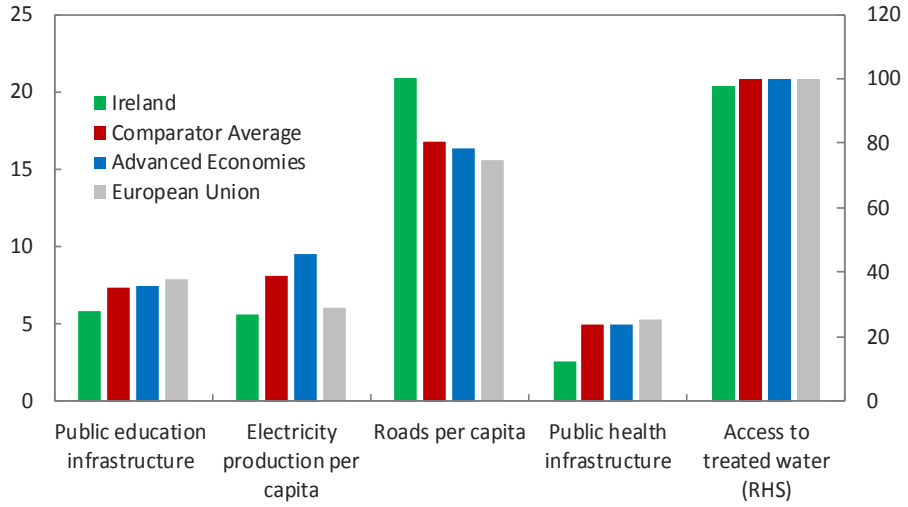
Source: OECD and staff estimates.

II. EFFICIENCY AND IMPACT OF PUBLIC INVESTMENT

9. According to the IMF's standard "global measures" of infrastructure, Ireland's infrastructure and access to services are relatively strong overall, albeit somewhat mixed looking across various sectors (Figure 14).[5] Reflecting the considerable investment since 2000, Ireland's roads stand out as exceptional in terms of coverage. Water coverage is slightly below that of other advanced economies, but with 96.4 percent of the population having access to treated water, is still in line with advanced economy standards, with the shortfall largely attributable to the large free-standing rural population. The relatively low electricity production per capita reflects several factors, including the temperate climate requiring minimal cooling (air conditioning makes up a large component of power usage in many other countries), as well as energy efficiency measures taken over the last decade. Areas where infrastructure is relatively weak include education and health, where large class sizes, and low numbers of hospital beds per capita reduce Ireland's rating.

Figure 14. Measures of Infrastructure Access (Global Measure)[1]

Index (LHS) and Percent (RHS)



Source: World Bank World Development Indicators.

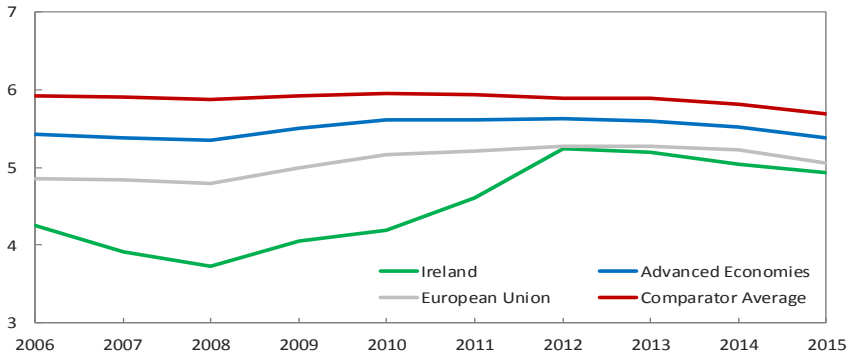
1/ Comparator countries are the UK, France, Germany, Sweden, Netherlands, Austria, Finland, Denmark, and Italy.

10. The improved perceptions of infrastructure quality likely reflect the benefits of the surge in infrastructure spending during the boom period (Figure 15). This indicator, drawn from the World Economic Forum's infrastructure perceptions survey, improved

[5] See Making Public Investment More Efficient (IMF 2015) for more details on the methodology, sources and specific measures of infrastructure coverage, quality and efficiency, in particular Annexes I & II.

significantly between 2008 and 2012, reaching European Union averages, before declining slightly. Interestingly, this decline has been in line with other European countries, suggesting that the deterioration in the perception of infrastructure quality may not be fully attributable to the decline in the public capital stock that occurred in the aftermath of the crisis.

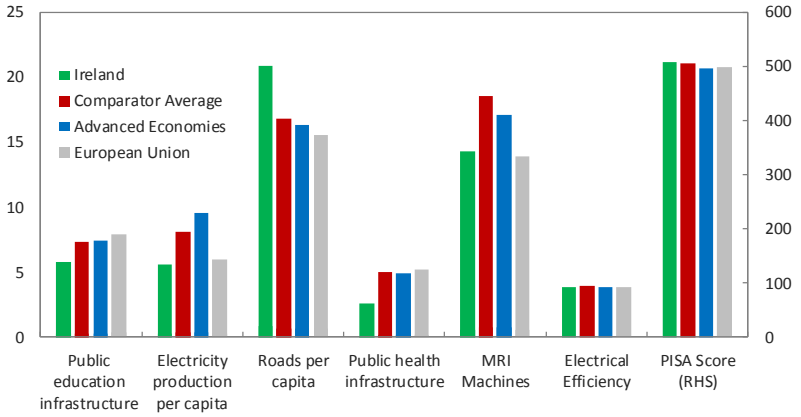
Figure 15. Perceptions of Infrastructure Quality



Source: World Economic Forum.

11. In addition to the global measure of infrastructure quality, Ireland can also be assessed against advanced economies alone, using a broader set of relevant access and coverage indicators (Figure 16). This assessment takes the standard indicators discussed above, excluding water coverage (which is less relevant for advanced economies) and complements them with three extra indicators, such as the Programme for International Student Assessment (PISA) scores to provide a better sense of education outcomes, the use of magnetic resonance imaging (MRI) machines for health investments, and transmission losses in the electricity sector. In these areas, Ireland achieves above average results in PISA scores, average scores in electricity efficiency, and below-average use of MRIs.

Figure 16. Measures of Infrastructure Access (Advanced Economy Measure)

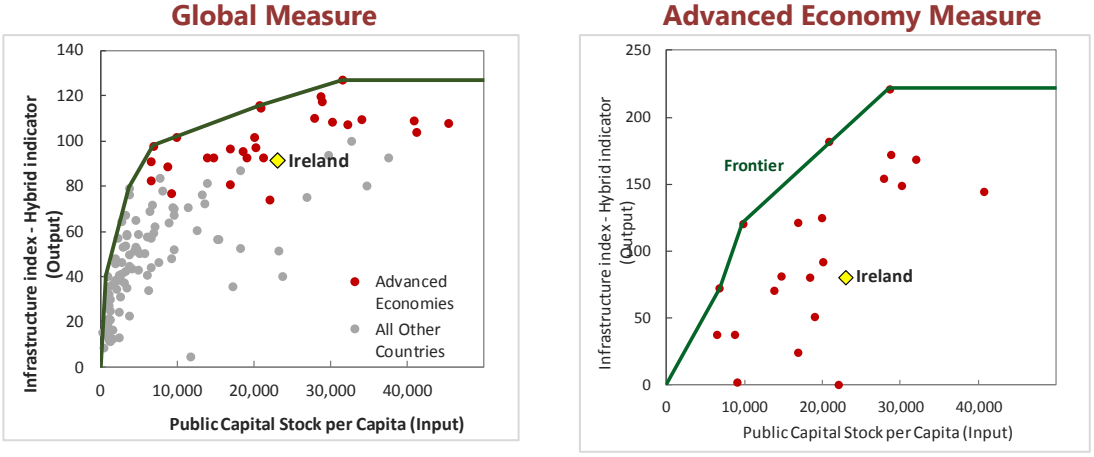


Source: World Bank WDI, OECD.

12. Ireland's investment efficiency is favorable compared to global measures, but significantly weaker when compared to advanced economies alone. Taking the measures of

infrastructure output—infrastructure access and quality—and mapping them against the public capital stock shows an investment efficiency frontier.[6] This frontier follows the path of the countries that deliver the highest level of infrastructure outputs for the lowest amount of infrastructure investment over time. Where a country sits relative to that frontier provides a measure of the efficiency of the country in converting infrastructure spending into infrastructure outcomes. The vertical distance below the frontier represents the efficiency gap. In this assessment, Ireland is assessed against a global efficiency frontier using the standard global measures of infrastructure outputs, as well as an advanced economy measure that uses the indicators of infrastructure access described in Figure 16. The latter represents a higher bar to be assessed against, as it compares Ireland solely to advanced economies that have more advanced public investment management (PIM) systems. (Figure 17).

Figure 17. Efficiency Gap



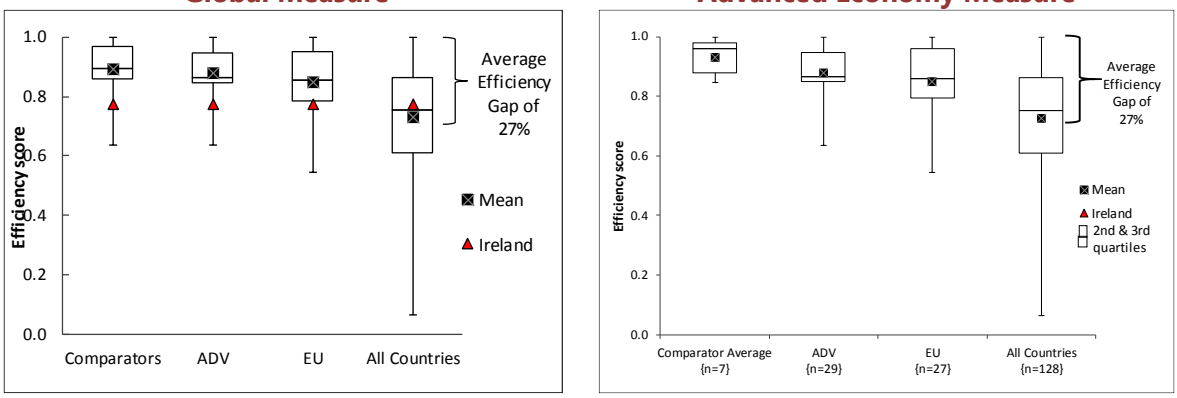
Source: Staff estimates.
Note that the output indicators for the two measures are scaled differently.

13. Both measures of the efficiency gap indicate considerable room for improvement in Ireland's public investment efficiency (Figure 18). The global measure puts Ireland's efficiency gap at 23 percent, compared to 15 percent for the broader European Union (EU). When comparing Ireland to the average of advanced economies, the efficiency gap increases to 58 percent, compared to the EU average of 42 percent. There is thus substantial scope for the Irish authorities to adopt policies that will help improve the efficiency in PIM. In Section III of this report, we will analyze where those gaps lie, and provide recommendations to close them.

[6] The infrastructure output is a synthetic series aggregating across the infrastructure access and output; and quality indicators (with quality weighted at 50 percent, and the each of the infrastructure access indicators given an equal weighting within the remaining 50 percent). The frontier is the line joining the most efficient countries at progressively higher spending levels. See Making Public Investment More Efficient (IMF 2015) for more details.

Figure 18. Efficiency Gap, Hybrid Score

Global Measure **Advanced Economy Measure**



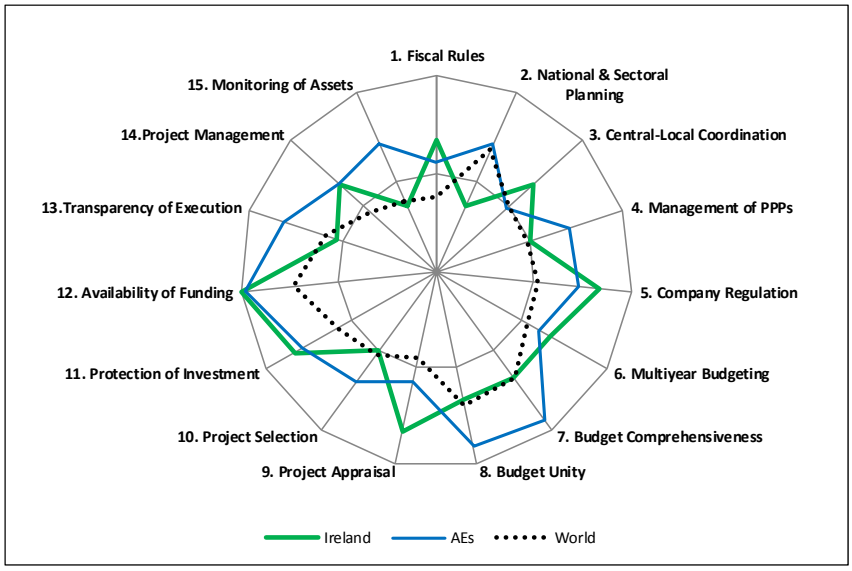
Source: Staff estimates.

III. PUBLIC INVESTMENT MANAGEMENT INSTITUTIONS

A. Overall Assessment

14. Fifteen key Public Investment Management (PIM) institutions are evaluated in this section of the report, and the results are summarized in Figure 19 below. The institutions are divided into three phases of the PIM cycle: (i) the planning of public investment; (ii) the allocation of resources to investment projects using Exchequer funds, PPPs, or other sources of finance; and (iii) the implementation of investment projects. The assessment evaluates the strength of the institutions, as well as their effectiveness, revealing areas where existing institutions are not working as well as they could.

Figure 19. Effectiveness of PIM Institutions in Ireland



Source: Staff estimates (strength is higher the further from the center).

15. Many of the institutions in Ireland are well designed and effective, in line with other advanced economies, but there are some areas where improvements can be made. Ireland's fiscal rules, which transpose the EU fiscal framework, support public capital formation; the semi-state commercial enterprises are well regulated and generally manage their investment projects well; implementation of multi-year budgeting has improved the allocation of budgetary resources to public investment projects; there is an adequate availability of funding for ongoing projects, even during previously tight fiscal conditions; and there are good project management practices. However, the planning process is complex and poorly linked to the allocation of resources for public investment; PPPs could be made subject to tighter fiscal rules; the effectiveness and sequencing of the project appraisal and selection processes could be increased; and more attention given to the management of infrastructure assets, especially the maintenance of these assets.[7]

B. Planning Sustainable Levels of Investment

1. Fiscal Rules (Institutional Strength - Good; Effectiveness - Medium)

16. Ireland's fiscal policy is guided by the EU framework, which includes a range of fiscal rules regarding the fiscal deficit, the structural deficit, spending growth, and debt levels. This framework is front and center in the Irish public discussion and budget decision making, and ensures fiscal discipline. The rules are codified in the 2012 Fiscal Responsibility Act, and include:

- A **budget balance rule**, requiring a general government budget balance or surplus, which is tighter than the Maastricht limit of a deficit of 3 percent of GDP. In practice, this rule will be deemed met if the medium-term structural budget deficit rule is met.
- A medium-term objective of achieving a **structural budget deficit** of no greater than 0.5 percent of GDP or, if the structural deficit exceeds 0.5 percent of GDP, an annual reduction is required, the size of which depends on the cyclical position of the economy (0.6 percent of GDP for 2016 in Ireland).
- A **debt rule** limiting debt to 60 percent of GDP, or if debt exceeds 60 percent of GDP, an annual pace of reduction of no less than 1/20th of the difference between the actual debt ratio and the 60 percent of GDP limit.
- An **expenditure benchmark** that limits the annual growth in general government primary expenditure to potential growth, as assessed over a 10-year period (defined as the past five years, the current year, and a projection for the next four years).

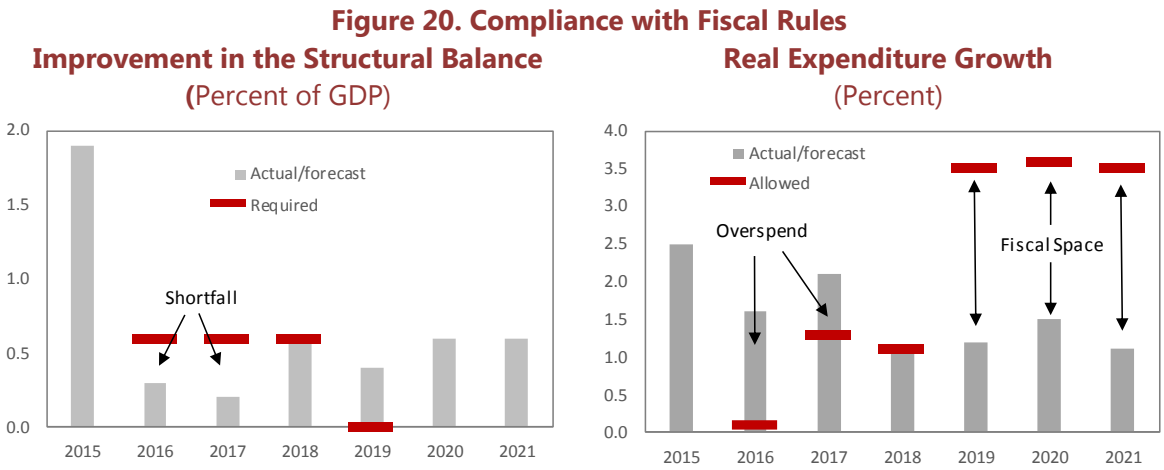
17. The complexity of the fiscal rules, and the extreme volatility of the Irish economy creates a significant challenge to the government in operating within the rules. In particular, the use of the structural balance rule, which requires an assessment of potential

[7] A notable exception are PPP's, maintenance costs are profiled for the 25-year operating period.

output, raises major difficulties in Ireland due to the highly volatile movements in GDP. This volatility results in large revisions to the structural balance estimates, which underpin the fiscal rules. Furthermore, the treatment of one-off adjustments, on both the revenue and expenditure side confuses matters even further. For instance, in 2016, taking account of one-off adjustments related to the sale of the Allied Irish Banks (AIB) improved compliance with the structural balance rule, but led to non-compliance with the expenditure growth rule. An additional problem for Ireland is the volatility of corporate income tax revenue.[8]

18. Ireland broadly complies with the fiscal rules, though risks of some small deviations linger. 2016 marked the first year of Ireland under the *preventive* arm of the EU fiscal framework, as it was previously under the excessive deficit procedure, which was focused on returning to the 3 percent of GDP deficit. The reduction in the structural balance was 0.3 percent of GDP, falling short of the required 0.6 percent of GDP adjustment. While the expenditure growth rule was met, this was due to a one-off increase in the 2015 expenditure base. Adjusting for that one-off expenditure increase, public spending growth exceeded potential output growth by 0.4 percent of GDP. Looking forward, the government's projections will not adhere to both the structural adjustment or spending growth rules in 2017, are projected to meet both in 2018, and have some positive fiscal space over the period 2019 to 2021.[9] It is this prospect of fiscal space opening up in 2019 that has stimulated the current debate about the scope for increasing the allocation of budgetary resources for public investment (Figure 20).

Figure 20. Compliance with Fiscal Rules



Source: IFAC.

19. While adding complexity, the structural balance rule provides some degree of protection for capital spending, as does the special treatment of capital spending in the spending rule. The structural nature of the balance rule means that expenditures need not be

[8] See discussion in the last Article IV report. See also Box 3.1 of EC "Post-Programme Surveillance Report – Ireland, Autumn 2016."

[9] Compliance with the rules is based on the independent Irish Fiscal Advisory Council's (IFAC) assessment, published in the June 2017 Fiscal Assessment Report.

cut in the event of an economic slowdown leading to temporary revenue losses. Given that capital spending is often the first area to be cut in these situations, this is an important protection. The spending rule provides special treatment for gross fixed capital formation, by including a smoothed series, averaged over the past four years. This treatment opens the door to possible confusion when capital spending is being increased, as in the first year of an expansion, only 25 cents in each euro of additional spending is counted. However, if this option is used in full, as time progresses, this spending will catch up on the government, as by the fourth year, it may be necessary to cut back spending to maintain adherence to the rules. As noted, the complexity presents a challenge, not just in the operation of fiscal policy, but also in its interpretation.

20. In the previous cycle, investment spending was strongly pro-cyclical—surging as the economy boomed, and cut back following the crisis (see Section I). However, the current fiscal rules were introduced after the crisis, so cannot be assessed on that basis. Nevertheless, such a pattern does provide a salutary warning, and the government should be wary of overcommitting in advance to avoid following the same path in the future.

2. National and Sectoral Planning (Institutional Strength - Medium; Effectiveness - Medium)

21. The planning framework in Ireland is complex and its record in improving economic and social welfare has been mixed. A national spatial strategy (NSS) was prepared in 2002, to achieve a better balance of social, economic, and physical development. The NSS was structured around the identification of nine "gateways" comprising twelve cities and towns and nine "hubs" comprising eleven towns. However, the NSS had a number of shortcomings: it designated too many centers, created a perception of winners and losers, was inadequately supported by the political and local government systems, lacked an economic dimension, did not have adequate legislative backing and was not linked to a capital investment program.[10]

22. The government has launched a new attempt to build a comprehensive long-term spatial strategy, which looks forward to 2040, as well as a ten-year capital investment plan. A discussion paper was issued in February 2017 (*Ireland 2040, Our Plan: Issues and Choices*) and, following widespread public consultations, the Department of Housing, Planning and Local Governments (DHPLG) is preparing the *National Planning Framework* (NPF), with a draft to be published by the end of the summer, to be finalized by the end of the year. Some comments on the NPF, based on the mission's discussions with the DHPLG are provided in Box 1.

[10] Department of Housing, Planning and Local Government (DHPLG), *Ireland 2014, Our Plan: Issues and Choices*, February 2017, paragraph 2.4.3.

23. At the same time, the DPER is preparing a mid-term review of its existing capital investment plan,[11] which covers the period to 2021, as well as the ten-year capital plan. The DPER intends to publish the ten-year plan at the same time as the new NPF,[12] with the aim of establishing the capital plan as an instrument to enable the objectives set out in the strategic plan.

Box 1. Ireland's National Planning Framework (NPF)—Highlights

- Spatial plans at the national level should recognize and address the increasing mobility of people, especially young people, and capital, particularly the "pull" factor of large and capital cities.
- Implementation of long term development plans will require forming partnerships and formal coordination arrangements between regional and local authorities, private developers and citizens.
- Specific issues for Ireland to tackle in a spatial planning and regional economic development context include enhancement of regional connectivity (roads and railways) without encouraging more sprawl; diversifying energy sources (90 percent fossil fuel use, 10 percent renewable energy); enabling sustainable quality investment in water services; universal high speed broadband access for business and citizens; supporting investment in innovation (where Ireland rates below EU comparators); how to make businesses/SMEs/start-ups thrive in small towns; addressing new and emerging challenges like Brexit; and tackling skills shortages and performance of Irish-owned firms.
- Parity in the development and progression of Irish cities will require the central government to work hand in hand with local governments on measures that promote livability, critical mass, more sustainable mobility and more affordable housing in city cores.
- Greening of cities is crucial for their attractiveness and requires development of recreational areas and high-quality public spaces inside the cities.
- Building a critical mass of cities requires sustainable management of increasing mobility needs, expanded traffic, and the growth of urban noise pollution.
- Connectivity between regionally located cities and their outward links by air should be further developed.
- The importance of "soft tools" in the development of cities should be discussed. In Denmark, for example, private developers frequently hire experts (e.g., sociologists) to advise on how to furnish the public spaces in a city.

Prepared by Peder Baltzer Nielsen (FAD Expert), Merja Toikka (EC), Nikos Karadimitriou, (EC Expert), and FAD staff.

24. Some key features of the NPF include its focus on reversing the trend of cities and towns sprawling out continuously, and planning for a transition to a low-carbon future and adaptation to climate change. In the initial early draft, that was seen by the PIMA team, the strategy mixes high-level strategic directions and policies, with specific actions and in some cases, specific projects. Such an approach can create challenges, not only by raising the expectations of different stakeholders, but also by not being aligned with estimates of the cost of delivering significant capital infrastructure, which will be required to deliver the objectives of the NPF.

[11] DPER, *Building on Recovery: Infrastructure and Capital Investment 2016-21*, September 2015.

[12] The idea is that either the investment plan would be incorporated in the NPF, or that the two would be published as separate but complementary documents.

25. In addition to the national-level plans, many strategies and plans are produced at the sector level, by government departments and semi-state commercial entities. These plans include key sectors such as transport, health, education, social housing, climate change, national broadband, electricity, and water, and cover varying time periods. Most of the sector strategies include an assessment of capital investment requirements,[13] without much detail for individual projects. In many cases the costings have not been validated by Vote Officers in the DPER.

26. An example of good inter-departmental coordination is the plan for social housing (*Rebuilding Ireland: Action Plan for Housing and Homelessness*). Designed to address one of the most complex challenges facing Ireland—namely, housing shortages, rising prices, and homelessness—the strategy has received a strong political consensus. It is a well-developed strategy with clear targets (to build 47,000 new housing units over the period 2017–21), a funding envelope of €5.35 billion approved by the DPER, an effective system of planning approvals, and a construction pipeline that stretches across local authorities.

27. Some sector plans, but not all, include information on measurable performance targets for infrastructure investment. These targets sometimes focus on outcomes, but more typically on outputs: two examples of good practice are the plan for climate action and water.[14] At the local level, authorities are required to prepare development strategies covering a six-year period but, for the most part, these documents contain little information on capital investment, the costs of such investment, or performance targets.

28. The DPER faces some challenges in aligning the analysis of investment needs and priorities with its own analytical work, institutional setting, and available fiscal space. The total amount of submissions received in the mid-term review of the capital plan adds up to more than €10 billion, while the fiscal space available is €2.6 billion.[15] Some of this excess demand will be covered by the long-term capital plan that is under preparation, but the NFS—with its focus on developing five metropolitan cities and other urban areas—creates specific challenges and will demand additional resources as well. The traditional structure of the budget, arranged around departmental "votes", does not fit comfortably with the cross-sectoral approach envisaged in the NFS.

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[13] For example, the strategy for land transportation is largely focused on investment needs, and puts a case for minimum Exchequer funding of €1.3 billion a year over the long-term. See Department of Transport, Tourism and Sport, *Investing in our Transport Future: Strategic Investment Framework for Land Transport*.

[14] Department of Communications, Climate Action and Environment, *Draft National Mitigation Plan*, March 2017, includes a range of targets for energy efficiency. Irish Water's strategy to 2021 includes targets on drinking water quality, waste water quality, and network leakages that would align Ireland with EU standards. For example, the number of people at risk of contamination is planned to fall from 700,000 in 2016 to zero by 2021.

[15] The total fiscal space available is €5 billion, but €2.6 billion has already been allocated to the housing program, given the size and urgency of needs in this area.

29. Planning instruments, strategies, and plans have proliferated in Ireland. However, there is an absence of strong mechanisms to ensure that they are aligned at the national level; nor is it clear how regional and local strategies feed into or follow them. Expectations of higher investment may be created in departments, semi-state entities, regions, cities and towns, which cannot be fulfilled because of financing constraints. Measures could be taken to strengthen the coordination and alignment of the planning process and the preparation of credible and consistent infrastructure investment plans.

30. To effectively support the implementation of the NFS while safeguarding the fiscal stance and the effectiveness of expenditures, DPER could strengthen the institutional arrangements for managing public investment.[16] The National Economic and Social Council (NESC), for example, has suggested that the performance of infrastructure projects could be improved by establishing an entity with independent powers to assess infrastructure needs, help the government set priorities, review alternative financing options, help remove bottlenecks in delivering major projects, and monitor their performance.[17] Examples of entities with some similar characteristics that have been established in France, New Zealand, South Korea, and the UK are shown in Appendix 1. The main issues of relevance to the DPER in relation to Institution 2, together with suggestions for improvement, are summarized in Box 2.

Box 2. Measures to Improve the Management of Infrastructure Investment

Alignment of analytical work on estimating demand pressures

Many of the 69 National Policy Objectives set out in the latest draft of the NPF[1] prepared by the DHPLG includes references (which could be interpreted as commitments) to investment projects relating to specific sectors, without specific costings. Section 9.3 of the NPF presents a description of infrastructure pressures, but the projections and analysis are not aligned with the work carried out by the DPER on spending pressures and infrastructure gaps, and do not include any costings. The DPER could develop a common analytical framework that would be applied by all departments. Similarly, the assumptions and analytical methods used by the DPER in carrying its assessment of demand and infrastructure gaps in various sectors may need to be validated by the relevant spending departments. The DPER should also ensure that the estimates of the future costs of major investment projects are based on a standard methodology and assumptions.

Alignment of the presentation of the NPF, Sector Plans, and DPER's Capital Plan

The current plans and strategies do not "read across." Thus, it is difficult to connect the information set out in the national strategy for social housing, the discussion of social housing in the NPF, and the information on investment for social housing in DPER's capital plan. A system of "signposting" should be developed so that cross-references are included in the various strategies to facilitate a full understanding. For example, the discussion of transport or water in the NPF would include specific references to the respective plans; and the discussion of these topics in the capital plan would similarly refer to relevant sections of the NPF and the sector plans for transport and water. Such a change would greatly improve the connection between the plans, as well as their consistency.

[16] Edgar Morgenroth, ESRI, *Submission to the Department of Public Expenditure and Reform on the Review of the Public Capital Programme*, May 2014.

[17] For example, NESC, *Developing a New Approach to Infrastructure Policy*, December 2015; and NESC, *A New Approach to infrastructure Policy and Investment – the Case for an Infrastructure Policy Center*, June 2017.

Box 2. Measures to Improve the Management of Infrastructure Investment (concluded)

Standard presentation of sector plans with more complete information on investment

The presentation of information on investment in sector plans is variable, but there are examples of good practice such as the *National Mitigation Plan* for climate action and climate change. The framework for setting out information used in this *Plan* could be developed as a standard methodology, adapted as necessary for all sector plans. The *Plan* sets out for each area (built environment, transport, agriculture and forestry, etc.) data on: (i) investment projects that have already been initiated; (ii) proposed new projects; (iii) project objectives (measurable targets); (iv) estimated impact on the Exchequer (direct expenditure and taxes foregone); (v) the NPV of the project, measured over the short term (2017-20) and long term (2017–30); (vi) the marginal cost per ton of carbon abated; and (vii) the cumulative reduction in carbon emissions.

Infrastructure Projects Authority

Several advanced countries have established special entities to provide a range of advisory services such as the independent review of major projects, development of best practice methodologies, medium to long-term demand analysis, development of alternative financing models, and monitoring the implementation of major projects. In some of the countries, the entities are established within the executive, usually the finance ministry, in other cases they are at arms' length from the government. Creating such an entity could be considered in Ireland. To avoid potential issues of "capture", a preferred option might be to locate the entity as a unit of the DPER.

Recommendations:

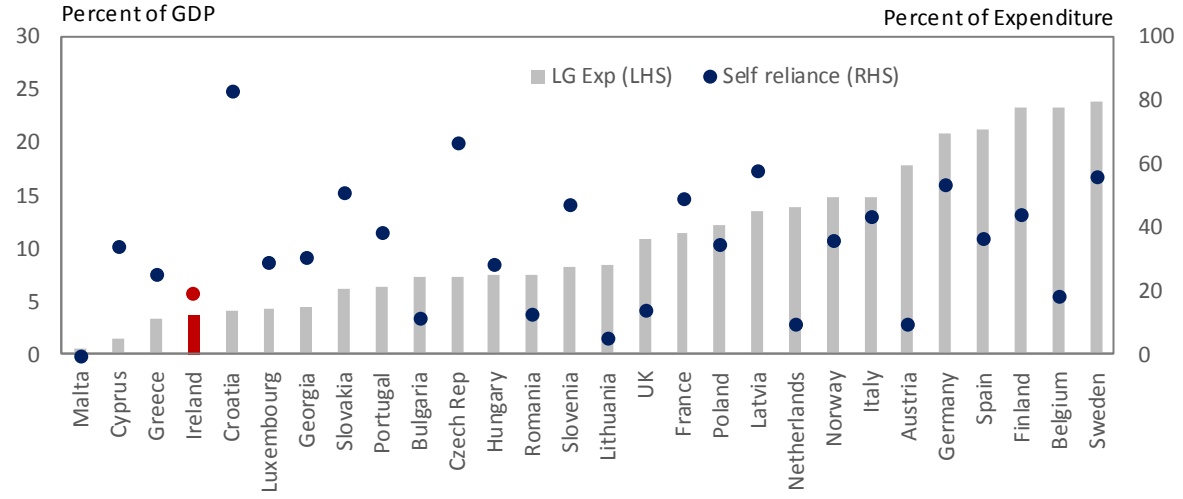
Improve the link between the planning and budgetary decision-making process by:

- Integrating the spatial, sectoral and 10-year capital funding plans so that each provides a coherent link to the other, with a specified minimum set of information on priorities, estimated project costs and infrastructure gaps, timelines for implementation, and performance targets;
- Updating and reducing the number of planning strategies, and integrating them both vertically (with the NPF and capital plan) and horizontally (across other relevant sectors);
- Establishing a common analytical framework for the work of the DPER, sectors and semi-state entities on estimating demand pressures and infrastructure gaps;
- Establishing a standard presentation in sector plans of data relating to investment projects, their cost, and performance targets; and ensuring that, to the extent possible, these data are aligned with information in the capital plan and the budget; and
- Establishing an Infrastructure Projects Unit within the DPER, to provide advisory services to the Minister on the appraisal and selection of projects (see also Institution 10 where a strengthened role for DPER in this respect is recommended), special studies of infrastructure bottlenecks and financing, and the evaluation of lessons learnt.

3. Central Local Coordination (Institutional Strength - Medium; Effectiveness - Medium)

31. The local government sector in Ireland accounts for only 3 percent of GDP, one of the smallest shares in the EU (Figure 21).[18] The self-financing rate is also extremely low. The sector was restructured under the Local Government Reform Act of 2014, following which the number of authorities was reduced from 88 to 31. Three Regional Assemblies, whose members are representatives of the constituent local authorities were also established, with a view to coordinating the plans and activities of their members. Overall, Ireland has one of the most centralized fiscal systems in Europe, with local authorities having relatively little political power or fiscal discretion. Local authorities prepare development plans which cover a six-year period, but most of these plans include little information on capital investment projects, or their cost.

Figure 21. Local Government Expenditure and Self-Funding
(Percent of GDP and Expenditure)



Source: GFS.

32. Although local authorities are not subject to numerical limits on their debt, all borrowings must be approved by the appropriate minister, following a review by the department responsible for local government (DHPLG).[19] The 2013 *Fiscal Transparency Evaluation* (FTE) of Ireland assessed fiscal risks to be low in the local government sector, with no local authority having a debt service to revenue ratio of more than 7 percent.[20]

[18] In 2011, the shares ranged from 6 percent in Greece to 63 percent in Denmark, with a simple average of about 33 percent. Ireland's share of 12 percent was the second lowest. See *Ireland: Fiscal Transparency Assessment*, July 2013.

[19] Local Government Act 2001, Section 106.

[20] *FTE*, Section 3.3.1 and Figure 3.9.

33. The MTBF [21] formalizes (in Annex 4) the General Government Balance (GGB) protocol agreed between the DPER and the then Department of Environment, Community and Local Government.[22] Under this protocol the local government sector is required to have a neutral impact on the GGB. The expenditure benchmark, also in the MTBF, facilitates control of general government expenditure with the objective of moving towards a balanced budget in structural terms. This benchmark governs the total revenue and capital expenditure of local authorities, and has implications in this context for the expenditure of own resources on capital projects.

34. The contribution of local authorities to the GGB is managed by the DHPLG through several mechanisms including the revenue account, the capital account, loan sanctions, and borrowing controls. The allocation of non-mortgage loan sanction capacity for all local authority capital projects is set annually by the DHPLG. The current allocation framework takes account of non-mortgage loan repayments, new loan financing requirements, and the planned expenditure of local authority own resources.

35. The Local Government Act 2001 (amended by the Local Government Reform Act 2014) provides legislation related to the local authority budget process. The tax base for local government is relatively small, but was expanded in 2014 to include a local property tax (LPT). Eighty percent of the LPT is retained by local authorities to finance their own spending, and 20 percent is redistributed to poorer authorities whose tax base is smaller. The government decides on the allocation of expenditure of LPT to local authorities each year as part of the budgetary process.

36. Capital investment by local authorities is financed largely by transfers (grants) from the state budget, with the remainder funded from development levies, borrowing, other internal resources, and sales of assets. A three-year capital program is prepared by the Chief Executive for approval by the elected local council in accordance with Section 135 of the Local Government Act 2001. Discussions between the government and individual local authorities are mainly conducted by the DHPLG, and with departments responsible for sectors such as transport, where local authorities have a significant role in the delivery of services. The DPER itself has little direct contact with these authorities during the budget negotiations. Information on grants and other allocations are often not notified to local authorities until several months after the national budget is approved. At the end of each year, local authorities prepare an annual financial statement that includes information on income and expenditure of the capital account, and an overall capital balance.

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[21] The local government sector, as part of general government, is required to operate in accordance with the MTBF. This framework was published by the Department of Finance in December 2013, as required by EU Council Directive 2011/85/EU, known as the "Six Pack."

[22] Now the Department of Housing, Planning and Local Government (DHPLG).

4. Public-Private Partnership (Institutional Strength - Good; Effectiveness - Medium)

37. Ireland established a general framework[23] for its PPP program in 2001 and, as noted above, the use of PPPs (though less than in some other countries) picked up substantially after the financial crisis. The 2001 framework focused on the methodology and procedures to be used in preparing, selecting, and implementing PPP projects. It did not seek to identify specific sectors and projects that would be undertaken as PPPs or concessions. Instead, the selection of PPP projections has proceeded on a largely ad hoc basis, driven by sector dynamics, subject to central review and oversight on value for money and procurement. The cumulative volume and value of PPPs in Ireland has been much lower than in some other EU member states. For example, in Portugal and the UK, PPPs represent around 11 percent and 16 percent of GDP, respectively, in terms of nominal commitments, compared to only 3 percent in Ireland. The DPER is currently carrying out a review of Ireland's PPP policy.

38. The PPP process is underpinned by several legislative instruments, notably the State Authorities (Public Private Partnership Arrangements) Act 2002, and a large suite of procedural guidelines.[24] The central oversight arrangements include a central PPP unit in the DPER, and the National Development Finance Agency (NDFA) in the National Treasury Management Agency (NTMA). The NDFA's main role has been to provide financial advice and support to departments in preparing their PPP proposals. In addition, it monitors the implementation of projects once tenders have been awarded. More recently, it has taken over from departments the prime responsibility for managing the procurement phase of PPP projects.

39. Under the PPP program, the government aims to deliver essential infrastructure across the education, health, justice (law courts), social housing, and transport sectors. Three phases of the PPP program are identified in DPER's latest draft of the government's *Capital Plan 2016–21*: Phase 1 focused on roads and primary education among others; Phase 2 focused on social housing; and Phase 3 focused on higher education, health, and court projects. Most PPPs in Ireland take the form of Design, Build, Finance, Operate, and Maintain (DBFOM) projects, most of which rely on unitary payments (often called "availability payments") from the government, though there are a small number of concession contracts where the private sector provider is given a license to levy a charge on the users of the service (e.g., a toll road).

40. PPP's have been rolled out in a sequenced way. The first PPP projects began in education (bundles of schools), before moving into roads. In 2004, Ireland's motorway network was relatively restricted, covering just 200km. This has now expanded to around 1000km, around 40 percent of which are PPP projects. The next stage saw a number of distinct buildings, such as the district criminal court and convention center built. At this point, the crisis hit, and most

[23] Framework for Public Private Partnerships, November 2001.

[24] For example, *Main PPP Guidelines*, 2006; *Technical Guidance Note: Assessment of Projects for Procurement as PPPs*, 2006.

projects under development (but not yet contracted) were cancelled. Nevertheless, schools and road projects continued throughout, and today a range of older project proposals are being reconsidered, as well as new projects such as higher education institutions, primary health centers and courts.

41. The PPP arrangement has allowed the government to deliver projects at a time when public spending was tightly constrained by the financial crisis (see Institution 1). Looking ahead to a period when more fiscal space may be available, it is important that the government takes decision on PPPs based on value-for-money (VFM) and affordability rather than additionality, which appears to have been the dominant driver in recent years.

42. The nominal value of the Exchequer's financial commitments under PPP and concession contracts amounts to €9.6 billion (Table 4). Transport is the dominant sector both in PPPs (€1.9 billion out of €3.1 billion total contractual value), and in concessions (seven road construction projects with a nominal contractual value of about € 1.5 billion). Some projects have been grouped into "bundles," for example where one PPP covers the construction and operation of several schools.

Table 4. Ireland: Exchequer Financial Commitments from PPPs and Concession Projects

	No. of projects	Total contractual value (€ billion)	Total projected unitary payments (€ million)
PPPs	19	3.1	8.6
Concessions	8	1.9	1.0
Total	27	4.9	9.6
Total as % of GDP		2.0	3.8

Source: DEPR.

43. While PPP projects are required to undertake a series of four VFM tests,[25] few are screened out through this process. The tests which are carried out across the procurement process are: (i) detailed appraisal; (ii) output specification and Public Sector Benchmark (PSB); (iii) tender evaluation; and (iv) award of contract (see Box 3). The DPER acts as a gatekeeper at each of these stages and has the right to delay or terminate any project if it believes the procedures have not been followed, or the calculations of VFM are inaccurate; however, only two projects over the past 15 years have ever failed the tests. A report by the C&AG in 2004 indicated that the PSB had been used incorrectly in one of the early PPP projects.[26] In the absence of more

[25] *Value for Money and the Public Private Partnership Procurement Process*, October 2007.

[26] Comptroller and Auditor General, *Report on the Groups Schools Pilot Partnership Project*, 2004. The report showed that errors in the estimation of the costs and benefits of the Department of Education and Science's project led to the conclusion that the PSB was cheaper by 6 percent. A correct calculation would have led to the opposite conclusion, namely that the PSB was more expensive by 13-19 percent.

recent audit information, it remains uncertain whether the VFM tests are being used consistently across government.

Box 3. Four Value-for-Money Tests for PPPs

- The first two tests are qualitative tests to determine if the project is suitable to be procured as a PPP—for example, if it is of sufficient scale and offers potential for risk transfer to the private sector.
- The third test is carried out after the receipt of tenders and evaluates whether the highest-ranking tender has the potential to deliver VFM. This test is undertaken against the approved PSB, the comparator using traditional method of procuring the projects.
- The final test is undertaken just prior to the award of the PPP contract, when all the costs are known, and is similarly based on a comparison with the PSB.

Source: NDFA

44. To compensate for a shortage of budgetary resources following the financial crisis, the government has arguably placed too much emphasis on the "additionality" case for PPPs in recent years. PPPs have been used to fund investment in addition to the expenditure allowed within the fiscal rules. In a period when more fiscal space may become available for infrastructure investment, the DPER could consider several measures to reduce the incentive to invest in PPPs, as compared to investment projects financed through the budget:

- The fiscal screw on PPP transactions could be tightened. The government currently imposes a cap of 10 percent on the aggregate level of annual expenditure on PPP unitary payments relative to the Exchequer capital envelope. DPER could consider reverting to the tighter rule that applied prior to 2012 in which the full capital cost of all new PPP transactions was scored against a department's envelope.
- Restrictions could be imposed on some categories of PPPs, e.g., in the social sector (hospitals, schools, etc.), which are more likely to impose a future fiscal burden than PPPs in the economic sector (roads, energy, etc.). Countries such as the U.K. and South Africa have imposed such restrictions.[27] This approach (focused on sectors) would not restrict "good" PPPs that generate sufficient cash flows from user charges. Rather it emphasizes the types of infrastructure services that are most beneficial to use under PPP arrangements.
- Another option would be to "raise the bar" compared to the public-sector comparator by requiring PPPs to achieve a higher percentage of net cost savings (on a net present value basis) over the PSB. This option would depend on a strong DPER to push back against spending departments' proposals which offered relatively weak value-for-money. On the other hand, this option could encourage more "creativity," with little impact on the number or value of projects brought forward for review by the DPER.

[27] For example, the UK government has cancelled some waste management PPPs, and taken over the contracts to manage them. South Africa has reduced the number of PPPs for government office accommodation.

The review of PPPs being undertaken presently by the DPER is an opportunity to address these issues.

45. Overall, the governance arrangements and mandated procedures for planning, evaluating and implementing PPPs and concessions are well aligned with international good practice. The C&AG, however, raised some concerns about the implementation of these procedures, as follows:

- Government policy on PPPs since the financial crisis has been guided by considerations of additionality rather than whether a PPP represents a good use of public resources.
- Information on the cost-benefit analysis (CBA) and other economic and financial analysis of proposed PPP projects should be made public (see also Institution 9).
- More ex post reviews of PPP projects should be carried out, and the results should be widely disseminated to promote lesson learning.
- Ex post reviews should place more emphasis on the economic and social impact of the projects (e.g., the performance of judicial courts, or the impact of new roads on traffic congestion).

46. The 2013 FTE raised concerns regarding the disclosure of information on the government's commitments and contingent liabilities relating to PPPs.[28] While more information is now published on these liabilities and additional information is available from departments such as Transport, Tourism, and Sport,[29] the data are not complete. One notable omission, for example, is an estimate of how the commitments of €9.6 billion are distributed over the remaining years of the contracts. Such information is routinely provided in the UK and Portugal.

Recommendations:

- As part of DPER's review of PPPs, and subject to confirmation that the change would be consistent with EUROSTAT rules, consider replacing the current fiscal cap on unitary/availability payments with a rule that scores the total capital cost of a PPP against departments' capital envelopes.
- Consider imposing restrictions on PPPs (e.g., in the social sector) that are more likely to impose a future fiscal burden than PPPs in the economic sector (roads, energy, etc.); and consider "raising the bar" by requiring PPPs to achieve a higher percentage of net cost savings compared to the public-sector benchmark.

[28] FTE, paragraph 77.

[29] See http://ppp.gov.ie/ppp-projects/

- Add an annex to the budget documents that provides comprehensive information on PPPs and concessions, broken down by sector and project, including a projection of how future commitments are distributed over the remaining years of the contracts.
- Make public the results of cost-benefit analysis of PPP projects, and the criteria used to select them.
- Conduct more ex post reviews of PPP projects, and disseminate the results; give more weight in these reviews to the economic and social impact of PPPs.

5. Regulation of Infrastructure Companies (Institutional Strength - Good; Effectiveness - Good)

47. Ireland's economic infrastructure markets are either open to both domestic and international competition, or thoroughly regulated monopolies. The former applies to electricity generation and retail distribution, gas supply, telephone and internet, while the transmission networks (gas, water, and electricity), which are by their nature natural monopolies, are closely regulated. The electricity market covers both the Republic of Ireland and Northern Ireland, and is interconnected with Great Britain, with three private sector players, and two additional public sector generators competing with the incumbent Electricity Supply Board (ESB). The provision of broadband internet is also highly competitive, with three alternative providers to the incumbent, Eircom Limited (EIR), ranging from larger national operators to smaller regional wireless broadband service providers.

48. The main domestic regulator, the Commission of Energy Regulation (CER) is responsible for setting the prices for many of the regulated monopolies. The CER is organizationally, financially, and managerially autonomous. It sets prices for the transmission networks according to a set of economic criteria that take account of both impact on the consumer and maintaining investment grade credit ratings for the related companies. In practice, this means scrutinizing closely the company investment plans and the projections for domestic demand that underlie them in order to avoid over- or under-investment. Other regulators include the rail regulator and COMREG for communications.

49. The area of water pricing has been highly sensitive in Ireland, where services have traditionally been provided at no cost to the consumer. A recent attempt to introduce water charges was highly controversial and eventually reversed. The CER continues to regulate the notional prices which the water company can charge, and hence the subsidy that it receives from the government, as well as the investments required to bring the quality of water up to the EU standards. Even so, water costs are estimated to be significantly higher than in comparable countries.

50. The government reviews the investment and overall financial plans of all state enterprises. The government set up an entity called NewERA in 2011, to provide oversight and specialist financial advice to the largest SOEs (Figure 22). It also compiles their financial

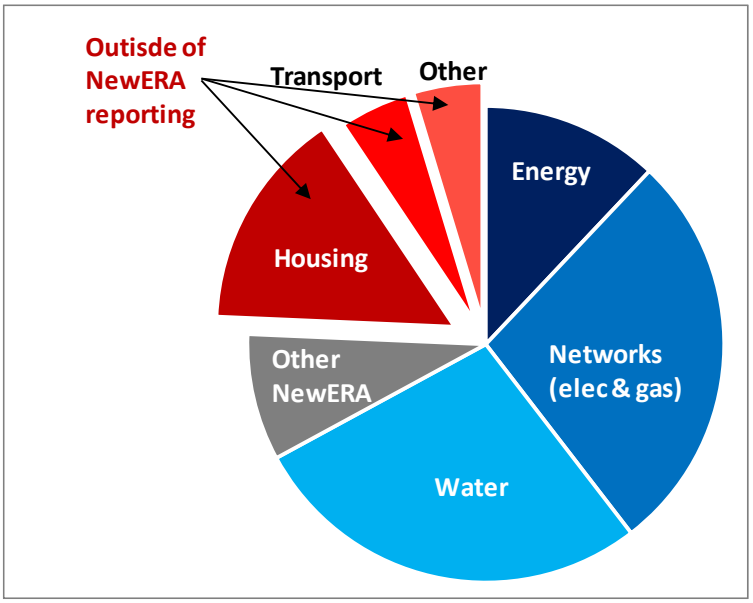
statements and investment plans into a single Financial Overview, though this only covers 75 percent of the SOEs. NewERA currently manages:

- Bord na Mona (peatland and electricity generation): turnover €433m;
- Coillte (Forestry and windfarms): turnover €283m;
- Eirgrid (electricity transmission): turnover €706m;
- Ervia (Gas networks and water supply): turnover €1,342m; and
- Electricity Supply Board (ESB—electricity generation and transmission): turnover €3,335m.

51. State enterprises' investment plans are required to work within a range of constraints, with multiple interactions and checks and balances around investment approval. All enterprises are dually "owned" by the Ministry of Finance and the relevant line ministry, which provide the companies with a Letter of Expectation, setting out objectives for financial performance, gearing ratios, and performance targets. Some enterprises, such as ESB, have borrowing limits laid out in their governing laws. And all enterprises are subject to market discipline, with a requirement to maintain investment grade credit ratings. In addition, the enterprises are required to produce five-year investment plans and annual corporate plans, both of which are subject to NewERA and ministerial approval.

52. The remaining major public infrastructure corporations are managed by both DPER and the relevant departments, with careful financial oversight. For any complex transactions or large investments, NewERA is often brought in to provide financial advice.

Figure 22. Investment by State Enterprises



Source: DPER.

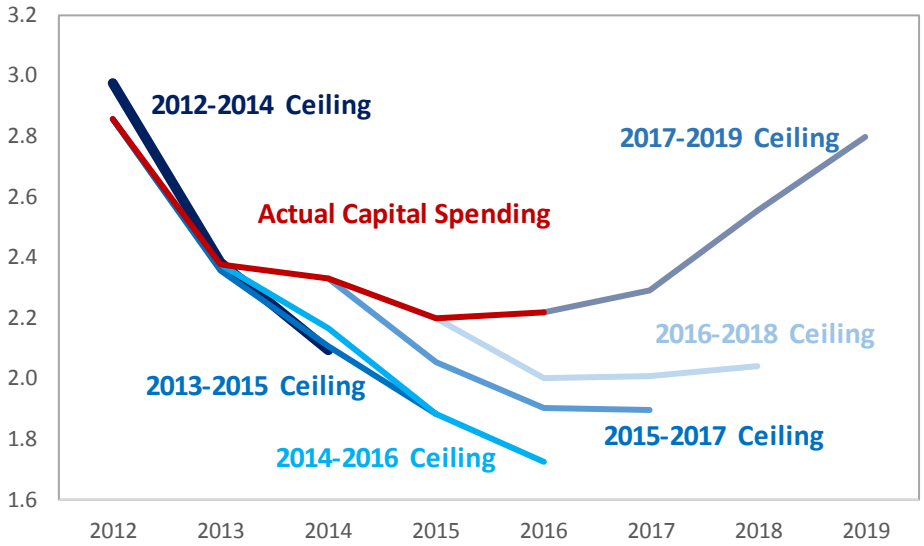
C. Allocating Investment

6. Multi-year budgeting (Institutional Strength - Medium; Effectiveness - Medium)

53. Ireland introduced detailed medium-term budgeting for both capital and current expenditures in 2011. The process is based on medium-term expenditure ceilings that the DPER sets for each department. The ceilings extend three-years into the future, and cover all Exchequer-financed expenditure, separated between capital and current. They are based on Comprehensive Reviews of Expenditure (CRE) that take place every two to three years. In the meantime, the DPER works closely with spending departments to ensure that the ceilings are appropriate. Since 2015, the ceilings have also been informed by the Infrastructure and Capital Investment Plan (2016–21).

54. In practice, however, the expenditure ceilings have not always been followed. The first three budgets following the introduction of medium-term ceilings held to the previously announced figures (Figure 23). Since then, there has been a pattern of upward revisions to ceilings. These revisions are due in large part to increased budget allocations in response to upward revenue revisions or, more recently, the allocation of increased available fiscal space towards public investment. The spending outturns have tended to exceed budgeted figures even in the budget years. In some cases, these overspends have been due to emergency measures, such as in 2011, when flooding required extra funding for road repairs.

Figure 23. Evolution of Capital Expenditure Ceilings Relative to Actual
(Percent of GNI*)



Source: DPER Expenditure Reports.

55. The expenditure ceilings are developed by reference to the spending plan and after consultation with line departments, rather than being based on medium-term forecasts.

While portfolio forecasts are maintained within some spending departments, the DPER does not maintain an overall expenditure forecast of ongoing, committed, or prioritized expenditure extending out into the medium term. Rather, it simply provides the top-down capital ceiling, and expects departments to work within that ceiling.

56. The lack of a medium and longer term profile of major project costs represents a potential risk to the public finances, as it opens the possibility of an over-commitment of resources. Many of the planned projects are large, with construction and maintenance cost profiles that increase over the medium term. Thus, there is a potential that the government over-commits, by giving budget approval to large projects that in the medium term could require funding exceeding that available within the fiscal rules. This risk is already being borne out in some departments, such as health, where projects that are "committed"—i.e., those with government and budgetary approval—have already exceeded their available spending allocation, even under the expanded budgets anticipated under the mid-term review of the capital plan.

57. The government does not currently publish a list of major capital projects with total project costs, though one is being developed and will soon be made public. The "Capital Tracker" database, due to be put on the DPER website later this year provides a full list of major projects—both underway and planned—with information describing each project, its region and sector, full cost, and expected timing.[30] However, in its present form, the database does not provide any details on important factors such as: the annual cost profile of each project; the mix of construction versus operational and maintenance costs; economic performance information such as CBA or Cost-Effectiveness Analysis (CEA); data on any material adjustments to a project's design or total cost; whether implementation of the project is on track, or is subject to significant delays; and data on performance targets, such as a project's outcomes and outputs. Such information may be available on request from departments, but is not collected or published on a routine basis.

Recommendation:

- Develop the "Capital Tracker" database as a tool for forecasting investment requirements; to ensure that the annual profiles of approved projects fit within the available capital expenditure ceilings; to improve the allocation of unapproved projects; and to track the progress of projects that are underway.

[30] The current version of Capital Tracker provides details of a project's total Exchequer cost, total value, responsible department, status, construction timetable, and estimated completion date.

7. Budget Comprehensiveness (Institutional Strength - Good; Effectiveness - Medium)

58. Most capital spending is funded by the Exchequer, or carried out by semi-state commercial entities. There are ten non-commercial semi-state entities in Ireland that are part of the central government sector but whose transactions are not included in the state budget.[31] These extra-budgetary entities perform a range of regulatory and advisory services. Their spending on capital investment, however, amounts to only €83 million in 2017, equivalent to 0.3 percent of total public investment. The other main extra-budgetary fund in Ireland—the Social Insurance Fund—does not undertake significant capital investments.

59. Total financial support from the EU has fallen sharply from an average of about €5 billion a year in the 1990s, to €400 million currently, of which capital spending is only €60 million. Ireland is now a net contributor to the EU budget. Summarized information on transactions relating to the EU budget is provided in Appendix 3 of the DPER's *Expenditure Estimates for 2017*, and more detailed information is available from departments and the NTMA.

60. Little information on PPPs is included in the budget documentation, as noted under Institution 4. Data on specific projects, however, can usually be obtained on request from the DPER, the NDFA, and the spending department responsible for individual PPPs.

8. Budget Unity (Institutional Strength - Good; Effectiveness - Medium)

61. The capital and recurrent budgets are prepared together, and submitted by departments to the DPER in a single document. However, for individual capital projects, only the relevant spending departments record information that separates the capital costs from the associated recurrent costs (for example, the staff and equipment required to run a hospital, as well as expenses for routine and capital maintenance). Similarly, while the budget includes appropriations of the recurrent costs associated with capital investment projects, the information is not shown at the level of individual projects.

62. The budget classification and chart of accounts are based on GFS/ESA principles which provide a clear definition of recurrent and capital spending. Not all departments, however, apply this definition consistently in relation to spending on the maintenance of infrastructure.

63. Adequate levels of maintenance funding are critical for sustainable service delivery from capital investment, but there is no standard methodology used for determining levels of maintenance funding, either at the planning or budgeting stages. Most sectors do not have any defined approach for identifying the needs for maintenance funding, or making reliable

[31] These entities comprise: the Irish Film Board; Uderas (promotion of the Irish language); Teagasc (farm advisory services); Commission for Communications Regulation; Ordnance Survey Ireland; Commission for Energy Regulation; Inland Fisheries; Enterprise Ireland; Environmental Services; and Direct Investment Ireland.

estimates of its future cost. For instance, apart from some minimal direct maintenance funding, the education sector relies on schools to fund capital maintenance through the capitation grants that cover operational expenditures.

64. A few sectors take a more sophisticated approach to maintenance funding. The roads sector, for example, operates a highly-developed system for determining and monitoring pavement quality on national motorways, and have estimated the amounts of maintenance and rehabilitation funding required to maintain steady-state road quality and availability. PPP projects include an obligation to maintain the projects over their lifetime, related to contractual quality standards. And state infrastructure corporations direct considerable focus to maintaining infrastructure asset values.

65. In sectors where figures could be provided, however, maintenance funding appears to be well below generally accepted norms, and is likely to lead to early degradation of public infrastructure (see Table 5). For instance, maintenance and rehabilitation funding for the national motorway network of €157 million represents less than ½ percent of the estimated national road asset value of €32 billion. This allocation is anticipated to increase to €457m by 2019, but will still leave maintenance funding of 1.4 percent, compared to norms of 5 to 10 percent used in countries such as South Africa. Similarly, hospital maintenance expenditure represents 1.1 percent of the estimated capital stock, much less than the 5–8 percent guideline.

Table 5. Ireland: Maintenance Funding Requirements

Sector	Maintenance Funding	Replacement or Major Rehabilitation
	Percent of replacement cost	
Roads	5-10	Every 20-30 years
Hospitals	5-8	Every 20-30 years
Schools	4-6	Every 30-50 years
Public Buildings	4-6	Every 30-50 years
Electricity reticulation	10-15	Every 20-30 years
Water reticulation	4-8	Every 20-30 years

Source: South African Maintenance Budgeting Guidelines

66. The budget documents do not provide systematic information on resources allocated to the rehabilitation of existing infrastructure. Some sectors (e.g., transport) do include a budget line for maintenance, but this practice is not common across departments. Thus, there is no available government-wide estimate of maintenance expenditure.

Recommendations:

- Further develop the Capital Tracker database (see Institution 6) to provide more comprehensive information on: the annual cost profile; implementation of projects, including a clear separation of capital and recurrent costs; and data on adjustments to project design and costs, implementation delays and results.

- Sharpen the focus in the budget process on the level of spending required to maintain infrastructure at a steady-state level. Use the recommended government-wide register of nonfinancial infrastructure assets, based on existing sectoral registers, to determine appropriate maintenance levels (see Section 15).
- Within the spending envelope set by the 2017 Stability Programme, increase the share of the budget directed toward maintenance and rehabilitation expenditure to prevent further degradation of the existing capital stock.

9. Project Appraisal (Institutional Strength - Good; Effectiveness - Good)

67. The Public Spending Code (PSC), which was introduced in 2012 applies both to the general government sector and to semi-state commercial enterprises,[32] requires all major projects to be subject to economic analysis. The PSC builds on 2005 Capital Appraisal Guidelines and is "the set of rules, procedures and guidance to ensure VFM in public expenditure across the Irish Public Service." The standard appraisal steps laid down in the PSC[33] include analysis of options using several methods, which vary with project scale but make CBA compulsory for projects with a total capital value exceeding €20 million. For those projects where it is not feasible to monetize benefits, CEA is allowable. The PSC also requires the CBA to be re-run during planning using detailed design cost estimates and tender prices. For projects below the €20 million threshold, qualitative appraisal techniques are employed.

68. Proportionate application of sophisticated analytical tools is generally regarded as good practice, but €20 million is a comparatively high threshold for CBA by international standards. Some countries use lower values and others, like the UK and the Netherlands, require CBA (or CEA) to be applied to all projects, but with a level of effort proportionate to project size. The threshold for the application of economic analysis should therefore be reviewed with a view to lowering it and widening the coverage of projects subject to more in-depth analysis. Reductions in the threshold at which CBA is mandatory have been made in the past as capacities have developed,[34] and a further downward adjustment would be in line with this gradual approach. Careful consideration of the capacity building requirements and sequencing would be required to ensure the smooth application of any change.

69. Since appraisal reports are not published,[35] even in summary form, it is difficult to assess the extent to which requirements regarding CBA are adhered to in practice and the quality of the analysis carried out. Departments are required to publish on their websites an annual self-assessment of their compliance with the PSC and the prescribed appraisal methods.

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[32] The Code of Practice for the Governance of State Bodies (September 2016) requires use of the PSC (page 46).

[33] http://publicspendingcode.per.gov.ie/appraisal-and-planning/

[34] The threshold began at €50 million, the fell to €30 million, before settling at to €20 million.

[35] Appraisal reports can only be obtained by means of a freedom of information request, which can be a cumbersome process.

Completion and publication of self-assessments is uneven, but those that are available, e.g., the one for the Department of Transport, Tourism, and Sport (DTTaS), indicate good compliance. This is confirmed by the DPER, which has an independent review function of both, the self-assessments and of the economic analysis of individual projects.

70. Closer monitoring by DPER of the effectiveness of appraisal (and pre-appraisal) in filtering out weaker projects could be useful in further refining methods and procedures. One concern is that, according to discussions with spending departments, there seem to be comparatively few cases of projects being turned down at the appraisal stage on the basis of CBA findings. This could reflect careful screening at pre-appraisal stage—a requirement for projects costing more than €5 million—resulting in fewer weak projects advancing as far as appraisal.

71. The PSC provides standard guidance on appraisal methods, including economic appraisal[36]—CBA and CEA—and an assessment of the financial and budgetary impact of projects.[37] The guidance on economic appraisal is relatively detailed and is consistent with international good practice. As well as this guidance, key parameter values[38] are provided to ensure consistent application of the guidance and comparability of results. The PSC recommends that, based on the central guidance, departments develop sector-specific methodologies to take account of the particularities of their sectors. This has been done for transport, the most important sector in terms of the total value of investment, where a Common Appraisal Framework for Transport Projects and Programmes[39] has been developed by the DTTaS. The framework also includes a common set of parameter values of interest in transport.[40]

72. The IGEES provides central support for the application of the methodologies across government. It does this through formal capacity building and on-call assistance. Capacity building is being stepped up and, during 2016, IGEES trained around 200 officials from departments and local authorities in the appraisal and evaluation techniques in the PSC.[41] IGEES economists are also seconded to departments to provide expertise in economic analysis of projects, as well as other aspects of economics. The Common Appraisal Framework for Transport, for example, was developed by the DTTaS in collaboration with the IGEES.

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[36] http://publicspendingcode.per.gov.ie/wp-content/uploads/2012/08/D03-Guide-to-economic-appraisal-CBA-16-July.pdf

[37] http://publicspendingcode.per.gov.ie/carrying-out-a-financial-analysis/

[38] Test discount rate; shadow price of public funds; shadow price of labor; price of carbon

[39] http://www.dttas.ie/sites/default/files/publications/corporate/english/common-appraisal-framework-2016-complete-document/common-appraisal-framework.pdf

[40] Value of time; vehicle operating costs; emission values; collision costs; and active travel values.

[41] http://igees.gov.ie/wp-content/uploads/2015/03/2017-IGEES-Work-Programme.pdf

73. A review of the PSC will be completed by the DPER before the end of 2017 to streamline the presentation and procedures, and to refine the methodologies. As Box 4 indicates, the PSC was developed by pulling together established procedures and methods from different sources and it will benefit from a rationalization and better linkages with supporting resources, including with existing guidance on procurement and implementation (see Institution14) and with sector specific methodologies, like the Common Framework for Transport.

74. The review of the PSC is an opportunity for updating appraisal methodologies and parameters, as well as ensuring their consistency. The DPER is consulting with departments on the new or revised parameter values that they see as important for operationalizing the appraisal methodology. There are opportunities for cross-fertilization in this area—e.g., values of time estimated for use in transport projects can equally well be used in other sectors. The use of international databases of values, particularly in the environmental sphere, could also be considered, provided suitable adjustments for the Irish context are made. Another area worthy of attention is the appraisal of projects below €20 million and above €5 million in value, where the PSC requires departments to use multi-criteria analysis (MCA). More detailed, cross-government guidance on how to apply MCA is required—similar to that already provided in Transport Infrastructure Ireland's (TII) Project Appraisal Guidelines—and this is already on the agenda of the IGEES. Scope also exists for developing further sector-specific methodological guidance, as already exists for transport.

75. While the PSC has served Ireland well, there is a case for considering the wider use of a more structured approach to developing business cases for major projects. This would be similar to the approach set out in TII's Project Appraisal Guidelines, which complement and give more depth to the Common Appraisal Framework for Transport. The wider application of the business case model will be warranted as the investment program ramps up, and by the emergence of larger, more complex, multi-sectoral, and riskier programs and projects.

76. The UK's "Business Case Model," which already informs the TII's Project Appraisal Guidelines, could provide a useful general example for Ireland. The UK approach involves examining each of the five thematic cases in three sequenced business cases, which are prepared during the appraisal and planning process. Each business case gives a different level of emphasis to each thematic case, but none are ignored (see Table 6). The model draws attention to issues such as the deliverability of the project, the procurement strategy, affordability, and management arrangements for delivery, at an earlier stage of project development than currently seems to be the case in Ireland. Also of note is the structured approach to pre-appraisal embodied in the Strategic Business Case, which is currently not widely practiced in Ireland, except with respect to transport infrastructure. In the UK, this creates a space for an early examination of the fundamental rationale for the project, and of the associated risks, before the project gains too much planning momentum.

77. The appraisal guidelines in the PSC cover the treatment of risk and uncertainty, and outline various analytical approaches, including sensitivity analysis, scenario analysis and

Monte Carlo analysis. Discussions with spending departments and the DPER indicate that these guidelines are applied in practice, with the sophistication of the approach depending on the scale, complexity, and riskiness of the project. The DTTaS, for example, indicated that they use Monte Carlo simulations for their largest projects, but more straightforward sensitivity analysis for simpler projects. There is no standardized approach to the treatment of optimism bias with respect to capital costs, as there is in the UK, where standard "correction" coefficients are applied to the cost estimates for different project types.[42] This is one area worthy of further investigation, as is already recognized in the PSC.

Table 6. The United Kingdom's Business Case Model

	Strategic Business Case	**Outline Business Case**	**Full Business Case**
Strategic Case	Completed in full but may be revised later.	Revisited.	Revisited and revised if required.
Economic Case	Completed as far as review of a long-list of options, recommended way forward and an initial short-list for OBC stage.	Completed according to methodological guidance on appraisal and evaluation in central government (the "Green Book").	Findings of procurement included in the economic analysis and recorded. Economic case re-assessed.
Commercial Case	Addresses the fundamentals of any potential procurement or "deal", e.g., initial identification of potential PPP options.	Outlines envisaged "deal" structure/s and any contractual clauses and payment mechanisms.	Recommended "deal" written up.
Financial Case	Discusses likely affordability of the proposed project.	Detailed analysis of affordability and any funding gaps.	Affordability and funding issues resolved.
Management Case	Outlines how the project will be set up and managed.	Develops in more detail how the project will be delivered with an outline of the proposed project management plan.	Detailed plans for delivery and arrangements for realization of benefits, the management of risk and ex post evaluation are recorded.

Source: "Public Sector Business Cases Using the 5 Case Model" HM Treasury. https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-governent

[42] Coefficients for increasing cost estimates have been estimated on the basis of historical data on cost overruns. Different coefficients apply for: standard buildings; non-standard buildings; standard civil engineering works; and non-standard civil engineering works.

78. The review of the PSC should consider the approach to optimism bias, and also whether the guidance on the analysis of risk and uncertainty needs to be deepened. The latter might include the provision of worked examples for less complex approaches, and discussion of expected value calculations, which is barely touched on. A considerable advantage of the business case model discussed above is that it allows a more structured approach to identifying a variety of risks earlier in the project cycle, thus helping identify mitigation measures and management strategies.

79. Project budgets include an allowance for contingencies. This allowance is a requirement of the PSC and of the guidelines on preparation of project budgets,[43] which give detailed guidance on the estimation of a contingency reserve at various points in project development.[44] The requirement for an adequate contingency allowance is repeated in the letters issued by the DPER to departments to notify them of their medium-term allocations under the multi-annual capital investment framework.

Recommendations:

- Reinforce the appraisal of investment projects to ensure that weaker projects are prevented from proceeding and riskier projects are identified early, then planned and managed accordingly. This will entail:
- Publishing project assessments either in full, or in summary form, with key economic performance indicators and underlying assumptions.
- Using the review of the PSC to harmonize, update, and extend appraisal methodologies and parameters, make it more accessible to users, and align it with complementary guidance.
- Reviewing the threshold for economic analysis (CBA and CEA), and ensuring that departments have the capacities required to apply the new arrangements.
- Updating, extending, and harmonizing parameter values for use in CBA/CEA.
- Developing more detailed guidance for projects below the threshold, where multi-criteria analysis is currently required.
- Mandating the IGEES to develop sector-specific methodological guidance in collaboration with investment-heavy departments.

[43] See Guidance Note 1.3 at: http://constructionprocurement.gov.ie/guidance-notes/

[44] The aim is to reduce the contingency as project planning progresses, with a contingency of 10 percent expected at the detailed design stage, reducing to 1-2 percent at the implementation stage for standard projects.

10. Project Selection (Institutional Strength - Medium; Effectiveness - Medium)

80. As a requirement of the PSC, the appraisals of all major projects are subject to review by the DPER (as illustrated in Figure 24), with input from external expertise on an "as-needed" basis. The PSC requires the Sponsoring Agency to seek the views of the DPER before the Sanctioning Authority makes its official "decision in principle" to proceed with the project. The Sponsoring Agency sends the appraisal to the relevant Vote Section in the DPER, who then confer with the in-house IGEES team, where the department's project analysis capability is situated. Depending on the nature of the project, the DPER will also draw on expert advice from the NDFA and NewERA, where necessary.

81. There is no formal obligation for the Sponsoring Agency to take account of the DPER's views, but it is implicitly understood that not to do so would be detrimental to future requests for funding. As a kind of sanction, the PSC allows for the DPER to publish its review on the department website, although this lever seems to be rarely used, if at all. The review function is reinforced by the secondment of IGEES staff to departments acting as Sanctioning Authorities in investment-heavy sectors. These teams—the Economic and Financial Evaluation Unit in the DTTaS being the best example—review appraisals using the same criteria as central IGEES staff, thus ensuring consistency of approach and greater objectivity in the Sanctioning Authorities' decision making.

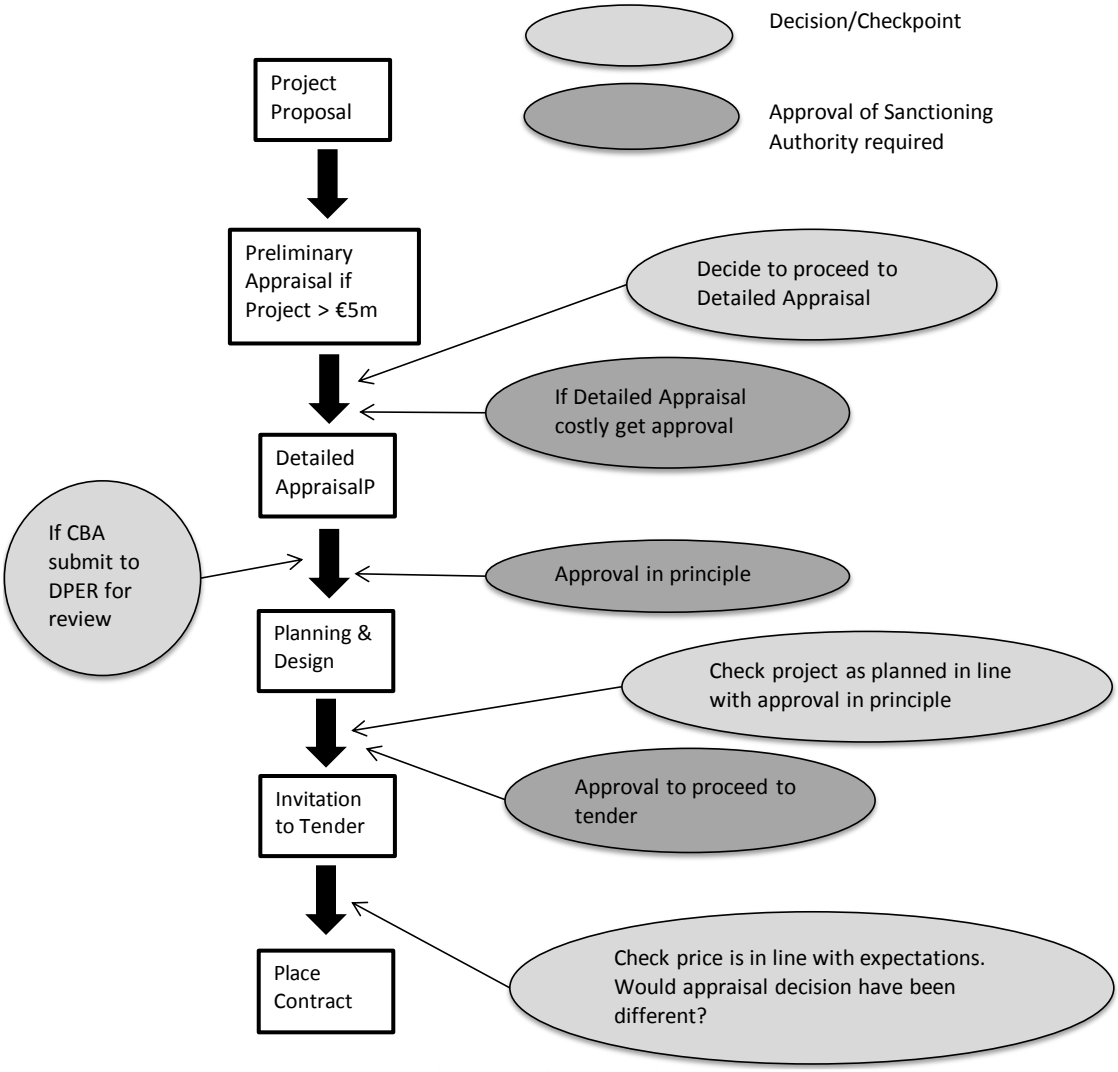
82. Other countries, with similar accountability arrangements to Ireland, give a more decisive status to the review of an appraisal by the finance ministry. The non-binding nature of the DPER's review of appraisals on Sanctioning Authorities is a unique feature of Ireland's system, deriving from the country's administrative tradition and accountability arrangements. In the UK, which has similar accountability arrangements, the review of the appraisal of major projects by the Treasury, when the Outline Business Case is complete (see Table 5), is a make-or-break decision point, known as a Treasury Approval Point or "TAP." In Ireland, for projects above €100 million, the Government is the Sanctioning Authority, thus allowing the Minister for the DPER to introduce the Department's view at cabinet level. The DPER therefore has a potentially stronger say for the largest projects, but no decisive say for projects in the €20-€100 million bracket.

83. During the annual budget process, the review of the rationale and economic case for a project by the DPER is cursory. The review process described above takes place outside of the budget preparation cycle. When it comes to reviewing budget requests, the DPER's focus is on the aggregates and limited attention is paid to the results of economic or other analysis. This risks allowing changes of scope or costs to slip in unchallenged.

84. The DPER's formal review role is performed before any detailed project planning and design work has been undertaken. In the UK, there is a further review by the finance ministry (and a related TAP) when the project is fully developed and before contract signature, when the Full Business Case has been completed. The Irish authorities may wish to consider

strengthening the role of the DPER at this later stage of project preparation, thereby creating a final "gate" through which a project must pass before budget funding is finally accorded. The eventual aim could be to arrive at a model where approval in principle would be a general requirement for entry into the medium-term capital plan and approval of the full business case would be a requirement for funding through the annual budget. For major projects, DPER's approval would be needed at both gates.

Figure 24. Appraisal and Selection Process



Source: Part B.03 of the Public Spending Code, "Approvals Required and Scale of Appraisal."

85. Arriving at such a model has implications for development of capacities, which would need to be carefully considered. Depending on capacities and preferences, it may also require a distinction to be made between the threshold for CBA/CEA and the threshold for DPER reviews: DPER may not have the resources or the desire to review all business cases involving the use of CBA if the threshold for CBA is lowered (as suggested under Institution 9).

86. A set of criteria for selecting projects for budget funding is not explicitly stated in one place, but some generalized criteria—relating to VFM, readiness-to-go and government policy priorities—are implicit within various published documents. As the circular introducing the PSC[45] makes clear, all expenditure, including projects selected for funding, must comply with the procedures and methods of the PSC, which is designed to ensure that the State gets the best possible value for the resources at its disposal. Letters issued to departments by the DPER informing them of their allocations under the multi-annual capital investment framework reiterate that compliance with the PSC is a condition for Exchequer resources to be committed.

87. At the policy level, project selection is guided by the Government program and the Capital Plan. The *Capital Plan 2016-2021* identifies priority areas where funding for investment will be directed. The 2016 *Programme for a Partnership Government* (PfPG – the Government program) identifies increases in capital investment in transport, broadband, education, health and flood defenses as priorities for the mid-term review of the *Capital Plan 2016–21*. The PfPG priorities were subsequently repeated in the material introducing the consultative process for this review.

88. While broad selection criteria can be identified, their practical application during budgeting is not easy to understand. The absence of a unified set of criteria to guide budget decisions on capital projects means that the process for arriving at decisions is difficult to follow. More concrete criteria, issued at the beginning of the annual budgeting or capital planning cycle, might assist spending departments in preparing their submissions and the DPER in preparing the expenditure budget for consideration by decision-makers.

89. Compliance with the PSC is an important condition for budget funding, but the economic analysis methods required therein are of limited use when it comes to making cross-sectoral allocation decisions (see Box 4). The PSC does not, therefore, provide a complete framework for addressing the selection decision, which has more to do with the tighter strategic planning process recommended in relation to Institution 2, and the closer alignment of strategic planning with the budget process, including its political dimension.

90. The PSC seems to give too strong a dispensation from VFM considerations,[46] even in the context of the political realities of budgeting. Ideally, an appropriate balance needs to be reached between setting selection criteria that are too rigid, potentially fostering a "case-making" mentality, and allowing unbounded scope for taking account of less well-defined factors in decision-making. Without ignoring the wider dimensions of budgeting, efficiency, and effectiveness of expenditure should be at the forefront of decisions made by those who are

[45] http://publicspendingcode.per.gov.ie/wp-content/uploads/2013/09/Circular-13-13.pdf.

[46] The PSC states that, "Nothing in the Public Spending Code should be taken as precluding Government or Ministers, under the delegated sanction arrangements set down by the Minister of Finance, from deciding to approve projects independent of the detailed application of the Public Spending Code."

accountable for public expenditure, and departures from these principles should generally be the exception, rather than the rule. Tightening the guidance in this respect, while taking due cognizance of Accounting Officers' responsibilities under the Public Financial Procedures, should be considered in the ongoing review of the PSC.

Box 4. Limitations of CBA as a Tool for Selecting Project for Budget Funding

While CBA is a powerful tool, its limitations need to be recognized, particularly when it comes to selecting projects for budget funding. CBA is useful in quality controlling projects and ensuring that those projects that go forward into the budget arbitrage are socially profitable and sustainable. It is also a useful aid to prioritizing projects within sectors/sub-sectors—roads and flood protection, for example - or for making strategic investment decisions—road vs rail investment in a transport corridor, for example.

However, even if it could be applied to all projects, which it cannot, CBA is not a universal prioritization tool that is capable of providing a ranking of all projects across all sectors as a basis for budgeting. The relative importance of non-monetized benefits and costs differs between sectors (and even sub-sectors), as does the reliability of benefit estimation techniques—revealed vs stated preference techniques, for example—making it difficult to make cross-sector comparisons. And in those sectors where CBA is not readily applicable, because of difficulties in valuing benefits, CEA does not produce an absolute indicator of net project worth for comparison with other projects.

In fact, there are few, if any, countries where economic appraisal findings are used as the main means of determining budget priorities across sectors, although these often form one piece of information in the decision-making process.

Source: FAD staff.

91. A pipeline of approved projects is maintained by some departments, but not at the national level. The DPER does not currently keep track of projects according to their stage of review/approval in the project cycle (see Figure 24) although it is moving in this direction with the Capital Tracker (see Institutions 6 and 8). A further refinement of the Capital tracker might be to capture projects earlier in the project cycle, at the pre-appraisal stage.

Recommendations:

- Introduce a more structured quality-at-entry process, involving three sequenced "business case" assessments at different stages of project preparation, and a wider range of assessment dimensions;
- Align critical decision-points with the business case assessments and ensure objective review of each assessment to inform decisions;
- Closely correlate surety of funding—in the annual budget, medium-term capital plan and long-term capital plan—with the maturity of the business case for the project; and
- In line with the earlier recommendation to create a dedicated PIM unit (see Institution 2), enhance DPER's role as the coordinator and gatekeeper of the appraisal and selection process: firstly, by leading on the design and implementation of the improved "business

case" model for the appraisal of major projects; and secondly by acting as objective reviewer, signing-off on major projects for each business case once the system is established.

D. Implementing Investment

11. Protection of Investment (Institutional Strength - Medium; Effectiveness - Good)

92. The inability to make a budget appropriation for the total cost of a multi-year project from the outset, does not seem to be a hindrance to continuity of project funding in Ireland. There is no legal basis for appropriating total project outlays at project commencement since, constitutionally, Ireland operates on the basis of lapsing annual budget appropriations. Annual appropriations are made within the context of firm multi-annual capital allocations set out in the capital plan. Continuity of funding is ensured through the strong rule of law and well developed contract law, so that the government is required to meet its contractual commitments like any other legal entity. During the financial crisis, no funding to ongoing projects was interrupted, the burden of the reduced capital budget falling on new projects or ongoing projects that had not yet been contracted. Thus, continuity of funding was maintained under the severest of circumstances.

93. Virements from capital to current expenditure are permitted without parliamentary approval. Virement rules allow transfers between capital and recurrent sub-heads with the prior approval of the DPER, but this flexibility is only expected to be used in exceptional circumstances and "should not be used as a tool of expenditure management."[47] Discussions with the DPER confirm that transfers occur very rarely and that the rules are not abused to the detriment of the continuity of funding of ongoing project commitments.

94. Carryover of unspent capital appropriations is allowed subject to a limit based on the total capital budget. As part of the capital envelopes system, spending departments are allowed to carryover appropriations from one budget year to the next an amount of unspent capital not exceeding 10 percent of the voted capital allocation for the budget year. This is referred to as "deferred surrender" since the default rule is that all unused budgetary allocations should be given up at the end of the year. Departments are no longer required to spend the carryover on those projects where there has been underspend, but can redirect the resources to other priorities.[48] A case must be made for carryover and for any reallocation to other priorities and this is assessed by the DPER. The amount of the carryover is identified separately in the law granting departments the right to spend (the Appropriations Act) and if it is not spent by the end of the second year, it must be given up definitively. This provides a level of flexibility for spending departments, which there is no evident desire to change.

[47] General Conditions of Sanction for Multi-Annual Capital Envelopes, DPER.

[48] The provisions in the original Finance Act required carryover to be used to be used on the expenditures originally foreseen, but this restriction has been relaxed while oversight by the DPER has been strengthened.

12. Availability of Funding (Institutional Strength - Good; Effectiveness - Good)

95. Ireland's procedures for cash management and the related banking arrangements are well aligned with advanced international standards. As in the UK, the focal point of the arrangements is the Accounting Officer of each department or agency of government, who is the most senior permanent official (typically the General Secretary of a department). The Accounting Officer is answerable to the Parliament on the quality and performance of his department's financial management system.

96. The PMG provides cash for departments to finance their spending, but responsibility for the day-to-day management of their finances is fully devolved to departments and agencies. The cash management system operates through a system of electronic payments (EFT) and payable orders. To facilitate the management of investment projects, the DPER typically makes allocations of funding for capital investment on a multi-annual basis. It also imposes limits on departments' ability to make contractual commitments for the current budget year and the three following years.[49] Additionally, as noted under Institution 11, in-year virements between capital and current spending are only allowed in exceptional circumstances; carryover of unspent funds is limited to 10 percent of the current years' capital allocation; and departments are required to establish a contingency provision to meet any unforeseen demands or additional risks and costs associated with capital projects.

97. At the beginning of each year, departments and agencies prepare a monthly cash plan of their funding requirements for the forthcoming fiscal year. These plans are closely monitored by the relevant Vote Officers in DPER, who may require departments to adjust their spending plans should cash disbursements diverge from the expected profile. Some departments with large investment programs (e.g., for health and transport) also prepare a five-year cash flow forecast. The lumpiness of investment projects may require departments to adjust the disbursement of funds for investment projects in line with their month-by-month cash flow forecasts. In some cases, the start-up of new projects, or the implementation of ongoing projects, may need to be delayed. Overall, however, the system is well managed, and the C&AG confirmed that occasions of cash shortages or untimely releases are extremely rare.[50]

98. Section E of the PSC provides information on the financial management of EU funds for which the required procedures have been transposed from EU directives and regulations. Arrangements for managing EU funds, and co-financing by the Irish government, are well integrated into Ireland's overall cash management system.

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[49] These limits are 75 percent of the indicative capital allocation in 2018, 60 percent in 2019, and 50 percent in 2019. The rules are set out in a letter ("Multi-Annual Delegated Capital Sanction 2017-2020") from the DPER to the respective departments.

[50] The same conclusion applies to commercial semi-state entities. NewERA, the government agency that oversees six of the largest of these entities, noted that the companies are professionally managed and no issues of financial irregularity or mismanagement had been identified in audit reports.

13. Transparency of Budget Execution (Institutional Strength - Medium; Effectiveness - Medium)

99. Ireland operates according to EU public procurement procedures, and open and transparent procurement is built into national systems. EU directives have been transposed into Irish public procurement law and regulations, which are updated whenever new EU directives appear. These apply to all public-sector bodies, including state corporations.

100. All public procurement opportunities are advertised on-line at the site (*eTenders)* managed by the Office of Government Procurement (OGP).[51] This site carries tender notices, prior indicative notices, and contract award notices. It also has facilities for downloading contract documentation, tender clarifications, and the on-line submission of tenders. Tenders above a threshold set by the EC (currently €5.225 million for works contracts) are also automatically transmitted to the *Official Journal* of the European Union by the *eTenders* system. Generally, a two-stage restricted tender process is used for public works contracts, whereby a shortlist of bidders is assembled after an open prequalification exercise. In a few special cases (e.g., implementation of the National Broadband Plan), a competitive dialogue process might be used.

101. The government has undertaken a reform of capital works contracting through the Capital Works Management Framework (CWMF).[52] This framework was introduced in 2007 to deliver the government's objectives for the procurement of construction contracts. It consists of an on-line suite of model contracts and standard conditions of engagement, together with guidance notes on different dimensions of procurement for capital projects. Fixed-price, lump sum contracts are at the heart of the CWMF and were introduced in an attempt to better control the risk taken on by the public sector after a period of significant cost over-runs in the early 2000s, when the Comptroller and Auditor General estimated cost overruns in real-terms in the 25-30 percent range for road projects.[53] While overruns seem to be lower than previously, at 4.8 percent for building works and 8.4 percent for civil engineering works,[54] they are still higher than the 1–2 percent target envisaged when the CWMF was introduced. A 2014 review of performance in public works contracting[55] found that over-emphasis on the price criterion and insufficient attention to the capabilities of contractors had deleterious effects on contract performance. The report recommended that greater weight be given to tenders that were most

[51] www.eTenders.gov.ie

[52] http://constructionprocurement.gov.ie/capital-works-management-framework/

[53] 'Report on the Performance of the Public Works Contract', Government Contracts Committee for Construction, 2014.

[54] 'Report on the Performance of the Public Works Contract', Government Contracts Committee for Construction, 2014.

[55] Ibid.

economically advantageous, while retaining price as the dominant criterion, but this recommendation has not yet been implemented.

102. The OGP carries out a procurement monitoring function and publishes analytical reports. *eTenders* is effectively a database of procurement since all tender announcements and awards pass through this system. This database, together with additional information on spending provided by public spending bodies is the source of information for an annual report, the *Public Service Spend and Tendering Analysis Report*, prepared by the OGP. However, this report is not produced on a timely basis—the report for 2014 is currently available and the report for 2015 is in preparation—and fails to provide important information for monitoring the performance of the procurement system, for example on the procurement method used and number of bidders per tender. It therefore falls short of being a fully-formed monitoring system.

103. Procurement complaints are handled directly through the judicial system and review (and redress) are therefore not subject to any predetermined time limits. There is no administrative complaints mechanism in Ireland and complainants must go directly to the High Court, with the possibility of going to the Court of Appeal thereafter. An independent and reliable judiciary ensures fair treatment of complaints, but this is obviously an expensive process, which could deter some genuine complaints (while at the same time having the advantage of dissuading frivolous complaints). On average 10-20 complaints are in process at any one time, a small number compared to countries with an administrative complaints process, e.g., Sweden.

104. Regular financial and physical monitoring of individual projects takes place at the level of spending departments and the agencies under them, and not at the center of government. Vote Sections in the DPER carefully monitor the overall spending of departments, but pay less attention to monitoring the performance of individual projects. The "Capital Tracker" system which is currently under development by the DPER could fulfill this function, but as discussed under Institution 6, the information it contains would need to be extended and the information flows systematized to ensure timeliness and reliability. By assigning a delivery confidence rating—red, amber, or green—to projects, the UK and New Zealand operate a risk-based, centralized monitoring system. This allows identification of higher risk projects which are then subjected to closer scrutiny during implementation, or until their risk rating falls. Such a system, operated by the designated PIM unit, allows vote officers to follow up on problem projects within their remits. This is one approach that Ireland could consider. It has the advantage of economizing on oversight capacities, where these are scarce.

105. Active centralized monitoring does not form part of the PSC, which only envisages an "audit" role for the DPER with respect to the procedures for reporting on project progress. The PSC requires regular progress reports identifying problems and solutions to be submitted to the Project Board. For major projects costing more than €20 million, a separate quarterly progress report must be submitted to the Management Advisory Committee for departmental projects and to the management and/or board for agency projects, and then to

the relevant minister. Indicating no active involvement, these quarterly reports "may" be subject to audit by the DPER, but this is not a requirement.

106. The C&AG does not, as a matter of course, carry out ex post audits of individual investment projects. Project expenditures will be included in the overall audits of the financial accounts of the implementing bodies. If these financial audits raise any significant issues with respect to individual projects, they may then be followed up.

107. Only a small number of performance audits have been performed by the C&AG's Office over the years, and institutional and financial constraints may be preventing this activity. A larger number of performance audits of projects is desirable, particularly if public investment expenditure is going to be ramped up as intended. Box 5, taken from the C&AG's special report on Limerick Greyhound Stadium, illustrates the powerful lesson-learning opportunities from this kind of work. Local authorities are audited by the National Oversight and Audit Commission and state corporations by private sector auditors. In neither case, are individual projects subject to ex post audit.

Box 5. Example of Performance Audit by C&AG: Investment in Limerick Greyhound Stadium

In 2014, the C&AG prepared a special report on investment by Bord na gCon, a commercial State body established under the Greyhound Industry Act 1958. The report found important weaknesses in the business case for the investment as the following extracts indicate:

> *This examination has found that there was a lack of thoroughness in the manner in which the capital appraisal of the Limerick project was undertaken. In particular, based on information that was available at the time the appraisal was completed, the projected net revenues from the operation of the Limerick stadium were overstated by an estimated €2.9 million (in net present value terms). In addition, projected cash flows from property disposals which accounted for over one third of the total revenues from the project were not backed up by current valuations of the relevant properties.*
>
> *The examination found no evidence that Bord na gCon… had conducted sensitivity analysis which would have allowed it to identify that the commercial viability of the project was heavily dependent on assumptions around increases in the tote betting contribution and track profit at Limerick.*
>
> *The capital investment appraisal undertaken in relation to the Limerick racecourse development was inadequate in the context of a proposed investment of the order of €20 million. The absence of an appraisal underpinning the initial strategic decision to construct a new stadium on a greenfield site rather than re-develop the existing stadium at Markets Field, albeit it at a much earlier stage in the process, is also of concern.*
>
> *Had better analysis and more soundly based assumptions been used, it is likely that the analysis would have indicated that the development of the Limerick stadium was, at best, a marginal commercial proposition. There might nevertheless have been strategic arguments in favor of proceeding with the project (or a less expensive development), but in pursuing such a course, the Board should have recognized that the project might adversely affect its financial position.*

These are important findings which demonstrate the usefulness of this kind of work in holding public entities to account and strengthening PIM systems, even though it is rarely performed at present.

Source: Development of Limerick Greyhound Racing Stadium, Special Report No. 86, Comptroller and Auditor General, 2014.

14. Management of Project Implementation (Institutional Strength Good; Effectiveness - Medium)

108. The PSC sets out the basic framework for project management arrangements, and this is consistently applied. A project manager must be appointed by the sponsoring department or agency at planning/procurement stage. A Project Board with appropriate expertise and authority must also be created and include the project manager and a representative of the sanctioning authority.[56] The project manager is personally responsible for monitoring progress on the project against the contract requirements and for reporting progress and issues to the Project Board. The project manager must be sufficiently senior within the organization, at the level of an official sitting on the Management Advisory Committee of the spending department or the equivalent.

109. There is good guidance on project management both at central and departmental levels. Project management arrangements are set out in central guidance on project management[57] and then operationalized through departmental guidance, e.g., the National Roads Authority's Project Management Guidelines (2010) and the protocols and procedures of the Capital Planning Group of the Health Services Executive. Since this detailed guidance on project management was generally prepared before the PSC was issued, there is a need for some harmonization of terminology and management structures.[58] The guidance note on project management, for example, refers to both a project director and project manager, whereas the former position is not mentioned in the PSC. Similarly, the guidelines for roads refer to a Project Steering Group rather than a Project Board.

110. The PSC sets out a process for making adjustments and stresses the need for fundamental review of problematic projects (Box 6), but there is little evidence that the latter actually occurs in practice. These rules are quite clear: significant adjustments must be identified and reported to the Sanctioning Authority, which must approve any such adjustments; analyze the consequences for project viability; and, if the viability of the project is undermined by the adjustments, consider the termination of the project, taking any termination costs into account. While the rules and procedures seem well defined, discussions with departments and the DPER did not reveal any instances of fundamental review having been undertaken, even

[56] The PSC makes a distinction between the sponsoring agency and sanctioning authority. The sponsoring agency proposes the project and has overall responsibility for implementation; the sanctioning authority approves the project and has an oversight role during implementation.

[57] Guidance Note No. 1.1 on Project Management forming part of the Capital Works Management Framework (2009) - http://constructionprocurement.gov.ie/guidance-notes/

[58] Earlier project management guidelines use terms from the 2005 'Guidelines for the Appraisal and Management of Capital Expenditure Proposals in the Public Sector', which preceded the PSC.

though there seem to have been instances where this would seem to have been appropriate, e.g., in the case of the National Children's Hospital.

111. The triggers for fundamental review of projects used in Ireland are qualitative rather than quantitative. While most countries use qualitative norms, some countries have adopted quantitative triggers. In South Korea, for example, a fundamental review is triggered if the costs of a project rise in real terms by more than 20 percent, or if forecast demand falls by more than 30 percent. During the period 2006-2010, 24 out of 140 projects subjected to a fundamental review in South Korea were terminated because they were no longer viable. Total project cost savings of 18 percent were achieved (compared to the requested adjustments) on those projects that continued.

Box 6. PSC Rules for Project Adjustments

If adverse developments occur, including unforeseen cost increases, which call into question the desirability or viability of the project, the Sponsoring Agency should submit a report at the earliest possible moment to the Sanctioning Authority, detailing the necessary measures proposed to rectify the situation.

Where, despite these measures, increased costs above those already approved are likely to arise, the approval of the Sanctioning Authority for the extra expenditure should be obtained before any commitment is made to accept cost increases. Any application for such approval should outline the reasons for the excess, along with a detailed explanation of why it was not possible to take appropriate measures to offset the increased cost. The viability of the project, given the changed circumstances, should also be reported on.

If a project is going badly wrong, there should be a willingness to terminate it before completion. Action of this kind can be justified if the cost of the project escalates above earlier estimates or if the benefits expected from it are not likely to be realized. An attitude that, once work on a project commences, it must be completed regardless of changed circumstances, is to be avoided. Before making a final decision to terminate a project that is not going according to plan, the costs of termination (for example, payments that might have to be paid by way of compensation to contractors etc.) should be ascertained and made known to the appropriate authorities.

Source: Public Spending Code, DPER.

112. Ireland has stringent requirements for ex post review of completed projects, but information on such reviews is not published. According to the PSC, all projects with a capital cost in excess of €20 million must be subject to a mandatory post-project review. Of the remaining projects, a sample of 5 percent are subject to review. Based on discussions with departments and DPER, many such reviews are being carried out, but the results of the reviews are not routinely published. This undermines the lesson-learning and feedback purposes of the exercise, as well as raising general questions concerning transparency.

Recommendations:

- Strengthen the ex post assessment of major projects to improve the design of future projects; publish departmental ex post reviews of projects. The ongoing review of the PSC could include these practices.
- Encourage the C&AG to do ex post performance audits of major investment projects.
- Prepare a biennial summary of government-wide lessons from the reviews of the 10 largest projects completed.

15. Monitoring of Public Assets (Institutional Strength - Medium; Effectiveness - Medium)

113. There is no systematic survey of government assets, although some of the major sectors do undertake regular surveys. The government does not maintain an asset register, and the cadaster is incomplete. However, some individual sectors, such as transport and higher education do conduct surveys of the assets they are responsible for. Transport Infrastructure Ireland (TII), for example, maintains a comprehensive pavement management system (dTims for national and MapRoad for regional and local roads) that tracks road quality on an ongoing basis, and have a valuation of the national road network of €32 billion (16.9 percent of GNI*). Similarly, a survey of assets in the higher education sector was conducted in 2010, and a similar survey of the health sector was recently commissioned, with the first phase covering acute hospitals now completed.

114. The government's financial accounts do not include data on nonfinancial assets. The Office of Public Works maintains a register of the government's office buildings, and departments also record such information, but no information on infrastructure assets is systematically maintained.

115. In part, the absence of a comprehensive register of public infrastructure assets is due to the unique mixed ownership of such assets in Ireland. The long-standing role of voluntary organizations (mainly religious bodies) in providing schooling and health, which precedes the Republic of Ireland, means that they are often the ultimate owners of social infrastructure. Thus, even though the government funds these investments, both in capital and current expenditures, the government is not the owner of the assets, and therefore would not include the assets in their balance sheets, even if the accounting rules required it (which they do not). Similarly, the local authorities are the ultimate owners of much of the transport infrastructure. For instance, in the roads sector, the local authorities own not only the local roads, but also the share of the national road network that lies within their boundaries. It is understood that neither the voluntary organizations nor local authorities systematically account for their infrastructure assets either.

116. Correspondingly, the financial statements do not record the depreciation of infrastructure assets. This is partly due to the ownership issues, but also due to the use of the

cash basis for accounting (which does not include depreciation). The government is considering the adoption of accrual accounting in the early 2020s, following the introduction of a new accounting IT system. Any such move would nevertheless still need to grapple with the ownership questions.

117. The government financial statistics do, however, report the general government public capital stock, and includes estimates of depreciation. These estimates are prepared in accordance with Eurostat requirements, and are based on the perpetual inventory method (the cumulative sum of gross fixed capital formation at historical prices adjusted for depreciation). The depreciation schedules are based on a simple classification of assets. For example, buildings are assumed to have a lifetime of between 20 and 80 years, depending on the type; aircraft, 15 years; and intellectual property, 10 years. These calculations do not attempt to adjust for the ownership of the assets.

118. The lack of asset surveys, together with issues concerning valuation and ownership, present a challenge for the management and maintenance of public assets. With no solid estimate of the capital stock, the amount that should be provided for maintenance and rehabilitation of the assets is unclear. Currently, funding of maintenance is provided on a relatively ad hoc basis, and anecdotal evidence gives a clear sense of premature deterioration in assets. The absence of systematic data on the stock of assets is also likely to present a challenge when asset sales take place. A current example is the planned combination of three hospitals into a single national pediatric hospital in Dublin. Two of the hospitals to be replaced are owned by private orders, though these have been state funded for decades, while the third is a state hospital.

Recommendation:

- Improve asset management and allocation of maintenance funding by developing a central register of infrastructure assets valued at either book or market value.

Annex I. Public Investment Units—International Experience

The table below summarizes the organizational arrangements and responsibilities of public investment units in four advanced countries. Despite diverse organizational arrangements in terms of location and reporting line, the units have similar responsibilities which include:

- undertaking or coordinating independent reviews of major projects;
- acting as a center of excellence for the development and dissemination of best practice assessment methodologies; and
- monitoring the implementation of major projects (in France, New Zealand, and the U.K.).

The units' roles are advisory, with decision-making power lying elsewhere. The establishment of these units has occurred since the mid-2000s, and can be explained by:

- A renewed focus on closing infrastructure deficits, which are perceived as inhibiting economic growth;
- A heightened focus on efficiency and effectiveness in response to tighter fiscal constraints following the global financial crisis;
- Emergence of a stronger portfolio approach to PIM, particularly with respect to mega projects and PPPs; and
- General dissatisfaction with the decentralized approach to managing infrastructure investment, especially in terms of the appraisal and selection of projects and the efficiency of their delivery.

Examples of Public Investment Units in Advanced Countries

France	New Zealand	South Korea	United Kingdom	United Kingdom
General Commission for Investment (Commissariat Général à l'Investissement)	National Infrastructure Unit	Public and Private Infrastructure Management Center (PIMAC)	Infrastructure and Projects Authority (IPA)	National Infrastructure Commission (NIC)
Established in 2010	Established in 2009	Established in 2005	Established in 2011, but recently merged with Infrastructure UK	Established in 2015 as an Executive Agency
Reports to the Prime Minister	Unit of the Treasury	Independent think-tank	Reports jointly to HM Treasury and the Cabinet Office	Executive Agency - reports to HM Treasury, but operates at arm's length
Prepares government decisions on contracts between the state and agencies responsible for management of funds under the special program 'investments for the future' Coordinates the preparation of project specifications and checks their consistency with the Government's policies and strategy on future investment Coordinates the processing of investment project, the independent review process, and provides advice and recommendations Oversees ex-ante and ex post evaluations of investment	Formulates, and monitors progress on, the 20-year National Infrastructure Plan (NIP) Establishes robust and reliable cross-government frameworks for infrastructure project appraisal and capital asset management, and monitors their implementation and use Provides support to, and acts as the secretariat, for the National Infrastructure Advisory Board representing stakeholders	Conducts preliminary feasibility studies (PFS) for major projects, based on general and sector-specific guidelines Examines the efficiency and appropriateness of projects by reviewing economic and policy feasibility Develops and revises PFS policies and methodologies, as well as managing the PFS database Conducts reassessments of feasibility studies (RFS) for off-track projects Supports the government in developing policies and plans on public-private	Develops the Government Major Projects Portfolio, in collaboration with departments, with regular reporting to ministers Initiates and oversees an integrated quality assurance and approval planning process for all major projects or programs, in coordination with HM Treasury Initiates and oversees a mandatory Starting Gate Review process for all new projects and programs Escalates issues of concern to ministers and accounting officers	Provides impartial, expert advice and makes independent recommendations to the government on economic infrastructure Takes account of potential interactions between its infrastructure recommendations and housing supply Prepares a National Infrastructure Assessment once in every Parliament, setting out long-term infrastructure needs with recommendations for action by the government

France	New Zealand	South Korea	United Kingdom	United Kingdom
projects, including cost-effectiveness Provides an annual review of the implementation of the public investment program		partnerships (PPPs) and in implementing PPP projects Conducts value for money tests for PPP projects Carries out ex post evaluations of government investment programs	Provides additional assurance and support where projects are causing concern Works with departments to build capability in projects and program management Publishes an annual report on government major projects	Conducts specific studies on pressing infrastructure challenges, with recommendations on required actions Prepares an annual monitoring report taking stock of the government's progress in areas where it has committed to take forward the NIC's recommendations

Source: FAD staff.

Fiscal Affairs Department

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