

Silva 8 AM Tues.

Krawcor 9:30 Thurs. 2-28

Sibbert 12:30

Taylor

Tues. 3-5, 2d Midt.

Ex. 134 Current

Finance, 7-12-85

1. DCF criterion when invs. are mutually exclusive.

a. Can't "invest in anything" w. + DCF. Cop-out.
You have so much land, or so much capl., or a given market.

b. ~~Here~~ also, are choosing among alts. w. diff. lives.
Max. DCF is biased for longer life. $\$$

We need to standardize for n .

IRR method does this.

To make DCF work, we must do so.

c. Already did so with sheep vs. Trees.

d. More generally! mult. DCF by IRR.
Annualize.

Alt., mult. FV by SIF.

e. View this as spreading costs over time.



f. Graph also shows how to define opt- y.

3-7-85.

Investment criteria.

0. Defining K_0 , p. 331,
I. Payback pd.

1. Pichler gives naive payback. $\frac{K}{a}$ Then shows it.
to van Man. It's ok for investment. Fund/flow.
No interest.

2. Better is half-life. $n = \frac{-\ln(1 - \frac{P}{a} \frac{i}{a})}{\ln I}$

3. Best is mean life.

Use full salvage model as bench mark.

Payback pd = carcass life.

Then take longer.

Machines take shorter. But see p. 61

4. Object of limiting payback pd. is to max. vol.
of bus. achieve eq. of scale w. limited K .

Also, protect banks vs. Δi .

Vocab. Expansion, Ec. 134

Fund. Mgmt

Cash flow

~~Int~~ Internal financing

PV

IRR

Payback

Earnings

Expenses

Capitalizing

a. vs. expensing

b. Converting flow to fund

Cap. rate

Valuation

Disintermediation

Investment co.

Money mkt.

Commercial paper

Real interest rate

Stock

Bond

Bill

Equity

Mortgage

Primary mkt

Trading mkt.

Tender offer

Corp. bond

Revenue req.

Open mkt. ops.

Relativ. rate

Selective controls

Stock yield

P-E ratio

Bond current yld

.. yld

GAAP

accrual

Realize

Matching

Hist. cost

Cost of goods sold

Direct Expenses

Depreciation

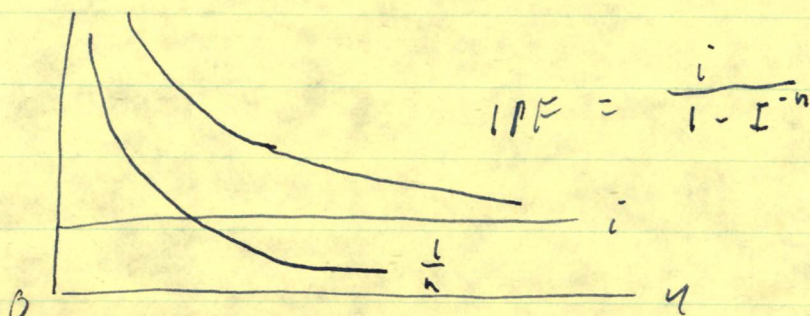
Land

Gross margin

op. profit

Thurs

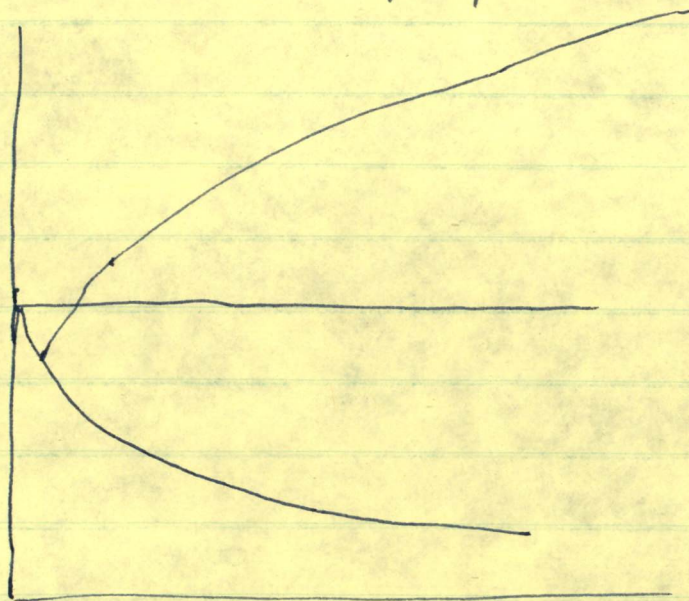
1. Spreading costs over time.



Effect of i , on whether you recover K .

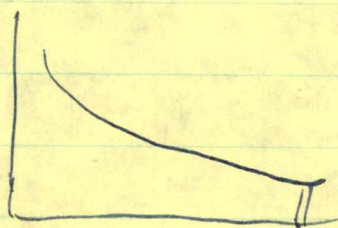
Cb. s.f. factor. E.g., costs as much to decommission as to build.

2. Value from early yrs.



n	P	σ , gain
2	1.86	—
4	3.55	91
8	6.46	82
16	10.84	68
32	15.80	46
64	19.12	21

$$3. \text{ Deprec.} = a \bar{I}^{-n} = P \frac{i}{1 - \bar{I}^{-n}} \bar{I}^{-n} = P \frac{i}{\bar{I}^n - 1}$$



Deprec. several years.

$$D = PV_n - PV_f = \frac{1 - \bar{I}^{-n}}{i} - \frac{1 - \bar{I}^{-f}}{i} = \frac{\bar{I}^{-f} - \bar{I}^{-n}}{i}$$

4. PV, declining a.

$$PV = a \frac{1 - \bar{I}^{-n}}{i} + b \left[\frac{1 - \bar{I}^{-(n+B)}}{i} - \frac{1 - \bar{I}^{-n}}{i} \right]$$

E.g. $n = 4, B = 12$

$a = 10, b = 5$

$$PV = 10 \cdot 3.55 + 5(10.84 - 3.55)$$

5. ~~the~~ a declines by d % yearly.

$$\{ = \frac{1-d}{1+i} \text{ etc.} \approx \frac{1}{1+i+d}$$

Add d to i.e.

6. Solve for η

~~$$\frac{a}{p} = \frac{p_i}{a} = 1 - I^{-\eta}$$~~

$$I^{-\eta} = 1 - \frac{p_i}{a}$$

$$I^{\eta} = \frac{1}{1 - \frac{p_i}{a}}$$

$$\eta \ln I = -\ln\left(1 - \frac{p_i}{a}\right)$$

$$\eta = \frac{-\ln\left(1 - \frac{p_i}{a}\right)}{\ln I}$$

7. Half-life $\bar{p} = \frac{p_0}{2}$

8. Solve for i . ($n=10$)

$$i = \frac{a}{p} [1 - I^{-n}]$$

$\frac{a}{p}$	i
.20	.151
.15	.081
.11	.018
.10	.000
.05	

"Matching"

1. GAAP match in time
2. Cash flow balanced vs. K_t , ~~balance~~ matches cause + effect.

3212-85

Huandley

Taylor

Bradley

Leighton

Gallegos

Milo

Grimes

Tynisha

Hussein