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Business Valuation

The following exercise is meant to solidify concepts learned in Chapter 13, Business Valuations. This business valuation project will help with understanding how current information can be used to forecast future cash flow activity. Use the assumptions listed hereunder to fill out the Business Valuation spreadsheet found online at remedybooks.com under the *Students* tab.

Scenario

A beginning health care provider has worked in an associate position for three years. Before starting the position, the beginning provider negotiated for the right to retain all patients attracted through personal efforts. This agreement allows the beginning provider to transition a patient base that was personally developed over to a new organization at no cost.

Out of desire to start a personal health care practice, the beginning provider started putting together a business plan with relevant marketing, financial and management sections. The financial section will include a projection of cash flows (business valuation) to determine (1) if the organization can generate sufficient net profit on a risk adjusted basis and (2) if the organization will experience any periods of negative cash balances.

The beginning provider has conducted exhaustive research and developed the following assumptions.

Inflation

Based upon a top-down analysis of macroeconomic forces, the beginning provider agrees with a panel of expert economists who say the economy will experience a 2% estimated rate of inflation on average over the coming years.

Revenues

A. General Decline: Based on conversations with current patients, roughly 10% will not transition over to the new organization because of commuting or other issues. The beginning provider has 40 personal patients under ongoing care at the moment. These 36 (40 x 90%) continuing patients are three-quarters through their care on average resulting in a patient margin equal to one-fourth of what will be estimated in *Part D* below.

B. New Patients: The beginning provider has built an extensive network over the past three years of 200 close relationships, 1,800 acquaintances, and 40 strong referral sources. One new patient each month comes from close relationships currently whereas 2 are from acquaintances. The referral sources produce 2 new patients per month. The beginning provider feels this patient flow is sustainable and can continue going forward. To keep the cash flow projection financially conservative, any potential increase to the number of new patients has been ignored.

C. Returning Patients: The beginning provider does not have an extensive history regarding former patients restarting care again at a later moment due to the lack of a long-term presence. According to conversations with other health care providers with 10 years of experience or less, about 50% of former patients restart care after a 3-year time period on average. In the three years of working as an associate, the beginning provider has seen 20, 40, and 58 new personal patients, respectively. Half of those seen in the beginning year of working as a health care provider should begin to reappear in the first year (Year 1) covered by the business valuation, less the 10% general decline. For example, the new organization should experience 8 (20 x 50% x 90%) former patients restarting care in Year 1, 18 in Year 2, and 26 in Year 3. Patients brand new to the organization in Year 1 should begin to reappear in Year 4, and so forth, *without* any general decline. Half of the 8 former patients seen again in Year 1 of the cash flow projection will reappear in Year 4 as well. Year 4 , Year 5, and terminal year estimations need to include both of these sources of returning patients. For example, if 60 new and 8 returning patients are seen in Year 1, half of these will reappear in Year 4 totaling 34 returning patients.

D. Patient Margin: The beginning provider expects each new or returning patient to spend $800 on average before ending care. This amount should increase per inflation. Patients that will transition over to the new clinic immediately will generate only one-fourth as much revenue on average.

E. Terminal Year: Assumptions used to establish cash flows in Years 1 through 5 will carry forward and apply to the terminal year as well.

Set up amounts using the aforementioned assumptions under the REVENUES tab. Amounts will automatically adjust for inflation. Note how the inflation rate compounds causing amounts to increase with time. The beginning provider assumes that the new organization will also generate $1,000 in product revenue in Year 1 and this amount will increase each year per the estimated rate of inflation. Amounts will automatically adjust for inflation per the built-in formulas.

Purchases

1. The new organization will invoke U.S. tax code section 179. Depreciation will equal the amount paid for capital expenditures (fixed assets) in the year the assets are placed into service. Since assets are fully depreciated, the sale of a fixed asset will result in a gain equal to the asset's sales price. The beginning provider will purchase an estimated $5,000 in furniture, equipment, and decorations in Year 1 using cash savings. A treatment table will be sold for an estimated $150 in Year 3 and replaced immediately with a nicer table costing $600 per a growth plan. A gain of $150 will be realized in Year 3 of the cash flow projection under *Revenues*.

2. A one-time $1,500 in legal expenses used to incorporate the business will be amortized equally over 15 years as an *intangible* using the straight-line method. The amortization expense will equal $100 per year and will not adjust per inflation.

Interest Expense

3. An uncollateralized line of credit has been established with a local bank with a $10,000 limit. Amounts that are taken out will bear interest charges of 6% until paid back. The low interest rate of 6% is possible because a relative cosigned on the loan. The beginning provider expects to take out $5,000 at the beginning of Year 1 to pay for the additional working capital needs. The line of credit balance will be reduced by $2,500 at the end of each subsequent year. Interest charges will apply to a total loan balance

of $5,000 in Year 1 and $2,500 in Year 2 only. For example, interest charges in Year 1 will equal $300 ($5,000 x 6%).

Expenses

All expense accounts are adjusted for inflation automatically.

4. A full-time staff member will be hired to bill insurance, answer the phone, and greet patients. The salary will equal $20,000 per year.

5. The beginning provider has already put together marketing materials, including a logo, website, and business card. Since these upfront costs have already been spent, advertising expenses should total $600 per year.

6. One hundred miles will be driven each month to run errands. The standard mileage rate on the IRS website is set at 50 cents per mile for the coming year.

7. The cost to keep a business checking account open equals $50 per year.

8. In order to build community, the beginning provider expects to donate $200 to charities per year.

9. The beginning provider has budgeted $300 per year for computer expenses. Amounts will not be subject to depreciation because they are not larger than the organization's capitalization policy.

10. Continuing education should cost $500 to maintain licensure and train employees.

11. In order to improve the waiting room experience, $150 will be spent for magazine subscriptions and books each year.

12. A licensed insurance agent has given a quote for malpractice, disability, and business continuity insurance. The total cost will equal $2,000 per year.

13. A triple-net lease will be signed for a mid-sized rental space. The current range for the area is between $1,000-1,500 per month. The beginning provider wants to use the low end of the range ($1,000) because of financial constraints. Most rental leases in the area require a fixed five-year commitment.

14. Legal and tax preparation expenses should equal $2,000 annually based on quotes from licensed professionals.

15. The beginning provider will need to pay $200 per year to keep a professional license active.

16. Sales luncheons will be used to extend the organization's network and referral system. The cost should equal an estimated $600 per year. An additional $200 should be spent eating meals with other prospects apart from the organized sales luncheons.

17. Based on conversations with health care providers, office expenses should average 4% of service revenue. Postage and delivery charges are included in this number. Amounts are calculated automatically.

18. Payroll taxes will equal 13% of wages. This amount will be levied on the $20,000 in staff member wages. Amounts are calculated automatically.

19. The beginning provider has budgeted $300 each year to repair and maintain furniture, equipment, and the interior part of the building. The triple-net lease will make the building owner responsible for any external repairs and maintenance that may be needed.

20. According to a quote given by the telephone company, telephone expenses shall run $800 per year.

21. Utility companies estimate that the cost for electricity, water, sewage, and garbage should equal $1,550 per year for a mid-sized rental space.

Free Cash Flow Adjustments

A. Interest expense is added back to net profit when calculating free cash flows to the firm. This adjustment has already been built into the spreadsheet.

B. A tax professional looked at the beginning provider's personal and business activity and estimated an effective tax rate of 18% will apply. Since the organization will file Form 2553 and operate as an S corporation, a corporate level income tax will not apply.

C. Depreciation and amortization expense are noncash items that are mentioned above. Equipment will be purchased in Year 1 totaling $5,000 and $600 in Year 3. Amounts spent to set up the business are treated as intangibles and total $1,500 in Year 1.

D. The new organization does not expect to see material changes to working capital (current assets minus current liabilities) except for the working capital loan. The loan balance of $5,000 reflects an increase in Year 1. The $2,500 end-of-year payments are reflected as decreases in Years 2 and 3.

Discount Rate

In conversations with other health care providers and business owners, a risk premium of 20% has been recommended based on past economic conditions. Since the economy faces a high risk of a recession, the beginning provider would like to add an additional 5% for increased systematic risk going forward. The total discount rate to be used equals 27% after adding 2% for estimated inflation.

Growth Rate

Based on a top-down analysis of macroeconomic forces, the beginning provider agrees with a panel of expert economists that say the economy will grow at a 3% estimated rate on average over the coming years. This growth rate is used to modify the terminal free cash flow.

Questions

1. Why might health care organizations experience an immediate reduction in the patient base upon making a permanent transition?

2. What assumptions should be considered when calculating the estimated patient margin?

3. What expenses could the organization try to reduce in an effort to become more profitable?

4. How might reducing certain expenses hurt the patient experience or the production of revenues?

5. Could this beginning provider improve the patient experience or increase the production of revenues using inexpensive or FREE alternatives?

6. What are some expenses the beginning provider might have overlooked in setting up this valuation?

7. Would the beginning provider earn enough each year to cover personal living expenses?

8. Should the beginning provider start and operate this new organization as planned?