Value analysis for Starbuck's Corporation stock

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ABSTRACT

This finance case requires students to take the role of a financial analyst for Starbucks Corporation. This case discusses various alternative valuation techniques such as comparative price ratios (P/FCF and P/EBITDA), dividend discount and capital asset pricing models, and regression analysis that junior and senior business students may use to predict the 2019 target price for Starbuck's stock. Students are required to lay out all the relevant assumptions underlying each model before they provide their recommended solution.

Keywords: stock valuation, price multiples, dividend discount model, capital asset pricing model, regression, target price

INTRODUCTION

A team of three senior students from the Hasan School of Business, Colorado State University, Pueblo, presented a paper at the stock valuation analysis competition among five participating western regional universities involving eight contestants at the Colorado State University Fort Collins campus on April 2nd, 2016. Two finance faculty members mentored the team.

CORPORATION BACKGROUND

While evaluating Starbucks Corporation, the team identified three intriguing facets of its strategic initiatives that may have significantly contributed to its success. These include: 1) its unique model and competitive standing, 2) its catalysts for strong growth opportunities, and 3) its perceptive management practices and well-compensated and motivated workforce.

Starbucks plays a dominant and preeminent role in the coffee brewing business unlike many of its competitors (e.g. Dunkin Donuts, Panera Bread, and McDonald's) whose coffee business is a much smaller segment of their overall product mix. The Starbucks brand is well recognized and pervasive in the United States and Europe. It currently has 25085 stores in 75 different countries. It is also aggressively spreading its wings on a global scale into yet to be tapped potential growth opportunities notably in China and India.

Starbucks is well ahead of the game in its use of technology in the restaurant industry. The number of active users in the company's loyalty program in the U.S. grew by 28% from a year ago to 10.4 million and 20% of its U.S. transactions now are made using mobile devices, up from 9% just two years ago. Moreover, some analysts have noted that Starbucks has more money loaded on to its customer cards than some banks have in their deposit accounts. According to figures Starbucks provided to MarketWatch, as of the second quarter of fiscal 2016, a compelling 41% of its transactions in the U.S. and Canada were conducted using a Starbucks card. The company had 12 million active loyalty members in the U.S. in the second quarter alone while $1.2 billion was loaded onto Starbucks cards and the Starbucks mobile app as of the first quarter of 2016.

The firm also has made several large purchases, including its recent acquisition of Teavana Holdings Inc. which primarily offers teas and herbal infusions. This addition is expected to greatly contribute to its growth prospects in the Asia Pacific Region where tea consumption is much more pervasive. CEO Howard Schultz said in a January 2016 interview with The Wall Street Journal that the chain, which already has 2,000 stores in the Chinese market, would add another 500 each year for the next five years. Schultz sees China as a pivotal point for its growth prospects.   The expansion plan in stores will eventually place China as the largest market outlet outside the U.S. surpassing that of Europe. In his interview with CNBC on April 4, 2016, Mr. Kevin Johnson, the President and COO of Starbucks, predicts that China could actually overtake the US as its major source of business in the not too distant future.

Schultz is considered one of the best visionary CEOs in the restaurant industry and was named Fortune Magazine's 2011 Business Person of the Year. He believes in and is committed to promoting employees' welfare by providing generous benefit packages. The strategic initiative he undertook, in turn, enhances employees' loyalty and productivity and Starbucks' hallmark of its much-touted customer experience.

The company offers five different products: coffee beans, handcrafted beverages, ready-to-drink beverages, food, and merchandise.   Additionally, it operates through both licensed and

unlicensed stores, consumer packaged goods, and foodservice. Table 1 shows Starbucks yearly revenue, broken down by three of its major drivers.   Starbucks operates in four separate regions: the Americas, China/Asia Pacific, the Middle East/Africa, and Channel Development or Other.

Starbucks stock price has appreciated at an annual compound growth rate of 28% over the past four years. Table 2 shows that it has consistently outperformed its close competitors during this period. It is worth mentioning that Starbucks has also outperformed Dunkin Donuts, one of its closest rivals, in almost all financial metrics including Return on Assets, Net Income, Operating Income, Operating Cash Flow, and Free Cash Flow.

Table 3 provides Starbuck's historical price performances, shares outstanding and operating cash flow for the past ten years during the period 2006 through 2015 while Table 4 provides data on historical EBITDA. Tables 5 and 6 provide 10-year data on historical free cash flows and dividends, respectively, while Table 7 provides additional financial data that may be relevant to the case analysis.

QUESTIONS 1 TO 7

1.   Offer brief explanations of how the three distinguishing attributes mentioned in the case contribute to Starbuck's success.
2.   Utilizing Tables 3 and 4, perform regression analysis to find annual growth rates for both OCF/Share and EBITDA/Share. Use projected 2019 values of these ratios to determine a high-average-low price range for Starbucks stock for 2019. Make note of and provide rationale for the inclusion or exclusion of outliers in your analysis.
3.   Given the information in Table 7, determine the Weighted Average Cost of Capital (WACC) for Starbucks.
4.   Using Table 5, WACC, and a mid-point annual growth rate of 3.0% (reference Table 7), determine the 2019 stock price for Starbucks.
5.   Using Table 6, the Cost of Equity and a growth rate of 3.0%, determine the 2019 target stock price for Starbucks.
6.   Which model(s) is/are the most plausible in predicting the 2019 target price? Provide rationale.
7.   Mention at least four potential risks that may adversely affect Starbuck's strategic initiatives and its financial performances in the foreseeable future.

INSTRUCTOR'S NOTES

Answer 1:

Starbucks Corporation enjoys a near monopolistic position in the coffee brewing business, which is its primary focus of operation.   This stands in stark contrast to its competitors whose coffee business is only a small portion of their overall product mix. It is worth mentioning that Starbucks has a strong customer loyalty program, which has allowed it to substantially grow its client base and revenue stream. This corporation has also spread its wings in a global scale and currently has over 25,000 stores. In China alone, it plans to expand its coffee business from 2,000 to 5,000 stores within the next 5 years. Finally, its management team and CEO, Howard Schultz, provide strong incentives and generous benefit packages to

employees, which enhance its highly touted customer experience.

Answer 2:

First, calculate OCF/Share and Price/OCF and exclude 2014 data as an outlier, which corresponds to the purchase of Teavana that resulted in a lower OCF for the year. Do a regression analysis for the nine-year period and project OCF/Share for 2019. Find the highest, lowest, and average Price/OCF for the preceding five years (2010, 2011, 2012, 2013, and 2015) and multiply by the respective 2019 OCF/Share to predict a High-Average-Low price range for its 2019 target Stock Price. (See Table 8.)

Determine EBITDA/Share and Price/EBITDA and exclude 2013 data as an outlier, which corresponds to the purchase of Teavana that resulted in a lower EBITDA for the year. Do a regression analysis for the nine-year period and project EBITDA/Share for 2019. Find the highest, lowest, and average Price/EBITDA for the preceding five years (2010, 2011, 2012, 2014, and 2015) and multiply by the respective 2019 EBITDA/Share to predict a High-Average-Low price range for its 2019 target Stock Price. (See Table 9.)

Answer 3:

Cost of Equity = $K_e = R_f + Beta(R_m - R_f) = 8.16\%$,
WACC = $D/A*(\text{After Tax } K_d) + E/A*(K_e) = 5.55\%$

Answer 4:

Begin by projecting FCF via Regression Analysis and removing 2014 as an outlier. Assuming a 3% growth rate beyond 2019, determine the 2019 Terminal Value. Subtract the value of the debt from the terminal value of the company to find the value attributable to equity holders. Divide this value by the number of shares to determine a 2019 Stock Price. (See Table 10.)

Answer 5:

Complete regression analysis on years 2010-2015 to provide trend line used to project dividend values for years 2016-2019. Using Cost of Equity (K_e) and a 3% growth rate beyond 2019, determine the 2019 Stock Price. (See Table 11.)

Answer 6:

Target price estimates vary across the alternative valuation models. The estimated price of $20.56 arrived at using DDM is very unrealistic since it is well below the current price and should not be considered. The high-end price points under P/CF and P/EBIDTA and the DCF models appear to be the most plausible. Students may recommend considering an average price from these three models' values. (See Table 12.)

Answer 7:

The following factors may adversely affect Starbuck's business: These include, but are not limited to, increase in labor costs and commodity prices, global economic slowdown, exchange rate and geopolitical risks and changes in management.

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APPENDIX

Table 1: SBUX Revenue, Broken Down by Driver

SBUX Revenue, Broken Down by Driver

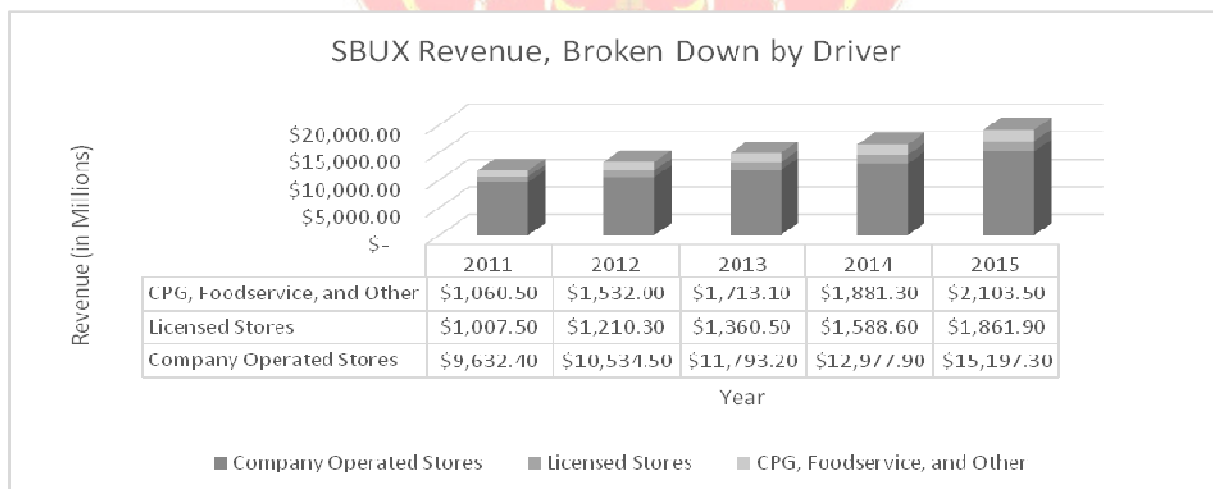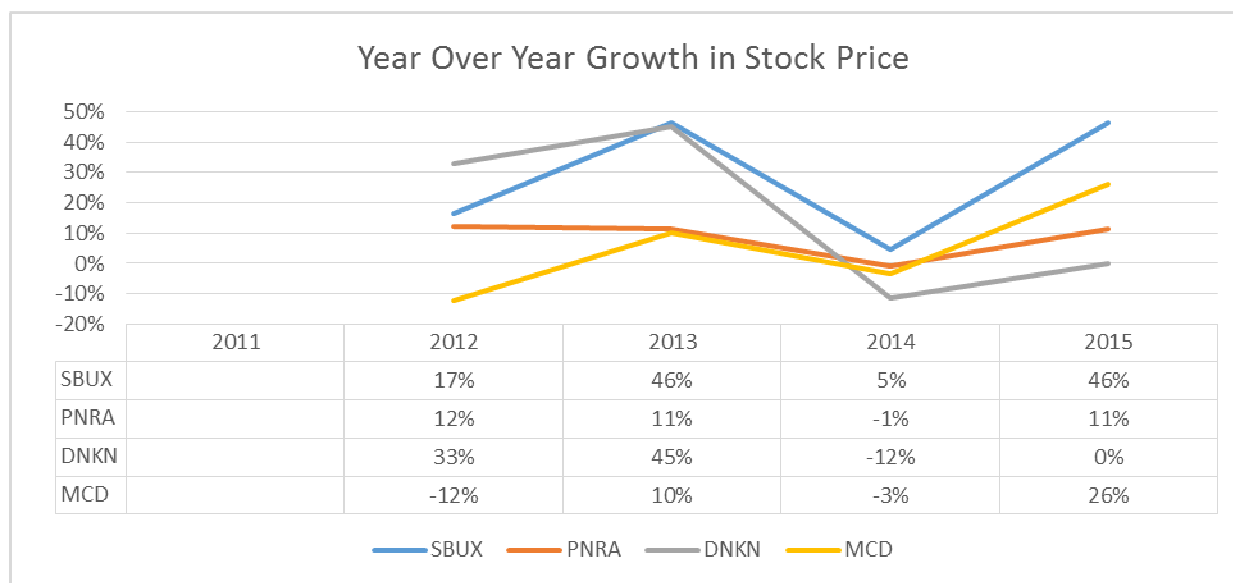|	2011	2012	2013	2014	2015
CPG, Foodservice, and Other	$1,060.50	$1,532.00	$1,713.10	$1,881.30	$2,103.50
Licensed Stores	$1,007.50	$1,210.30	$1,360.50	$1,588.60	$1,861.90
Company Operated Stores	$9,632.40	$10,534.50	$11,793.20	$12,977.90	$15,197.30

Table 2: Year over Year Growth in Stock Price for SBUX, PNRA, DNKN, and MCD

Table 3: SBUX 10-Year Historical Price, Shares Outstanding, and OCF
(Source: Prices and Shares Outstanding from Value Line, OCF from Morningstar)

	Price	Shares Outstanding, Millions	OCF, Millions
2006	$ 17.71	1,513.20	$ 1,132.00
2007	$ 10.24	1,476.60	$ 1,331.00
2008	$ 4.73	1,471.00	$ 1,259.00
2009	$ 11.53	1,485.80	$ 1,389.00
2010	$ 16.07	1,485.20	$ 1,705.00
2011	$ 23.01	1,489.60	$ 1,612.00
2012	$ 26.82	1,498.60	$ 1,750.00
2013	$ 39.20	1,506.40	$ 2,908.00
2014	$ 41.03	1,499.00	$ 607.00
2015	$ 60.03	1,485.10	$ 3,749.00

Table 4: SBUX 10-Year Historical EBITDA (Source: Morningstar)

EBITDA, Millions	
2006	$ 1,309.00
2007	$ 1,546.00
2008	$ 1,117.00
2009	$ 1,162.00
2010	$ 2,010.00
2011	$ 2,394.00
2012	$ 2,672.00
2013	$ 454.00
2014	$ 3,972.00
2015	$ 4,907.00

Table 5: SBUX 10-Year Historical FCF (Source: Morningstar)

FCF, Millions	
2006	$ 360.00
2007	$ 251.00
2008	$ 274.00
2009	$ 943.00
2010	$ 1,264.00
2011	$ 1,081.00
2012	$ 894.00
2013	$ 1,757.00
2014	$ (553.00)
2015	$ 2,445.00

Table 6: SBUX 5-Year Historic Dividend Values (Source: Value Line)

Dividend	
2010	$ 0.12
2011	$ 0.26
2012	$ 0.34
2013	$ 0.42
2014	$ 0.52
2015	$ 0.64

Table 7: Additional Financial Data
(Note: Moody's ratings agency is now expecting operating profit to grow 2% to 4% in the next 12 to 18 months, down from a previous forecast of growth of 5% to 6%.)

Additional Financial Data, Given for SBUX		Source
		Source
Beta	0.95	ValueLine, Aug. 2016
Risk Free Rate	1.76%	Ten Year Treasury Bond, Oct. 2016
Market Return	8.50%	Moneychimp.com Average Market Return for S&P 500, 1871-2015
After Tax Cost of Debt	1.29%	Morningstar, Oct. 2016
D/A	38.00%	Morningstar, Oct. 2016
E/A	62.00%	Morningstar, Oct. 2016
Growth Rate	3.00%	Moody's Rating Agency , Nov. 2016
2015 Sales, Millions	$19,162.70	ValueLine
2019 Projected Sales, Millions	$27,767.76	
2015 Value of Debt, Millions	$ 6,628.00	Morningstar, Oct. 2016
2019 Value of Debt, Millions	$ 9,604.32	

Table 8 (for Answer 2):

		Price	Shares Outstanding, Millions	OCF, Millions	OCF/Share	Price/OCF
2006	1	$17.71	1,513.20	$ 1,132.00	$ 0.75	$ 23.67
2007	2	$10.24	1,476.60	$ 1,331.00	$ 0.90	$ 11.36
2008	3	$ 4.73	1,471.00	$ 1,259.00	$ 0.86	$ 5.53
2009	4	$11.53	1,485.80	$ 1,389.00	$ 0.93	$ 12.33
2010	5	$16.07	1,485.20	$ 1,705.00	$ 1.15	$ 14.00
2011	6	$23.01	1,489.60	$ 1,612.00	$ 1.08	$ 21.26
2012	7	$26.82	1,498.60	$ 1,750.00	$ 1.17	$ 22.97
2013	8	$39.20	1,506.40	$ 2,908.00	$ 1.93	$ 20.31
2015	10	$60.03	1,485.10	$ 3,749.00	$ 2.52	$ 23.78
2016	11				$ 2.30	
2017	12				$ 2.48	
2018	13				$ 2.66	
2019	14				$ 2.83	

Clarifier		Price	OCF/Share		P/OCF	
High P/CF		$67.38	$	2.83	$	23.78
Avg. P/CF		$57.98	$	2.83	$	20.46
Low P/CF		$39.67	$	2.83	$	14.00

Outlier						
2014	9	$41.03	1,499.00	$ 607.00	$ 0.40	$ 101.32

Price from Morningstar, CF/Share from ValueLine

OCF/Share Regression

$y = 0.1776x + 0.3472$
$R^2 = 0.787$
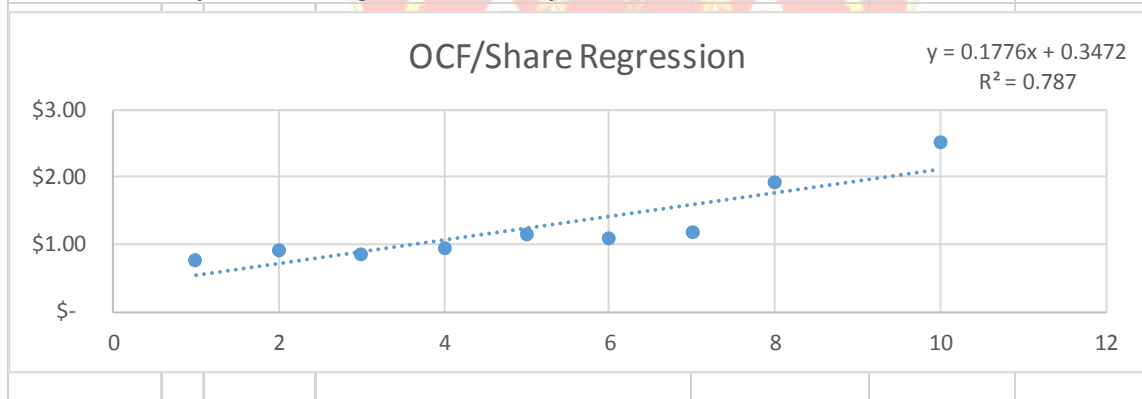
Table 9 (for Answer 2):

		Price	Shares Outstanding, Millions	EBITDA, Millions	EBITDA/Share	P/EBITDA
2006	1	$17.71	1,513.20	$ 1,309.00	$ 0.87	$ 20.47
2007	2	$10.24	1,476.60	$ 1,546.00	$ 1.05	$ 9.78
2008	3	$ 4.73	1,471.00	$ 1,117.00	$ 0.76	$ 6.23
2009	4	$11.53	1,485.80	$ 1,162.00	$ 0.78	$ 14.74
2010	5	$16.07	1,485.20	$ 2,010.00	$ 1.35	$ 11.87
2011	6	$23.01	1,489.60	$ 2,394.00	$ 1.61	$ 14.32
2012	7	$26.82	1,498.60	$ 2,672.00	$ 1.78	$ 15.04
2014	8	$39.20	1,499.00	$ 3,972.00	$ 2.65	$ 14.79
2015	9	$60.03	1,485.10	$ 4,907.00	$ 3.30	$ 18.17
2016	10				$ 3.03	
2017	11				$ 3.32	
2018	12				$ 3.61	
2019	13				$ 3.90	

Clarifier		Price	EBITDA/Share		P/EBITDA	
High P/EBITDA		$70.80	$	3.90	$	18.17
Avg. P/EBITDA		$57.83	$	3.90	$	14.84
Low P/EBITDA		$46.27	$	3.90	$	11.87

Outlier						
2013		$44.62	1,506.40	$ 454.00	$ 0.30	$ 148.04

Price from Morningstar, EBITDA/Share Calculated in EBITDAS Sheet

EBITDA/Share Regression

$y = 0.2906x + 0.1192$
$R^2 = 0.8024$
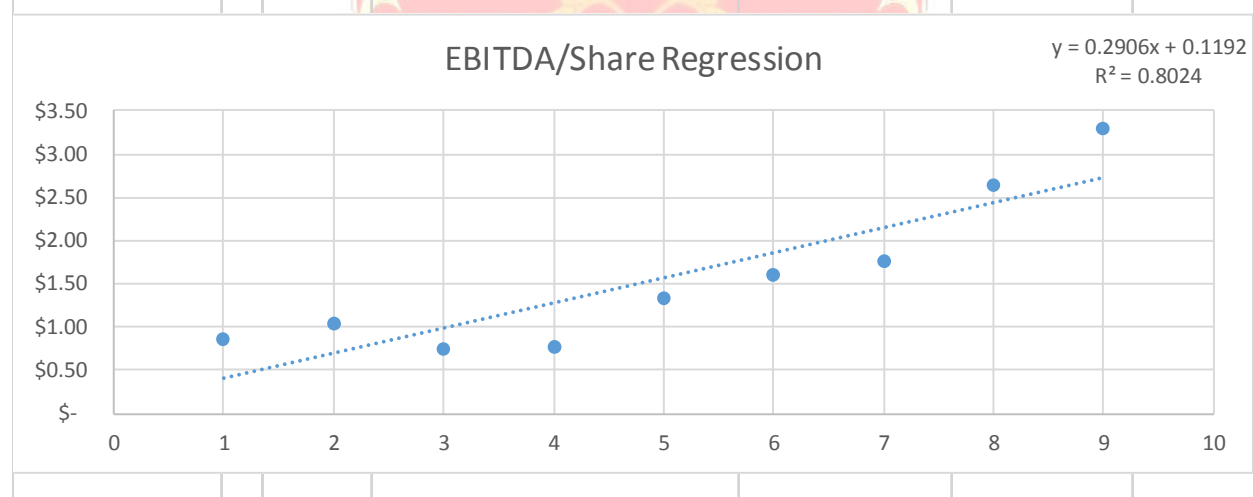
Table 10 (for Answer 4):

		FCF, Millions	Shares Outstanding, Millions
2006	1	$ 360.00	1513.2
2007	2	$ 251.00	1476.6
2008	3	$ 274.00	1471.0
2009	4	$ 943.00	1485.8
2010	5	$ 1,264.00	1485.2
2011	6	$ 1,081.00	1489.6
2012	7	$ 894.00	1498.6
2013	8	$ 1,757.00	1506.4
2015	9	$ 2,445.00	1485.1
2016	10	$ 2,216.26	1465.0
2017	11	$ 2,453.53	1460.0
2018	12	$ 2,690.80	1460.0
2019	13	$ 2,928.07	1460.0
WACC	5.55%		
G	3.00%		
Terminal Value of the Company		$118,212.65	
Value of Debt		$ 9,604.00	
Value of the Company		$108,608.65	
# Shares		1460.0	
Valuation		$ 74.39	
Outlier			
2014	-553	1499	-0.368912608

FCF Regression

y = 237.27x - 156.44
R² = 0.7964

$3,000.00
$2,000.00
$1,000.00
$-

0   2   4   6   8   10
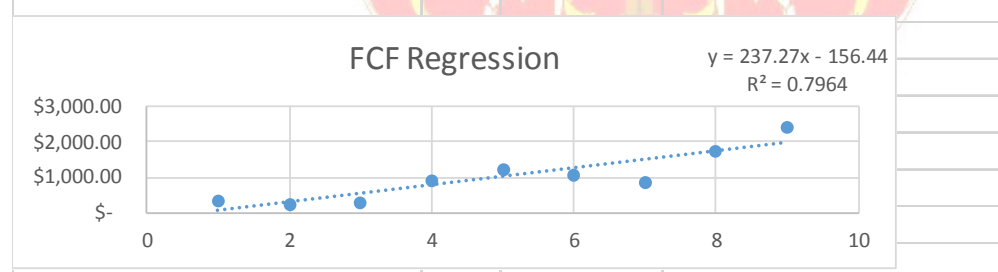
Table 11 (for Answer 5):

		Dividend
2010	1	$ 0.12
2011	2	$ 0.26
2012	3	$ 0.34
2013	4	$ 0.42
2014	5	$ 0.52
2015	6	$ 0.64
2016	7	$ 0.80
2017	8	$ 0.83
2018	9	$ 0.93
2019	10	$ 1.03

Growth	3.00%
Ke	8.16%

Stock Price at 2019	$ 20.49

Dividend Regression $y = 0.0989x + 0.0373$
$R^2 = 0.9924$

Table 12 (for Answer 6):

Model	2019 Stock Price
High P/CF	$ 67.38
High P/EBITDA	$ 70.80
Discounted Cash Flow	$ 74.39
Dividend Discount Model	$ 20.49
Average of Price Ratio Models and DCF	$ 70.86