BS2551   Money Banking and Finance

Seminar 2   Capital Budgeting Solutions

Year	Project A	Project B
0	-100	100
1	150	-150

NPV (A) = -100 + 150 / (1+0.10) = 36.36.

NPV (B) = 100 -150 / (1+0.10) = -36.36.

IRR (A) = -100 + 150 / (1+IRR)

Set 1 + IRR =X,   = -100 +150 / X

X = 1.5.

IRR = 1.5 -1 = 0.5 or 50%.

IRR (B) = 100 - 150 / (1+IRR)

Set 1 + IRR =X,   = 100 -150 / X

X = 1.5.

IRR = 1.5 -1 = 0.5 or 50%.

According to IRR both projects are accepted if independent because both produce a return greater then the cost of capital (10%). If mutually exclusive then cannot distinguish which project is better.

According to NPV project A should be accepted (NPV > 0) and project B should be rejected (NPV < 0).

This problem further clarifies the shortcomings of the IRR.

Q) The Principal reasons as to why management prefer IRR to NPV is that management (incorrectly) see a link between the IRR of a project, current market interests rates and accounting rates of return.