A Case Study on the Statistical Sensitivity of Conclusions in an Auditor's Going Concern Report

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Abstract

I have developed a case study that addresses how auditors evaluate a client's going concern assumption. In this case scenario, the client has significant negative trends indicating doubt about its ability to continue as a going concern. To mitigate the going concern issue, the client uses a discounted cash flow valuation to show the auditors its projected financial position. Students, acting as auditors, must evaluate the feasibility of management's discounted cash flow analysis and make a judgment on whether the going concern issue is mitigated.

Introduction

To fulfill my undergraduate Honors College requirements, I have developed the following case study that addresses how auditors evaluate going concern. In this case scenario, I demonstrate the subjectivity of discounted cash flow valuation conclusions and the sensitivity of key variables within the calculation itself.

This paper is presented as follows. First, I discuss the need for auditors to evaluate a company's financial statements including the entity's ability to continue as a going concern. Second, I discuss the capitalization method for valuing an asset. The capitalization method discounts future cash flows back to present value using a company-specific discount rate. Third, the case that students will complete is provided (some information required for the case is found in Appendix A). Following the case is the outline of the case objectives and implementation guidance.

Auditors' Responsibility

The American Institute of Certified Public Accountants develops Statements on Auditing Standards (SAS). These standards apply to external auditors regarding audits of non-public companies. SAS No. 59, "The Auditor's Consideration of an Entity's Ability to Continue as a Going Concern," provides guidance to the auditor in conducting an audit of financial statements in accordance with generally accepted auditing standards, specifically with respect to evaluating whether there is substantial doubt about the entity's ability to continue as a going concern.

The auditor's evaluation is based on his or her knowledge of the relevant conditions and events that exist or have occurred prior to the date of the auditor's report. Information regarding such conditions or events is obtained from auditing procedures performed to achieve objectives related to management's assertions in the financial statements being audited.

Throughout the course of the audit, the auditor should consider whether there are conditions and events that, when considered in the aggregate, indicate there is a substantial doubt. These conditions and events include negative financial trends, internal and external matters, and other problems that can arise in today's complex business environment. Examples of negative financial trends include recurring operating losses, working capital deficiencies, negative cash flows from operating activities, and adverse key financial ratios. Other indicators of financial distress can come from defaults on loans or bonds, arrearages in dividends, and the restructuring of debt. Internal matters that can create doubt about the going concern assumption relate to events like work stoppages, labor difficulties, substantial dependence on a project, and unprofitable long term commitments; external matters are events such as the loss of a key franchise, license, patent, principle costumer/supplier, or underinsured asset.

If the auditor determines there is a substantial doubt, then he/she should obtain information about management's plans to mitigate the effect of such conditions or events, and assess the likelihood that such plans can be effectively implemented. Management's plan to mitigate the going concern assumption can include changes made to improve operating efficiencies and effectiveness, infusion of cash to offset negative cash flows, and the liquidation of certain assets. After management's plans are received by the auditor, the auditor must then determine the feasibility of those plans which requires a great deal of professional judgement.

If the auditor concludes that management's plan to mitigate the going concern assumption are feasible, then no modification to the auditor's report is needed, although the condition leading to the doubt may warrant disclosure. However, if the auditor concludes that management's plans are not feasible, then he/she should consider the adequacy of disclosure about the entity's possible inability to continue as a going concern for a reasonable period of time. The auditor should also include an explanatory paragraph, following the opinion paragraph, in his audit report to reflect his/her conclusion.

When an entity is labeled as having substantial doubt in its ability to continue as a going concern, it can have drastic effects not only on the entity's operations but on public perception as well. The issuance could limit the ability of a company to raise capital through common capital markets. Most creditors would be weary to purchase stocks in, or issue debt, to a company that has the risk of going out of business within one year. This inability to raise capital is a huge problem for companies. Capital is ultimately what is needed to execute many of the plans management has to stabilize the company. In addition to the inability to raise capital effectively, suppliers of the company might begin to decline transactions on account. Many businesses do not have cash readily available for the materials needed to produce its goods or perform its services. Not having trade credit could have massive effects on the company's operations as it might be unable to produce items at the same efficiency or price that it is accustomed to. If the company produces costly goods with extended lifetimes, customers might also be weary of purchasing them due to the fear of not being able to utilize warranties after the company goes under. All of these consequences, in addition to the already present negative trends, that create the going concern issue can make it difficult for companies to recover from possible liquidation.

Discounted Cash Flow Valuation

A common way of measuring the value of a company is by using the capitalization method of discounted cash flow valuations. This is where future cash flows of a project/business are estimated and then discounted back to present value. The discount rate represents the required rate of return on an investment, the return on a comparably risky project, or the weighted cost of capital for a company. After estimating these cash flows and discounting them to present value, the computations are compared to upcoming financial obligations to find the net present value of the business.

The discount rate used in valuing a company can be difficult to determine. Many companies are funded through a complex capital structure in a world of dynamic markets and legal authority. The discount rate should ultimately represent what it costs the company to raise its capital. This is represented by the weighted average cost of capital (WACC) for the company. The WACC is comprised of the required return on equity from investors and the cost of its debt financing. The WACC of a company takes into account the capital structure, weights of debt and equity of the company, and applies it to the costs associated with raising capital through each of the respective source.

The required return on equity for a company is best calculated using the Capital Asset Pricing Model (CAPM). The CAPM is based on the linear relationship between the required return required on an investment and its systematic risk. This linear relationship creates what is called the Security Market Line. The CAPM finds the required return by taking the risk-free rate available in the markets and adding it to the market premium at the time multiplied by the company's systematic risk, or Beta. Beta represents a security's systematic correlation to the market. The market premium is found by subtracting the risk-free rate from the average market return for that period. The average market return itself is a percentage that can be found through multiple different methods. It can be represented by returns for major indexes, industry specific averages, or estimated future market returns.

The cost of debt for the company is represented by the interest rates on its long-term debt. Many companies have multiple financial obligations with different interest rates. A weighted average of the effective annual rates for each of the obligations is an effective representation of the cost of debt financing. Another thing to consider when calculating cost of debt financing is that interest expense reduces tax liability for the company. This reduction in taxes also reduces the company's cost of debt.

Given the complex relationships that impact cash flows, discount rate sensitivity analysis is conducted on individual variables within the cash flow projection as well as on the discount rate calculations. Small alterations in key variables can cause drastic changes in the resulting calculations. The variables that are indicated as being value drivers of cash flows should be analyzed for risk associated with the likelihood of meeting the expectation. If a certain driver seems particularly risky, scenario analysis will display potential results from each potential occurrence.

The Case

Background

Assume you are a staff auditor with a local public accounting firm, Smith CPAs. You have recently completed an audit of a hotel chain in another city and the firm would like you to use your recently gained expertise on a local client, PeeDee's Hotel. When you arrive on the client site, you are introduced to PeeDee's owner and CEO, Samuel Kyle. You begin to discuss the history of the company with him and learn that he wanted to open this business to give parents of the local university students a comfortable yet affordable place to come and visit their children. His dream started when he was a student at the local university. Like many freshman, Samuel did not have a car and when hit with homesickness, he had no available option to visit his family. At the time, there were no hotels in close vicinity to the university that were affordable enough for his family to visit him. He saw this as a chance to create something to help the many students who faced this obstacle during their college stay.

When Samuel opened the hotel 45 years ago, it began as a private company and was the only hotel within 40 miles of the university. PeeDee's survived mostly from football game weekends in the fall, and graduation and academic ceremonies in the spring. PeeDee's controlled the market for many years and became the go to hotel in the area for everything related to the local university; the university even promoted it as "the place to stay" when visiting. As the university began to grow, PeeDee's was reaping the rewards as well. Samuel and his management team did not see an end to their success. They had become accustomed to their market position and adapted their business model to their consistent customer base. Some 25 years after opening, Samuel's team decided to issue shares of stock to local investors. Although these equity securities were not traded on a major exchange, they served as a representation of ownership for the local investors.

Over that last decade, the local university experienced a great deal of growth. The university invested heavily in its College of Business and it was becoming more popular each year, attracting thousands of new students. One of those thousands was a local basketball prospect. Last year the basketball team, along with the help of the local prospect, made it deeper into the NCAA tournament than ever before. This publicity at a national scale helped spread the university's name. After 40 years of being the only hotel in town, Samuel watched as four hotel chains opened within a ten-mile radius of PeeDee's Hotel. Samuel initially thought it was silly for them to attempt to compete with PeeDee's after it had successfully held the local market for so long. He believed that his presence could not be deterred and that the families of students would acknowledge that PeeDee's was the place to stay no matter what other options were available.

Since opening its doors, PeeDee's business model was to provide the highest quality experience for a cut rate cost. This approach fairs well when there is a large, consistent customer base to offset the smaller profit margins associated with providing the higher quality services. Due to the cyclical nature of occupancy in the hotel, it was already difficult to provide the same measure of quality during the "off seasons" for the hotel. The national hotel chains coming to town make it that much harder for PeeDee's to survive. Samuel knew he had to change his business model. He noticed the occupancy rates dropping steadily over the few past years but believed the hotel would persevere through the rough times and maintain a consistent customer base large enough to support the costs of running a hotel.

Ten years ago, the company opened an in-house café and a heated pool to add some attractiveness to the hotel and financed both with long-term bonds. Although, PeeDee's has had net operating losses in the past four years, it had enough equity to offset these losses and continue operations while meeting its expenses as well as interest payments on the bonds. However, to meet its operating expenses, PeeDee's missed its first semi-annual interest payment of $400,000 earlier this year. With another interest payment coming due within the next month, there is suspicion that PeeDee's will default on this payment as well.

Doubt About PeeDee's Going Concern

You have identified a few negative trends in regards to PeeDee's operations including recurring operating losses, working capital deficiencies, and negative cash flows from operating activities, in addition to the company's recent failure to make its interest payment. As a result, you believe there is substantial doubt about the PeeDee's ability to continue as a going concern over the next year. You bring these concerns to the audit senior, Karen, who has worked with this client for the past three years. She agrees that these are very concerning and that you both will discuss them with Samuel before taking them to the rest of management.

Samuel comes into the room with you and Karen and asks how the audit is going. Karen tells him that the procedures are running smoothly and, as always, is thankful for his and the rest of management's help in conducting the audit. Karen begins to discuss with him the financial position of the company, which he is aware of, and how PeeDee's might not be able to survive for much longer given the current conditions.

Samuel replies, "Oh come on, PeeDee's has gone through much tougher times and business is picking up anyways. Our café recently was highlighted in the best breakfast stops in Collegeville and with our basketball team being ranked this year, winter will be our best one yet."

Karen notes, "While this is their highest advertised season, basketball still does not attract the masses of people that football does. Most of the games are during the week which keeps people from making the trip to an isolated town like Collegeville."

Samuel answers, “I’ve gone through the schedule and all of our rivalry and ranked games are on the weekends. I am telling you this will be the best year for us in terms of the winter season! Because we missed our interest payment earlier this year, if your opinion has a going concern statement, you know how much that will impact us. You would be putting the nail in the coffin by releasing a going concern report Karen. Our bond rating would fall to junk bond status and the banks will be at our door the next day to collect as much as they can.”

Karen puts her head down for a moment not sure what to say. You chip in, “Samuel, unfortunately our job, as public accountants, is to protect the users of financial statements not the creators. It is our job to give an independent and unbiased opinion on the financial statements of our clients, and unfortunately, if that means issuing a going concern, it is our responsibility to do so.”

Samuel replies, “When I first hired your firm I was assured you were committed to the future of my company and that you would do everything in your power to see that through. I guess I was wrong.” Samuel then stormed out of the room.

You look at Karen and say, “I know this is a tough position for us but he has to understand this is our job and we cannot hide the truth in our opinion.”

Karen replies, “He understands that. He just cares so much about this company and knows what could potentially happen when this news hits the street. He’s simply looking to protect his company and everyone that is dependent on it. He cares about all his employees as if they were family. On top of that, after the success of the hotel, his wife left her job to raise the kids and now this company is the sole source of income for them.”

You think for a second respond, “I do see where he’s coming from. This obviously is very important to him. However, it is also very important to the users of financial statements that will be using our opinion as a basis for investment decision making. Leading people to believe this company is still in good standing can mean the loss of money for them too. You seem to know Samuel really well Karen. How long have you been the senior on this client?”

Karen quickly answers, “Only three years, but Samuel and I know each other pretty well.”

You ask, “Really, how so?”

Karen answers “Samuel and I are from the same hometown. His son, Pete, and I were close friends through childhood. We both ended up coming to the local university and continued our friendship there. Our families were pretty close and shared a beach house. Our parents passed the house down to both of us and we now both own half. So we have gone on family vacations together since childhood. We don’t get to go as often as we’d like anymore but it is still a nice getaway for both our families.”

You say, “Wow that’s interesting I never knew you went to school here. However, does the managing partner know about you and Samuel’s relationship? I would hate for something like that not have been cleared beforehand and you have to deal with the circumstances of an independence issue.”

PeeDee's Plans to Mitigate the Going Concern

Samuel reenters the room and lays down a folder of files on the table, "Here is our internal report on projected revenue for the year based on average occupancy rates, fees, expenses, amenities revenue expenses, the whole nine yards. We also included our calculation of the suggested discount rate to apply to the cash flows. We incorporated a small increase of 5% in occupancy rates for the months of January and February. We feel that is a very comfortable estimate for the busy winter season ahead of us. We also incorporated our new housekeeping policies that are expected to lower variable costs per room by 20%. We use a logistics program to map the most efficient route for the housekeeping teams, which lowers to total labor time required in daily maintenance."

You reply, "Thank you, Samuel. I'm looking forward to going over these and will come to you if I have any questions or need any help. I hope there are no hard feelings from me pushing this investigation. I certainly do care about your company and those invested in it and that is the why I am here in the first place. I assure you I understand the stress a going concern report can place on a business and I would never issue that opinion without being reasonably assured that my opinion is relevant."

Samuel extends his hand and says, "Of course, no hard feelings. I am emotional about my company and can come off the wrong way at times. I know you are doing your job, but we analyzed this internally already and I am certain we can survive. I'm looking forward to discussing it more after you review the report."

Your firm has also supplied you with industry standard data relevant to similar sized hotels. You are required to gather all the data together and conclude what you believe to be the most relevant and reliable information for your assumptions in the calculation of the hotel's net present value.

Case Requirements

1) What is going concern? What responsibilities does the auditor have in evaluating whether there is substantial doubt about an entity's ability to continue as a going concern? What steps should the auditor take after identifying negative trends that indicate an entity's inability to continue as a going concern?

2) Review the data provided from management's report on the present value of the company and your firms industry average information. After your review, conclude what you feel is the most reliable and relevant set of data to be used. Create a report with your conclusion to present on the financial status of the hotel for the next year. (See Appendix A below)

    a. Use this information to project the hotel's cash flows the following year. For simplification, assume 30 days per month.

    b. Are management's plans to mitigate the negative trends feasible?

    c. Discount the projected cash flow back to present value using an appropriate discount rate and calculate the net present value of PeeDee's. Has management mitigated the doubt in PeeDee's ability to continue as a going concern? Prepare this calculation and your conclusion in an appropriate manner to give a report to Karen, Samuel, and the rest of management at the hotel.

3) What should you do in regards to your concerns about Karen's independence with the client?

Post-Case Review

1) As a class discuss your concerns with any information presented to you to be used. Discuss your decision-making criteria and why you believed that information was the best to be used. Reflect on how subjective decision making can be in an unknown field where many variables can be seemingly relevant.

2) Review the provided sensitivity analysis of the discount rate on the calculation of PeeDee's net present value. Reflect on how minute changes in these percentages can cause drastic changes in calculations and conclusions.

Case Learning Objectives and Implementation Guidance

In this case, a hypothetical hotel, PeeDee's Hotel, is being audited. Students will serve the role of an auditor who has identified significant information in regards to the hotel's ability to continue as a going concern. According to SAS No.59, the ability to continue as a going concern relates to the entity's ability to continue to meet its obligations as they become due without substantial disposition of assets outside of the ordinary course of business, restructuring of debt, externally forced revisions of its operations, or similar actions. Auditors have a responsibility to evaluate whether there is substantial doubt in regards to an entity's ability to continue as a going concern for a reasonable period of time, which refers to a time period not to exceed one year beyond the date of the financial statements being audited.

The PeeDee's Hotel case was written with four objectives in mind: (1) To enable the student to use critical thinking skills to establish guidelines and identify reasonable variables to be used in their calculations, (2) to display the subjectivity of the going concern assessment, (3) to display the sensitivity involved with discount rates used in discounting cash flows, and (4) to help students make ethical decisions regarding independence issues in the context of auditor-client relations.

The first objective is met by presenting students with a plethora of arguably relevant data from a variety of sources that will be used not only as the basis of their audit but also as the variables within the calculations. The students will also be required to evaluate management's plans to mitigate the effect of the current conditions. Students will be required to decide what data is the most relevant and reliable for use in their calculations to support their opinions. This data includes uncertain variables such as average occupancy rates, average room rates, average costs, average amenity revenue and costs, etc. The exposure to so much similar information will display the subjectivity involved in creating these calculations in the real world compared to classroom style examples. Students will be exposed to the concept that there are multiple options that could answer what is needed, however there is a process to determining the most reliable and relevant in the scope of their audit procedures.

The second objective will be met after the students have completed the case and as a whole will compare their results with each other. They will find that there are multiple ways to approach the issue at hand and each of them will have their own rationale of why they chose the data set they did for the basis of their assumption. This will highlight the importance of context in receiving information and how a person can be misled to believe that certain data is much more relevant and reliable than the reality at hand.

The third objective will be met by the sensitivity analysis provided at the end of the case. The sensitivity analysis will graphically display the differences in valuations that result from minute changes of discount rates in the discounted cash flow calculation. This analysis along with the discussion involved with issue number two above, will expose the students to just how much subjectivity and sensitivity there is within the going concern auditing standard. They will see how easy it is to use a broad stamp approach to the valuation of a company without applying any critical thinking and coming up with a valuation that is built off of incorrect assumptions and data. This incorrect valuation could be used to determine the entity's ability to continue as a going concern and cause great financial distress for the entity that with due diligence would have been avoided.

The fourth objective will be met with a potential independence issue in the case that is the result of questionable auditor-client relations. There will be multiple examples that can be switched in and out of the case to change it up from time to time that will include issues such as being the godparent of one's child, use of a vacation home, being neighbors, etc. This will require students to evaluate and decide whether or not they believe this will raise and issues in regards to independence of the auditor.

Appendix A:

PeeDee's Hotel

Memorandum

To: Audit Team

From: PeeDee's Management

PeeDee's Management has conducted an internal analysis on the company's net present value in regards to its interest payments coming due. Below is a chart showing our projected occupancy rates for the upcoming year. We feel that the basketball team's success this year will attract more revenue for PeeDee's specifically in the months January and February. We believe that rates for these months will increase at least 5% for this year due to our increased advertisements at basketball games.

Average Occupancy Rate by in Month in Percentages	Last Year	Management's Projections
January	30%	35%
February	30%	35%
March	35%	35%
April	35%	35%
May	90%	90%
June	30%	30%
July	30%	30%
August	70%	70%
September	90%	90%
October	85%	85%
November	85%	85%
December	65%	65%

PeeDee's staff have recently been trained on a new housekeeping system that results in less staff required for the same amount of rooms. We expect this new system to save us 20% on the overall variable costs associated with occupied rooms. This results in variable costs being $40 a room rather than $50.

Hotel Cashflow Variables	Last Year	Management's Projections
Number of rooms	100	100
Average Room Rate	$100	$100
Average Variable Cost per Room	$50	$40
Fixed Costs per Month	$75,000	$75,000

Below are our projected cash flows generated by the hotel. We assumed a 30-day month to estimate these cash flows.

Revenue Projection				
Month	Occupancy Rate	x100 rooms = daily occupancy	x30 Days per month = monthly occupancy	x$100 Room Rate = Monthly Gross Revenues
January	35%	35	1050	$ 105,000.00
February	35%	35	1050	$ 105,000.00
March	35%	35	1050	$ 105,000.00
April	35%	35	1050	$ 105,000.00
May	90%	90	2700	$ 270,000.00
June	30%	30	900	$ 90,000.00
July	30%	30	900	$ 90,000.00
August	70%	70	2100	$ 210,000.00
September	90%	90	2700	$ 270,000.00
October	85%	85	2550	$ 255,000.00
November	85%	85	2550	$ 255,000.00
December	65%	65	1950	$ 195,000.00
			Gross Revenues =	$ 2,055,000.00

Below are our projected expenses associated with these revenues. We assumed a 30-day month to estimate these cash flows.

Variable Costs Projection				
Month	Occupancy Rate	x100 rooms = daily occupancy	x30 Days per month = monthly occupancy	x$40 Variable Cost Per Room = Monthly Variable Costs
January	35%	35	1050	$ 42,000.00
February	35%	35	1050	$ 42,000.00
March	35%	35	1050	$ 42,000.00
April	35%	35	1050	$ 42,000.00
May	90%	90	2700	$ 108,000.00
June	30%	30	900	$ 36,000.00
July	30%	30	900	$ 36,000.00
August	70%	70	2100	$ 84,000.00
September	90%	90	2700	$ 108,000.00
October	85%	85	2550	$ 102,000.00
November	85%	85	2550	$ 102,000.00
December	65%	65	1950	$ 78,000.00
			Total Variable Costs =	$ 822,000.00

These calculations along with 12 months of $75,000/month in fixed costs results in the following net profit from hoteling services.

Gross Hoteling Revenue	$ 2,055,000.00
Total Hoteling Variable Costs	$ (822,000.00)
Total Hoteling Fixed Costs	$ (900,000.00)
Total Net Hoteling Profit	$ 333,000.00

The following information relates to the projection of cash flows for the in-house café. We recently have been highlighted as a premiere breakfast spot in Collegeville and expect an increase in customer base. We estimate a 10% growth of revenues for the following year.

Café Cashflow Variables		
Last Year Total Revenues		$256,000
Average Profit Margin		50%
Expected Revenue Growth		10%
Expected Next Year Revneue =	Last Year Revenue*(1+Growth Rate)	
Expected Revenue =	$	281,600.00
x Profit Margin		0.5
Net Profit from Café	$	140,800.00

Total Net Hoteling Profit	$333,000.00
Total Net Café Profit	$140,800.00
Total Net Profit	$473,800.00

We believe the appropriate discount rate to value these cash flows is 6%. We have considered current market trends within the hotel industry and in the capital markets. The hotel industry Beta average is declining and therefore, shareholders are requiring a lower return on their investments. We believe this rate adequately represents the current cost of capital for the company. Below is our discounted cash flow calculation for next year.

Discounted Cashflow Calculation
Present Value = Future Value / (1+Discount Rate)^t
PV = $473,800 / (1+.06) ^1
$446,981.13

After comparing the present value of PeeDee's future cash flows to its $400,000 interest payments coming due, you can see PeeDee's has a net present value of $46,981.13. After effectively mitigating the going concern by increasing café revenue and off season revenues while cutting variable costs, PeeDee's has put itself in a position to thrive in its current economic position. PeeDee's negative trends are in its past and ahead is a bright future.

Appendix B: Potential Extra Assignment WACC Calculation

1) Use PeeDee's information regarding its capital structure below to calculate PeeDee's weighted average cost of capital.

Firm's Company and Industry Analysis Data

PeeDee's Cost of Equity:	
Risk Free Rate =	3%
Return on the Market =	14%
Similar Sized Hotel Betas =	0.9

PeeDee's Cost of Debt	
Borrowing Rate on debt	6%
Corporate Tax Rate	35%

PeeDee's Capital Structure Weights	
Debt	40%
Equity	60%