



College of Petroleum Engineering

Lecture(10)

Petroleum Engineering Economy

3d year student

Dr.Abdulhussien Neamah Al-Attabi

2022-2023

Capital Budeding Techniques

Dr.Abdulhussien N.Alattabi

Lecture(10)

Capital budgding

ألميزانيه أأرأسماليه

Capital budgding: An area that focuses on investing in long –expensive assest.

وهي المساحه التي لها علاقه بالاستثمار طويل الامد وذات الاصول المكلفه.

Example of Capital expeditures or capital investment are (Purcuse, construction or acquisios of (Land, building, Equipment,Air craft, Manufacturing plant ,Retal store out lets, Business segment.

من الأمثله على النفقات الرأسمالية أو الاستثمار الرأسمالي (Purchase) ، البناء أو الاستحواذ على (أرض ، مبنى ، معدات ، طائرة ، مصنع ، Retal store out Lits ، قطاع أعمال.

Intangible assets such as pustules, copy rights and others.

الأصول غير الملموسة مثل حق المؤلف وحقوق النسخ وغيرها.

Ressource Economics.المصادر الأقتصادية

A-Cash Flow analysis

!- Up stream Petroleum Economic

2- Mid stream and Down stream Economic

B- Uncertanity and decision analysis.

c-evaluation of Assest

Methods Of Capital budgeting Techniques

- NPV-----Net present Value. صافي القيمة الحالية
- IRR-Internal rate of return معدل العائد الداخلي
- PI-Profitability index مؤشر الربحية
- PBP Pay Back Period فترة الاسترداد

Cash flow divided in to:

1-Discounted cash flow(DCF): The Investment decisions made by tacking in to account the interst that the money in hand can earn if invested in bank ore some where else. This varies as per the industry standers.

2-Non-Discounted cash flow(NDCF):In Non-discounted cash flow, the interest ,is not taken in to consideration time. i.e Value of money is not considered.

A-Discounted cash flow

- NPV-----Net present Value.
- IRR-Internal rate of return معدل العائد الداخلي
- PI-Profitability index مؤشر الربحية
- PBP Pay Back Period فترة الاسترداد

B-Non-Discounted cash flow:◌

- Pay back period(PBP):is usually calculated, Value of time not considered.
-

Future value(FV) and Present Value(PV)

Net present value considers the time value of money,((time value of money is mony grow over time, when it earns interest. There for dollars in hand to day is worth is worth more than dollars in future.

$$FV = PV(1+K)^n$$

FV=Futur value

PV=Present value

K=Discount rate

N=number of years

If \$100 dollars is invested in bank today may earn 8% dollars, calculate the future value for 1st, 5th, 15th years.

Answers:

If, n=1 then $FV = \$100(1 + 8/100)^1$

$$FV = \$100(1.08)^1$$

$$Fv = \$108$$

For n=5, then $FV = \$100(1.08)^5$

$$FV = \$146.95$$

For n=15 $FV = \$100(1.08)^{15} = \317.22

Present Value(PV)

$$PV = FV * (1 / (1 + k)^n)$$

Present value(PV) for \$100 invested 1 year = $100 * (1 / (1 + 0.08)^1) = \92.6

PV for 5 year = $100 * 1 / (1 + 0.08)^5 = \68.05

Pv for 15 = $100 * 1 / (1.08)^{15} = \32
