

# [Plan a or plan b](https://assignbuster.com/plan-a-or-plan-b/)

Explanations to the information in the Excel template: a. In order to determine the present value of plan A to a typical employee, we discount the amount of $1, 500 that represents payment in an annual annuity at a discount factor of 3. 312 (4 yrs, 8%). The present value equals $4, 698. 00. b. In order to find the amount a typical employee will owe under Plan B when the loan is due, we find the future value of $20, 000 compounded annually at 3% for five years (factor 1. 159).

The present value of this lump sum (5 yrs, 8%) is obtained using discount factor 0. 681. Subtracting this amount from the $20, 000 loan, we determine the present value of the company`s subsidized financing to equal $4, 214. 42. c. Therefore, a typical employee will choose Plan A as it provides a higher present value, $4, 698. 00 as compared to just $4, 214. 42 under Plan B. d. Reworking parts (a) through (c) with an opportunity cost of 10%, we will see that for employees with this opportunity cost: under Plan A, the present value amounts to $4, 755. 00, under Plan B $5, 605. 22. This means that for those employees Plan B is preferable due to higher present value. Overall, employees with higher opportunity costs will probably tend to prefer Plan B because it offers a longer time frame. Plan B envisages repayment of the loan after five years as opposed to Plan A that will supply employees with funds over the time frame of four years.

Under Plan B, they can use available funds to invest elsewhere at a higher rate, which will give them greater return than the 3% they will owe on the loan. As a result, the higher opportunity cost employees at Hanover Maple Works can hope for, the more attractive Plan B including a loan will seem to these employees, and vice versa.