



2018 Bank Study Project Class of 2020

INTERMEDIATE CREDIT ANALYSIS Ken Cyree

NOTES:

1. Please use 8 1/2" x 11" paper (or paper folded to that size).
2. Attach the **Freshman Cover Sheet – Class of 2020** from <http://www.gsblsu.org/students-3/> as the first page of your project.
3. Please staple your project or use a binder clip. **DO NOT** use paper clips. or any kind of folder or binder.

Complete and mail by September 17, 2018

(June 12, 2018 See edit on page 5 ... with the correct amount, **\$164,252.731.**)

Graduate School of Banking at LSU

4273 Highland Road
Baton Rouge, LA 70808-4541
225-766-8595

Intermediate Credit Analysis
2018
Bank Study Problem

Proto Employment Inc.

In an effort to assist companies that currently have a shortage of qualified employees for technical positions normally requiring several years' experience, Harold Kelly and Elizabeth Newland formed a new corporation that has the goal of solving the employment problem. The solution was one that involved complex technicalities itself, but Kelly and Newland believe that the result was worth their effort.

Kelly's experience with robotics was instrumental in developing a robot with artificial intelligence that can learn the basics of a particular job and then add detailed information by asking questions of other employees (either human or artificial) and by correcting his or her own mistakes.

To start the employment process, the client company must have an experienced worker already filling the position or hire one from another company as a temporary instructor. The experienced employee is called the prototype and the robot being trained is the protégé. In case there are many employees assigned to the same task, the Proto Employment client company only needs one (perhaps one that is deemed the most experienced) to train a protégé. The original protégé is the model for the manufacture of as many new trained employees (all protégés) as required.

For the client company a protégé is an ideal employee. He or she has no salary, no vacation or family downtime, no overtime pay, and no problem working nights or weekends. Of course there are occasional technical errors to be corrected and machinery upkeep involved, but a single department in the client company can keep the protégés doing their jobs.

Kelly and Newland suggest that client companies retain the employment of several original prototypes for updating protégé instruction when an industry develops new methods or technical adjustments.

It would be an understatement to say that Proto Employment services have been well accepted. One major complaint has been received from U.S., state, and municipal tax authorities as they see or predict the number of

previous taxpayer positions declining. As one official proclaimed, “Robots should have to pay taxes, too!”

Fred Hastings, loan officer with Oak Forest Bank, has provided financial counseling as well as long and short-term funds to Proto Employment Inc. for a number of years. In September, 2018, he listened to Kelly and Newland explain their current plans.

Kelly and Newland have researched the market for their products in the U.S. and in other countries and believe that sales will grow by eight percent in 2019 and again in 2020. One reason for their confidence in the sales forecast is that in developing countries an order of industrial protégés will give a company instant productivity with no language barrier. The market is even larger due to companies that purchase protégés to train and re-sell.

To take advantage of expected growth in sales, Kelly and Newland want to purchase an existing manufacturing facility with a cost of \$2,000,000. This amount is needed at the first of January, 2019, and they request that Oak Forest Bank provide eighty percent of the purchase price on a loan amortized over a ten year period.

Payment for sales is expected to be approximately eight percent cash, forty percent in purchases on bank credit cards, and fifty-two percent on credit as a Proto Employment account receivable. Collections of accounts receivable normally occur forty-five percent in the first month following sales, thirty-five percent in the second month, and eighteen percent in the third month. At the end of the third month two percent of accounts receivable are considered non-collectable.

For Proto Employment, the cost of goods sold is on average 66.50 percent. This is the forecast for 2019 and 2020.

Sales commissions are six percent of sales, paid in the same month as the sales occur.

Several predicted expenses are divided into twelve equal monthly cash outflows on the cash budget. These are salary expense, \$630,000; advertising expense, \$230,000; lease expense, \$280,000; protégé servicing and training, \$150,000.

Maintenance & Other expense is related to labor and other expenses for which payment is delayed for various reasons. Delay in payment results in adding to the accrued expense liability account. In the forecast year, 2019, Proto Employment intends to pay out \$155,000 for maintenance and other while the actual expense for the year is predicted to be \$95,000. This will reduce accrued expenses by \$60,000.

Proto Employment accepts customer payments by bank credit cards. The bank card terminal fee is \$10 per \$100,000 of sales in the forecast year, 2019. For each sale the bank card fee is 2.50 percent. Credit losses on bank card sales are predicted to be two percent, a cash outflow for Proto Employment at the end of the third month following sales paid by bank issued credit cards.

Proto Employment Inc. has 200,000 shares of common stock outstanding at a par value of \$1.00 per share. In January, 2019, the company will issue an additional 10,000 shares with par value of \$1.00 per share. The issue price of the new stock will be \$25 per share. A dividend of \$1.25 per share will be paid in 2019, divided into quarterly amounts paid in March, June, September and December.

For the cash budget, interest rates for 2019 are the following: short-term borrowing on the line-of-credit, 5.00 percent; short-term investment in money-market securities (90-day Treasury bills), 0.50 percent; and long-term borrowing on the term loan 7.50 percent.

The total amount of long-term funding requested by Kelly and Newland includes the 80 percent of the cost of the additional plant, current portion of long-term debt at the end of 2018, and non-current long-term debt at the end of December, 2019.

All of the data for Proto Employment may be entered on the Back (background) worksheet of the Proto Employment simulation file. Input numbers should be entered in the color shaded cells. After the data is entered, an amount of tax for 2019 will appear at cell H4. This is not the final tax amount, however, because the calculation does not include a forecast of quarterly tax payments on the cash budget.

In order to put tax payments on the cash budget, it is necessary to enter a number in cell H5. The number that you enter in cell H5 should be the same as the amount of tax shown in cell H4. This will immediately result in a new number for H4, now that the simulation has a budgeting tax amount to use in the calculation.

After the new tax amount is entered in H5 the two numbers will still be unequal. Once again enter the new tax shown in cell H4 in H5. After several repeats of this – each time entering the number shown in H4 into H5 – the two numbers will be equal. At this point you should look at the balance sheet to see whether it is in balance with total assets equal to total liabilities and equity capital. If it is in balance, all of the numbers on the financial statements should be correct.

One advantage of the simulation is that one or more input values on the Back spreadsheet can be changed and the balancing can still be achieved. This means that you are able to do “what if” analysis, to see the results of different input values. However, this also means that you may have one or more incorrect input values and not be aware of the error.

To avoid the problem of an unknown error, compare your final tax number with the correct amount, **\$164,252.731**. If your tax number is different from the correct amount, check the input values to see if they correspond to the values shown for Proto Employment. For further assistance you may email Paul Cretien at Cretien619@aol.com

Input interest rates and percentages as decimal fractions. For example, five and one-half percent would be entered as 0.055.

There are several exhibits on the Back spreadsheet:

- Row 70 Amortization schedule for the new term loan
- Row 114 Amortization schedule for the existing term loan
- Row 139 Fixed assets and depreciation
- Row 160 Monthly sales indexes as proportions of 12

Because some banks are reluctant to combine the new term loan with the existing long-term debt, an alternative simulation program that separates the new and previous term loans is available. The additional simulation is called Alternative B. Contact Paul at Cretien619@aol.com if you would like to have a copy of Alternative B.

Discussion questions

1. Describe the company's use of the line of credit. Is the line of credit financing asset and sales growth? Is the line of credit a high risk for the bank?
2. To what extent is the company's growth in assets and sales financed by bank debt? Is this use of debt appropriate?
3. Which of the ratios comparing the company with its peer group are important in relation to credit analysis?
4. Why is depreciation cash flow important for this credit decision, and why is depreciation considered a cash flow?
5. In analyzing the requested term loan and line of credit, would you approve the credits? Explain why or why not.
6. Suggest two questions for the credit analysis that can best be answered by what-if analysis applied to the beginning data on the Back spreadsheet. Explain the results of your what-if tests.