31 October 2025

Independent Pricing and Regulatory Tribunal
PO Box K35
Haymarket Post Shop
Sydney NSW 1240

Visa email: ipart@ipart.nsw.gov.au

Dear IPART,

Submission to IPART's Issues Paper – Review of IPART discount rate for local government

Please find attached the Submission to IPART that has been endorsed by the member councils of the Western Sydney Planning Partnership (WSPP). This submission by WSPP seeks to add value to the review of IPART discount rate methodology for local government and should not be read as representing the individual views of any partner organisation to WSPP.

This can be published as an identified submission under the organisation's name of WSPP.

Yours sincerely

Joanna Kubota
Director
Western Sydney Planning Partnership

COMMERCIAL IN CONFIDENCE

FINAL REPORT

Submission to IPART's review of the discount rate for local infrastructure contributions

Prepared for
The Parks

28 October 2025

THE CENTRE FOR INTERNATIONAL ECONOMICS
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Summary

The Parks is an alliance of Western Sydney local governments that have partnered with the Australian and New South Wales Governments to deliver the 20 year Western Sydney City Deal. These councils provide a substantial amount of the greenfield development for Sydney. The CIE has been tasked with preparing a response to IPART's discussion paper for the review of the discount rate that councils use if they prepare a local infrastructure contribution plan using a net present value (NPV) framework.

Currently none of the councils in the Parks use a NPV approach to setting local infrastructure contributions. This is mainly because councils do not generally provide infrastructure or spend contributions in advance of receiving them:

- many councils use works in kind (WIK) or voluntary planning agreements (VPAs) so that developers are actually providing land and constructing infrastructure directly, in lieu of contributions
- where land ownership is more fragmented, councils generally wait to receive revenue before spending, to reduce risk. This can lead to a chicken and egg problem for local infrastructure and development.

Some of the Parks' councils expressed interest in moving to a model where infrastructure was provided in advance and contributions were set using an NPV approach. Consultations with councils suggested a higher discount rate would support this change, but it is only one factor that would need to be addressed for a council to move to this model. Other key issues include:

- where plans are capped, councils would be less likely to move to a NPV approach, as it would not make a difference to the contributions rates. Contribution caps are increasingly binding for councils because the caps have not increased in respond to increases in costs. This means that the value of the cap has declined in real terms over time, which has made it more difficult for councils to cover local infrastructure costs within the caps
- councils have very limited appetite for debt financing, because any variances to revenue collected through contribution plans would mean they would have to use general revenue to pay back loans, and general revenue is highly constrained
  - a housing contingent loan scheme through the state government, where the state government financed infrastructure upfront and then received the contributions as they were paid is one option that could be explored through government
- a lack of technical skills and relevant information to implement an NPV approach for a contribution plan. In particular:
  - a lack of robust forecasts on development timing and hence revenue timing, which would be needed for an NPV approach
  - a lack of skills to implement the NPV approach and limited resourcing

– complications with how VPAs/WIK agreements, where a developer is determining timing, interact with the NPV approach.

IPART's current review is focused on the discount rate and will not resolve these other issues above. Nevertheless, a discount rate consistent with the risks for councils would remove one barrier to providing infrastructure upfront and moving to a NPV framework.

For IPART's review of the discount rate, we recommend moving to a cost of capital that is consistent with the approach used for other regulated businesses, and reflective of the underlying risks of the cashflows and discounting of cashflows for providing local infrastructure through contributions plans. It is difficult to find exact matches to the cash flow profile of local councils undertaking infrastructure for contribution plans. The closest match in private business is a land developer. Where data is available for such companies, their systematic risk is typically higher than the assumptions used for IPART's economy cost of capital estimate. However, these are imperfect proxies.

Using the economy cost of capital estimate for local infrastructure contributions could be a simple and conservative (lower-end) estimate of the cost of capital for councils in undertaking local infrastructure contributions. Given that there is minimal use of an NPV approach now and likely only modest uptake given other barriers, this is also a cost-effective option for IPART to implement.

Councils raised a number of other issues in interviews that are relevant for local infrastructure contribution plans and that interact with the NPV approach, including:

- improving indexation approaches to minimise risks around construction cost and land cost increases — councils were interested in how this would interact with an NPV framework
- making it faster to update rates for plans that had been approved to be above caps — making reviews of plans simpler would reduce risks for councils.

1 Introduction and context

The role of the discount rate in setting developer contribution rates

Council's may choose to use a present value framework for setting their contribution rates as part of a local infrastructure contribution plan. A present value framework involves:

- projecting a set of costs over time for required local infrastructure
- projecting the timing of development
- setting contribution rates so that the value today of costs (the present value) is equal to the value today of revenues, given the timing of development.

The advantage of a present value framework is that it accounts for differences in the timing of costs and revenues. For example, if costs are incurred upfront, then this approach recognises that dollars spent today are of greater value than dollars received in the future. And vice versa if revenues are received in advance of costs.

IPART notes that:

> An NPV approach to modelling local infrastructure contributions recognises that the future value of cash flows (revenue) and costs must be discounted. That is because a dollar next year is worth less than a dollar today. It is well accepted that the discount rate that an organisation should use for this purpose must be its own cost of capital.[1]

Henceforth we use the terms cost of capital, weighted average cost of capital (WACC) and discount rate interchangeably.

The practical implications of a higher or lower discount rate will depend on the expected profile of costs and revenues (table 1.1). A higher discount rate will increase the contribution rate if costs are incurred before revenues are received, other factors equal.

1.1 Impact of the discount rate on contribution rates, other factors equal

	Lower discount rate	Higher discount rate
Costs are incurred before revenues are received	↓	↑
Costs are incurred at the same time as revenues are received	–	–
Revenues are received before costs are incurred	↑	↓

Source: The CIE.

1 https://www.ipart.nsw.gov.au/Home/Industries/Local-Government/Reviews/Contributions-Plan/Modelling-local-infrastructure-contributions, p. 9.

A council whose plan does not specify incurring costs before contribution revenues are received is highly unlikely to use a NPV framework, as this would reduce the contribution rates that apply.

IPART's current approach for setting the discount rate

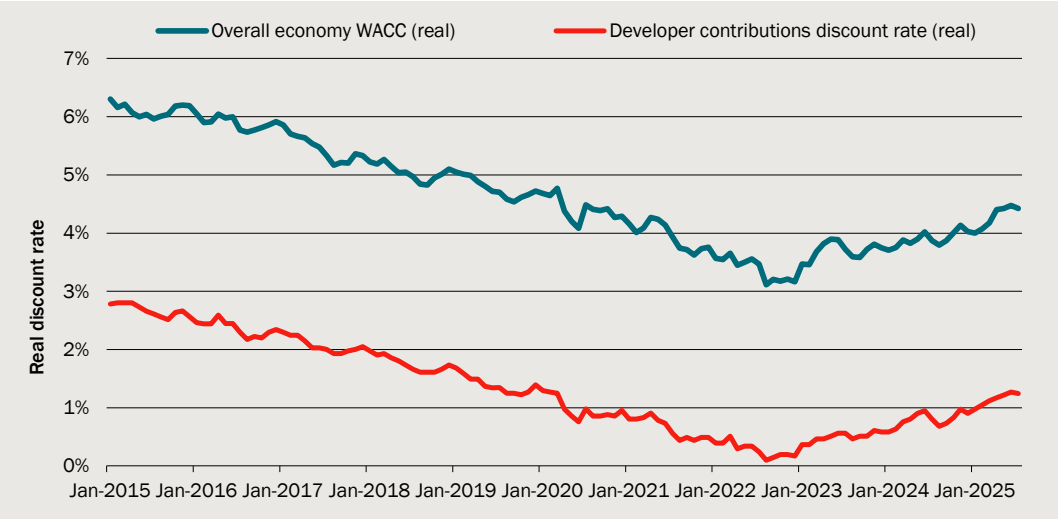
IPART has developed a methodology for estimating the discount rate for local infrastructure contributions.[2] This method has the following elements:

- IPART calculates the midpoint of the historic and current cost of debt for the 10-year Commonwealth bond yield and non-financial corporate A rated debt
- IPART calculates the 'spread', which is the yield for non-financial corporate A rated debt less the Commonwealth bond yield
- The discount rate is then calculated as:
  - the midpoint of the Commonwealth bond yield, plus
  - half the spread, plus
  - an allowance of 12.5 basis points for debt-raising costs.
- This is then rounded to 1 decimal place to derive a nominal discount rate. To obtain a real discount rate requires removing expected inflation.

IPART's approach to use a debt rate only is based on the view that a council cannot raise equity by selling shares.

If we apply this approach to historical data, the resulting real discount rates are very low (0-3 per cent and currently just over 1.0 per cent) (chart 1.2). The rate is much lower than the discount rate that is expected for the overall economy, also shown in chart 1.2.

1.2 Discount rate using IPART's current method (post-tax real)

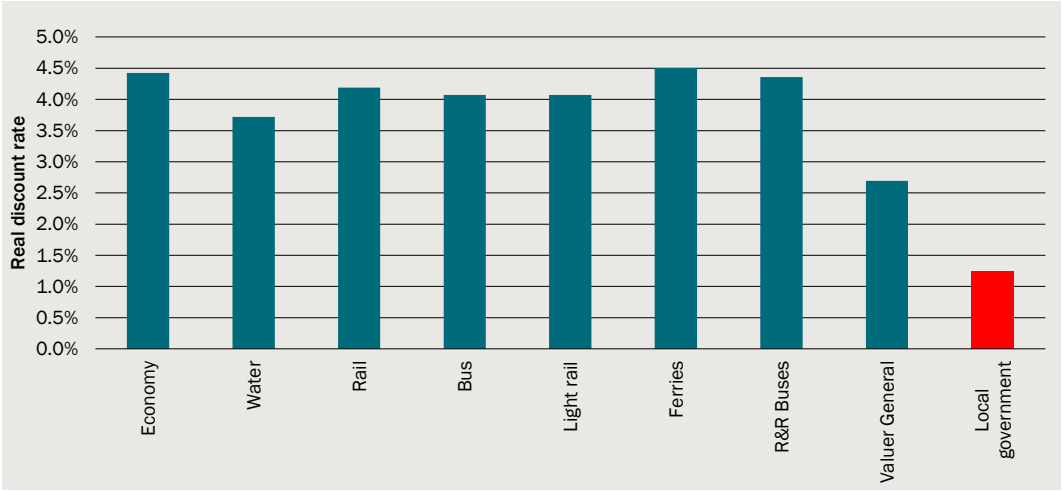


Data source: The CIE, using IPART's August 2025 WACC calculator.

2 https://www.ipart.nsw.gov.au/Home/Industries/Local-Government/Reviews/Contributions-Plan/Modelling-local-infrastructure-contributions

IPART's current rate across different sectors is shown in chart 1.3. The rate is relatively similar except for the Valuer General which is lower than other rates and Local Government, which is much lower than other rates.

1.3 IPART's discount rate across sectors (real), July 2025



Data source: The CIE, using IPART's August 2025 WACC calculator.

Council role in delivering infrastructure

The typical activities that councils undertake that are covered by a local infrastructure contributions plan are shown in table 1.4. Local councils will generally wish to provide roads and drainage first and open space and community facilities later. However, land acquisition for open space would also ideally occur earlier.

1.4 Typical activities in a local infrastructure contribution plan

Typical activities in a local contributions plan	Others undertaking similar activities
New and improved local roads	Developers will typically be responsible for local roads within their subdivision and half-width of local roads on their frontage
Drainage	Sydney Water undertakes drainage responsibilities in some cases (e.g. Mamre Rd) where it is the designated stormwater authority Developers often provide drainage infrastructure within their sites
New and embellished open space, sporting facilities and aquatic facilities	There is private provision and operation of some sporting facilities and aquatic facilities (e.g. gyms, indoor swimming pools)
Community facilities	Private development of non-residential floorspace has similar characteristics to building community facilities/libraries.

Source: The CIE, based on reviewing local infrastructure contribution plans.

The way that infrastructure is provided differs substantially depending on whether the development area is fragmented or owned by a single large developer.

- Where there is a single large developer, they will often undertake the works specified in the local infrastructure contributions plan, in lieu of providing contributions. In this case, the developer is taking on cost risk and timing risk, rather than a council
- Where there is fragmented ownership, the current approaches to contributions and infrastructure becomes much more problematic. Councils will typically deliver the infrastructure in these cases, but issues arise because they will often only do so once contributions have been collected.

IPART's issues paper and questions

IPART has set out the key issues for its review of discount rates in its discussion paper. The questions asked by IPART and where they are addressed in this submission are set out in table 1.5.

1.5 Where IPART's questions are addressed within the submission

IPART question	Where addressed in this submission
1. In addition to our Technical Paper, Modelling local infrastructure contributions in a present value framework, would it be useful for IPART to provide guidance on how to determine contribution rates using an NPV approach? If so, what kind of guidance would be useful? For example, this could include practical workshops or a spreadsheet template, or both.	Chapter 4
2. Does your council use an NPV approach in other areas of the organisation? For example, to calculate other infrastructure costs.	Chapter 2
3. What are the barriers to using an NPV approach for local infrastructure contributions plans?	Chapter 2
4. Would your council be interested in using an NPV approach for any future or amended contributions plans?	Chapter 2
5. Does the cost of capital for a cashflow differ according to who receives the cashflow stream (i.e. a council, a bank, an investor, a firm, etc.)?	Chapter 3
6. Does the cost of capital for a cashflow differ according to the way the contributions plan is financed (i.e. through debt, equity, or a mix of the two)?	Chapter 3
7. Is the relevant cost of capital for the cashflow stream associated with the contributions plan the cost of capital for the council as a whole (however that might be estimated)?	Chapter 3
8. Are there any existing parameters of our methodology that you think should be adjusted? This could include credit rating assumptions, sampling dates and periods, market observations, etc.	NA
9. What is a council's opportunity cost of using retained earnings to fund local infrastructure?	Chapter 2
10. Are councils able to reinvest their contributions balances at the discount rate specified by the methodology? For example, a 3.6% rate of return based on our February 2025 update.	Chapter 2
11. What are the constraints on a council's ability to directly raise funding for local infrastructure covered in contribution plans from sources other than debt?	Chapter 2
12. Would it be appropriate to include the cost of equity in our discount rate methodology?	Chapter 3
13. What are the risks faced by a council in providing local infrastructure?	Chapter 4
14. What listed companies with a known cost of capital undertake similar activities to councils' provision of local infrastructure?	Chapter 4

IPART question	Where addressed in this submission
15. For these listed companies, what range of values or point estimate would you recommend for beta values, gearing ratios, or overall cost of capital?	Chapter 4
16. Why do councils generally not use debt to fund infrastructure development ahead of receipt of contributions revenue?	Chapter 2
17. For your contributions plan(s), how fast have lots been developed compared to council's expectation at the time the contribution rates were set?	Chapter 4
18. Are the revenues earned by councils, and the expenditures incurred by councils, in relation to developer contributions subject to taxation or a tax equivalent regime? How are any such tax effects accounted for in setting contribution rates?	Chapter 2
19. How does the discount rate used for modelled contributions impact the timely provision of local infrastructure and the feasibility of housing development?	Chapter 2
20. Are there any other issues related to this review that you would like to tell us about?	NA

Source: The CIE.

2 Current approaches by councils for infrastructure delivery and funding

The CIE conducted targeted interviews with seven members of the Parks. The questions asked in the interviews were informed by the set of questions provided by IPART in their discussion paper. The questions were generally structured based on:

- Questions directed at contributions officers of councils' dedicated infrastructure teams and/or strategic planning team. These primarily relate to:
  - The current approach to infrastructure delivery under developer contribution plans,
  - The prevalence of voluntary planning agreements (VPAs) and work in kind (WIK) agreements, and
  - Considering the councils' overall development environment (e.g. greenfield vs infill, fragmented vs large scale development, type of infrastructure) and appetite for debt, whether adoption of a net present value (NPV) approach would change the timing of infrastructure development.
- Questions directed at councils' financial officers. These relate to:
  - The prevalence of debt at councils and the purpose of debt,
  - How earnings from contributions are invested and at what rate of return, and
  - If councils were to provide infrastructure in advance of contributions, how this would be financed.

Councils were also asked about the general viability of a net present value (NPV) approach to infrastructure contributions and the technical assistance that IPART can provide.

Current approach to infrastructure delivery

Western Sydney councils' approach to infrastructure delivery is primarily determined by the overall development environment that they face. In greenfield areas, councils primarily used Voluntary Planning Agreements (VPAs) or Works in Kind (WIK). In these cases, the timing of infrastructure provision is determined by the developer, who provides infrastructure instead of paying a cash contribution to councils. Councils appear to rely on WIKs and VPAs when the development environment permits – unsubdivided land with a single owner – as a mechanism to shift the risk of infrastructure provision from councils to developers. Infrastructure cost uncertainty has been cited as a barrier to reaching a contractual agreement between developers and councils, which in turn affects the likelihood of housing development. One council commented that they were risk

averse to providing infrastructure to the extent that a development would not proceed if council and developers failed to reach an agreement.

When councils do deliver infrastructure projects that are funded through development contribution plans, it is usually in the context of infill or fragmented greenfield development, where VPAs/WIKs are not feasible. In these cases, no councils provided infrastructure in advance of receiving development contributions, with most councils providing infrastructure after or concurrently with development. This reflects the risk aversion of councils and the type of infrastructure involved, which is typically small-scale supporting infrastructure that is development contingent, rather than larger scale enabling infrastructure.

When asked what affected their decision to proceed with infrastructure projects that are funded through development contribution plans, councils cited the following factors:

- All councils said that the timing and certainty of development was important or very important,
- All councils said that collecting sufficient revenue from contributions to be able to pay for infrastructure projects was important or very important,
- Approximately 75 per cent of councils said that proceeding before an area was developed to minimise cost and disruption was somewhat important.

How council's finance infrastructure to support new development

As a general rule, councils have historically been averse to developing infrastructure prior to having received revenues because of the risks involved. Council's generally also do not use debt very much compared to private sector companies:

- The ABS reports that NSW local councils had loans of $3.6 billion on $234.6 billion of assets in 2022/23.[3]
- IPART notes that most councils use funds accumulated in other plans or other reserves to fund infrastructure.[4]

This aversion to debt has been confirmed in interviews with finance officers from local councils. Currently, none of the seven Western Sydney councils that were interviewed use debt to finance infrastructure delivered under developer contribution plans. While five of the seven councils do use debt for infrastructure projects, these are mainly for community centres and libraries, which are not covered by contributions plans.[5] When councils do borrow, they use TCorp[6], which is owned by the NSW Government, or

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3 ABS Government Finance Statistics Australia 2022-23, Catalogue No. 5512.0, Table 331, https://www.abs.gov.au/statistics/economy/government/government-finance-statistics-annual/latest-release#data-downloads.

4 https://www.ipart.nsw.gov.au/Home/Industries/Local-Government/Reviews/Contributions-Plan/Modelling-local-infrastructure-contributions

5 https://www.planningportal.nsw.gov.au/local-infrastructure-contributions/ipart-review-section-7-11.

6 https://tcorp.nsw.gov.au/localcouncils/

through private banks, with borrowing rates ranging from 5 to 6 per cent currently depending on the repayment term and lender. Note that this is higher than the 3.9 per cent nominal discount rate IPART estimates for local councils as of August 2025.

If councils were to provide infrastructure in advance of contributions, how this would be financed

Councils are able to invest their contributions balances and retained earnings from other parts of council in designated assets at a rate of return.[7] All councils invest their balances in assets such as mature term deposits at private banks at a rate of return of between 4 to 5 per cent.

If councils were to theoretically provide infrastructure in advance of contributions, finance officers at councils expressed a relatively uniform view on how they would finance this infrastructure.

- As an initial option, councils would pool contributions from other plans, or other asset categories within the plan. If they used contributions from another plan they would be required to make a loan agreement and pay interest between plans.
- As a second option, councils would use funds from other parts of council. Again, this would require a loan agreement where councils would pay a borrowing rate equivalent to the rate of return on a mature term deposit or a commercial lending rate. Note that if a council is seeking to borrow internally from restricted reserves then this requires ministerial approval.
- As a third and final option, some councils would use debt, but only as a last resort. Financing infrastructure projects under contributions plans using debt are perceived as being high risk due to cashflow risks. There was an aversion to having to use general rates revenue to make repayments if contributions revenue was insufficient or delayed. Any loans would be backed by guaranteed rate income, not just contributions from developers.

One council noted that they did not believe that a loan that was taken out for local infrastructure contributions.[8] They interpreted the local government regulations as indicating that interest on any loan could only be repaid through rates and could not be charged to the local contributions plan. The Local Government Regulation states:

> 229 Loans to council to be charge on the council's income
>
> The repayment of money borrowed by a council (whether by way of overdraft or otherwise), and the payment of any interest on that money, is a charge on the income of the council.

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7 Councils are limited in the assets that they can invest in, which is set out in a ministerial order https://www.olg.nsw.gov.au/https-www-olg-nsw-gov-au-category-https-www-olg-nsw-gov-au-category-council-circulars/11-01-revised-ministerial-investment-order/.

8 Section 229 of Local Government Regulations, https://legislation.nsw.gov.au/view/html/inforce/current/sl-2021-0460#sec.229.

One other council indicated that they would like clarity on how arrangements between the local contributions plan's restricted accounts would work if a loan had to be repaid through general revenue because there was insufficient local contribution revenue.

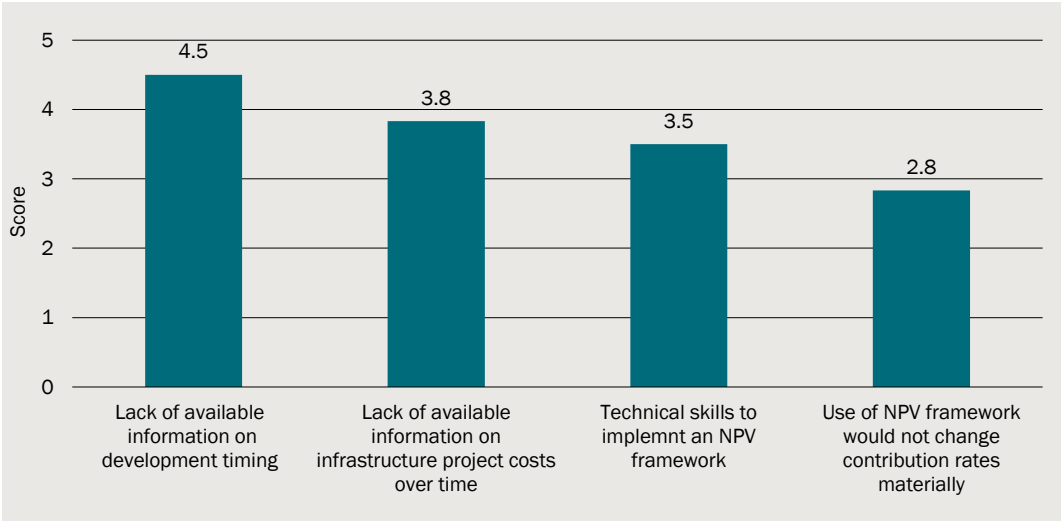
A number of consultations indicated that their council was averse to debt because of politics and because of the lack of control that they have over their revenue streams.

Viability of NPV approach and effect on infrastructure delivery

When asked about the viability of applying a net present value (NPV) approach to calculating infrastructure contributions, councils expressed a range of views.

Some Western Sydney councils do use a net present value approach in other council financial calculations, but not for calculating infrastructure contributions. In interviews, councils were asked about specific barriers that would prevent councils from adopting net present value (NPV) approach to calculating infrastructure contributions, where a 5 is very important and a 1 is not important (chart 2.1). A lack of information on development timing and uncertainty about infrastructure costs were cited as key barriers. Many councils also mentioned a lack of technical capability as a barrier. This is likely to be more of a problem at smaller councils. To address this, most councils suggested that practical support from IPART, such as spreadsheet templates and information papers, would help build capability and facilitate adoption. Councils were also very support of IPART support one-on-one as they develop an NPV approach.

2.1 Barriers to a NPV approach from councils



Data source: CIE based on surveys with councils.

Given these barriers, only half of councils expressed an interest in adopting an NPV framework to calculating infrastructure contributions. Among those that were supportive, councils noted that a higher contribution rate from a higher discount rate would incentivise councils to provide infrastructure earlier in certain circumstances only. The types of circumstances where this would be likely include:

- where the contribution plan area has fragmented ownership so VPAs and WIK agreements cannot be used
- where upfront infrastructure delivery would help to unlock the development, and
- if councils could access development contingent loans from the NSW Government.

Other issues raised

Other issues raised during consultations included:

- limitations from the prescriptiveness of plans — i.e. plans specifying specific works and funding allocated to specific asset types making adjustments difficult
- risks from indexation are important to councils — councils using CPI have found this has not kept pace with land cost inflation in particular. Those using more specific land and construction cost indices have fared better, but the increases are always lagging the actual changes in costs being experienced by councils
- reviewing plans — plan review is seen as a good way to mitigate risk, but many councils undertook far less review and revision than they would like. This reflects the resource and time intensiveness of the process, including having to go back through IPART for any plans that are above caps.

3 Conceptual underpinnings of the discount rate

Conceptual basis for the discount rate

Currently IPART uses a financing approach for the local council discount rate. In other sectors, IPART typically adopts a definition with reference to an efficient benchmark entity. IPART's benchmark entity is "a firm operating in a competitive market and facing similar risks to the regulated business."[9]

Conceptually, the benchmark firm is the approach that actually reflects the underlying cost of capital for local infrastructure contributions. The financing rate available to a council is not related to the risks or actual activities undertaken for local infrastructure contributions, because any debt taken out for local infrastructure contributions are backed by other local council revenue (i.e. taxation revenue from rates).

To take a simple example. Suppose a council borrowed $100m for undertaking infrastructure covered by a local contributions plan, based on an expectation of development occurring and being able to pay this back (including interest). It obtains a 5 per cent financing rate for this. There is a market downturn and development activity slows down. Council cannot use contribution revenue to pay the loan, as the amount is insufficient, and instead has to use general revenue. Ratepayers are clearly bearing the risks around development timing, rather than the lender.

During consultations with councils, several relevant points were made on this:

- one council noted that any loans for infrastructure covered by local contributions plans were secured against rate revenue. If the loans were instead only secured by local contribution revenue then financing rates would be much higher or may not be available at all[10]
- many councils noted that a key reason they would not debt finance upfront infrastructure was because of the risks this imposes on their rate paying base when local infrastructure contributions revenue varies.

Or to use an example in the context of a business regulated by IPART. If the Sydney desalination plant was 100 per cent financed by NSW Government bonds, then this would not mean that the cost of capital is the government bond rate. IPART would apply an approach of estimating the cost of capital using its benchmark firm approach.

Similar discussions have been had for many years with respect to the cost of capital approach used to derive a social discount rate for state and Commonwealth

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9 IPART 2018, Review of WACC Method, Section 3.2, https://www.ipart.nsw.gov.au/sites/default/files/documents/final-report-review-of-our-wacc-method-february-2018_0.pdf.

10 It is unclear if this is a formal security to the loan or an implicit security.

Governments.[11] Discount rates (real) used for projects are generally 5 per cent to 7 per cent as the central case, which is far above the government borrowing rate.

So in answer to IPART question as to whether the cost of capital for a cashflow differs according to who receives the cashflow stream (i.e. a council, a bank, an investor, a firm, etc.), we would say that this should not influence the rate IPART sets.

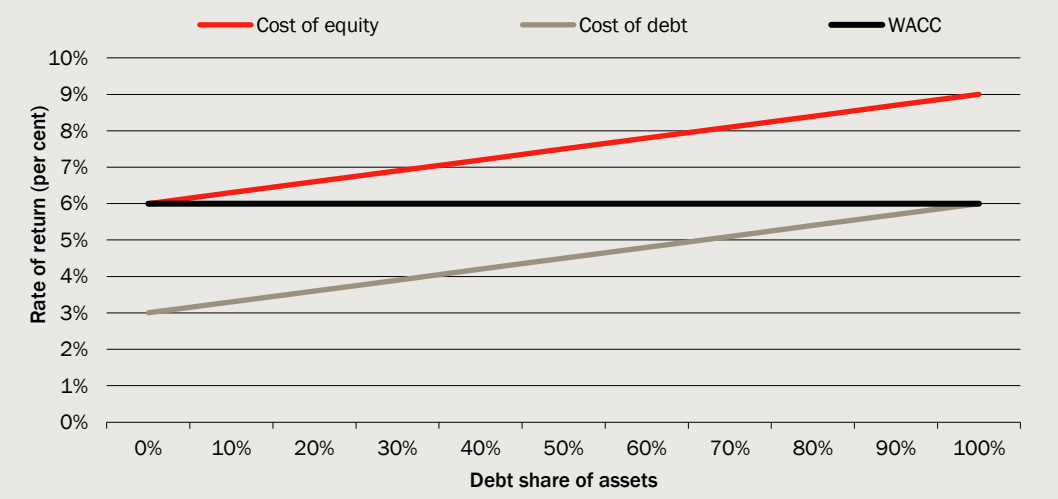
Financing structure

IPART also asks whether the cost of capital should be different depending on how a contributions plan is financed (i.e. through debt, equity, or a mix of the two). Under standard finance theory, the cost of capital is not impacted by the capital structure of the business — i.e. the share of capital funded by debt versus equity — except where there are different taxation treatments of these funding sources.[12] The practical implication of this is that a higher level of gearing of a company means that:

- the cost of debt increases, through a higher debt margin
- the cost of equity increases, because of a higher equity beta
- the overall cost of capital (the weighted average cost of capital) remains the same (chart 3.1).

Where there are tax differences, such as the tax deductibility of interest payments on debt, then the overall cost of capital will change, but the cost of debt and equity will both also increase as the level of gearing increases.

3.1 Level of debt and the cost of equity and debt



Note: Ignoring tax effects of debt for simplicity.

Data source: The CIE.

11 Harrison 2010, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1599963.

12 Modigliani, Franco, and Merton H. Miller. "Corporate Income Taxes and the Cost of Capital: A Correction." *American Economic Review,* vol. 53, no. 3, Summer 1963, pp. 433-443

So broadly, we would expect that the cost of capital will be invariant to the financing structure, except in respect to taxation.

Based on discussions with the Parks councils, debt is not a preferred financing approach, as set out in Chapter 2. Councils are much more likely to use retained earnings as a first resort, particularly from other contributions plans, to finance infrastructure upfront. Conceptually this is equity.

Council consultations indicated that there would be little appetite for debt for many councils because of political factors and constraints around revenues that make it more difficult for councils to adjust to meet repayments. This is also evident in the low debt to equity ratios across NSW councils.[13]

IPART has also asked whether it would be appropriate to include the cost of equity in the discount rate methodology. Given council assets are nearly entirely equity funded, and councils are likely to use retained earnings at least in part to fund local infrastructure, we would suggest this is the main form of financing. Defining equity as coming from issuing of shares is a narrow definition. We would see equity as the difference between assets and liabilities, which is in a council's case equity owned by the community.

Alternatively, if IPART uses a 100 per cent debt financed model, then debt is taking on the characteristics of equity as it has all downside risks and will require much higher financing rates (if this debt was not backed by council's other revenues).

Council versus activity cost of capital

In our view, the appropriate cost of capital is that associated with the contribution plan, rather than for the council as a whole. Other council activities will have very different characteristics to providing local infrastructure to support development. Whether this makes any practical difference to the chosen discount rate will depend on whether the risks to council as a whole versus the types of activities within a contributions plan can be differentiated. Councils do not tend to have a discount rate for council activities as a whole used in other aspects of council financial policies, based on discussions with The Parks councils.

13 The ABS reports that councils in NSW had assets of $234.6 billion in 2022/23, but loans of only $3.6 billion, ABS Government Finance Statistics Australia 2022-23, Catalogue No. 5512.0, Table 331, https://www.abs.gov.au/statistics/economy/government/government-finance-statistics-annual/latest-release#data-downloads

4 Practical issues to develop a revised discount rate

The main industry-specific factors that drive differences in discount rates across industries regulated by IPART relate to risk. In particular:

- What level of debt could be used consistent with the risk profile of the activities?
- What is the equity beta for the component of the cost of capital not related to debt?

These two assumptions are related and together form a view about the riskiness of the activity.

Across most industries IPART uses a fairly narrow range of assumptions (table 4.1).

4.1 Parameters used for other industries

Industry	Gearing	Equity beta	Post-tax WACC (real)
	%	No.	%
Economy	60	1.00	4.42
Water	60	0.70	3.72
Rail	60	0.90	4.19
Bus	60	0.85	4.07
Light rail	60	0.85	4.07
Ferries	50	0.90	4.51
R&R Buses	50	0.85	4.36
Valuer General	45	0.45	2.69
Local government	100	NA	1.24

Source: IPART August 2025 WACC calculator.

Note that while gearing and equity beta can be considered separately, they are really reflective of a combined view of risk. The underlying risk of the activity is represented in the asset beta, which:

- is higher if the equity beta assumption is higher, other things equal
- is higher if the gearing is lower, other things equal.[14]

So for example, the risk of the activity of providing ferry services as assumed by IPART is higher than rail, because it has a lower gearing assumption (and the same equity beta). It is also higher than R&R buses because it has a higher equity beta assumption (and the same gearing).

14 The general formula used for the asset beta is: $\beta_a = \frac{\beta_e}{1+(1-t)*\frac{D}{E}}$ where t is the tax rate, D is debt and E is equity.

Because of this we focus on the consideration of the risk in total of the activity. The possible ways to consider this risk are:

- considering from first principles what risks council bear.
- finding proxy firms that undertake similar activities and for which we can measure an equity beta and gearing through financial market data.

What are the risks for councils in providing local infrastructure?

For considering the types of risks we assume a model whereby a council undertakes infrastructure in advance of development and then later receives contributions. While this is not the current model that is used by councils, this is the only model that makes sense for councils adopting an NPV approach to local contributions.

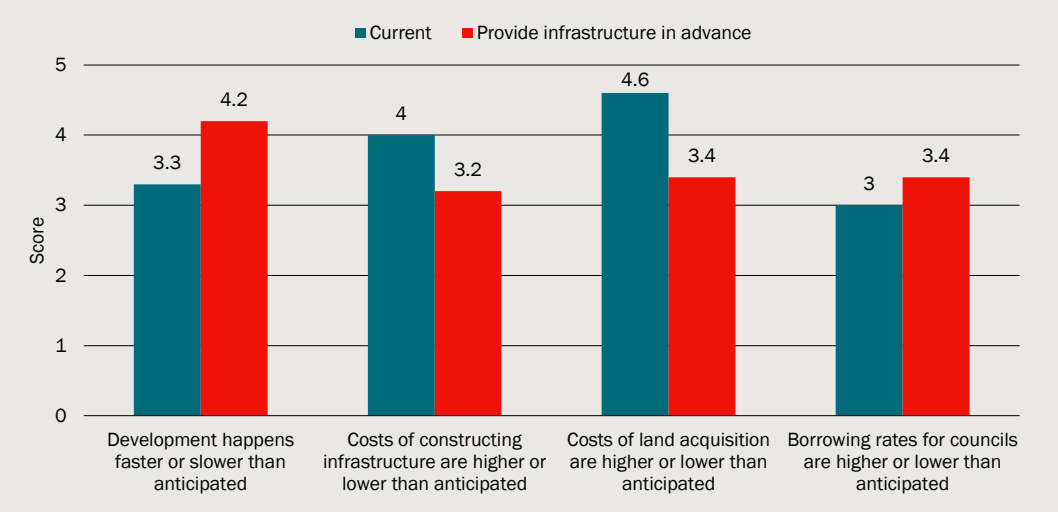
Under this model we can break risks into cashflow risks and discount rate risks.[15]

- Cashflow risks:
  - development doesn't happen in the timeframe expected, meaning that revenue doesn't accrue at the timing expected. This could be because of a market downturn or because of a lack of other activities necessary for development (e.g. utilities in a greenfield area)
  - the ultimate level of development is different to that envisaged, which can impact on revenues, but could also drive additional costs. For example, a denser development pattern than expected could lead to increased revenue
  - construction costs are different to those factored into plans
  - land acquisition costs are different to those factored into plans
  - indexation of 'prices' is not well aligned to actual changes in costs
- Discount rate risks — the discount rate changes, leading to changes in the present value of future cashflows. In practice this could be changes to returns on equity or borrowing rates for councils. Discount rate risks are largest where the timing gap between costs and future payments is larger.

Councils were asked in interviews to rate each of the cashflow risks above, based on their current approach to infrastructure provision, from least important (1) to most important (5). Councils were then asked how their ratings would change in the event that they provided infrastructure in advance of receiving developer contributions. As seen in the chart below, the lack of information available on development timing would become more important to councils if infrastructure was provided in advance (chart 4.2).

15 Campbell, John Y., and Jianping Mei. "Where Do Betas Come From? Asset Price Dynamics and the Sources of Systematic Risk." *The Review of Financial Studies*, vol. 6, no. 3, 1993, pp. 567–92. *JSTOR*, http://www.jstor.org/stable/2961979. Accessed 22 Oct. 2025.

4.2 Risk ratings by local council



Data source: CIE based on surveys with councils

The risks for councils are a combination of systematic (market-correlated) and idiosyncratic risks. Key systematic risks are from broader market drivers of new housing, costs and discount rates. Key idiosyncratic risks include issues with other infrastructure for specific precincts.

An assessment of how council's risks compare to typical businesses is shown in table 4.3. In some areas, a council would face higher risk and for others it isn't clear.

4.3 Risks for councils in local infrastructure compared to typical business

Factor that increases risk	Council local infrastructure contributions relative to typical business activity
Share of costs that are fixed	Higher Infrastructure costs expended upfront for councils can't be later down scaled if there are slower housing starts. There would be businesses with similar characteristics, such as some mining operations that have high fixed costs and infrastructure (although this often has regulations that reduce risk).
Longer time period between costs and revenues	Higher Under an upfront delivery model, it could take years for revenues to be received, which means a higher discount rate risk than most businesses.
Demand sensitivity to economic conditions	Not clear Housing is income inelastic. New and greenfield housing is likely more correlated with market conditions. For example, Sydney's greenfield land markets were significantly impacted by the global financial crisis.
Restricted ability to respond to demand or cost changes through prices	Not clear Councils could adjust their contributions for cost changes, but this would take a long time compared to private business. Councils would not generally adjust prices to demand. This has an upside in that prices are fixed, while a business may face declining prices. However, this is also a downside as a business can respond by adjusting prices to minimise losses.

Source: The CIE.

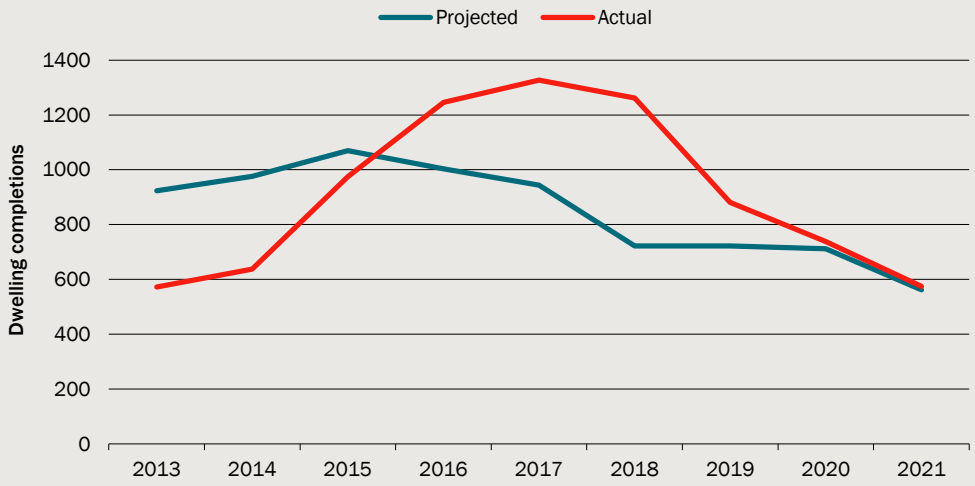
Based on this, we would think the activities of council in undertaking local infrastructure upfront for development would be considered relatively risky compared to a typical business, but there is no specific quantitative conclusion that could be drawn on the basis of this.

We do not have systematic data on the variance between development projects and actual development, or cost projections and actuals. Selected examples are set out as case studies below.

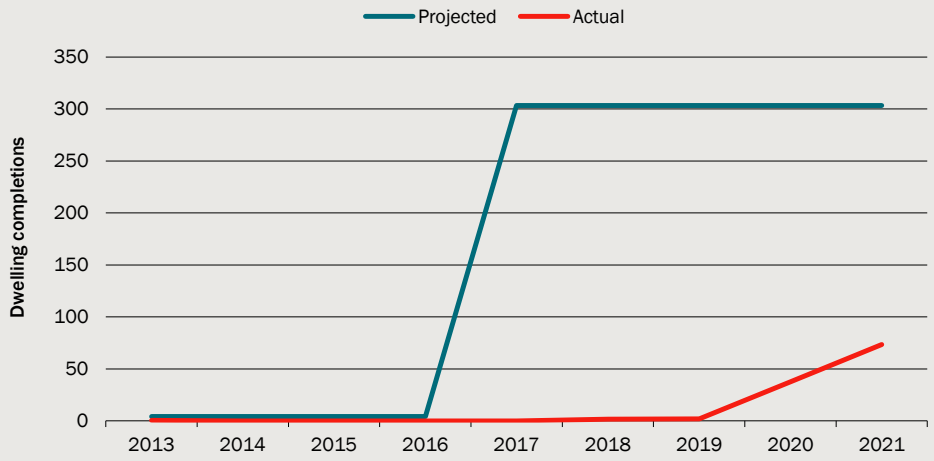
- Oran Park in Camden initially developed more slowly than anticipated, but after 4 years development per year was higher than projections (box 4.4).
- On the other hand, Leppington (also in Camden) has proceeded much more gradually than expected in the contributions plan (box 4.4). This has reflected issues with the planning, infrastructure delivery and market viability.
- In terms of cost variances, in Austral and North Leppington Precinct (in Liverpool), costs estimated for the 2021 plan were 50 per cent higher in real terms than those estimated in the 2014 plan (box 4.5). Local council consultations indicated that there were many projects that had much greater variance than this — with revised costs 2-3 times those of the costs originally envisaged.

4.4 Examples of timing uncertainty associated with development, Camden Council

Councils cited uncertainty in the timing of development as a barrier to adopting an NPV approach to calculating the discount rate for local infrastructure contributions. This is uncertainty is reflected in the experience of Camden Council. For example, in the Oran Park and Turner Road Development Contributions Plan, beween 2013 and 2014, actual dwelling completions lagged behind projections, but between 2015 and 2021, actual completions significantly exceeded projections. [a] [b]



In contrast to the projections in the Oran Park and Turner Road Development Contributions Plan, the projections in the Leppington Contributions Plan overestimated the actual dwelling completions in the precinct. As seen in the chart below, dwelling completions between 2013 and 2021 were projected at 1 533, significantly above actual dwelling completions of 115 over the same time period. [b] [c]



[a] Camden Council, Oran Park and Turner Road Precincts Section 94 Contributions Plan, https://www.camden.nsw.gov.au/strategic-planning/section-7-11/repealed-section-94-contribution-plans, pg. 32.

[b] Data NSW, 2022, Net Dwelling Completions, https://data.nsw.gov.au/data/en/dataset/greater-sydney-urban-development-program-data/resource/d0c9ee25-ddd9-41b5-aeb4-1a8f50fda362.

[c] SGS, 2012, Leppington Precinct Study for Camden Council, https://s3.ap-southeast-2.amazonaws.com/dpe-files-production/s3fs-public/dpp/183144/Retail,%20Employment,%20Demographics%20and%20Social%20Infrastructure%20Report.pdf, pg. 30.

4.5 Examples of infrastructure cost uncertainty, Liverpool Council

Councils amend development contribution plans at regular intervals, typically every four years. Amendments include changes to development contributions, usually as a result of changes in infrastructure costs.

For example, in the original Austral and North Leppington Precinct Development Contribution Plan which was originally released in 2014, total infrastructure costs for the precinct were estimated at $792 million (real). [a] In the amendment to the DCP, published in 2021, infrastructure costs were revised upwards to $1.2 billion (real), which is a 50 per cent increase. [b] As seen in the table below, this escalation was mostly driven by increases in the cost of land.

Category	2014 plan	2021 plan	Change
	$m, 2025	$m, 2025	per cent
Land	313	584	86.4
Works	478	602	25.9
Total	**792**	**1186**	**50**

Decomposing change by infrastructure type, open space and drainage are the main drivers in the change in cost, increasing by 43.6 per cent and 74.8 per cent respectively from 2014 to 2021.

Category	2014 plan	2021 plan	Change
	$m, 2025	$m, 2025	per cent
Open space	366	526	43.6
Community facilities	4	9	142.0
Roads	126	135	7.1
Drainage	295	516	74.8
Total	**792**	**1186**	**50**

[a] Liverpool City Council, Austral and Leppington North Contributions Plan 2014, https://s3-ap-southeast-2.amazonaws.com/shared-drupal-s3fs/master-test/fapub_pdf/LIVERPOOL/Liverpool%20CP%202014%20-%20Austral%20and%20Leppington%20North%20Precincts.pdf, pg. 2.

[b] Liverpool City Council, Austral and Leppington North Contributions Plan 2021, https://www.liverpool.nsw.gov.au/__data/assets/pdf_file/0017/252701/Liverpool-Contributions-Plan-2021-Austral-and-Leppington-North-.pdf, pg. 1.

Another useful comparison is between the businesses that IPART has already made risk assessments for and local councils. Sydney Water is more risky in the sense that the time between capital expenditure and revenue can be much longer than likely in a contributions plan. However, a contributions plan has a higher share of costs that are fixed upfront and a much higher revenue risk than Sydney Water (table 4.6).

4.6 Comparison of risks of local infrastructure to Sydney Water

	Sydney Water	Local council developer infrastructure
Share of costs that are fixed	~50% of building block costs are capital-related	100% of costs in contributions plan are capital related
Longer time period between costs and revenues	Life for recovering capex based on economic lives, which are around 50 years on average	Recovered when development contribution paid, which would be expected to be shorter than water recover period
Demand sensitivity to economic conditions	Insensitive. Revenue comes from fixed charges, which will be almost invariant to economic conditions. Water use will also be inelastic with respect to economic conditions.	Likely more sensitive than water, as new development is more impacted by market conditions.
Restricted ability to respond to demand or cost changes through prices	Reviews typically every 4-5 years. CPI inflation in between	Reviews could occur every 5 years but practically this does not seem to occur. CPI inflation or some plans. More cost reflective indices (land value and construction cost) used in some plans.

Source: Final-Report-Sydney-Water-prices-2025-2030-September-2025.PDF; The CIE.

Proxy firms for council activities

The second method to consider risk is to examine businesses that are public companies, and then to measure what the market assesses their equity beta to be through the correlation of their share price to that of a defined market. The gearing of public companies is also available.

There are unlikely to be any proxy firms that provide exactly the same set of services as local councils, because local councils are providing public infrastructure. The closest type of business is a land developer focused on large greenfield sites. This type of land developer:

- purchases land for their site
- provides the master planning of the site
- organises and funds utility connections (within the site)
- constructs public infrastructure. This includes:
  - minor infrastructure that is the direct responsibility of the subdivision, such as subdivision roads and drainage
  - other infrastructure that is the same as that in local infrastructure contributions. For these types of developments, this infrastructure is often built by the developer through a voluntary planning agreement with a council. Under these agreements the developer faces the same risks as a local council would face

- receives revenue from the sale of lots, on which a building can then be constructed. Unlike a council, the developer can adjust the sale price of the lots depending on market demand.

An example of this type of development include:

- Googong near Queanbeyan. This is an entire new city, largely developed by a single developer, with the developer expected to construct infrastructure
- Menangle Park, Sydney. This is a consolidated area developed by a single developer, with the developer providing local infrastructure
- Wilton, Sydney. This is a consolidated area developed by a single developer, with the developer providing local infrastructure.

Land developers in our view have a similar set of risks as a council that undertook to construct public infrastructure in advance of receiving contributions revenue. (In some cases they are specifically taking on the exact same risks through WIK or VPAs.) In particular, they are subject to similar cost risks and similar development timing risks. They potentially have some risk mitigations that are not available to council, such as securing pre-sales prior to construction, being in control of the release of development and adjusting prices with demand (which is a risk mitigation but also impacts on cashflows).

Unfortunately, most land developers undertake many other activities, such as owning and leasing and civil construction. This means finding data that is specific to land development is difficult. The asset betas for the companies that are potentially relevant are nearly all above the IPART economy implied asset beta, with the exception of Peet Limited, BWP Trust and Lend Lease (table 4.7). There is a fairly wide range of asset beta estimates across companies.

Note that the IPART economy assumptions have a higher level of gearing than any of the companies we have, and also likely of the ASX200 as a whole. We have not gone into detail about this difference, but it may be that the IPART economy assumptions are less risky than a typical business activity as the gearing level is very high and the equity beta is 1.

The other set of companies that are somewhat relevant are civil construction companies. These companies have similar cost drivers to council local infrastructure. However, their revenue side is quite different in that they would typically be bidding in for a specific project and hence get paid based on their estimate of costs for that project, rather than on subsequent development occurring. Hence we would see them as much less relevant. Note that some of the land developers are also civil construction companies, such as Lend Lease.

4.7 Data for proxy firms

Company	Market capitalisation	Equity beta	Debt/equity ratio	Debt share	Implied asset beta
	$B	No.	Per cent	Per cent	No.
Goodman Group	69.1	0.82	23%	18%	0.71
Stockland	15.0	1.01	52%	34%	0.74
The GPT Group	10.5	0.98	51%	34%	0.72
Dexus	7.8	0.78	49%	33%	0.58
Mirvac Group	9.1	1.08	51%	34%	0.79
Charter Hall Group	10.9	1.35	19%	16%	1.19
Lendlease Group	3.8	0.71	84%	46%	0.45
Lifestyle Communities Limited	0.7	1.02	74%	43%	0.67
Peet Limited	0.9	0.37	54%	35%	0.27
Vicinity Centres	11.7	1.15	44%	30%	0.88
BWP Trust	2.7	0.57	28%	22%	0.48
Growthpoint Properties Australia	2.0	0.89	80%	44%	0.57
Cedar Woods Properties Limited	0.6	0.83	28%	22%	0.69
Average		0.89	49%	32%	0.67
Average weighted by market capitalisation		0.92	35%	25%	0.74
ASX200	~ 3 trillion	1.00	45%	31%	0.76
IPART economy		1.00	150%	60%	0.49

Note: The unlevered beta = levered beta/(1-(1-t)*debt/equity) where t is the tax rate. A 5 year monthly beta is used.

Source: Betas, market capitalisation and debt to equity ratios are from https://au.finance.yahoo.com/; ASX debt to equity ratio is from https://www.abs.gov.au/statistics/economy/national-accounts/australian-national-accounts-finance-and-wealth/latest-release#methodology.

Tax arrangements

IPART typically uses a post-tax WACC and allows for a tax allowance in cash flows. Councils providing infrastructure for local contributions do not have any requirement to have tax equivalence. Hence we would think the discount rate would be a post-tax WACC and there would be no other consideration of tax.

Conclusions about risk and tax

It is difficult to be precise on what the risk level is for local councils in providing infrastructure. We would consider that the evidence indicates suggests that local infrastructure contribution activity is at least as risky as typical economic activity and is more risky than businesses such as Sydney Water. Given IPART already has an assessment of the discount rate for the economy as a whole, we would see that as a reasonable lower bound estimate for the local council discount rate.

If IPART has the resources to undertake a more detailed assessment of proxy companies then that could be used to provide a more specific estimate. However, given the expected

limited uptake of the NPV method, a general rate for the economy is probably sufficient and likely to be on the conservative (low) side.

We also note that the IPART economy cost of capital assumes a 60 per cent debt level. This seems much higher than we have observed. If an overall economy measure is to be used, then this level of gearing could be checked against company financial data available to IPART.

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