

The sizing worksheet

Chapter 2. Six lines, fifteen minutes, for any term sheet. The last line is the one nobody writes down.

Loan / property		Prepared by	
Lender		Date	

Input	Amount	Source
Value (appraised, or the lender's haircut of it)		
Net operating income on the LENDER'S definition		
Rate, and amortisation schedule		
Mortgage constant: annual debt service per dollar of loan		

Test	Level	Loan it supports	Share of value	Slack against the binding test
Loan to value				
Debt service coverage				
Debt yield				

At the loan proposed	Value	The operating result that would make it bind instead	Value
Coverage		Rate at which coverage binds	
Debt yield		Income at which debt yield binds	
Loan to value		Value at which loan to value binds	

The binding test, and what it tells you to negotiate (advance rate, appraisal, coverage level, or income):

On the book's loan loan to value binds at 60 per cent; coverage would have supported 67.0 and debt yield 69.4. Coverage takes over at a rate of 7.43 per cent, 108 basis points up (the corrected workbook, sheet 9). A lender leading with debt yield is telling you it does not believe the value.

Rate, amortisation and hedging: what to abstract

Chapters 3 and 4. The constant, not the rate, sizes the loan; the cap the lender requires is not the cap the borrower needs.

Loan / property		Prepared by	
Lender		Date	

Item	Answer	Source: document and section
Rate and payment		
Fixed or floating; reference rate, tenor, fixing date, lookback		
Spread, and any reference rate floor		
Day count convention (actual/360 adds about 1.4 per cent to the nominal rate)		
Amortisation schedule; interest-only period and whether it can be LOST on a covenant breach		
Mortgage constant, computed; annual and monthly debt service		
Default rate, as an annual dollar amount on the current balance; late charge; grace period and notice		
Balance and balloon		
Balance at each anniversary		
Balance at maturity, and the share of the loan still owed		
Covenant tested on interest-only or on amortising debt service, and the date it steps		

The four hedging numbers	Rate	Question it answers
Rate at which the distribution stops (cash trap level)		Where the borrower stops receiving cash
Rate at which cash flow after debt service reaches zero		Where the property stops covering its debt
Strike the lender requires		Where the lender requires protection
Unprotected gap between the trap rate and the strike, bp		What the borrower has not insured

Item	Answer	Source: document and section
Hedging covenant		
Strike: fixed in the document, or set at purchase by a coverage test		
Term: matched to the loan, or shorter with a replacement obligation		
Counterparty rating and replacement on downgrade		
Assignment to the lender; where the payments go		
Cap payments count as income for the covenants?		
Failure to maintain: an event of default, or a lesser remedy?		
Premium as a percentage of equity; replacement cost at each extension		

Book: 8.68 per cent stops the distribution, 9.92 is the strike the lender requires, 10.42 is where the property stops covering its debt. 124 basis points unprotected.

The one page before signing a term sheet

Chapter 5. Six lines that convert a rate quotation into a financing.

Loan / property		Prepared by	
Lender		Date	

Line	Amount	Note
Gross loan		
less origination fee		
less lender's legal fees (capped?)		
less appraisal, condition, environmental, zoning reports		
less title and survey		
less mortgage recording tax		
NET PROCEEDS		

Upfront reserve	Amount	Release condition
Debt service reserve		
Outstanding tenant improvements and commissions		
Immediate repairs (100 to 125 per cent of the estimate)		
Environmental remediation		
Holdback / future advance (not proceeds today)		
TOTAL EQUITY REQUIREMENT, reserves included		

Cost	This loan	Alternative
Debt service; constant; coverage on the lender's definition		
All-in cost including fees, as a rate		
All-in cost including the exit, on the business plan horizon		
Exit fee / prepayment premium at the expected exit date		
Extension fee and replacement cap		

The three conditions that can move the loan	Exposure	Action
Appraisal condition: loan reduced if the value comes in low?		
Estoppels from major tenants: started the day the term sheet is signed?		
Subordination and non-disturbance agreements		

Book: 1 per cent fee and 250,000 of costs take 6.35 per cent to 6.59 all-in; a 6.50 per cent loan carrying the same costs is 6.60 (corrected workbook, sheet 9). Compare like with like.

The covenant ladder, and the one line

Chapters 6 and 7. Every covenant is a level; what matters is the income that reaches it, computed on the definition the lender will use.

Loan / property		Prepared by	
Lender		Date	

Income, the lender's definition	Amount
Net operating income, sponsor's basis	
less imputed management fee (per cent of revenue)	
less replacement reserve (per sq ft)	
less tenant improvement and leasing reserve (per sq ft)	
less income from tenants in default, dark or expiring	
less straight-line rent, variable income	
NET OPERATING INCOME, LENDER'S DEFINITION	
Debt service AS DEFINED (actual, notional constant, hypothetical rate)	
COVERAGE ON THE LENDER'S DEFINITION	

Trigger	Level	Income required	Decline from today	What happens
Cash trap, coverage				excess held
Cash trap, debt yield				excess held
Cash sweep				excess to principal
Event of default				acceleration, default rate
Extension test(s)				no extension

Item	Answer	Source: document and section
Testing mechanics		
Test period: trailing twelve months, three months annualised, or forward		
Test date, reporting lag; does the trap apply from the test date?		
Extraordinary items excluded both ways?		
Maintenance covenant, or only a condition (extension, release, transfer)?		

Cash is trapped at a ____ % decline in income, swept at ____ %, and in default at ____ %; the trap can be cured by ____, the default by ____; the extension requires ____.

Book: 14.0, 21.2 and 24.7 per cent on the sponsor's definition; 1.210 times on the lender's, 0.8 per cent of income from the trap on the day of closing.

The monitoring page

Chapter 8. One page, produced monthly, not quarterly. A sponsor who relies on the compliance certificate learns of the breach six weeks late.

Loan / property		Prepared by	
Lender		Date	

Month	T12 income, lender's definition	Coverage	Debt yield	Loan to value (last valuation)	Distance to first trigger, % of income	Forward 12 months, same definitions

Known event in the next 12 months	Date	Income effect	Covenant effect

Next test date	Report due	Reappraisal right: when, at whose cost	Value decline to maintenance LTV (if any)

The leading indicator on this loan (coverage or debt yield), and why:

The loan that passes all three tests today and fails two at maturity because rates have moved is the most common way a performing loan becomes a problem (chapter 8).

Cash management and the reserve schedule

Chapters 9 and 10. Whether the borrower runs the property or the document does; and which deposits are cost and which are timing.

Loan / property		Prepared by	
Lender		Date	

Cash management agreement: six questions	Answer	Section
Hard or springing lockbox; what triggers the spring		
The waterfall in order; where operating expenses sit		
Approved budget mechanism; variance aggregate or by line		
Trap trigger, sweep trigger: same test at different levels?		
What trapped funds may pay for; LEASING COSTS specifically		
Release: how many consecutive quarters; interest on trapped cash; applied to principal on a later default?		

Reserve	Upfront	Monthly	Cap	Cost or timing	Release condition / trigger and likely date
Tax and insurance escrow					
Debt service reserve					
Replacement reserve					
Tenant improvement and leasing					
Springing rollover reserve					
Immediate repairs					
Holdback					

Side by side	Amount	Cash-on-cash
Cash flow after debt service		
Cash flow after debt service AND reserve deposits		
Distributable a month, against the largest springing deposit a month		

Book: 4.21 per cent after debt service, 3.00 after reserves; a springing reserve of 125,000 a month against 65,195 of distributable cash. Budget four to six weeks of operational disruption at closing.

The cure worksheet

Chapter 11 and Appendix F. The deposit cure fixes one year's ratio; the prepayment fixes it for good. Their ratio is $1/(k \times c)$: a property of the covenant and the amortisation, not of the deal.

Loan / property		Prepared by	
Lender		Date	

Item	Answer	Source: document and section
The provision		
Covenants with a cure right, and those without		
Number of cures per period and in total; consecutive cures allowed?		
Cure funds held and returned, applied to principal, or forfeited		
Does a coverage cure also cure the debt yield trigger?		
Deadline for the cure relative to the test date; prevents the trap or only reverses it?		

At a decline in income of	10%	20%	30%
Income			
Coverage / debt yield			
Deposit cure, to the coverage trap			
Prepayment cure, to the coverage trap			
Prepayment cure, to the DEBT YIELD COVENANT (not the sizing test)			
Excess cash trapped a year			

The window	Value
Closed form: $1 / (\text{coverage covenant} \times \text{mortgage constant})$	
Decline at which the coverage trap fires	
Decline at which the debt yield trap fires	
WINDOW in which a deposit cures, points	
Most a deposit cure can be worth (prepayment avoided when the debt yield trap fires)	

Liquidity to hold against this asset, and the waiver or amendment you would ask for two quarters early:

Book: 233,192 against 2,602,535 at a 20 per cent decline, 11.2 times. Window 4.4 points; bound 1,910,586. Cure to the covenant (8.50 per cent), not to the 9.00 that sized the loan: 729,412, not 2,755,556.

Prepayment and the extension

Chapters 12 and 13. Price the exit before choosing the loan; treat each extension as a scenario with a probability.

Loan / property		Prepared by	
Lender		Date	

Mechanism	Formula / terms	Cost, rates fallen	Cost, rates risen	Share of equity
Lockout (until)				
Step-down				
Yield maintenance (floor?)				
Defeasance (+ transaction costs)				
Exit fee				
Assumption fee (qualified transferee?)				

Item	Answer	Source: document and section
Around the edges		
Partial prepayment: permitted, increments, re-amortises or only cuts the balloon?		
Casualty and condemnation proceeds: no premium?		
Prepayment to cure a covenant: no premium?		

Extension condition	Level	Income that fails it	Decline
No default (or potential default)			
Debt yield on the balance at the date			
Coverage (on which debt service?)			
Replacement hedge: estimated cost			
Fee			
Notice window: diary dates			

Paydown right asked for at origination (size it at the decline that fails the extension):

Book: 1,074,929 step-down against 4,821,005 yield maintenance at year three. The extension fails at a 15 per cent decline, on coverage; the paydown that buys it is 423,994, not two million.

The maturity page

Chapter 13. All six lines. A refinancing begun twelve months early has options; one begun ninety days early has one lender.

Loan / property		Prepared by	
Lender		Date	

Anniversary	Balance	Share of the loan

Income and value flat	Rate 1	Rate 2	Rate 3
Coverage supports			
Debt yield supports			
Loan to value supports			
PROCEEDS (lowest)			
Binding test			
Surplus / shortfall against the balance			

Income and value stressed (- ____ %)	Rate 1	Rate 2	Rate 3
Coverage supports			
Debt yield supports			
Loan to value supports			
PROCEEDS (lowest)			
Binding test			
Surplus / shortfall against the balance			

Extension conditions, and the income that fails each	Diary: twelve months before maturity

Book: flat income, 8 per cent leaves a surplus of 443,978; minus 15 per cent at 8 per cent, a shortfall of 4,837,007. In the stressed case loan to value binds at 5.50 and 6.35 per cent and coverage only from 7.25 (the book says "throughout").

The recourse page, and the transfer map

Chapters 14 and 15. The carve-out is a switch, not a measure of damage; and the easiest covenant to trip sits on the springing list.

Loan / property		Prepared by	
Lender		Date	

Carve-out	Loss or SPRINGING	Can it trigger without a deliberate decision?	Negotiated to
Voluntary bankruptcy			
Collusive / uncontested involuntary filing			
Transfer in breach			
Additional debt in breach (incl. equity level)			
Single-purpose entity covenants			
Misapplication of rents, insurance, condemnation			
Fraud, misrepresentation, waste, environmental			

Guaranty	Guarantor	Scope and cap	Burn-off / sunset	Survives repayment?
Recourse carve-out				
Completion				
Carry / interest				
Payment (top slice)				
Environmental indemnity				

Item	Answer	Source: document and section
Transfers and consent		
Transfer thresholds: direct and indirect, per transaction and aggregate		
Permitted transfers; one-time sale to a qualified transferee		
Minimum retained interest and control; guarantor replacement		
Consent standard, response deadline, deemed approval		
Leasing: threshold, pre-approved parameters, deadline		
Fund events that are indirect transfers: continuation vehicle, recap, GP change		

Book: at a 30 per cent decline the lender loses nothing; a sprung carve-out exposes the sponsor to the entire 34,762,591. The lender starts to lose only below a 42.8 per cent decline.

The reporting calendar and the default page

Chapters 16 and 17. The reporting default is the one a lender uses when it wants out; the default page is two lines the agreement does not contain.

Loan / property		Prepared by	
Lender		Date	

Deliverable	Frequency	Deadline	Owner	Source system	Notice and cure before default?
Operating statement and rent roll					
Compliance certificate					
Capex and leasing report					
Audited statements, borrower					
Guarantor statements					
Budget and capital plan (fallback if not approved?)					
Event notices (default, litigation, casualty, tenant)					

Event of default group	Notice?	Cure period	Automatic or elective remedy
Payment			
Financial covenant (after any cure right)			
Other covenants (reporting, insurance, transfers, SPE, hedge)			
Representation			
Insolvency (borrower, guarantor)			

Item	Answer
Default interest a year on the current balance	
Cross-default: borrower / affiliates / guarantor, and what it reaches	
Balance sheet lender or servicer; special servicer	
Enforcement timetable in the jurisdiction, months	

Book: a five-point default rate on this loan is 1,860,000 a year, from the date of the event of default, whether or not the lender does anything else.

The capital structure and the workout pack

Chapters 18 and 19. Model the combined coverage, always; in a workout, compute everything before the conversation.

Loan / property		Prepared by	
Lender		Date	

Layer	Amount	Rate / terms	Debt service	Coverage to this layer
Senior mortgage				
Mezzanine / preferred equity				
TOTAL				

Reading a capital structure	Answer	Source
Combined coverage against the senior covenant levels		
Decline at which cash after ALL debt service is zero		
Intercreditor: standstill, cure rights, purchase option, modification limits		
Does the senior loan permit the junior layer? If not, which structure, and does it breach the transfer covenant?		
In a downside, who ends up owning the equity, and how fast?		

Item	Done	Figure / note
The workout pack: six pages before the call		
The covenant ladder, current		
The cure costs: deposit and prepayment		
The refinancing analysis at three rates		
The leasing plan and its capital requirement		
The value at which the lender starts to lose		
The ask: covenant reset, release of trapped cash for leasing, extension, fresh equity for terms		

Concessions, cheapest first (fee, spread, tighter covenant, recourse last):

Book: mezzanine of 6.2 million at 11 per cent takes coverage to 1.120 times and cash-on-cash to 2.09 per cent; cash after all debt service is zero at a 10.7 per cent decline, before the senior trap fires at 14.0.

Forty red flags

Appendix B. Run against the term sheet before it is signed and the loan agreement before closing. For each hit, record the dollar effect or the operating result that triggers it.

Loan / property				Prepared by			
Lender				Date			

#	Red flag	Hit ?	Dollar effect / trigger	#	Red flag	Hit ?	Dollar effect / trigger
1	Covenant quoted with no income that breaches it			21	Debt service reserve not in sources and uses		
2	Imputed management fee not in the model			22	Springing reserve trigger visible in the rent roll		
3	Assumed reserves in the covenant definition			23	Holdback treated as proceeds		
4	Notional constant during interest-only			24	Holdback test after the advance		
5	Coverage steps to amortising at an undiarised date			25	Reserve release on a coverage test		
6	Interest-only lost on a covenant breach			26	Release needs rent no lower than expiring		
7	Amortisation shortened for a rate concession			27	Lockout longer than the business plan		
8	Reference rate floor above today's rate			28	Yield maintenance on an asset to be sold		
9	Default rate not stated as dollars a year			29	Defeasance with no cost estimate		
10	No all-in cost with fees and exit			30	Partial prepayment cuts only the balloon		
11	No cure right on debt yield			31	Extension fails at a 15% decline		
12	Cure funds applied to principal			32	Extension needs a hedge nobody priced		
13	Consecutive cures prohibited			33	No refinancing at 3 rates and 2 incomes		
14	Trapped cash cannot fund leasing			34	SPE covenants on the springing list		
15	Release needs four consecutive quarters			35	Uncontested involuntary filing springs recourse		
16	Trap and sweep the same test 0.2 apart			36	Guaranty with no sunset		
17	Trailing three months annualised			37	Uncapped completion or carry guaranty		
18	Hard lockbox where springing was available			38	Cross-default to affiliates		
19	Budget variance line by line			39	Equity-level financing prohibited against the plan		
20	Opex below reserves, no emergency carve-out			40	Reporting failure a default without notice		

Sizing and economics 1-10; covenants and cash 11-20; reserves and holdbacks 21-26; exit and maturity 27-33; recourse and structure 34-40.