PLDRP
Lease Length Model

User Guide

UCT-Nedbank Urban Real Estate Research Unit

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PLDRP Lease Optimisation Model – User Guide

1.   Introduction

The purpose of this model is NOT to seek a specific IRR for either the land owner or the developer. The purpose is to determine a lease duration that generates parity for both parties in terms of an IRR. The IRR may not necessarily be favourable for either or both parties, given the type of development and the current status of a particular sub-market (e.g. Johannesburg CBD). The main output at the point of parity is to assist with a starting point for negotiation in terms of the lease duration.

2.   Rental Versions

There are two rental versions of the model. These versions comprise one on rental on value and one on rental on turnover.

2.1   Rental on Value

Rental on value is calculated on a percentage of the value of the land at the point of lease commencement. This will result in an escalated value at the start of the lease, as the initial land value is determined at the start of development. An annual escalation to the land value is applied for every year of the lease.

2.2   Rental on Turnover

The rental on turnover is calculated by applying the gross rental (including parking, if applicable) and multiplying it by a factor that is determined by the land contribution to the total value of the development. If the rental on turnover is less than the rental on value, then the higher of the two amounts will be used.

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3. Live Variables

The live variables are displayed in green cells. The result of the live variables will be cash flows for both the developer and the land owner.
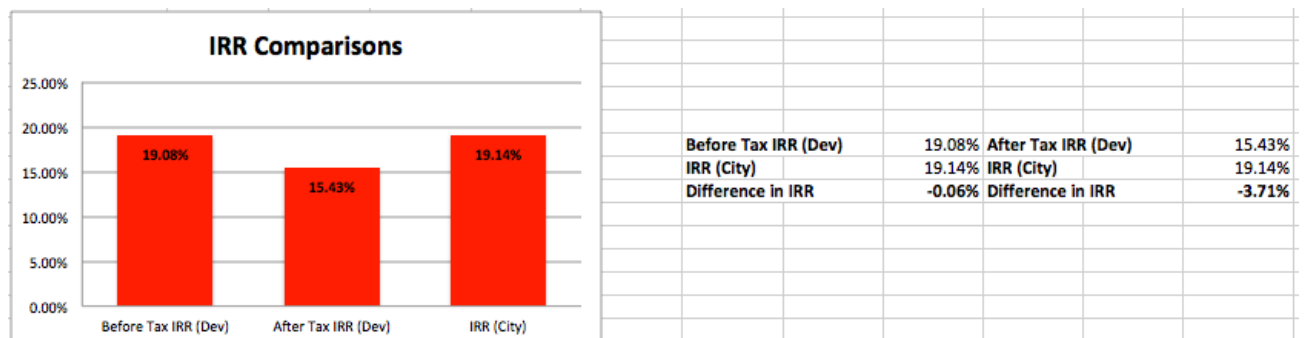
3.1 Developer Cash Flow

The developer's cash flow will comprise income, expense, vacancy, land rental, refurbishment and debt service lines items. These will result in a before tax cash flow (BTCF). A breakdown of the debt into the interest portion, which is tax deductible is used to calculate the after tax cash flow (ATCF) for each year of the lease.

3.2 Land Owner Cash Flow

The land owner's cash flow comprises income from the land rental and from the residual value of the development at the end of the lease period. The last years net operating income (NOI) is capitalised at the exit capitalisation rate to determine a residual value for the development. The value is added to the last years rental income, which results a significantly higher income to the land owner in the last year of the lease.

4. Lease Duration – Manual Manipulation

Once all the live market related variables have been inputted a final live variable can be manipulated. The cashflow duration variable, in the red cell will allow the user to modify the lease duration for both the developer and the land owner cash flow. The objective of the user is to insert a lease duration period that results in similar IRR results for the for the developer (BTCF) and the land owner.

Before Tax IRR (Dev)	19.08%	After Tax IRR (Dev)	15.43%
IRR (City)	19.14%	IRR (City)	19.14%
Difference in IRR	-0.06%	Difference in IRR	-3.71%

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5. Lease Duration – Default 99 Years

Alternatively, one can review the default 99-year cash-flow, which shows the different IRR's for both parties for each year over a 99-year period. From this one can see where parity will occur if it does. In some cases, depending on the nature of the cash flows, parity may never be reached.

6. Initial Observations

Three cases were run through the model:

- Case 1 – A 71 954m^2 Shopping Centre
- Case 2 – A 18 824m^2 Residential Development
- Case 3 – A 32 682m^2 Office Development

See annexure 1 for the model outputs.

6.1. User-friendliness and technical points of the model:

6.1.1. The model is designed to incorporate "raw" input data and is therefore very powerful. However, in the cases above, the input data is taken from different QS feasibilities, with each company displaying the information differently. In most cases the data is aggregated and therefore some inputs in the model need to be over-ridden. This is relatively easy for someone familiar with the model but may prove to be a challenge for a first-time user.

6.1.2. Rental escalations must be kept low (lower than market) over the 99 year period as in reality, rentals will not increase in a straight-line manner over such a long period.

6.2. Initial findings:

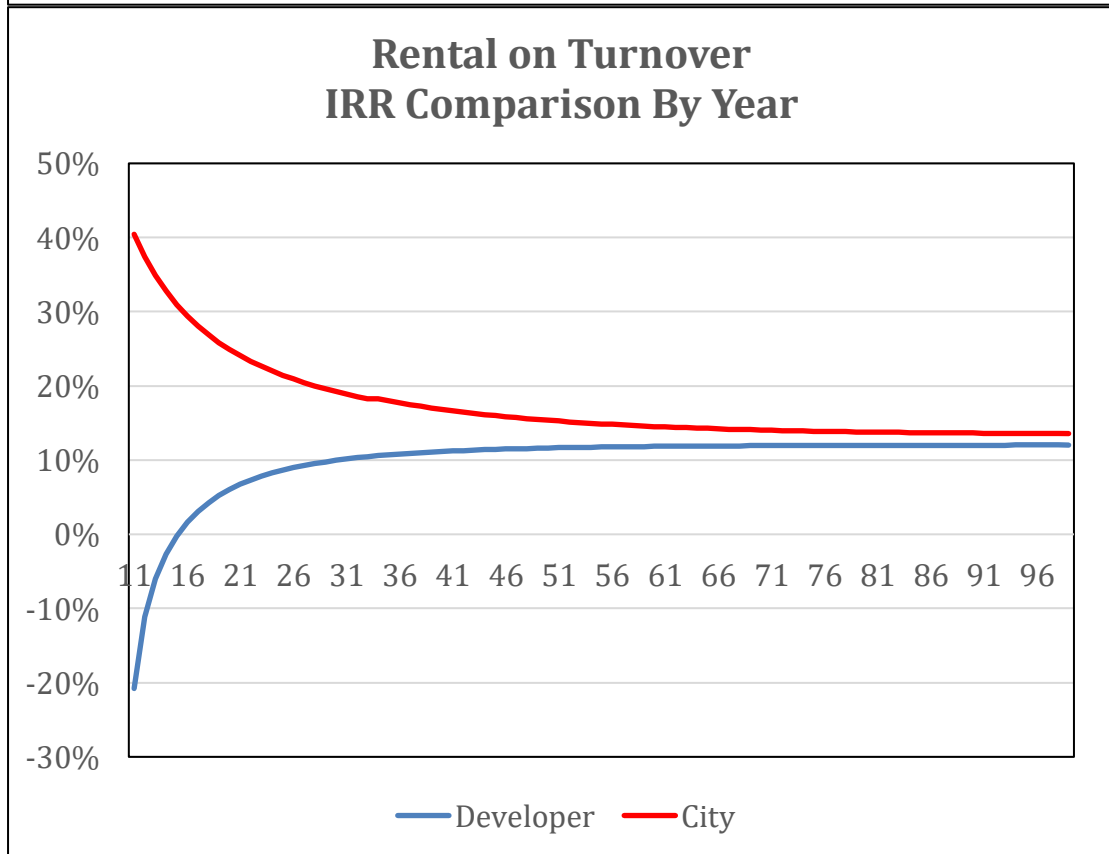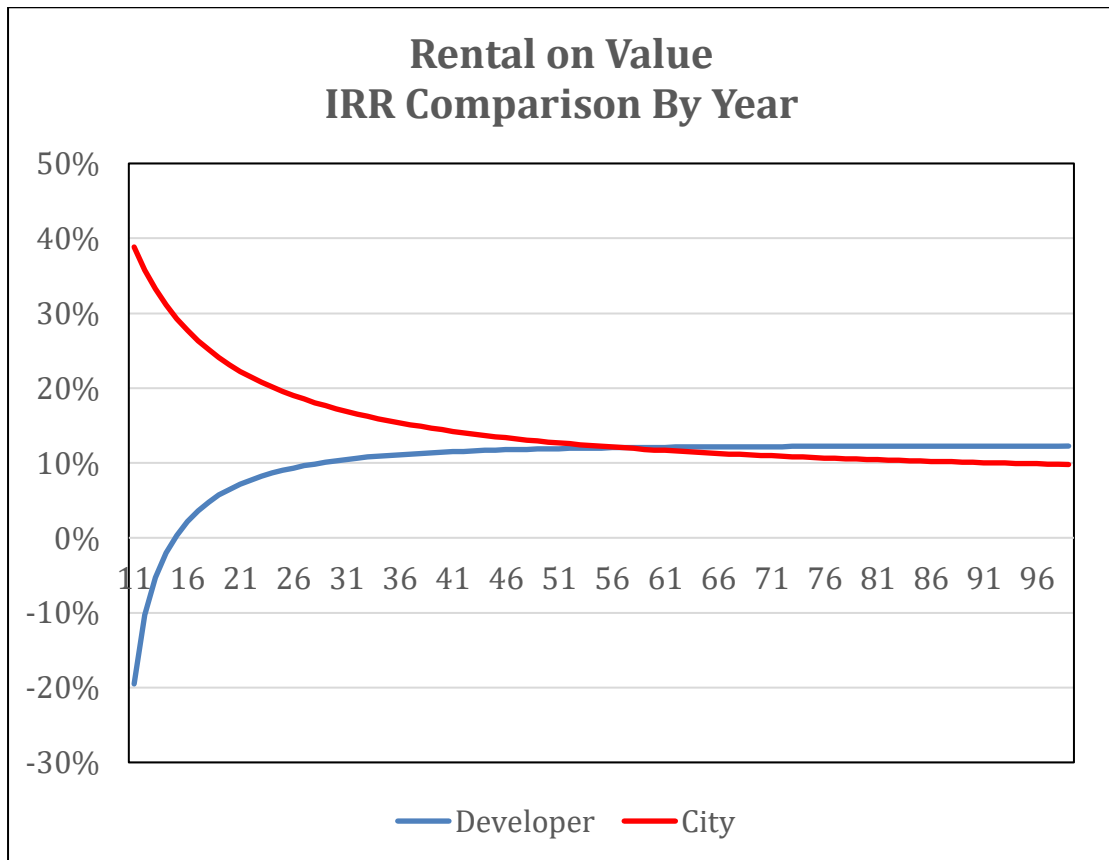#### 6.2.1. What the model can tell us:

- Where parity lies for both parties. The initial findings suggest that parity tends to occur between 30 – 50
- That the difference in returns for both parties declines as the lease length increases as the PV of the cash-flows decline the further out they occur. As a result, after a certain point, the differences become negligible.
- The turnover rental option often does not result in a cross over point in IRR's as the landowner shares in the upside of the rental growth.

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- The land rental on value may be higher than the rental on turn-over as is evident in case-study 3.
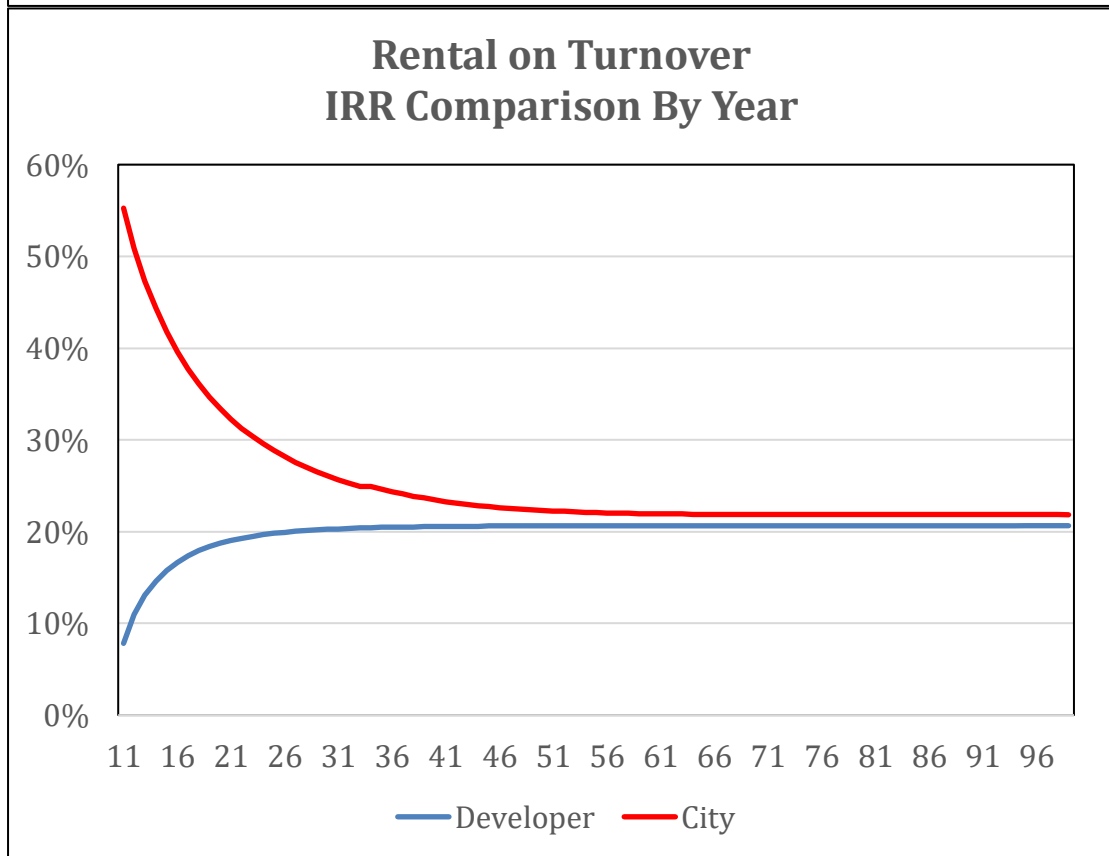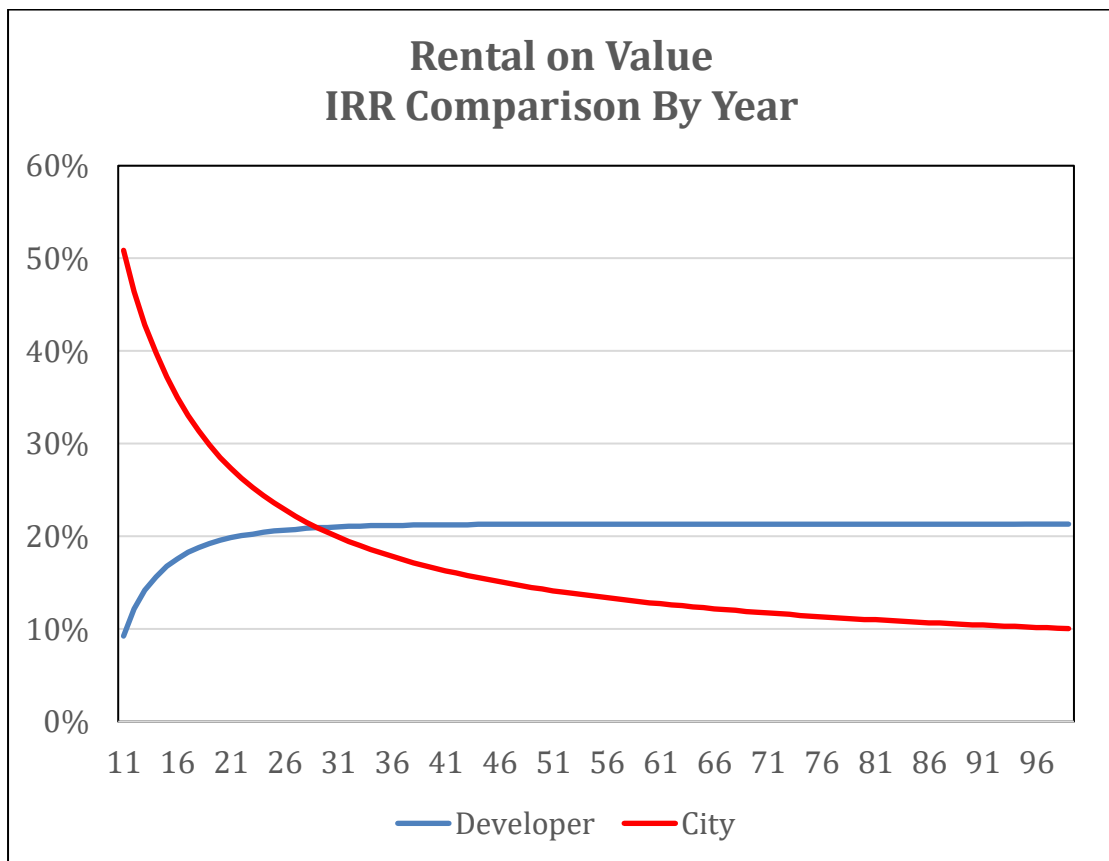
6.1.2. What the model does not tell us:

- The required returns of the different parties. In other words, the parity position may be too low for one or both parties and hence they may choose not to proceed at this level of return.
- The re-set requirements for the investor/developer.

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Case Study 1:

Rental on Value
IRR Comparison By Year

— Developer   — City

Rental on Turnover
IRR Comparison By Year

— Developer   — City

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Case Study 2:

Rental on Value
IRR Comparison By Year

Rental on Turnover
IRR Comparison By Year

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Case Study 3:

**Rental on Value
IRR Comparison By Year**

Developer — City

**Rental on Turnover
IRR Comparison By Year**

Developer — City

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