

## **Gonzalez Energy Partners: A Hypothetical Teaching Case Study of Financial Statement Analysis and Firm Valuation**

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In the process of earning AACSB-International accreditation in 2017, the College of Business Administration at Texas A&M University-Kingsville demonstrated curriculum quality at the graduate level is assessed through student completion of hypothetical cases. The Gonzalez Energy Partners (GEP) case has been used in the Financial Management and Sustainability (FINC 5347) to assess graduate student written communication skills and critical thinking skills. This case represents a detailed analysis of the hypothetical financial aspects of a mid-sized company in the energy industry. In the process of evaluating the financial strengths and weaknesses of GEP, students will be engaged in financial statement analysis, capital budgeting, financial security valuation, and time value of money techniques. The case is applicable at either advanced undergraduate or graduate levels.

The rough layout of this case follows that of “Trak Software, Inc.” which is an integrative case in Gitman and Zutter (2012, pp. 215-218). The textbook used in the author’s class is Financial Management: Theory and Practice (2017) by Brigham and Ehrhardt. Adjusting the industry, personnel, cash amounts, questions, and multiple other factors, frequently on an individual student basis, helps minimize the opportunities of MBA students to use online resources to answer the case.

### **THE CASE**

#### **Mr. O’Sullivan Makes an Offer**

Samantha Gonzalez recently posted information about her firm, Gonzalez Energy Partners, LLC (GEP), on “AngelFinder” an online angel investor website where entrepreneurs can share information about their firms, attract investor interest, and gain insight to firm valuation. She was totally flabbergasted that Mr. Bradley O’Sullivan, a frequent panelist on the hit television show “FishTank” responded. Mr. O’Sullivan’s has offered Samantha \$2 million for GEP. After sharing 35 percent with GEP partners, her share would be \$1,300,000. Through discussion with Mr. O’Sullivan, Samantha found out that he uses a twelve percent discount rate on projects with GEP’s level of risk. By comparison, Samantha uses a nine percent required rate of return on new projects. Should Samantha accept Mr. O’Sullivan’s offer?

#### **Background**

After 15 years in of rising through the ranks at Kleberg Drilling, Inc., Samantha Gonzalez, CFA, resigned her position as manager of Kleberg Drilling’s land acquisition and leasing division and started Gonzalez Energy Partners, LLC. During the years preceding her departure from Kleberg Drilling, Samantha had spent weekends and nights developing a sophisticated land valuation model based upon

crude oil futures prices that became GEP's primary land appraisal vehicle. As the firm grew, Samantha planned to develop and expand the model to other energy industry assets such as drilling platforms.

Although Gonzalez Energy Partners experienced losses during its first years of operation, GEP's profit has increased fairly steadily over the past six years. The firm's history, including dividend payments and contributions to retained earnings, is summarized in Exhibit 1.

Samantha started the firm with a \$200,000 investment—her savings of \$100,000 as equity and a \$100,000 long-term loan from the bank. She had hoped to maintain her initial 100 percent ownership in the corporation, but after experiencing a \$100,000 loss during the first two years of operation (2011-2012), she sold 35 percent of GEP stock to a group of investors to obtain needed funds. In total there are 500,000 shares of stock outstanding, 325,000 of which are owned by Samantha. In order to enhance the attractiveness of the issue, Samantha added "partners" to the firm's original Gonzalez Energy name. Since then, no other stock transactions have taken place. In addition to being the majority shareholder, Samantha actively manages all aspects of firm activities, while the other stockholders are not active in management of the firm. The stock's market value was \$2.98 at the end of 2017 and \$3.27 at the end of 2018. This represents 9.7 price appreciation and a total return of 10.1 percent when the dividends are included.

Samantha has just prepared the firm's 2018 income statement, balance sheet, and statement of retained earnings, shown in Table 2, Table 3, and Table 4, respectively, along with the 2017 balance sheet.

In addition, she has compiled the 2017 ratio values and industry for 2018, which are summarized in Table 5. She is quite pleased to have achieved record earnings of \$78,000 in 2018, but she is concerned about the firm's cash flows. Specifically, she is finding it more difficult to pay the firm's bills in a timely manner and generate cash flows to investors—both creditors and owners. To gain insight into these cash flow problems, Samantha is planning to determine the firm's 2018 operating cash flows and free cash flows.

Samantha is further frustrated by the firm's inability to afford to hire a chemical engineer with an MBA degree to complete development of a revenue-based cost estimation package that is believed have "breakout" potential in terms of risk assessment during project valuation. Samantha began development of this package a year ago, but the firm's growing complexity has forced her to devote more of her time to running GEP, thereby halting this project. Samantha's reluctance to fill this position stems from her concern that the added \$105,000 per year in salary and benefits for the position would certainly lower the firm's earnings per share (EPS) over the next few years. Although the risk estimation protocol's success is not guaranteed, Samantha believes that if the money were spent to hire the chemical engineer with a good understanding of finance, GEP's sales and earnings would significantly rise after two or three years.

**TABLE 1**  
**GONZALEZ ENERGY PARTNERS**  
**2011-2018 NET INCOME, DIVIDEND PAYMENTS, AND RETAINED EARNINGS**

All dollars in Thousands (\$000)								
Year	2011	2012	2013	2014	2015	2016	2017	2018
Net income	-\$70	-\$30	\$20	\$45	\$35	\$50	\$53	\$78
Less: Dividends paid	0	0	0	0	0	1.5	2.5	5
Change in Retained Earnings	-\$70	-\$30	\$20	\$45	\$35	\$48.5	\$50.5	\$73

**TABLE 2**  
**GONZALEZ ENERGY PARTNERS**  
**INCOME STATEMENT, FOR THE YEAR ENDED DECEMBER 31, 2018**

All dollars in Thousands (\$000)	
Sale Revenue	\$ 3,100
Less: Cost of goods sold	<u>2,060</u>
Gross profit	\$ 1,040
Less: Operating expenses	
General and administrative expenses	\$246
Marketing-related costs	654
Depreciation expense	<u>16</u>
Total operating expenses	916
Operating Profit (EBIT)	\$124
Less: Interest expenses	<u>4</u>
Earnings before taxes	\$ 120
Less: Taxes	<u>42</u>
Net income	\$ 78

**TABLE 3**  
**GONZALEZ ENERGY PARTNERS**  
**BALANCE SHEETS**

All dollars in Thousands (\$000)		
Assets	12/31/2018	12/31/2017
Cash	\$25	\$21
Accounts receivable	130	124
Inventories	<u>140</u>	<u>135</u>
Total current assets	<u>\$295</u>	<u>\$280</u>
Gross fixed assets	\$200	\$180
Less: Accumulated depreciation	<u>68</u>	<u>52</u>
Net fixed assets	<u>\$132</u>	<u>\$128</u>
Total Assets	<u>\$427</u>	<u>\$408</u>
Liabilities and Stockholders' Equity		
Accounts payable	\$106	\$126
Notes payable	5	68
Accruals	<u>26</u>	<u>25</u>
Total current liabilities	\$137	219
Long-term debt	<u>\$68</u>	<u>\$40</u>
Total liabilities	<u>\$205</u>	<u>\$259</u>
Common stock (500,000 shares outstanding at \$0.01)	\$5	\$5
Paid-in capital in excess of par	45	45
Retained earnings	<u>172</u>	<u>99</u>
Total stockholders' equity	<u>\$222</u>	<u>\$149</u>
Total liabilities and stockholders' equity	<u>\$427</u>	<u>\$408</u>

**TABLE 4**  
**GONZALES ENERGY PARTNERS**  
**STATEMENT OF RETAINED EARNINGS**  
**FOR THE YEAR ENDED DECEMBER 31, 2018**

All dollars in Thousands (\$000)	
Retained earnings balance (12/31/2017)	\$99
Plus: Net profit after taxes (2018)	78
Less: Cash dividends paid on common stock	<u>5</u>
Retained earnings balance (12/31/2018)	<u>\$172</u>

**TABLE 5**  
**2017 RATIOS FOR GEP AND 2018 INDUSTRY AVERAGES**

Ratio	GEP 2017 Ratio	Industry Average 2018
Current ratio	1.28	1.96
Quick ratio	0.66	1.18
Days sales outstanding	14.6 days	21.7 days
Inventory turnover	14.1 x	13.4 x
Fixed asset turnover	22.8 x	20.0 x
Total asset turnover	6.90 x	5.80 x
Debt-to-assets ratio	0.63	0.59
Equity multiplier	2.74	2.55
Times interest earned	20.9 x	18.2
Gross profit margin	30.5%	45.4%
Operating profit margin	4.69%	13.7%
Profit margin on sales	3.08%	8.37%
Basic earnings power	30.2%	28.0%
Return on total assets (ROA)	17.4%	20.4%
Return on common equity (ROE)	39.4%	37.3%
Price/earnings (P/E) ratio	19.1	17.1
Price/cash flow ratio	15.1	15.0
Market/book (M/B) ratio	6.25	3.20

### Case Response

With this information, Samantha set out to evaluate GEP's current financial condition and assess Mr. O'Sullivan's offer. She believes that a thorough analysis of 2018's financial statements and utilization of capital budgeting tools will provide important insights. In order to keep any emotional attachment Ms. Gonzalez has to GEP, you have been hired to assist in this evaluation. Your report should be in a basic business plan format with an executive summary, quantitative analysis of the facts, and proposed response. Be sure to fully cite all of the sources you use in the analysis. Your analysis should cover the following items:

#### A. Analysis of Company Objectives.

1. Discussion of Samantha's financial goals including whether these goals are appropriate.
2. Evaluate the potential for an agency problem at GEP and scenarios under which an agency problem may develop.

## B. EPS Performance Assessment

1. Calculate and evaluate GEP's earnings per share (EPS) for each year, assuming that the number of shares has remained unchanged since inception.
2. Use online resources to discuss chemical industry factors, real estate factors, and general economic factors that could cause changes in EPS performance.

## C. Cash Flow Statement

1. Construct a cash flow statement
2. Compute and evaluate GEP's operating cash flow and free cash flow in 2018.

## D. Financial Statement Ratio Analysis

1. Compute financial ratios that reveal GEP's financial situation in 2018 as it relates to (a) liquidity, (b) asset utilization, (c) debt, (d) profitability, and (e) market conditions.
2. Critique GEP's performance on a cross-sectional basis and a time-series basis.

## E. Dividends and Payback-based analysis of Proposed Purchase

1. Assuming dividends grow at the same rate, what is the payback period and discounted payback period from Mr. O'Sullivan's perspective.
2. Assuming dividends grow at the same rate, what is the payback period and discounted payback period from Samantha Gonzalez's perspective.

## F. Cash flow and NPV-based analysis of Proposed Purchase

1. Identify the highest price Mr. O'Sullivan will pay for GEP on the basis of free cash flow assuming zero growth in free cash flows and seven percent growth.
2. Identify the lowest price for which Samantha Gonzalez should be willing to sell GEP on the basis of free cash flow assuming zero percent growth in free cash flows and seven percent growth.

## GEP SOLUTION

### Executive Summary

The executive summary (yes, think of this in terms of the word "summary") is an abridged version of this case's conclusion. Wording might be similar to this:

The Gonzalez Energy Partners, LLC (GEP), case is designed to place the student in the role of financial decision maker. Students are introduced to the basic concepts of financial goal-setting, measurement of the firm's performance, and analysis of the firm's financial condition. Since this is a young, 8-year-old company in the volatile energy industry, the company has cash flow problems. It is assumed that the student has been hired as an outside consultant to prepare and analyze the statement of cash flows. Careful analysis of GEP financing reveals that during 2018 Samantha replaced a large portion of short-term notes payable with long-term debt, which would be consistent with an expectation of higher future interest rates. A ratio analysis of GEP's financial statements is used to provide additional information about the firm's financial condition. Along the line, the cost/benefit tradeoff of hiring a finance-savvy chemical engineer is conducted.

As with all firms, an underlying concern for GEP is its value. This issue is operationalized through the comparison of valuation estimates placed by a potential acquirer and placed by the owner. Payback periods, discounted payback periods, and net present values are computed in the analysis. Differences in required rates of return, which directly impact the discount rate is the primary factor in valuation differences. In the conclusion, the Mr. O'Sullivan's offer is addressed, including factors in favor of acceptance and factors against acceptance. The case helps student becomes familiar with the importance of financial decisions to the firm's day-to-day operations and long-term profitability.

### A. Analysis of Company Objectives

1. Discussion of Samantha's financial goals including whether these goals are appropriate.

ANSWER: There is relatively little discussion of firm share price in the case. Instead, Table 1 and much of the discussion is focused on profit maximization. This attention has resulted in profits rising from -70,000 to +\$78,000 over the past 8 years. From 2013 to 2018, the period over which cash flows have been positive, the growth rate has been a phenomenal 25.5%. Samantha's dilemma regarding the addition of a chemical engineer, which could depress earnings for the near term, also demonstrates her emphasis on the profit goal. Conversely, wealth maximization is the correct goal of a manager. Wealth maximization takes a long-term perspective and also considers risk and cash flows. Profit maximization does not integrate cash flow size, timing, and variance in the decision process.

2. Evaluate the potential for an agency problem at GEP and scenarios under which an agency problem may develop.

ANSWER: An agency problem exists when managers place personal goals ahead of corporate goals. Since Samantha owns 65% of the outstanding equity, it is unlikely that an agency problem would arise at GEP. However, it is possible for Samantha to make decisions which benefit her personally, without increasing the wealth of the silent partners. Another instance in which an agency problem could arise is if Mr. O'Sullivan buys out Samantha and keeps her on as the manager of operations.

### B. EPS Performance Assessment

1. Calculate and evaluate GEP's earnings per share (EPS) for each year, assuming that the number of shares has remained unchanged since inception.

ANSWER: Earnings per share (EPS) calculations are given in Table 6. Where we see that EPS has risen from a loss of \$0.14 per share to \$0.156 in 2018, as shown in the third column. EPS growth rate is reported in the fourth column.

**TABLE 6**  
**GONZALES ENERGY PARTNERS**  
**ANNUAL EPS VALUES AND EPS GROWTH RATES**

Year	Net Income	EPS <u>Net income</u> 500,000 shares	EPS Growth Rate <u>Current EPS</u> Prior EPS
2011	(\$70,000)	-\$0.14	-----
2012	(30,000)	-\$0.06	-----
2013	20,000	0.040	-----
2014	45,000	0.090	125.0%
2015	35,000	0.070	-22.2%
2016	50,000	0.100	42.9%
2017	53,000	0.106	6.0%
2018	78,000	0.156	47.2%

Earnings per share have been positive in every year since 2012, a six-year span. The consistently positive net income value helps confirm the answer above that Samantha is concentrating her efforts on profit maximization. However, the growth rate has varied significantly from a positive 125.9% in 2014 to -22.2% in 2015. Over the past five years, the average annual increase in net income has been \$11,600. Note that growth rates cannot be computed for the entire period, because of the negative values in the first two years.

2. Use online resources to discuss chemical industry factors, real estate factors, and general economic factors that could cause changes in EPS performance.

ANSWER: Students should report a wide variety of potential reasons for improved EPS performance. They should describe both revenue growth and cost containment in their answer. Students also should discuss industry factors as well as macroeconomic situations which could play a role. Of course, a primary driver in all of these is the global supply and demand for oil, resulting in an equilibrium price per barrel that moves up and down depending upon the availability of oil versus new demands thereof. Specifically, during the 2011 to 2018 period, prices for a barrel of oil ranged from \$40.68 to \$107.46. Real estate factors would be tied to cost of money, which could have a direct impact through mortgage interest rates and property values.

### C. Cash Flow Statement

1. Construct a cash flow statement.

Gonzalez' cash flow statement for 2018 is given in Table 7.

**TABLE 7**  
**GONZALES ENERGY PARTNERS**  
**2018 CASH FLOW STATEMENT**

All dollars in Thousands (\$000)		
Cash From Operating Activities		
Net Income		\$78
Adjustments to reconcile net income to net cash provided by operating Activities		
Depreciation	\$16	
Accounts Receivable	(\$6)	
Inventory	(\$5)	
Accounts Payable	(20)	
Accruals	1	
Total Adjustments		<u>(14)</u>
Net Cash provided by Operations		\$64
Cash flows from Investing Activities		
Fixed Assets	(\$20)	(20)
Cash Flows from Financing Activities		
Short-term notes payable	(\$63)	
Dividends	(5)	
Long-term Debt	<u>28</u>	
Net Cash from Financing Activities		<u>(40)</u>
Net Change (Decrease) in Cash		\$4
Cash Balance at End of Fiscal Year		
	\$25	
- Cash Balance at Beginning of Fiscal Year	<u>21</u>	
Net Decrease in Cash		\$4

The key piece of information is that there is a positive change in cash to the tune of \$4,000. Even if GEP were to eliminate the dividend, it would have \$9,000 in the cash account. The growth in accounts receivable and inventory reduced the cash balance. There seems to be a move from short-term notes payable to long-term debt, with the former dropping by \$63,000 and the latter increasing by \$28,000. The shift may have occurred because long-term interest rates may be relatively low and Samantha wanted to lock them in at their current levels. The net reduction in debt of \$35,000 speaks well for the financial health of GEP, though it cut down on the amount of cash in the bank.

2. Compute and evaluate GEP's operating cash flow and free cash flow in 2018. .

ANSWER: Calculation of Operating and Free Cash Flows (numbers in thousands)

Step 1. NOPAT – net operating profit after tax

NOPAT = EBIT (1-Tax rate)

NOPAT = \$124 (1-.35) = \$80.60

Step 2. NOWC – net operating working capital

Operating current assets – Operating current liabilities

2017: \$280 – ( \$126 + \$25) = \$129

2018: \$295 – (\$106 + \$26) = \$163

Step 3. Total net operating capital

2017: \$129 + \$128 = \$257

2018: \$163 + \$132 = \$295

Step 4. Net Investment in operating asset

Total net operating capital 2018 - Total net operating capital 2017

Net Investment in operating capital

\$295 - \$257 = \$38

Total Investor-supplied capital

An alternative way to compute investment is to look at the financing side changes as follows:

Notes Payable + Long-term bonds + Common equity

In 2017: \$68 + 40 + 149 = \$257

In 2018: \$5 + 68 + 222 = \$295

\$295 - \$257 = \$38

Step 5. Free cash flow

NOPAT - Net investment in operating capital

\$80.60 - \$38 = \$42.60 (\$42,600)

Check with Explanation of Uses of Free Cash Flow

Pay interest \$4(1-.35) = \$2,600

Repay debtholders (63 – 28) = 35,000

Pay Dividends = 5,000

Free cash flow \$42,600

GEP is providing a good positive cash flow from its operating activities. The OCF is large enough to provide the cash needed for the investment in both fixed assets and the increase in net working capital. The firm still has \$42,600 available to pay investors (creditors and equity holders).

#### D. Financial Statement Ratio Analysis

1. Compute financial ratios that reveal GEP's financial situation in 2018 as it relates to (a) liquidity, (b) asset utilization, (c) debt, (d) profitability, and (e) market conditions.

ANSWER: Financial ratios for 2018 (left), 2017, and Industry, plus an assessment are presented in Table 8. The analysis column above includes an examination of the values in terms of the trend from 2018 to 2017 and comparative level relative to the industry. Concerning trend analysis, a single word is used to specify that a ratio has "improved, remained "stable," or "deteriorated" from 2017 to 2018. Values that are less than 10 percent apart are arbitrarily considered to have remained stable. Concerning industry comparisons, a single word is used to specify that a ratio is "better," "similar," or "worse" than the industry benchmark. Again, values that are less than 10 percent apart are arbitrarily considered to be similar.



**TABLE 8**  
**GONZALEZ ENERGY PARTNERS**  
**RATIO ANALYSIS**

Ratio Category	Ratio	Annual Values			Analysis
		2018	2017	Industry	
Liquidity Metrics	Current ratio	2.15	1.28	1.96	T: Improved I: Similar
	Quick ratio	1.13	0.66	1.18	T: Improved I: Similar
Asset Utilization Metrics	Days sales outstanding	15.3 days	14.6 days	21.7 days	T: Stable I: Better
	Inventory turnover	14.7 x	14.1 x	13.4x	T: Improved I: Similar
	Fixed asset turnover	23.5 x	22.8 x	20.0 x	T: Stable I: Better
	Total asset turnover	7.26 x	6.9 x	5.8 x	T: Stable I: Better
Debt Metrics	Debt ratio	0.48	0.63	0.59	T: Improved I: Better
	Equity multiplier	1.92	2.74	2.55	T: Deteriorated I: Worse
	Times interest earned (TIE)	31.0	20.9	18.2	T: Improved I: Better
Profitability Metrics	Gross profit margin	33.5%	30.5%	45.4%	T: Stable I: Worse
	Operating profit margin	4.00%	4.69%	13.70%	T: Deteriorated I: Worse
	Net profit margin	2.52%	3.08%	8.37%	T: Deteriorated I: Worse
	Basic earnings power	29.0%	30.2%	28.0%	T: Stable I: Similar
	Return on total assets (ROA)	18.3%	17.4%	20.4%	T: Stable I: Worse
	Return on equity (ROE)	35.1%	39.4%	37.3%	T: Deteriorated I: Similar
Market Value Metrics	Price/earnings (P/E ratio)	21.0	19.1	17.1	T: Stable I: Better
	Price/cash flow ratio	16.9	15.1	15.0	T: Improved I: Better
	Market /book (M/B) ratio	7.36	6.25	3.20	T: Improved I: Better

1. Liquidity analysis: GEP's liquidity as reflected by the current ratio and quick ratio has improved slightly. Both 2018 values are within ten percent of the industry benchmark. Overall, the results are very good, with the sum of cash and accounts receivable now exceeding current liabilities.
2. Asset utilization analysis: Inventory turnover has improved despite the increase in inventories. The other ratios (days sales outstanding, fixed asset turnover, and total asset turnover) are better than the

- industry benchmark. Overall, GEP is doing quite well on all of these measures, with marked improvement either in comparison to the prior year or to the industry.
3. Debt Analysis: Paying off \$63,000 of notes payable and \$20,000 of accounts payable has pushed the debt ratio down from 0.63 to 0.48. Instead of being 0.08 above the industry norm, the debt ratio is 0.07 lower. The downside of reduced debt is the diminished equity multiplier. With a times interest earned ratio that is approaching twice the industry level, GEP appears to be able to easily take on more debt if the situation required it to do so.
  4. Profitability Analysis: Samantha's primary concern is GEP's profitability. All five of the measures used to assess profitability are "stable" or deteriorating from the prior year. While a return on assets of 18.3 percent would seem good, in relationship to the industry's 20.4 percent average is over ten percent higher. From a Du Pont equation perspective, the reduced equity multiplier and low net profit margin on sales have diminished the return on equity value.
  5. Market Value Analysis: Despite the low profitability, a higher stock price has pushed GEP's market value ratios higher. The price/cash flow and market/book value ratios are over ten percent higher. All three market value ratios are better at GEP than the industry in general suggesting that investors view Samantha's efforts very favorably. Hence, the interest shown in GEP by Mr. O'Sullivan is not a surprise.

Table 9 reports GEP's financial performance on a trend and industry comparison basis. As shown in the matrix, the typical change in GEP's ratios within a ratio class is measured by the median change of the ratios within the specified ratio class. Although GEP's market value ratios have risen on a trend and industry comparison basis, the increased stock price may be the result of higher stock prices overall. Better financial management has helped to improve both the liquidity and debt utilization numbers, while GEP's asset utilization is better than found in the typical firm within the industry. Samantha should pay attention to factors impacting her profitability over the coming year so these metrics can be improved and hopefully rise to a point where they beat the industry averages.

**TABLE 9**  
**TYPICAL CHANGE IN GEP RATIOS BY RATIO CLASS**

Ratio Category	Trend Analysis	Industry Comparison
Liquidity	Improved	Similar
Asset utilization	Stable	Better
Debt utilization	Improved (reduced)	Better
Profitability	Deteriorated	Worse
Market value	Improved	Better

**E. Dividends and Payback-based analysis of Proposed Purchase**

1. Assuming dividends grow at the same rate, what is the payback period and discounted payback period from Mr. O'Sullivan's perspective.

ANSWER: Dividing the dividend payment by Mr. O'Sullivan's required rate of return results in a \$41,667. Given the annual free cash flow is \$42,600, assuming a fixed dividend over time does not provide much insight. The annual balance due is shown in the third column of Table 10.

However, dividend payments have been made over three years, providing some insight to the future potential dividend stream. Over these years, the dividend growth rate has been 82.57 percent (N=2, PV = \$1,500, FV = \$5,000). Even if GEP could maintain this dividend growth rate in the future, the payback period would be 8.57 years, as shown in the payback period columns in the table below. The discounted payback would be slightly longer at 10.28 years.

**TABLE 10**  
**GEP PAYBACK AND DISCOUNTED PAYBACK:**  
**MR. O'SULLIVAN'S PERSEPECTIVE**

Year	Dividend at 82.75 percent growth rate	Balance	Present value of Dividend at 82.75 percent growth rate at 12 percent	Balance
0		2,000,000		\$2,000,000
1	\$9,129	1,990,872	\$8,150	\$1,991,850
2	\$16,666	1,974,206	\$13,286	1978564
3	\$30,427	1,943,779	\$21,657	1956907
4	\$55,550	1,888,228	\$35,274	1921633
5	\$101,418	1,786,810	\$57,547	1864086
6	\$185,160	1,601,650	\$93,804	1770282
7	\$338,046	1,263,604	\$150,653	1619629
8	\$617,171	646,433	\$249,265	1370364
9	\$1,126,769	-480,335	\$406,324	964040
10	\$2,057,141		\$662,344	301696
11	\$3,755,723		\$1,079,681	

2. Assuming dividends grow at the same rate, what is the payback period and discounted payback period from Samantha Gonzalez's perspective.

From Samantha's perspective, as illustrated in Table 11, the discounted payback period is shorter. As shown in the following table, while the payback period is still 8.57 years, the discounted payback period is 9.83 years. Students might discuss the quick ratio at this juncture also, using it as a measure to assess the ability to make a dividend payment. The current ratio is only appropriate if there is excess inventory which could be sold.

**TABLE 11**  
**GEP PAYBACK AND DISCOUNTED PAYBACK:**  
**SAMANTHA GONZALEZ' PERSPECTIVE**

Year	Dividend at 82.75 percent growth rate	Balance	Present value of Dividend at 82.75 percent growth rate at 12 percent	Balance
0		2,000,000		2,000,000
1	\$9,129	1,990,872	8,375	1,991,625
2	\$16,666	1,974,206	14,027	1,977,598
3	\$30,427	1,943,779	23,495	1,954,103
4	\$55,550	1,888,228	39,353	1,914,749
5	\$101,418	1,786,810	65,915	1,848,834
6	\$185,160	1,601,650	110,405	1,738430
7	\$338,046	1,263,604	184,923	1,553,507
8	\$617,171	646,433	309,737	1,243,770
9	\$1,126,769	-480,335	518,796	724,974
10	\$2,057,141		868,959	-143.985
11	\$3,755,723		1,455,466	

## F. Cash flow and NPV-based analysis of Proposed Purchase

1. Identify the highest price Mr. O'Sullivan will pay for GEP on the basis of free cash flow assuming zero growth in free cash flows and seven percent growth.

ANSWER: GEP valuation on the basis of dividends is unrealistic because the dividend payment per share is only \$0.01, Furthermore, the growth rate exceeds Samantha's required rate of return. Therefore, free cash flows are being utilized in this analysis. Estimates of free cash flow growth rates are needed because we do not have information regarding free cash flow in prior years.

With zero growth, Mr. O'Sullivan would use the zero growth form of the Gordon growth model and identify a value of \$355,000, as follows.

$$\text{Free Cash Flow Next Year} \div \text{Required return} \\ \$42,600 \div 0.12 = \$355,000$$

At a seven percent growth rate, Mr. O'Sullivan would identify a GEP value of \$1,139,550, as follows:

$$[\$42,600 (1.07)] \div [.12 - 0.07] = \$45,582 \div 0.04 = \$1,139,550$$

2. Identify the lowest price for which Samantha Gonzalez should be willing to sell GEP on the basis of free cash flow assuming zero percent growth in free cash flows and seven percent growth.

With zero growth, Samantha would use the zero growth form of the Gordon growth model and identify a value of \$355,000, as follows.

$$\$42,600 \div 0.09 = \$473,333 \\ (\text{which is } \$118,333 \text{ more than Mr. O'Sullivan's valuation})$$

At an seven percent growth rate, Samantha would identify a GEP value of \$2,279,100, as follows:

$$[\$42,600 (1.07)] \div [0.09 - 0.07] = \$45,582 \div 0.02 = \$2,279,100 \\ (\text{which is } \$1,139,500 \text{ higher than Mr. O'Sullivan's valuation})$$

## CONCLUSION

Gonzalez Energy Partners, LLC, (GEP) has been managed with an eye on profitability by Ms. Samantha Gonzalez, who is simultaneously considering the hiring of a chemical engineer and response to an offer to purchase GEP. Earnings have growth by over thirty percent over the past three years, accompanied by stellar dividend growth. In addition to a positive cash flow, the cash account has risen over the past year. A ratio analysis suggests that GEP is being efficiently operated, which has been rewarded with a stock price that is up almost 10 percent over the past year.

The \$2.0 million dollar offer from Mr. O'Sullivan is very intriguing. Even with very rapid dividend growth, it would take Samantha almost nine years to earn an equivalent amount of money, or almost eleven years on a discounted basis. The amount is significantly higher than Mr. O'Sullivan's \$1.1 million free cash flow valuation, but less than Samantha's \$2.3 million valuation.

Multiplying the 2018 end-of-year stock price times 500,000 shares results in a market value of \$1,635,000. Mr. O'Sullivan's offer is \$365,000, or 18.25 percent, higher. However, it is likely that stock prices would rise as fewer shares were left out of his control. For these, and undoubtedly many personal reasons, the Samantha's decision has to be made with great care. The analysis above provides useful insight to making the choice to accept or reject Mr. O'Sullivan's offer.

## REFERENCES

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