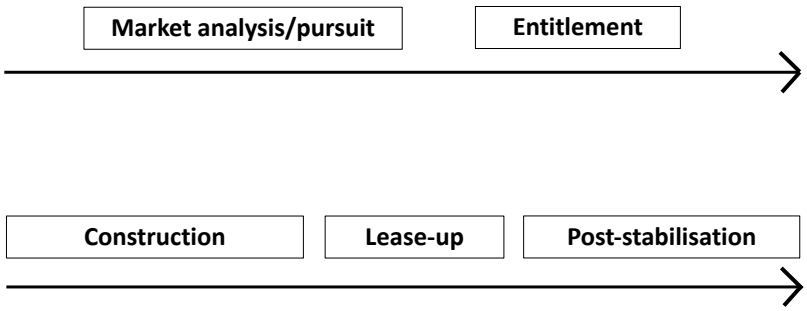
Real Estate Investment: A Strategic Approach
Fourth Edition, 2023

Andrew Baum

Chapter Six
Development

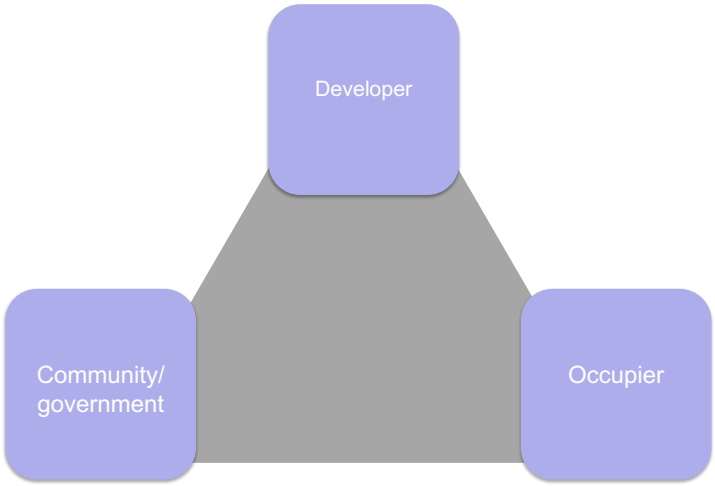
1

The development process



2

The Graaskamp model



3

Highest and best use: the theory

- The highest and best use of a property will maximise either land value or developer's profit
- The use must be:
  - Legally allowable
    - permitted by local zoning/planning
    - permitted by national regulation
    - permitted by covenants imposed by current or previous owners
  - Physically possible/feasible/sustainable
  - Financially optimal

4

Back door / residual method

gross development value

less

cost including profit

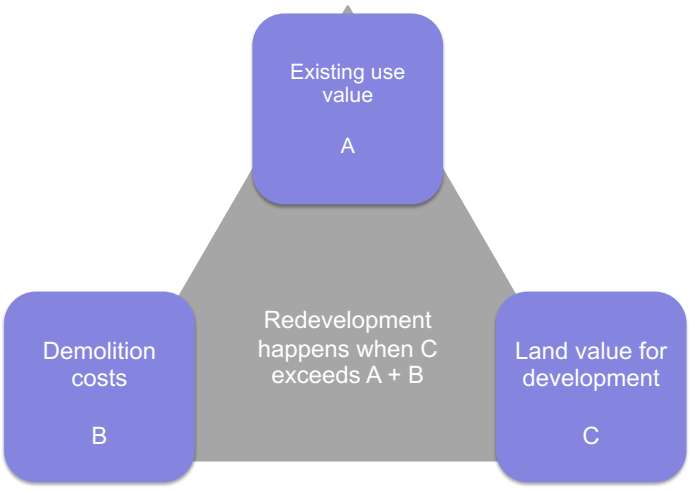
equals

maximum bid for site

Does this maximum bid exceed existing use value?

5

Is there development potential?



6

Back and front door approaches

- Front door approach – given a land price, which scheme maximises profit?
- Back door approach – given a land auction and a required profit, which scheme will maximise our bid?
- The back door approach is also known as a *residual valuation*

7

Back door / residual method

gross development value

less

cost including profit

equals

maximum bid for site

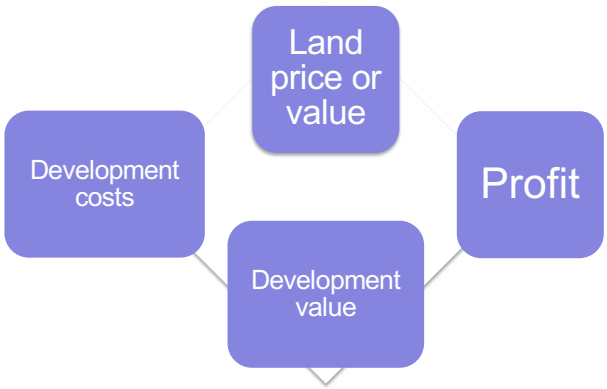
8

Cash flow: back door, 100% debt on costs

Quarter	Net cash	Interest	Cap o/s
0	-10,000	0	-10,000
1	-150,625	-241	-160,866
2	-140,625	-3,879	-305,370
3	-140,625	-7,364	-453,359
4	-140,625	-10,932	-604,916
5	-140,625	-14,587	-760,128
6	-140,625	-18,329	-919,082
7	-140,625	-22,162	-1,081,870
8	1,964,375	-26,088	856,417
PV 2 years @		10%	0.8264
NPV			707,783
less fees			33704
Land bid			674,079

9

The viability diamond



Development value – profit – development costs = land value
Development value – land price – development costs = profit

10

Profit

- Profit on cost?
- Profit on completed value?
- Income yield on cost (cash on cash)?
- IRR?
- NPV?
- Equity multiple/payback?

11

Cash flow, 50% equity

Quarter	Cash in	Site costs	Building	Other	Net cash	PV	PV$
0	0	10,000			-10,000	1.0000	-10,000
1	0	10,000	140,625		-150,625	0.9657	-145,453
2	0		140,625		-140,625	0.9325	-131,133
3	0		140,625		-140,625	0.9005	-126,631
4	0		140,625		-140,625	0.8696	-122,283
5	0		140,625		-140,625	0.8397	-118,084
6	0		140,625		-140,625	0.8109	-114,029
7	0		140,625		-140,625	0.7830	-110,114
8	2,400,000		140,625	295,000*	1,964,375	0.7561	1485,350
					NPV		607,623
					Less fees		28934
					Land bid		**578,689**

** Profit plus contingency*

Discount rate: 15%

We receive a developer's profit of $240,000 and a return on our equity of 20% (4.66% per quarter)

12

The impact of finance

- Using quick back door approach
  - land value $960,000
- Finance and fees for site included
  - land value $755,608
- Using 100% debt on construction cost
  - land value $674,079
- Using 50% debt, 50% equity
  - land value $578,689
- Using 100% equity
  - land value $496,066

- Debt availability increases land prices

The housebuilder approach

Pro forma

Land cost (m)	25
Build costs (m)	75
House sales (m)	130
Profit (m)	30
Profit on total cost (%)	30

Ex post

Land cost (m)	25
Build costs (m)	75
House sales (m)	145
Profit (m)	45
Profit on total cost (%)	45

What would you do?

Equity funding structures

- Development joint venture (JV)
  - A developer joins forces with a funding partner 'promoted' or 'side-by-side'
- Land JV
  - Land owner contributes land in exchange for an equity interest in the JV equal to the agreed value of the land
- Forward funding
  - Developer agrees a sale of the project prior to commencement, with the end buyer funding during construction as milestones are achieved
- Forward sale
  - Developer agrees a sale of the project prior to commencement, and uses that purchase commitment to secure additional debt funding

Promoted JV waterfall

Equity investment		Sale proceeds	£83m*
Developer	14% (£5m)	IRR hurdle 1	10%
Capital partner	86% (£30m)	Post-hurdle Sharing	25% / 75%
Gearing	50%	IRR hurdle 2	20%
Interest rate	6%	Post-hurdle sharing	50% / 50%

**Gross proceeds £85m; after £2m developer's management fee, net proceeds £83m*

Promoted JV waterfall

	Bank	Developer	Capital partner	Total
Capital invested	£35m	£5m	£30m	£70m
Capital invested (%)	50%	7.15%	42.85%	100%
Return of capital	£35m	£5m	£30m	£70m
10% hurdle distribution		£1.8375m	£5.5125m	£7.35m
20% hurdle distribution		£2.825m	£2.825m	£5.65m
Total distributions to equity		£9.6625m	£38.3375m	£48m
(%)		13.9%	86.1%	100.0%
Profit share		£2.7m	£7.0m	£9.7m
(%)		20.1%	79.9%	100.0%
IRR		39.0%	13.0%	17.1%
Equity multiple		1.93x	1.28x	1.37x

17

Why is development risky?

- Profit is a geared residual
- Management motivation is asymmetric
  - *Megaprojects and Risk*
  - Why do costs and timetables usually over-run?
- Management benefits from upside scenarios
  - Salary
  - Bonus/carried interest (20% of all returns over 10%)
- Management is protected from downside scenarios
  - Salary
  - Minimum bonus
- Management is not motivated to advise against a scheme

18

The sustainability triangle