

RN TEMPS, INC.

CAPITAL STRUCTURE ANALYSIS

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RN TEMPS, INC., franchises “rent-a-nurse” businesses to independent operators throughout the United States. The concept of the business is the same as that of other temporary help services, such as Manpower and Kelly Temporary Services, except that RN Temps deals only with registered nurses. (For an example of a company similar to RN Temps, Inc., see <http://interimhealthcare.com>.)

The rationale for developing RN Temps is as follows:

1. Many healthcare providers, especially hospitals, have difficulty hiring and retaining nurses, so there is almost always a demand for nursing professionals. Traditionally, hospitals have been the dominant employer of nurses, employing almost 60 percent of the roughly 2.5 million working nurses in the United States. But now nurses have opportunities that were not even dreamed of a generation ago. Registered nurses can work in the nurse practitioner, nurse anesthetist, or critical care or neonatal specialist professions, all of which are in high demand today. In addition, they can work in home health agencies; nursing homes; utilization review departments; physicians’ offices or outpatient surgery centers; and a multitude of other nonhospital settings, such as schools. Of all the work settings, hospitals are generally considered to be the least desirable

- because of the hard work, rigid work conditions, and irregular working hours. (For more information about the nursing profession, see the American Nurses Association website at www.nursingworld.org.)
2. Providers generally want to minimize fixed costs, so any staffing requirements that may not be permanent in nature are often filled by temporary workers. Also, when vacancies occur among permanent workers, providers often need temporary nurses to carry the load until the vacancies are filled with permanent personnel.
 3. Although nursing salaries have increased over the past ten years, real wages have barely kept up with inflation. Furthermore, a large number of nurses have quit the profession for a variety of reasons, including family responsibilities. Many of these nurses are willing to work occasionally but not on a permanent basis. About one in five nurses works part time.
 4. Typically, the nurses who want to work on a selective basis have spouses who provide family coverage health insurance. Also, these nurses do not require extensive fringe benefits, such as pension plans or paid vacations, and because they are part-time workers, they are not eligible for unemployment insurance or workers' compensation. Thus, if the average fringe-benefit package paid for permanent nurses is, say, 25 percent of salary, a temporary services company could offer a salary to its nurses 5 percent higher than can providers; could "rent" the nurses out at 5 percent less than it costs providers to hire permanent nurses, including all fringe benefits; and could pocket what remains of the 15 percent spread after administrative costs are paid. Note, however, that the actual rates charged by RN Temps franchisees are related more to local supply-and-demand conditions than to costs.

Franchisees buy the exclusive right to use the RN Temps name within a specified territory from RN Temps, Inc., the franchisor. In addition, franchisees receive marketing and management support from RN Temps as well as the right to lease computers and other office

equipment under relatively favorable terms. Finally, franchisees can purchase expendable office supplies directly from RN Temps at substantial savings from retail prices.

To start operations, a franchisee recruits a pool of nurses from the local labor market. Then, when a client needs a temporary nurse, the local manager matches the client's specific needs with a qualified nurse from the pool. The bill for services is sent to the client by the franchisee based on the number of hours—verified by a timecard—that the nurse works for the client. The client has no responsibility for the nurse's salary or fringe benefits; this is all handled by the RN Temps franchisee.

Tiffany Radcliff, a registered nurse from Albuquerque who left the profession to get an MBA from the University of New Mexico, founded RN Temps in 1990. The firm grew rapidly from its base in Albuquerque, first by expanding operations into different cities across the Southwest and then by franchising into other parts of the country. Tiffany was a devout believer in the virtues of equity financing. Although the firm had issued debt periodically, especially to finance company-owned business expansion, Tiffany always used the firm's free cash flow to retire the debt as soon as possible. Recent growth has involved franchising, in which the franchisee puts up the required capital, and hence there has been no need for outside capital for several years.

Tiffany believes that her firm's high-growth days are over. First, numerous companies that offer competing services have appeared on the scene. Second, the number of hospitals, which are her primary clients, has declined over the years since she founded the firm, and a meaningful increase in hospital beds is unlikely in the foreseeable future. Third, many hospitals have created "flexible staffing pools" for nurses, which, for all practical purposes, are in-house temporary work agencies. Finally, many large employers of nurses are recruiting internationally, which lessens the demand for temporary domestic workers. Thus, Tiffany expects the firm's earnings to grow relatively slowly in the future.

Tiffany's financial manager, Paul Duncan, has been preaching for years that RN Temps should use some debt in its capital structure. "After all," says Paul, "everybody else uses debt, and some of our competitors use more than 50 percent debt financing. Also, an underleveraged company is exposed to a hostile takeover because raiders can use the firm's excess debt capacity to finance the bid."

If the firm were to recapitalize, the borrowed funds would be used to repurchase stock in the open market, as the funds are not needed

to grow the business. Tiffany's reaction to Paul's prodding is cautious, but she is willing to give Paul the chance to prove his point. Paul has worked with Tiffany for the past six years and knows that the only way he can convince her that the firm should use debt financing is to conduct a comprehensive capital structure analysis.

On the basis of previous conversations, Paul knows that Tiffany has four major concerns about debt financing: (1) the impact on the firm's return on equity (ROE) as reported in the firm's financial statements, (2) the impact on the firm's stock price and corporate cost of capital (CCC), (3) the financial effects of potential changes in business risk of RN Temps, and (4) whether industry averages have any implications for the level of debt financing of RN Temps.

Impact of Financial Leverage on ROE

RN Temps has 10 million shares of common stock outstanding, which are traded in the over-the-counter market. The current share price is \$1.20, so the total market value of the firm's equity is \$12 million. The book value of equity is also \$12 million, so the stock now sells at its book value. The firm's federal-plus-state tax rate is 40 percent. Tiffany owns 20 percent of the outstanding stock, and others in the management group own an additional 10 percent.

Although RN Temps' earnings before interest and taxes (EBIT) is expected to be \$3 million in 2014, there is some uncertainty in the estimate, as indicated by the following probability distribution:

Probability	EBIT
0.25	\$2,500,000
0.50	3,000,000
0.25	3,500,000

To address Tiffany's first concern, Paul plans to construct partial income statements (beginning with EBIT) for four levels of debt as measured by the book value Total debt/Total assets ratio: zero, 25 percent, 50 percent, and 75 percent. For this analysis, which will not be used to make the actual capital structure decision, Paul intends to use a cost of debt of 10 percent regardless of the amount of debt financing used. Furthermore, any risk implications to stockholders must be identified.

To address Tiffany's second concern, Paul used a technique to value zero-growth firms at different debt levels. Clearly, the results of this analysis do not apply exactly to RN Temps, which is expected to experience slow growth, as opposed to zero growth, over the coming years. Here are the equations used in the analysis:

$$E = \{EBIT - [R(R_d) \times D]\}(1 - T)/R(R_e)$$

$$V = E + D$$

$$P = (V - D_0)/n_0$$

$$n_1 = n_0 - D/P$$

where

- E = market value of equity
- $EBIT$ = earnings before interest and taxes
- $R(R_d)$ = cost of debt
- D = market (and book) value of new debt
- D_0 = market value of old debt
- T = tax rate
- $R(R_e)$ = cost of equity
- V = total market value
- P = stock price after recapitalization
- n_0 = number of shares before recapitalization
- n_1 = number of shares after recapitalization

Paul arranged for a meeting with an investment banker who specializes in corporate financing for service companies. After several hours, the pair agreed on the estimates for the relationships between the use of debt financing and RN Temps' capital costs, which are shown in Exhibit 19.1. Additionally, Paul obtained industry capitalization data for companies that franchise professional services along with the matching debt ratings on the basis of rough guidance given by Standard & Poor's Ratings Services. These data are provided in Exhibit 19.2.

Business Risk and Industry Averages

Tiffany's third concern is potential changes in the healthcare industry and how they might affect the basic business risk of RN Temps should they occur. To address this concern, Paul produced Exhibit 19.3, which contains leverage/cost estimates at alternative business risk levels. Note that the values in Exhibit 19.3 are for "what if" analysis purposes

EXHIBIT 19.1
RN Temps, Inc.: Estimated
Cost of Debt and Equity at
Different Amounts of Debt
Financing Under Different
Business Risk Levels

EXHIBIT 19.1
RN Temps, Inc.:
Estimated Cost of Debt
and Equity at Different
Amounts of Debt
Financing

EXHIBIT 19.2
Healthcare Franchise
Industry Data: Debt
Ratings at Different
Levels of Debt Ratio
(Total Debt/Total Assets)

only. The best current estimates of the financing costs at alternative debt levels are given in Exhibit 19.1.

Tiffany's final concern is whether industry averages have any implications for the level of debt financing of RN Temps. Paul uncovered the following additional industry data: (1) The average healthcare franchise business has a times interest earned (TIE) ratio of 4.0, and (2) RN Temps has cash and marketable securities of \$500,000. The average healthcare franchise business has cash and marketable securities on hand equal to 70 percent of its annual interest payment.

Paul also knows that Tiffany is familiar with capital structure theory and will want to know the value of the firm according to the Modigliani-Miller with corporate taxes model and the Miller model. To ease comparisons, Paul assumes that the value of RN Temps, with zero debt financing, is \$12 million in both models. He also assumes that the personal tax rates are 15 percent on stock income and 30 percent on debt income.

Put yourself in Paul's shoes and see if you can convince Tiffany that the business should use debt financing.

EXHIBIT 19.1
RN Temps, Inc.:
Estimated Cost of Debt
and Equity at Different
Amounts of Debt
Financing

Amount Borrowed	Cost of Debt	Cost of Equity
\$ 0	—	15.0%
2,500,000	10.0%	15.5
5,000,000	11.0	16.5
7,500,000	13.0	18.0
10,000,000	16.0	20.0
12,500,000	20.0	25.0

EXHIBIT 19.2
Healthcare Franchise
Industry Data: Debt
Ratings at Different
Levels of Debt Ratio
(Total debt/Total assets)

Percentile	Debt Ratio	Debt Rating
10th	10%	
25th	25	AAA
40th	35	AA
Median	50	A
60th	65	BBB
75th	75	BB
90th	82	B
		C

Significant Increase in Business Risk:

Amount Borrowed	Cost of Debt	Cost of Equity
\$ 0	—	16.0%
2,500,000	11.0%	17.0
5,000,000	13.0	19.0
7,500,000	16.0	22.0
10,000,000	20.0	26.0
12,500,000	25.0	31.0

EXHIBIT 19.3
 RN Temps, Inc.: Estimated
 Cost of Debt and Equity at
 Different Amounts of Debt
 Financing Under Different
 Business Risk Levels

Significant Decrease in Business Risk:

Amount Borrowed	Cost of Debt	Cost of Equity
\$ 0	—	14.0%
2,500,000	9.0%	14.3
5,000,000	9.5	15.0
7,500,000	10.5	16.0
10,000,000	12.5	17.5
12,500,000	15.5	20.0