

# [Danforth donnalley laundry products company integrative problem](https://assignbuster.com/danforth-donnalley-laundry-products-company-integrative-problem-essay-samples/)

[Finance](https://assignbuster.com/essay-subjects/finance/)

Danforth Donnalley Laundry Products Company Integrative Problem Cash flows reflect the flows of cash from and into a business entity. Cash flows can either occur in the operating, financing and investing activities. The use of debt to finance Danforth and Donnalley Laundry Products Company falls under financing activities. Debts taken by companies to finance its activities are often paid back with an interest. In this case, if the company’s project was financed through a debt, the company would make interest payments. These interest payments represent flows of cash from the company and should be considered cash flows (Brigham & Ehrhardt, 2011).
NPV =  (R1 + R2 + R3 + ...  ) /{( 1 + i )1( 1 + i )2( 1 + i )3 } − Initial Investment
Initial investment = 2, 000, 000 + 500, 000 = 2, 500, 000
Rate of Discount = 10%
PV factor, year 1 = 1/ (1+ 10%) ^1 ≈ 0. 909
PV factor, year 2= 1/ (1+ 10%) ^2 ≈ 0. 826
PV factor, year 3 = 1/ (1+ 10%) ^3 ≈ 0. 7513
PV factor, year 4 = 1/ (1+ 10%) ^4 ≈ 0. 683
PV factor, year 5 = 1/ (1+ 10%) ^5 ≈ 0. 6209
PV factor, year 6 = 1/ (1+ 10%) ^6 ≈ 0. 5646
PV factor, year 7 = 1/ (1+ 10%) ^7 ≈ 0. 5131
PV factor, year 8 = 1/ (1+ 10%) ^8 ≈ 0. 4665
PV factor, year 9 = 1/ (1+ 10%) ^9 ≈ 0. 4241
PV factor, year 10 = 1/ (1+ 10%) ^10 ≈ 0. 3855
PV factor, year 11 = 1/ (1+ 10%) ^11 ≈ 0. 3505
PV factor, year 12 = 1/ (1+ 10%) ^12 ≈ 0. 3186
PV factor, year 13= 1/ (1+ 10%) ^13 ≈ 0. 2896
PV factor, year 14 = 1/ (1+ 10%) ^14 ≈ 0. 2633
PV factor, year 15 = 1/ (1+ 10%) ^15 ≈ 0. 2394
Exhibit 1
Year
Cash flow
Present Value Factor
Present value of Cash Flows
1
280, 000
0. 909
254, 520
2
280, 000
0. 826
231, 280
3
280, 000
0. 7513
210, 364
4
280, 000
0. 683
191, 240
5
280, 000
0. 6209
173, 852
6
350, 000
0. 5646
197, 610
7
350, 000
0. 5131
179, 585
8
350, 000
0. 4665
163, 275
9
350, 000
0. 4241
148, 435
10
350, 000
0. 3855
134, 925
11
250, 000
0. 3505
87, 625
12
250, 000
0. 3186
79, 650
13
250, 000
0. 2896
72, 400
14
250, 000
0. 2633
65, 825
15
250, 000
0. 2394
59, 850
Total present value = 2, 250, 436
Net Present Value = 2, 250, 436 – 2, 500, 000 = - 249, 564
Exhibit 2
Year
Cash flow
Present Value Factor
Present value of cash flows
1
250, 000
0. 909
227250
2
250, 000
0. 826
206500
3
250, 000
0. 7513
187825
4
250, 000
0. 683
170750
5
250, 000
0. 6209
155225
6
315, 000
0. 5646
177849
7
315, 000
0. 5131
161626. 5
8
315, 000
0. 4665
146947. 5
9
315, 000
0. 4241
133591. 5
10
315, 000
0. 3855
121432. 5
11
225, 000
0. 3505
110407. 5
12
225, 000
0. 3186
100359
13
225, 000
0. 2896
91224
14
225, 000
0. 2633
82939. 5
15
225, 000
0. 2394
75411
Total Present Value of Cash Flows = 2, 149, 338
Net Present Value = 2, 149, 338 – 2, 500, 000 = - 350, 662
Internal Rate of Return
IRR is the discounting percentage at which NPV is zero.
The IRR for exhibit one is 8. 56%
The IRR for exhibit two is 6. 32%
Profitability Index
Profitability Index = Present Value of Future Cash Flows/Initial Investment Required
Exhibit one = 2, 250, 436/ 2, 500, 000
= 0. 9001744
Exhibit two = 2, 149, 338/ 2, 500, 000
= 0. 8597352
I would not accept this project. It has a low profitability index and introduction of a similar product by a competitor would profoundly affect the profitability of the company (Brigham & Ehrhardt, 2011).
References
Brigham, E. F., & Ehrhardt, M. C. (2011). Financial management: Theory and practice. Mason, OH: South-Western Cengage Learning.