

NPV

Project A	WACC		0.0582				
Year	0	1	2	3	4	5	
Cash Flow	-90000	10000	17000	34000	41000	38000	
					-30000		
NPV	-90000	9450.009	15181.45536	28692.98	8772.465	28638.14	

Payback

Year	0	1	2	3	4	5
DCF	-90000	9450.009	15181.45536	28692.98	8772.465	28638.14
CDCF	-90000	-80550	-65368.53519	-36675.6	-27903.1	735.0496

0.025667

==>Payback is 4 years

9.24005

IRR

Year	0	1	2	3	4	5
r1=	0.06					
r2=	0.063					
NPV(r1)	-90000	9433.962	15129.93948	28547.06	8713.03	28395.81
NPV(r2)	-90000	9407.338	15044.66052	28306.04	8615.086	27997.37

IRR 0.060776397

Proof:

	-90000	9427.057	15107.79996	28484.42	8687.55	28292.05
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MIRR

remaining years		4	3	2	1	0
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year	0	1	2	3	4	5
+CF		10000	17000	34000	41000	38000
capitalization		12539.23	20144.30058	38072.77	43386.2	38000
-CF	-90000				-30000	
discounting	-90000				-23924.9	

MIRR= 0.059562

== > IRR>MIRR!

Project B

	Year	0	1	2	3
	Cash Flow	-10000	-2000	-2000	-2000
SUM	30 % Probability		2000	3000	7000
			600	900	2100
	50% Probability		4000	6000	9000
			2000	3000	4500
	20% Probability		5000	7000	10000
			1000	1400	2000
	Sum of probable CF's		3600	5300	8600
	NPV	-10000	1512.002	2946.988	5569.814

735.05

NPV(A) > NPV(B) ... Project A better

Year	0	1	2	3
DCF	-10000	1512.002	2946.988	5569.814
CDCF	-10000	-8488	-5541.01	28.80354

0.005171

and 10 days (0,025667*360=9,24005)

==>Payback is 2 years

1.861691

PB(B) > PB(A) ... Project B better (shorter time to get back invested sources)

	Year	0	1	2	3
	r1=	0.059			
	r2=	0.06			
SUM	NPV(r1)	-10000	1510.859	2942.538	5557.2
	NPV(r2)	-10000	1509.434	2936.988	5541.487
	IRR	0.0594671			

-1.12744 this is approximation so we can take it as \approx NPV=0

IRR(A) > IRR(B) ... Project A better

remaining years	2	1	0
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	year	0	1	2	3
SUM	+CF		3600	5300	8600
152142.5	capitalization		4031.234	5608.46	8600
	-CF	-10000	-2000	-2000	-2000
113924.9	discounting	-10000	-1890	-1786.05	-1687.82

MIRR= 0.05886

again IRR>MIRR

SUM

28.804

and 2 days

SUM

10.59725

-12.0905

SUM
18239.69
SUM
15363.88