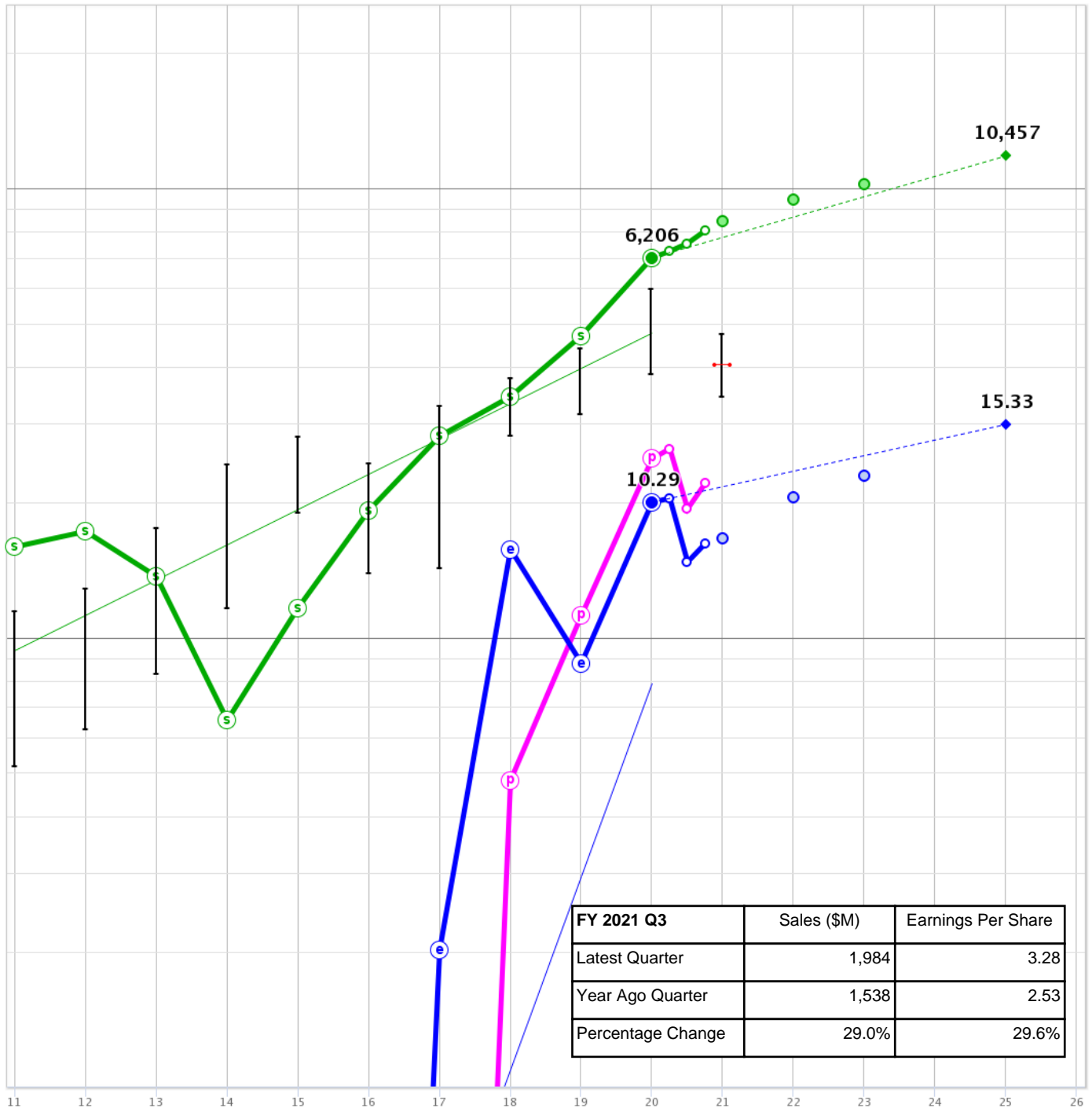


Stock Selection Guide

Company	Vertex Pharmaceutica		Date	12/09/21	
Prepared by	FWIC		Data taken from	BI Stock Data	
Where traded	NAS	Industry	Biotechnology		
Capitalization --- Outstanding Amounts	Reference				
Preferred (\$M)	0.0	% Insiders	% Institution		
Common (M Shares)	259.7	0.9	78.2		
Debt (\$M)	876.8	% to Tot Cap	8.4	% Pot Dil	0.7

Symbol: VRTX

1 VISUAL ANALYSIS of Sales, Earnings, and Price



- | | | | |
|-----------------------------------|-------|--|--------|
| (1) Historical Sales Growth | 19.8% | (3) Historical Earnings Per Share Growth | 169.2% |
| (2) Estimated Future Sales Growth | 11.0% | (4) Estimated Future Earnings Per Share Growth | 8.3% |

2 EVALUATING Management

Vertex Pharmaceutica

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Last 5 Year Avg.
Pre-tax Profit on Sales	4.3%	-0.8%	-80.5%	-126.6%	-54.0%	-4.0%	-0.6%	19.7%	33.5%	50.2%	19.8%
% Earned on Equity	5.1%	-10.9%	-36.6%	-65.7%	-61.7%	-11.2%	14.7%	71.0%	22.2%	32.9%	25.9%
% Debt To Capital	33.7%	41.1%	27.2%	43.4%	46.8%	42.1%	23.0%	11.8%	9.7%	9.7%	19.3%

3 PRICE-EARNINGS HISTORY as an indicator of the future

This shows how stock prices have fluctuated with earnings and dividends. It is building block for translating earnings into future stock prices.

CLOSING PRICE 208.41 (12/09/21)

HIGH THIS YEAR 242.99

LOW THIS YEAR 176.36

	A	B	C	D	E	F	G	H
Year	Price		Earnings	Price Earnings Ratio		Dividend	% Payout	% High Yield
	High	Low	Per Share	High A / C	Low B / C	Per Share	F / C * 100	F / B * 100
2016	125.0	71.5	-0.46	NMF	NMF	0.00	0.0	0.0
2017	167.9	73.3	1.04	161.4	70.5	0.00	0.0	0.0
2018	193.8	144.1	8.09	24.0	17.8	0.00	0.0	0.0
2019	225.7	161.0	4.51	50.0	35.7	0.00	0.0	0.0
2020	306.1	197.5	10.29	29.7	19.2	0.00	0.0	0.0
AVERAGE		129.5		26.8	18.5		0.0	
CURRENT/TTM			8.33			0.00	0.0	
AVERAGE PRICE EARNINGS RATIO: 22.7				CURRENT PRICE EARNINGS RATIO: 25.0				

4 EVALUATING RISK and REWARD over the next 5 years

Assuming one recession and one business boom every 5 years, calculations are made of how high and how low the stock might sell. The upside-downside ratio is the key to evaluating risk and reward.

A HIGH PRICE - NEXT 5 YEARS

Avg. High P/E 25.0 X Estimate High Earnings/Share 15.33 = Forecasted High Price \$ 383.3

B LOW PRICE - NEXT 5 YEARS

(a) Avg. Low P/E 17.8 X Estimate Low Earnings/Share 10.29 = Forecasted Low Price \$ 183.2

(b) Avg. Low Price of Last 5 Years 129.5

(c) Recent Market Low Price 161.0

(d) Price Dividend Will Support $\frac{\text{Indicated Dividend}}{\text{High Yield}} = \frac{0.00}{0.00\%} = 0.0$

Selected Forecasted Low Price \$ 183.2

C ZONING using 25%-50%-25%

Forecasted High Price 383.3 Minus Forecasted Low Price 183.2 = 200.1 Range. 25% of Range 50.0

Buy Zone 183.2 to 233.2

Hold Zone 233.2 to 333.2

Sell Zone 333.2 to 383.3

Present Market Price of 208.41 is in the **BUY** Zone

D UPSIDE DOWNSIDE RATIO (POTENTIAL GAIN VS. RISK OR LOSS)

$\frac{\text{High Price} - \text{Present Price}}{\text{Present Price} - \text{Low Price}} = \frac{383.3 - 208.41}{208.41 - 183.2} = \frac{174.85}{25.21} = 6.9$ To 1

E PRICE TARGET (Note: This shows the potential market price appreciation over the next five years in simple interest terms.)

$\frac{\text{High Price} - \text{Closing Price}}{\text{Closing Price}} = \frac{383.3 - 208.41}{208.41} = 1.8390$ X 100 = 183.90 - 100 = 83.9 % Appreciation

5 5-YEAR POTENTIAL

This combines price appreciation with dividend yield to get an estimate of total return. It provides a standard for comparing income and growth stocks.

A $\frac{\text{Indicated Annual Dividend}}{\text{Closing Price}} = \frac{0.00}{208.41} = 0.0000 = 0.0\%$ Current Yield

B AVERAGE YIELD - USING FORECAST HIGH P/E

$\frac{\text{Avg. \% Payout}}{\text{Forecast High PE}} = \frac{0.0\%}{25.00} = 0.0\%$

AVERAGE YIELD - USING FORECAST AVERAGE P/E

$\frac{\text{Avg. \% Payout}}{\text{Forecast Average PE}} = \frac{0.0\%}{21.40} = 0.0\%$

C COMPOUND ANNUAL RETURN - USING FORECAST HIGH P/E

Annualized Appreciation 13.0 %
Average Yield 0.0 %
Annualized Rate of Return 13.0 %

COMPOUND ANNUAL RETURN - USING FORECAST AVG P/E

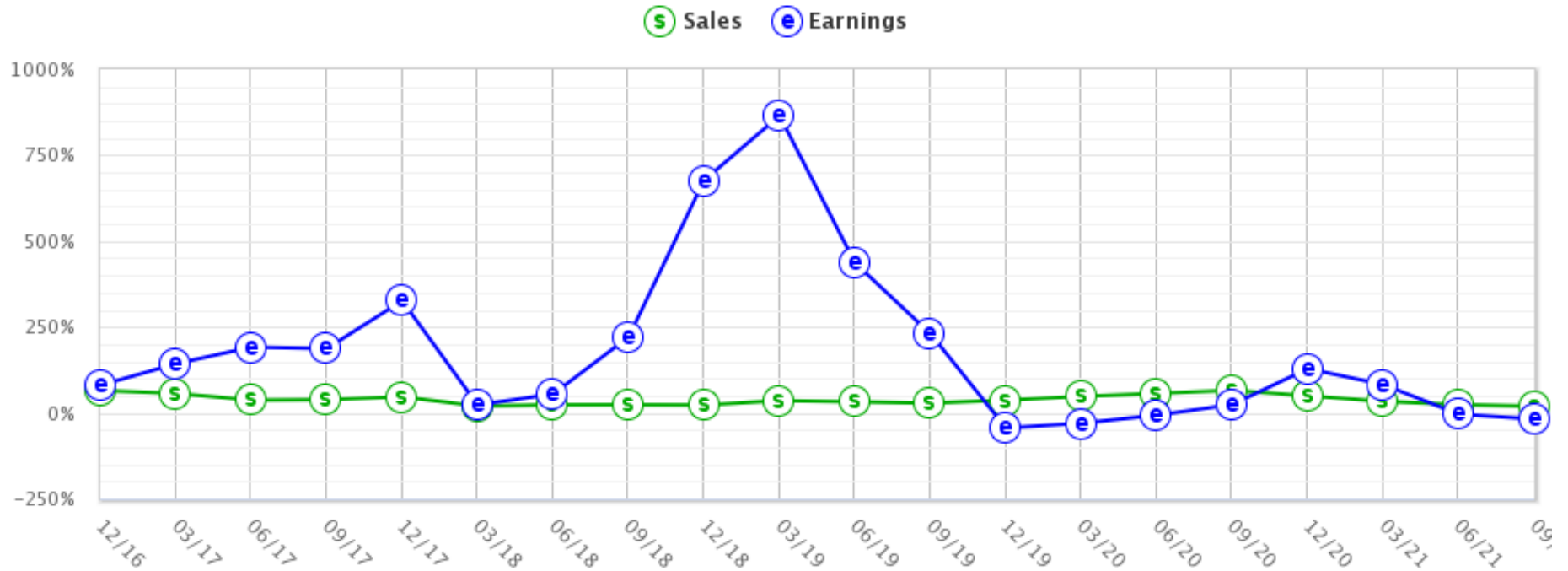
Annualized Appreciation 9.5 %
Average Yield 0.0 %
Annualized Rate of Return 9.5 %

Notes: VRTX 12/10/21_Arvind

Date	Subject	Description	Type
12/13/21	VRTX Forecasts - Arvind	VRTX Sales and EPS growth estimates for the 3rd QTR beat all Analysts' estimates. 2nd QTR was a drag on EPS and sales growth because VRTX had to pay 900M for partnership with CRISPER for developing the Gene Therapy for sickle cell treatments. For the LT sales growth I estimated 11% which is compatible with Value Line estimates for SALES (10000 MILLION). For EPS long term estimates, I used Preferred Procedure Method to generate EPS growth 8.3% with EPS (15.3). Value Line LT estimate for EPS growth is (15.5).	Study
08/01/21	Vertex not doing very well	The past two years has shown a significant drop in the value of the company's stock. We need more specific information about its potential to increase its value. SSG says it will happen but this is a pharmaceutical company and they are totally dependent on the success of the drugs in their development line.	Community
06/13/21	Another possible drug abandoned	Abandoning further development of VX-864 for alpha-1 antitrypsin deficiency ("AATD") made the stock price drop about 10% overnight.	Community
01/03/21	One time adjustments and non-GAAP data etc	1) One time non-recurring tax adjustments for the year 2018 annual EPS is adjusted from \$8.09 to \$2.06. Quarter Q3 is adjusted from \$0.00 to \$-0.05 2) Income tax rates for yrs 2012 thru 2017 with negative earnings are made 0 in the Annual Data 3) Valuline 5-yr estimate for Revenue & EPS added in yr 2024 yr in "Data" -> "Detailed Estimates" 4) P/E data for the year 2018 is discounted in addition to the "NMF" data for 2015 thru 2017 yrs	Community
10/21/20	Halt in VX drug	VX-814 due to causing liver toxicity has dropped value of stock substantially. VRTX hasn't much on the horizon and a bad record for making acquisitions. If a good acquisition by VRTX becomes available in 2021 I would look very hard at this company if the price is around 200.00	Community
10/20/20	VRTX still showing growth and a buy	Using a Sales and EPS growth of 10% which is very conservative as of this date the stock is presently in the buy with a ridiculous up to down ratio of 10 to 1. Eliminated PE Ratios High/Low of 2017 which were outliers in Valuation and Return and used the resulting average.	Community
01/29/20	Vertex 01/29/2020	Vertex seems to be in a growth period. However, history of Vertex, and most pharma companies, indicates highly unpredictable instability. The valued low vs. high price of the company stock also has very little variance. At over \$200 per share, the price is already quite high. With what could be the exit of a profitable period of growth for the company, purchasing at this rate may be risky. If the value for the stock drops to \$150 or less, this may be a valuable stock to watch for future investment opportunities. However, with such volatility of this type of company, it would be one that should be watched no less than monthly with vigilance and ongoing market research. - TM	Community

Quarterly Growth Trend Data

Graph: Trailing 4 Quarters, Last 5 Years of Data



Quarterly Data									Last 12 Months Data								
Period	EPS		Pre-Tax Profit			Sales		Income Tax Rate	EPS	Pre-Tax Profit		Sales	Income Tax		%Change		
	\$	%Change	\$ Mil	%Sales	%Change	\$ Mil	%Change	\$		\$ Mil	%Sales	\$ Mil	%Rate	EPS	Pre-Tax Profit	Sales	
09/21	3.28	29.6	1,082.7	54.6	45.2	1,984.2	29.0	21.3	8.33	2,748.1	38.5	7,129.7	2,232.7	81.2	-18.6	-5.4	19.0
06/21	0.26	-91.8	-44.3	-2.5	-105.4	1,793.4	17.6	251.2	7.58	2,411.2	36.1	6,683.8	1,893.9	78.5	-4.3	8.1	23.7
03/21	2.49	8.7	821.0	47.6	24.9	1,724.3	13.8	20.4	10.50	3,280.2	51.1	6,414.9	503.9	15.4	82.0	89.4	33.1
12/20	2.30	3.1	888.6	54.6	31.3	1,627.8	15.2	32.0	10.30	3,116.8	50.2	6,205.7	384.5	12.3	128.4	123.4	49.1
09/20	2.53	1,050.0	745.9	48.5	955.5	1,538.3	62.0	10.5	10.23	2,905.1	48.5	5,991.1	226.4	7.8	24.0	287.1	65.5
06/20	3.18	208.7	824.8	54.1	152.1	1,524.5	62.0	-1.5	7.92	2,229.9	41.3	5,402.7	218.9	9.8	-7.2	173.2	56.4
03/20	2.29	122.3	657.5	43.4	105.4	1,515.1	76.5	8.3	5.77	1,732.3	35.9	4,819.5	255.6	14.8	-30.5	145.4	47.6

Quarterly Growth Trend Data

Graph: Trailing 4 Quarters, Last 5 Years of Data

Quarterly Data										Last 12 Months Data								
Period	EPS		Pre-Tax Profit			Sales		Income Tax Rate	EPS	Pre-Tax Profit		Sales	Income Tax		%Change			
	\$	%Change	\$ Mil	%Sales	%Change	\$ Mil	%Change			\$	\$ Mil		%Sales	\$ Mil	%Rate	EPS	Pre-Tax Profit	Sales
12/19	2.23	-62.6	677.0	47.9	1,983.1	1,413.3	62.4	13.8	4.51	1,394.9	33.5	4,162.8	233.0	16.7	-44.2	132.4	36.6	
09/19	0.22	-56.0	70.7	7.4	-48.2	949.8	21.1	18.6	8.25	750.5	20.7	3,619.7	-8,517.9	-1,135.0	230.0	10.3	27.9	
06/19	1.03	28.8	327.1	34.8	51.0	941.3	25.1	18.3	8.53	816.3	23.6	3,454.4	-9,291.2	-1,138.2	436.5	545.3	31.7	
03/19	1.03	27.2	320.2	37.3	49.2	858.4	34.0	16.1	8.30	705.8	21.6	3,265.2	-8,056.8	-1,141.6	865.1	1,393.1	35.2	
12/18	5.97	1,430.8	32.5	3.7	-71.1	870.1	33.5	-4,593.0	8.08	600.2	19.7	3,047.6	-6,885.2	-1,147.1	676.9	3,925.9	22.5	
09/18	0.50	222.0	136.5	17.4	132.7	784.5	35.7	5.9	2.50	680.2	24.0	2,829.1	23.6	3.5	220.5	730.8	23.2	
06/18	0.80	1,042.9	216.6	28.8	510.0	752.2	38.2	4.8	1.59	126.5	4.8	2,622.8	12.1	9.5	54.4	-53.2	23.1	
03/18	0.81	-18.2	214.6	33.5	-15.3	640.8	-10.3	-5.9	0.86	-54.6	-2.3	2,414.7	-6.2	11.4	22.9	-125.2	19.6	
12/17	0.39	200.0	112.4	17.3	453.7	651.6	42.1	9.1	1.04	-15.7	-0.6	2,488.7	-2.1	13.3	326.1	76.7	46.2	
09/17	-0.41	-156.3	-417.2	-72.2	-968.7	578.2	39.7	30.2	0.78	-107.8	-4.7	2,295.7	-2.0	1.8	186.7	34.1	38.2	
06/17	0.07	126.9	35.5	6.5	297.0	544.1	26.1	12.2	1.03	270.3	12.7	2,131.3	-16.4	-6.1	191.2	224.5	36.8	
03/17	0.99	682.4	253.5	35.5	928.1	714.7	79.5	1.6	0.70	216.8	10.7	2,018.8	-74.3	-34.3	142.4	155.6	56.3	
12/16	0.13	141.9	20.3	4.4	126.7	458.7	9.8	-36.7	-0.46	-67.4	-4.0	1,702.2	26.4	-39.1	80.1	87.9	64.9	
09/16	-0.16	59.0	-39.0	-9.4	57.8	413.8	33.6	-1.3	-0.90	-163.7	-9.9	1,661.4	48.3	-29.5	67.2	75.2	118.9	
06/16	-0.26	66.7	-18.0	-4.2	90.6	431.6	159.9	-100.6	-1.13	-217.2	-13.9	1,557.4	64.1	-29.5	63.2	70.4	147.9	
03/16	-0.17	79.5	-30.6	-7.7	84.6	398.1	187.4	-17.9	-1.65	-390.0	-30.2	1,291.9	32.5	-8.3	44.4	44.5	115.1	
12/15	-0.31	58.1	-76.0	-18.2	57.4	417.9	189.1	1.8	-2.31	-557.8	-54.0	1,032.3	21.7	-3.9	26.4	24.2	77.9	
09/15	-0.39	45.8	-92.5	-29.9	44.5	309.8	73.1	-1.4	-2.74	-660.3	-87.0	759.0	30.6	-4.6	-24.0	26.4	-3.6	
06/15	-0.78	-14.7	-190.9	-114.9	-20.3	166.1	20.0	-15.8	-3.07	-734.4	-116.9	628.1	35.1	-4.8	-51.2	14.6	-24.3	
03/15	-0.83	17.0	-198.4	-143.2	14.4	138.5	16.9	-0.2	-2.97	-702.3	-117.0	600.5	6.6	-0.9	-84.5	8.2	-40.1	
12/14	-0.74	-489.5	-178.6	-123.5	47.5	144.6	-58.8	-1.1	-3.14	-735.5	-126.7	580.4	7.3	-1.0	-53.9	24.6	-52.1	
09/14	-0.72	-33.3	-166.6	-93.1	-28.7	179.0	-19.3	-2.1	-2.21	-897.2	-114.0	787.0	-96.3	10.7	14.3	-25.2	-34.1	
06/14	-0.68	-161.5	-158.7	-114.6	-149.9	138.4	-55.5	-0.4	-2.03	-860.0	-103.6	829.7	-97.9	11.4	12.1	-45.2	-36.6	
03/14	-1.00	30.1	-231.7	-195.6	47.7	118.5	-63.9	-0.4	-1.61	-764.8	-76.3	1,002.1	-93.3	12.2	31.8	-40.8	-29.3	
12/13	0.19	154.3	-340.3	-96.9	-321.3	351.2	5.1	45.8	-2.04	-976.1	-80.5	1,212.0	-191.8	19.6	-308.0	-7,784.0	-20.6	
09/13	-0.54	-100.0	-129.4	-58.4	-2,431.6	221.7	-34.0	0.6	-2.58	-716.6	-60.0	1,194.8	-64.8	9.0	-516.1	-356.7	-32.0	
06/13	-0.26	16.1	-63.5	-20.4	-340.9	310.8	-25.7	2.8	-2.31	-592.3	-45.2	1,309.1	565.9	-95.5	-220.9	-222.2	-37.0	
03/13	-1.43	-432.6	-442.9	-134.9	-603.9	328.4	-25.2	29.4	-2.36	-543.2	-38.3	1,416.7	712.0	-131.1	-272.3	-267.4	-20.2	
12/12	-0.35	-145.5	-80.8	-24.2	-138.3	334.0	-40.7	3.3	-0.50	-12.4	-0.8	1,527.0	17.1	-138.4	-814.3	-105.2	8.3	
09/12	-0.27	-126.5	-5.1	-1.5	-102.5	336.0	-49.0	-417.7	0.62	279.2	15.9	1,756.4	-381.3	-136.6				
06/12	-0.31	63.5	-14.4	-3.4	91.8	418.3	265.6	-139.3	1.91	484.9	23.3	2,079.6	-172.6	-35.6				

Quarterly Growth Trend Data

Graph: Trailing 4 Quarters, Last 5 Years of Data

Quarterly Data									Last 12 Months Data									
Period	EPS		Pre-Tax Profit			Sales		Income Tax Rate	EPS	Pre-Tax Profit			Sales	Income Tax		%Change		
	\$	%Change	\$ Mil	%Sales	%Change	\$ Mil	%Change	\$		\$ Mil	%Sales	\$ Mil		%Rate	EPS	Pre-Tax Profit	Sales	
03/12	0.43	149.4	87.9	20.0		438.7	495.6	0.0	1.37	324.4	18.3	1,775.7	-13.8	-4.3				
12/11	0.77		210.8	37.4		563.3		10.8										
09/11	1.02		200.6	30.4		659.2		-13.9										
06/11	-0.85		-174.9	-152.8		114.4		-14.0										
03/11	-0.87		0.0	0.0		73.7												