COMMERCIAL IN CONFIDENCE

BRIEFING

Discount rate for developer contributions

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Western Sydney Planning Partnership

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Key points

IPART currently sets a discount rate for developer contributions that is based on debt finance. This provides a very low discount rate (currently 1.0 per cent real).

We recommend that IPART moves to a benchmark entity approach, consistent with how it thinks about cost of capital for other areas of regulation. This approach would mean applying a cost of capital consistent with the level of systematic risk of the activities that are being undertaken by councils as part of their local infrastructure contribution plans.

We also recommend that the risk level for these activities be above the risk level for the economy in general. Based on evidence from public companies that undertake similar activities, we recommend a risk level that equates to an equity beta of 1.47 with a debt share of funding of 40 per cent.

It is not clear if the discount rate used for council contributions should be a pre-tax or a post-tax discount rate. Under the above recommendations, the post-tax real discount rate (as of February 2025 IPART data) would be 6.5 per cent and the pre-tax real discount rate would be 8.5 per cent.

1 Introduction

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.

How council's finance infrastructure to support new development

For many infrastructure types, it would be preferable for council infrastructure to be put in before development occurs. For example, roads, public open space. This can be preferable particularly where infrastructure requires more land, as land costs will often increase as the development proceeds. For other types of infrastructure, such as community centres and libraries, it is less important that these occur early, as a sufficient mass of people is required for these facilities.

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.[2]
- IPART notes that most councils use funds accumulated in other plans or other reserves to fund infrastructure.[3]

If councils borrow, they could borrow through TCorp[4], which is owned by the NSW Government, or through private banks.

IPART's current approach for setting the discount rate

IPART has developed a methodology for estimating the discount rate for local infrastructure contributions.[5] 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.

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2 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.

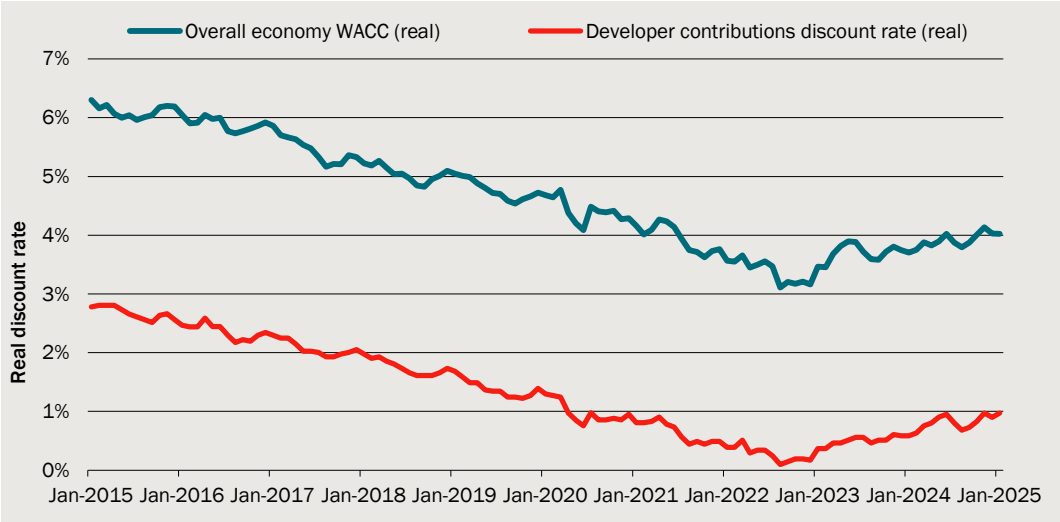
3 https://www.ipart.nsw.gov.au/Home/Industries/Local-Government/Reviews/Contributions-Plan/Modelling-local-infrastructure-contributions

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

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

If we apply this approach to historical data, the resulting real discount rates are very low (0-3 per cent and currently 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 February 2025 WACC calculator.

2 Review of the current approach

IPART's methods for modelling local infrastructure contributions is fairly unusual in the context of its broader approach to setting the weighted average cost of capital for industries that it regulates. The key assumptions that IPART makes are that:

- any financing of local infrastructure is funded entirely through debt, and
- even with 100 per cent debt funding, the debt margin is half that of A-rated corporate debt.

What is the overall conceptual basis for the discount rate for local infrastructure contributions plans?

In setting a discount rate, or rate of return, 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."[6]

Council developer contribution plans are not regulated in the same level of detail and the same way as a regulated business, such as Sydney Water. IPART has not specified an overall conceptual approach for the discount rate for council developer contributions, such as the use of a benchmark entity.[7] However, implicitly it is seeking to model a financing rate that a local council could access for debt, with debt chosen because a council cannot issue shares for equity.

The discount rate chosen will ultimately depend on the conceptual framework adopted. Possible options are:

1 a benchmark entity approach, based on a firm operating in a competitive market and facing similar risks to the regulated business, which is what IPART uses for regulated businesses

2 a council financing approach, linked to what a council may do in practice if they were to undertake capital expenditure in advance of receiving contributions.

The main disadvantage of the second approach, and the reason why a benchmark entity approach is generally used, is that the financing rates available for a government entity

6 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.

7 IPART 2024, *Modelling local infrastructure contributions in a present value framework,* chapter 3, https://www.ipart.nsw.gov.au/sites/default/files/cm9_documents/Technical-Paper-Modelling-local-infrastructure-contributions-in-a-present-value-framework-August-2024.PDF.

are not reflective of the risks of the activity being considered — financing rates are artificially low because of the ability to levy taxes on other activities. This means that in using an actual financing rate, the risks related to the specific activity being regulated — i.e. development-related infrastructure in this case — are being borne by the broader revenue base of the government organisation.

Nearly all of the businesses that are regulated by IPART are government owned, whether by council or the NSW Government. For example, Central Coast Water is owned by a local council, Sydney Water and Water NSW are owned by the NSW Government. In all these other cases IPART uses a benchmark entity approach, even though these businesses could be expected to (and do) access lower cost financing arrangements. For example, Sydney Water and Sydney Desalination Plant can and do use loans through TCorp, as can local councils. Nevertheless, IPART sets the weighted average cost of capital (i.e. the discount rate) based on market indicators of the cost of capital for a benchmark entity, rather than the specific costs of TCorp debt.

It is also evident that councils do not in practice use debt in any significant way. The ABS reports that councils in NSW had assets of $234.6 billion in 2022/23, but loans of only $3.6 billion.[8] This indicates that councils are not using debt to finance their activities. Council assets are largely funded by equity, although not through issuing shares but through accruing revenue from other sources such as ratepayers.

Unless there are strong reasons for a departure to the benchmark entity approach for local infrastructure contributions, which are not obvious to us, then we would consider this to be the preferred approach and consistent with how IPART sets relevant rates of return in other contexts.

- **We recommend that IPART use an overall conceptual approach for the discount rate of the return required for a firm operating in a competitive market and facing similar risks to the regulated business, as is used in other areas of regulation.**

What are the implications of using a financing approach based on a borrowing rate?

The use of a borrowing rate aligned to the types of rates that could be obtained from TCorp will generally just mean that a council would have to use other revenues if risks around development occurred. For example:

- Suppose a council spends $10m on infrastructure upfront. It expects to receive contributions equally over the next 10 years. Using IPART's approach, the council has a real discount rate of 1 per cent. This means the annual contributions in each future year in real terms is $1.06 million
- The council borrows the $10m from TCorp at a real borrowing rate of 1 per cent. The repayments exactly match the expected annual contributions of $1.06m per year.

8 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.

- After putting place this arrangement and constructing the upfront infrastructure, economic conditions worsen and the development pipeline slows to half its expected rate
  - the council now received $0.53m per year in contributions
  - repayments remain at $1.06 million per year
- In order to meet repayments, council will have to divert revenue from elsewhere or take out other loans.
- So while it appears that the financing rate of the loan is a useful measure of the cost of capital, the reality is that council ratepayers or others are really bearing all the risk related to the activity. The discount rate (rate of return) is not being set in a way that compensates for this risk.

These sorts of issues are exactly why using a benchmark entity approach provides a more robust basis for the discount rate. Government financing rates are simply hiding the true cost of capital by shifting this onto taxpayers.

Under a benchmark entity approach, what are the relevant parameters?

If a benchmark entity approach is used, as we recommend, then many of the assumptions are already developed by IPART as standard practice in its WACC calculator.[9] The assumptions that are industry specific are:

- the level of gearing — this is the share of the capital that would be funded by debt versus equity
- the equity beta — this is the relative risk of equity in the activity compared to the risk of investments as a whole
- the length of the regulatory period.

The first two of these are closely related — the higher the level of gearing the higher the equity beta, other things equal.

Relationship between gearing, debt margin and cost of equity

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.[10] 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

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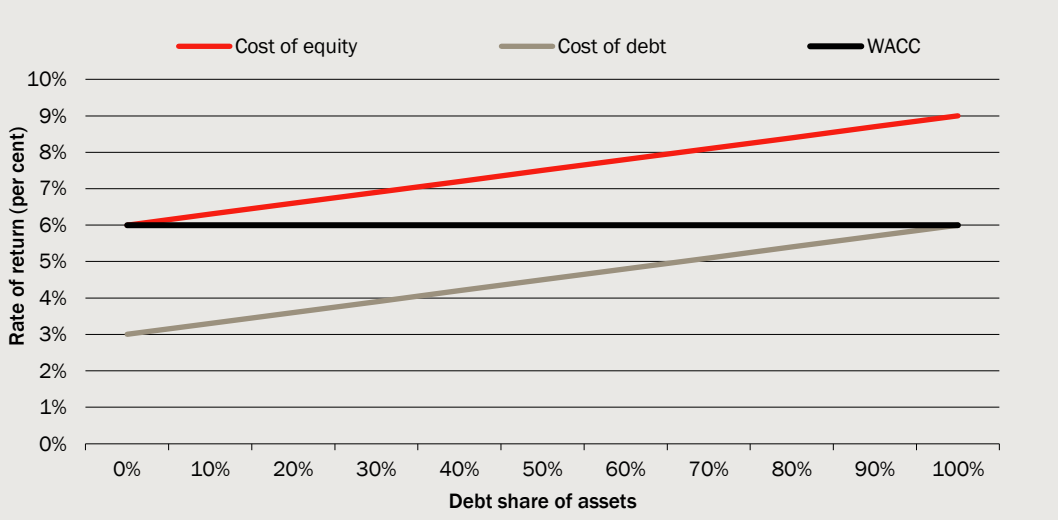
9 https://www.ipart.nsw.gov.au/Home/Industries/Special-Reviews/Regulatory-policy/WACC

10 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

- the overall cost of capital (the weighted average cost of capital) remains the same (chart 2.1).

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.

2.1 Level of debt and the cost of equity and debt



Note: Ignoring tax effects of debt for simplicity.

Data source: The CIE.

IPART's current approach, compared to an overarching concept of the cost of capital:

- takes a 100 per cent debt funding share and
- applies a very low debt margin (half of the margin for AAA rated corporate bonds).

Clearly in the context of an overall assessment of the cost of capital this set of assumptions is implausible. If debt funding was 100 per cent, then the cost of debt would be much higher. This simply reiterates the point from the previous section that using a financing cost is not in any way aligned to the cost of capital for a benchmark entity.

What is the level of risk of the activities involved in local infrastructure development?

If a benchmark entity approach is used, the key question is how the risks of the activities being undertaken as part of a local contributions plan compare to the risks of other activities for which IPART sets a cost of capital. The differences in risk could then be accounted for either though a revised assumption about gearing or a revised equity beta or both. That is:

- a higher risk could imply a lower level of gearing would be required to achieve the debt margins that IPART applies and/or
- a higher risk could mean that the equity beta is set higher than other regulated businesses.

The assumptions that IPART currently uses across industries are shown in table 2.2. Most of the businesses regulated by IPART are considered to have a lower risk than the economy as a whole.

2.2 Industry assumptions currently use by IPART

Industry	Beta			Gearing		
	Lower	Midpoint	Upper	Lower	Midpoint	Upper
Economy	0.90	1.00	1.10	60.0%	60.0%	60.0%
Water	0.60	0.70	0.80	60.0%	60.0%	60.0%
Rail	0.80	0.90	1.00	60.0%	60.0%	60.0%
Bus	0.70	0.85	1.00	60.0%	60.0%	60.0%
Light rail	0.70	0.85	1.00	60.0%	60.0%	60.0%
Ferries	0.80	0.90	1.00	40.0%	50.0%	60.0%
R&R Buses	0.70	0.85	1.00	40.0%	50.0%	60.0%
Valuer General	0.40	0.45	0.50	40.0%	45.0%	50.0%

Source: IPART's WACC calculator, found at https://www.ipart.nsw.gov.au/Home/Industries/Special-Reviews/Regulatory-policy/WACC.

The main method used to examine risks is to examine market data for private businesses that undertake similar activities to those of the regulated business. For council development activity, the most similar private businesses will be those developing greenfield land. These businesses:

- incur costs related to infrastructure provision within their sites (e.g. roads, footpaths, utilities)
- are subject to the risks around the timing of sale of lots.

In practice, most of these companies do a combination of activities, including land development, civil construction, housing development and infill development, as well as owning real estate. Owning real estate would be a much lower risk activity than developing it, reflected in quite low rental yields for example.

The most relevant development companies listed on the ASX and a brief description is set out below.

- Goodman Group — developing and owning business and industrial property
- Stockland — owning, developing and managing a large portfolio of shopping centres, residential communities, workplace and logistic assets and retirement living villages
- The GPT Group — owner and manager of a portfolio of high-quality Australian retail, office, and logistics property assets
- Dexus — developing, owning and managing Australian property, particularly offices.
- Mirvac Group — developing, owning and managing Australian property
- Charter Hall Group — developing, owning and managing Australian property office, focused on industrial & logistics, retail and social infrastructure sectors
- Lendlease Group — developing, owning and managing property globally across a range of property types

- Lifestyle Communities Limited — develops, owns and manages affordable independent living residential land lease communities.

The equity betas and unlevered betas (which account for the level of gearing of the companies) are shown in table 2.3.

- The most relevant companies are typically **more risky** than the ASX200, with unlevered betas of 0.95 (simple average) or 1.10 (market capitalisation weighted average) compared to the ASX200 of 0.76.
- These companies are involved in activities that encompass developing land and property, managing property and owning property. Of these activities, the first is likely to be the riskiest by a substantial margin, and most similar to what councils do in providing local infrastructure. Hence a council's level of risk is probably higher than reflected in these companies.

2.3 Risk levels of relevant Australian public companies

Company	Market capitalisation	Equity beta	Unlevered beta
	$B	No.	No.
Goodman Group	68.17	1.34	1.28
Stockland	12.15	1.05	0.81
The GPT Group	8.64	1.16	0.74
Dexus	7.75	0.99	0.61
Mirvac Group	7.52	0.97	0.62
Charter Hall Group	7.37	1.61	1.58
Lendlease Group	4.46	1.13	0.64
Lifestyle Communities Limited	1.14	1.55	1.29
Average (simple)	.	1.23	0.95
Average (weighted by market capitalisation)	.	1.26	1.10
ASX200	2,718.37	1.00	0.76

Note: The unlevered beta = levered beta/(1-(1-t)*debt/equity) where t is the tax rate. A 3 year beta is used.

Source: Betas are from https://www.infrontanalytics.com; market capitalisation is from https://www.listcorp.com/asx/sectors/real-estate; 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.

Note that for its overall economy measure IPART uses an equity beta of 1.0 and a gearing level of 60 per cent. ABS data on debt to equity indicates a debt to equity ratio of 0.45 for private non-financial corporations.[11] This implies debt as a share of assets of 31 per cent, which is much lower than IPART uses. This may be because the companies in the ASX200 have different debt to equity ratios than the coverage of the ABS private non-financial corporations. Or alternatively, the overall economy equity beta is too low, because it is aligned with a higher gearing level than actually occurs.

A conservative position would be an unlevered beta of 1.0.

- With a 60 per cent gearing level, this would equate to an equity beta of 2.05.

11 https://www.abs.gov.au/statistics/economy/national-accounts/australian-national-accounts-finance-and-wealth/latest-release#methodology, September 2024.

- With a 40 per cent gearing level, this would equate to an equity beta of 1.47.

With the level of risk we expect it makes more sense to have a lower debt to asset ratio than IPART's typical estimate of 60 per cent. This is also more consistent with the companies examined. Hence, we prefer the 40 per cent level.

- **The level of risk of activities undertaken by local councils is higher than the general economy and substantially higher than other businesses regulated by IPART.**
- **We recommend a minimum of an unlevered beta of 1.0. This would equate to an equity beta of 1.47 with a 40 per cent gearing level.**
- **This would lead to a post-tax real WACC of 6.5 per cent with February 2025 WACC assumptions, or a pre-tax real WACC of 8.5 per cent. This compares to the current approach of 1.0 per cent.**

Pre-tax or post-tax discount rate

A final relevant question is whether the discount rate applied should be a pre-tax discount rate or a post-tax discount rate.[12]

- The benchmark entity approach suggests that a pre-tax approach is more appropriate, because the benchmark entity would have tax obligations, and these would not otherwise be specifically modelled in the cash flows.
- In other areas for setting developer contributions, IPART would typically use a pre-tax WACC.
  - in recycled water, IPART's template uses a pre-tax WACC[13]
  - for water utility Sydney Water developer contributions, IPART also uses a pre-tax WACC[14]
- However, councils don't face tax obligations in relation to their local infrastructure activities. Other businesses regulated by IPART typically have some form of tax equivalence regime.

This means there are reasons to support either a pre-tax or a post-tax WACC as the relevant discount rate.

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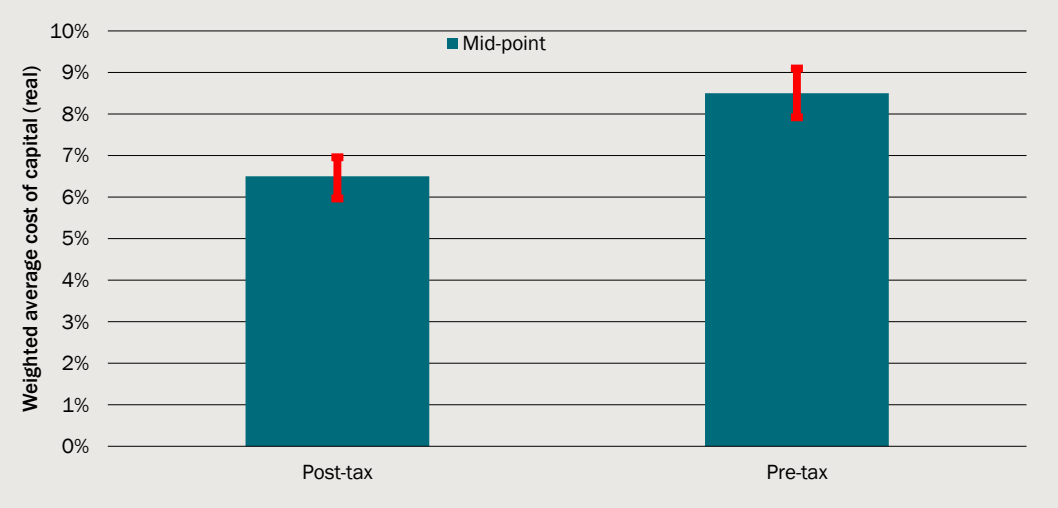
12 Note there is also a question of nominal or real, which is straightforward. If a council is using nominal costs and revenues then the discount rate should be nominal. If it is using real (adjusted for inflation) costs and revenues then the discount rate should be real.

13; https://www.ipart.nsw.gov.au/Home/Industries/Water/Reviews/Metro-Pricing/Review-of-recycled-water-prices-for-public-water-utilities/11-Dec-2019-Template-spreadsheet/Template-spreadsheet-Incremental-developer-charge-for-connecting-to-a-recycled-water-system?timeline_id=5480

14 https://www.ipart.nsw.gov.au/sites/default/files/documents/final-report-maximum-prices-to-connect-extend-or-upgrade-a-service-for-metropolitan-water-agencies-october-2018.pdf

2.4 Pre-tax and post-tax WACC (real)



Note: Red bars are the low and high range.

Source: IPART's WACC calculator, February 2025, found at https://www.ipart.nsw.gov.au/Home/Industries/Special-Reviews/Regulatory-policy/WACC.

Impact of changing the discount rate

Where local infrastructure costs are incurred upfront and revenues received over a longer time period, a higher discount rate will lead to a higher contribution rate. As a hypothetical example, at the extreme end:

- suppose a council will spend $10m per year on local infrastructure for five years
- development of 100 lots occurs per year from year 3 onwards for 20 years, to give a total of 2000 lots. Contributions are charged at the time of the development of the lots.

Then the applicable contribution rates for different discount rates are shown in table 2.5. With no discount rate, there would be a contribution of $25 000 per dwelling. With a discount rate of 6.5 per cent (real) there would be a contribution of $42 778 per dwelling. With a discount rate of 8.5 per cent (real) there would be a contribution of $49 021 per dwelling.

2.5 Contribution rates under different discount rates

Method	Rate with current parameters	Contribution rate
		$/dwelling
No discount rate	0.0%	25 000
IPART's approach	1.0%	27 436
CIE post-tax WACC	6.5%	42 778
CIE pre-tax WACC	8.5%	49 021

Source: The CIE.

This is at the extreme end as councils are unlikely to front-run development as much as this example. However, it shows that different discount rates will have a considerable impact on contributions.