PROPERTY VALUATION

(BG3 ALT S6)

Section 10 –

Methods of Valuation – Residual Method

Real Estate Business Management Program

Year 3 – Work study program

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Agenda

1. Residual Approach.
2. Residual Valuation.
3. Profit / Financial Evaluation.
4. Calculating the Gross Development Value (GDV).
5. Development Costs.
6. What does a residual valuation provide?
7. Residual Valuation – A Simple Example.
8. Development Costs – Overview.
9. Finance.
10. Sensitivity Analysis.

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1. Residual Approach

Two primary types of residual valuation – the difference is based on the outcome of the calculation.

1. Residual valuation

Calculating the remaining (residual) sum available to purchase the land once the development costs, including the developer's profit, have been paid.

2. Developer's profit.

Calculating the investment return / risk of the project (profit).

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2. Residual Valuation

Two variations of the basic calculation:

1. Residual Valuation

Gross development value (GDV) - (Costs plus Profit) = Residual value of the property.

Where:

- GDV is the Value of the completed development
- Cost plus profit is the cost of carrying out the development (including a profit element).
- Residual value equals amount available to pay for the land.

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2. Residual Valuation

Two variations of the basic calculation:

2. Financial Evaluation

Gross development value (GDV) - (Costs plus land) = Residual profit.

Where:

- GDV is the Value of the completed development.
- Cost plus land is the cost of carrying out the development (including the cost of the land).
- Residual profit equals the profit available to the developer.

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2. Residual Valuation

Value of Completed Development

Less

- Development Costs.
- Finance Costs (Interest).
- Development Profit.

Equals

Residual Site Value.

2. Residual Valuation

Gross Development Value (GDV & NDV) [value of the completed scheme]

Less all the costs of the development, including:

- Construction costs.
- Demolition, site clearance and site preparation.
- Architect, quantity surveyor and other construction professional fees.
- Promotion and marketing costs.
- Legal and estate agent fees on site purchase and final letting and/or sale.
- Miscellaneous or contingency costs.
- Interest charges on development finance.
- Fees for arranging finance.
- Developer’s risk and profit.
- Planning and other statutory consent charges.
- Compensation to existing occupiers.

Less all the costs of the development, including: = Balance.

Less other costs of site acquisition and interest payments on site funding.

= **Residual site value**

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3. Profit / Financial Evaluation

The two calculations:

1. residual site valuation.
2. financial /profit evaluation are very similar and have many components the same.

You should be aware of the similarities and the points of difference between the two calculations.

The **residual technique** is used as an appraisal tool to inform the developer **how much profit** they will make if the successfully purchase the site at a certain price.

When might we undertake the **financial evaluation**?

- If the site value is known and fixed.

or

- If comparable evidence or the developer's general knowledge of a given sector of the property market, suggest that the developer will have to bid more than the "site value" shown by the residual valuation?

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3. Profit / Financial Evaluation

Summary: Financial / Profit Evaluation

Value of Completed Development

Less

- Development Costs.
- Finance Costs (Interest).
- Land Costs.

Equals

Development Profit.

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3. Profit / Financial Evaluation

Residual Valuation

Value of Completed Development.

Less

- Development Costs.
- Finance Costs (Interest).
- Development Profit.

Equals

Residual Site Value.

Financial Evaluation / Profit evaluation

Value of Completed Development.

Less

- Development Costs.
- Finance Costs (Interest).
- Cost of Land.

Equals

Development Profit.

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4. Calculating the Gross Development Value (GDV)

For commercial properties:

- Calculate net annual income. (lettable area x rent rate £ per m2).
    - Analyse comparable rental values to find ERV (estimated rental value) for property Analyse comparable investment sales to find appropriate yield for property.
    - Calculate the lettable floor area in accordance with the RICS IPMS / Code of Measuring Practice for the type of property: (IPMS1,2,3; Net Internal Area or Gross Internal Area?).

- GDV: Capitalise the rent by multiplying it by the appropriate All Risks Yield from above (Annual Rent x YP in perpetuity at % yield) to arrive at the Gross Development Value (GDV).

- NDV: Remember to allow for purchase costs (taxes and fees) of the final building i.e. reduce GDV (Gross Development Value) to NDV (Net Development Value).

For residential properties, use the capital comparison method to find value of the property.

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5. Development Costs

Deduct

- Building Cost: based on [area m2 x costs £ rate per m2] .
- Design Team Fees: based on a % of building costs.
- Interest / Finance charge: based on half the building costs and fees for the whole building period.
- Legal and surveyors agency fees as a % of NDV.
- Letting fees and marketing costs as a % of annual Rental Value.
- Any other appropriate costs.
- An element for DEVELOPER'S PROFIT [for Residual only].
- Cost of LAND [for Profit / Financial Evaluation only].
- Any fees associated with land purchase.
- The finance payment on land purchase costs and fees for whole of development period – or the period from when you buy the site to completion of the building).

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6. What does a residual valuation provide?

- A first assessment of value.
- The possibility of refining input variables and imposition of parameters.
- A basic framework where sensitivity analysis can be used.
- If the developer is successful in purchasing the site, the development appraisal / financial evaluation of the project will then be used by the surveyor or developer as an appraisal tool throughout the project.
- To reassess the viability of the development project as more information becomes available e.g. more accurate development costs.
- To secure funding for the development.

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7. Residual Valuation – A Simple Example

- A former petrol station on the edge of a market town, adjacent to a retail warehouse park, is being offered for sale by auction.
- It has planning permission for a retail warehouse of **5,000 sqm** IPMS2.
- **Comparable evidence** shows that new lettings on the adjacent estate are achieving **rents of £150 psm** and freeholds sales show an **ARY of 8**%.
- **Construction costs** are estimated to be **£850 psm** and the **costs of infrastructure** are estimated to be **£250,000**.
- **Finance costs** are anticipated to be **10% pa**.
- Construction is expected to take **two years** to complete.

Stating your assumptions, what figure would you bid up to at auction for the site?

7. Residual Valuation – A Simple Example

Retail warehouse 5000 m 2 x £150 =	£750,000 p.a.	
x YP in perp @ 8%	x 12.5	
GDV		£9,375,000
Less		
sale costs at say 6% of GDV		-£ 562,500
Net development value		£8,812,500
Less		
Build costs 5000 m2 x £850 =	-£4,250,000	
Infrastructure	-£ 250,000	
Demolition say	-£ 150,000	
Remediation say	-£ 150,000	
Total Construction costs		-£4,800,000
Plus		
Architects fees at 10% of build costs of £4,250,000		£ 425,000
Finance at 10% on 50% of build cost of £4,800,000 for 2-year build period		£ 504,000
Finance at 10% on 75% of fees of £425,000 for 2-year build period		£ 66,938
No finance on void as assume pre-let		£
	costs	£5,008,439

7. Residual Valuation – A Simple Example

costs c/f		£5,008,439
Plus		
Letting Fees say 10% of rent		£ 75,000
No marketing fees as assume pre-let Contingencies at say 5% of construction costs		£ 240,000
Developer's profit at say 20% of NDV		£1,762,500
	Total Costs	£7,085,939
Amount available for land purchase (NDV-Total Costs (£8,812,500 - £7,085,939)) = £1,726,561		
x PV at 10% for two years (0.826446)		£1,426,909
Less		
acquisition costs at say 6%		£ 85,614
	Residual value of site today	£1,341,295

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8. Development Costs – Overview

- **Land Costs:** Land purchase/acquisition price Land costs.
  Associated costs, e.g. stamp duty, legal fees, agent's fees.

- **Building Costs:** Estimated by the developer's QS.
  Usually expressed as per unit cost (e.g. £/m2) and multiplied by gross internal area of the proposed building.

- **Professional fees:** Usually calculated as a percentage of total building costs.

- **Site investigation fees:** Ground investigations, land surveys, e.g. land contamination etc.

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8. Development Costs – Overview

- **Planning fees** — Government fees to secure planning consent. Planning consultant fees.
- **Building regulation fees** — Details available from building control department.
- **Funding fees** — Most funders charge fees for development funding, related to costs associated with arranging development finance.
- **Finance costs/interest** — Affected by many factors including risk and existing relationship between borrower and lender.
- **Letting agent's fees:** — The cost of the agent(s) letting the building to new tenants Promotion costs.

8. Development Costs – Overview

- **Promotion Costs:** Cost of promoting the project to let and/or sale.
- **Sale costs:** Estate agent's fees, solicitor's fees.
- **Other development costs:** e.g. party wall agreements, planning agreements, rights of light agreements etc.
- **Contingency allowance:** Contingencies to cover unexpected costs.
- **Developer's profit allowance:** Usually expressed as a % of total net development value or development costs.
  Level of profit required depends on risk.
  Developers often aim for 15-25% of the total cost (% 'required' increases with perceived risk) or a 12 - 20% of Net Development Value.
  Note: the calculation varies very slightly depending upon whether you allow for profit as a % of NDV or as a % of Development Costs.

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9. Finance

- A good understanding of the development timeline helps understand how the interest / finance charges accumulate.

- **The development period** includes:

    - **The planning period** is the time to get planning permission, drawings prepared and quantities/costs prepared.

    - **The building contract** period will vary.

    - **The void period** is the time to let· the property; this depends on circumstances.

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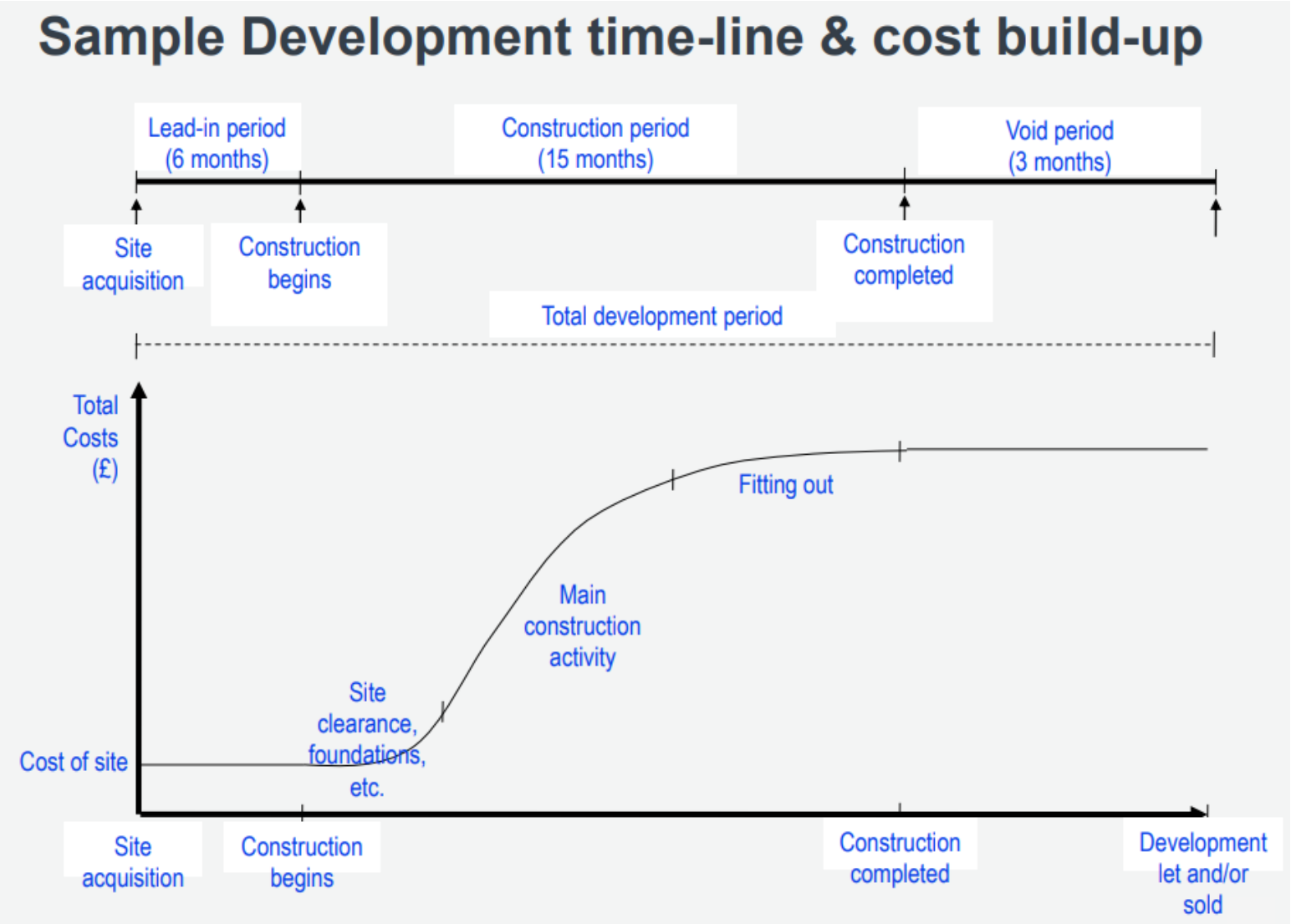
9. Finance



10. Sensitivity Analysis

The values and costs discussed above can be reduced to the following four main variable factors which will most affect the end value of an appraisal:

- Rental Value.
- Investment Yield.
- Building Cost.
- Short Term rates of Interest.

In most cases, the above are the highest values and costs in the development appraisal; the financial outcome of the appraisal is therefore more sensitive to their variability than the other components of the appraisal. For example, a 10% increase in building costs is likely to have a more significant impact on profitability than a similar increase in marketing/promotion costs. Sensitivity analysis is the name given to the procedures adopted to test the effect of changes in these main variables.

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10. Sensitivity Analysis

With the improvements in computers, we can perform a sensitivity analysis which tests the impact of the following range of variables:

- Building costs from £550 to £850 per m2.
- Rental Values from £85 to £115 per m2 p.a.

The initial appraisal at Rent of **£100** and Build costs of **£700** indicated a Developer's Profit of **12.42%**.

Note how the Developer's profit changes as the two inputs change.

Sensitivity Analysis - Developer's Profit as a % of GDV

Building Cost £ per sq.m	*Rent £ per sq.m*						
	85	*90*	*95*	*100*	*105*	*110*	*115*
550	15.19%	19.79%	23.90%	27.61%	30.96%	34.01%	36.79%
600	9.23%	14.16%	18.57%	22.55%	26.14%	29.40%	32.39%
650	3.27%	8.54%	13.24%	17.48%	21.32%	24.80%	27.98%
700	-2.68%	2.91%	7.92%	12.42%	16.50%	20.20%	23.58%
750	-8.64%	-2.71%	2.59%	7.36%	11.67%	15.60%	19.18%
800	-14.59%	-8.34%	-2.74%	2.30%	6.85%	11.00%	14.78%
850	-20.55%	-13.96%	-8.07%	-2.77%	2.03%	6.39%	10.38%

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10. Sensitivity Analysis

- The developer may wish to develop this sensitivity analysis further by weighing up the probability of the outcomes.
- In the end the original best estimate of a developer's profit of 12.42% of GDV may still be selected, but the context of possibility and uncertainty in which it lies can now be better understood.
- The developer may decide that the risk profile demonstrated by the sensitivity analysis is such that an attempt to fix one of the variables in one of the ways we have discussed before is best approach.
- Sensitivity analysis combined with the use of cash flow models provides the developer with analytical tools which can greatly improve their understanding of the most probable outcomes and as a result, the risks involved.

Next Lecture

Section 11 – Methods of Valuation – Profits Method