

LEASE FINANCING

Analysis

lessor

- (i) given LR is the lease viable
[whether to lease or not]
- (ii) minimum lease rentals that can be charged
- (iii) IRR of lease (return generated)

lessee

- (i) Buy asset or loan or lease.
- (ii) Indifference point

MINIMUM Lease Rental

Plans of LR

MLR such that $NPV = 0$

Equated
equal
throughout
LT

stepped up
stepped down
LR $\uparrow$ or $\downarrow$
@ fixed
date

deferred
plan
LR postpone
for specific
period
pay-as any
later

Ballon
plan

1st - small
last - lump
some
LR.

Cash flow

[lessor point of view]

- Buy asset Cx
- LR income net of tax x
- Tax ben on depⁿ Ex
- Salvage x
- Tax on P/L @ end x

discount rate: COC or desired ROR
Tax: data may not be same throughout LR
Lease rent: advance charging = 0 year LR x
[x net of tax] 1 year tax (x)
AF for 0-3 years = $1 + AF(1-3)$
Assume $NPV = 0$ find x LR = x lease mgmt fee - x CF [incidental to lease $\times$ asset]

nominal value: x salvage it is SP @ end of LT.

capital expenditure - x net of tax: sales tax = add to cost of asset.

FINANCIAL VIABILITY OF LEASE

NPV method

Find NPV

+ve - accept
-ve - $\times$ viable

IRR method

Find IRR [better] $\checkmark$

IRR $>$ COC viable
IRR $<$ COC $\times$ viable

$$IRR = LR + \frac{NPV(LR)}{NPV(LR) - NPV(HR)} \times \text{diff in rate}$$

- * down payment - 0 year
- tax benefit - 1 year
- mgmt fees - x tax benefit

ANALYSIS FROM LESSEE

Buy, loan, lease asset

NPV method

IRR method

BHW model

Net adv leasing model

1) NPV method

Find NPV of all opⁿ.

Select ↑ +ve or ↓ -ve NPV.

Cash flow

loan	lease
0 loan x Buy asset (x) <u>0</u>	1-n pay LR (x) (NOT)
1-n pay principal (x)	1-n T.B on lease (adv) x
1-n Int (NOT) (x)	1-n exp on (x) NNN lease
1-n TB on dep ⁿ x	
1-n maint exp (x) (NOT)	
n salvage x	
n P/L-Tax x	

discount rate: COC or incremental borrowing rate net of tax **

common CF - ignore [revenue, opertⁿ exp]
NNN lease: net net net lease all exp borne by lessee.

maint lease: exp borne by lessor (✓)

LR: if not given find from lessor
point of view: "NPV = 0"

Int: Year of p. EMI Int p. Deint

LR payable	rate	Period
quarterly	1/4	x4
half yearly	1/2	2
monthly	1/12	12

tax: yearly rate LR - monthly rate

2) Bowe Heeringe William son model

Operating adv
(tax CF)

Financial adv
(other CF)

Tax on LR } xx
(-) Tax on Int } (xx)
(-) Tax on dep } (xx)
DA = xx

PV @ COC (net of tax)

loan OF xx
(-) lease OF (xx)
FA = xx
PV = gross COC [XNOT]

DA + FA = +ve : lease
DA + FA = -ve - loan

values: same of NPV table.

3) Net advantage of leasing

loan amt = PV of LR disc @ gross borrowing rate

[to make comparable] lease over loan

A) COF
opp cost forego.

PV of gross LR - ↑ BR
TB on int
TB on dep
scap
Tax on loan
COF xx

B) CIF
opp gain we get
PV of Tax on LR COC
Ini. inv saved PV
Tax on p COC
CIF xx

COF > CIF - loan
CIF > COF - lease

EMI = LR p.m.

4) IRR method (lessee)

Incremental IRR $>$ COC - purchase/loan

Incremental IRR $<$ COC - lease.

• Incremental IRR of lease over purchase.

Year	Paid	① Lease	② P.	1-2	PV.
				IRR.	

leveraged lease

L2

asset finance by loan & given on lease.

CR collected - pay loan EMI.
profit - diff.

Hire purchase

all same except
allocation of interest - flat rate.

a) sum of years : 3:2:1

b) if payable monthly

Year	Int	Ratio
1	£(25-36)	366
2	£(13-24)	222
3	£(1-12)	78
	$\frac{n(n+1)}{2}$	