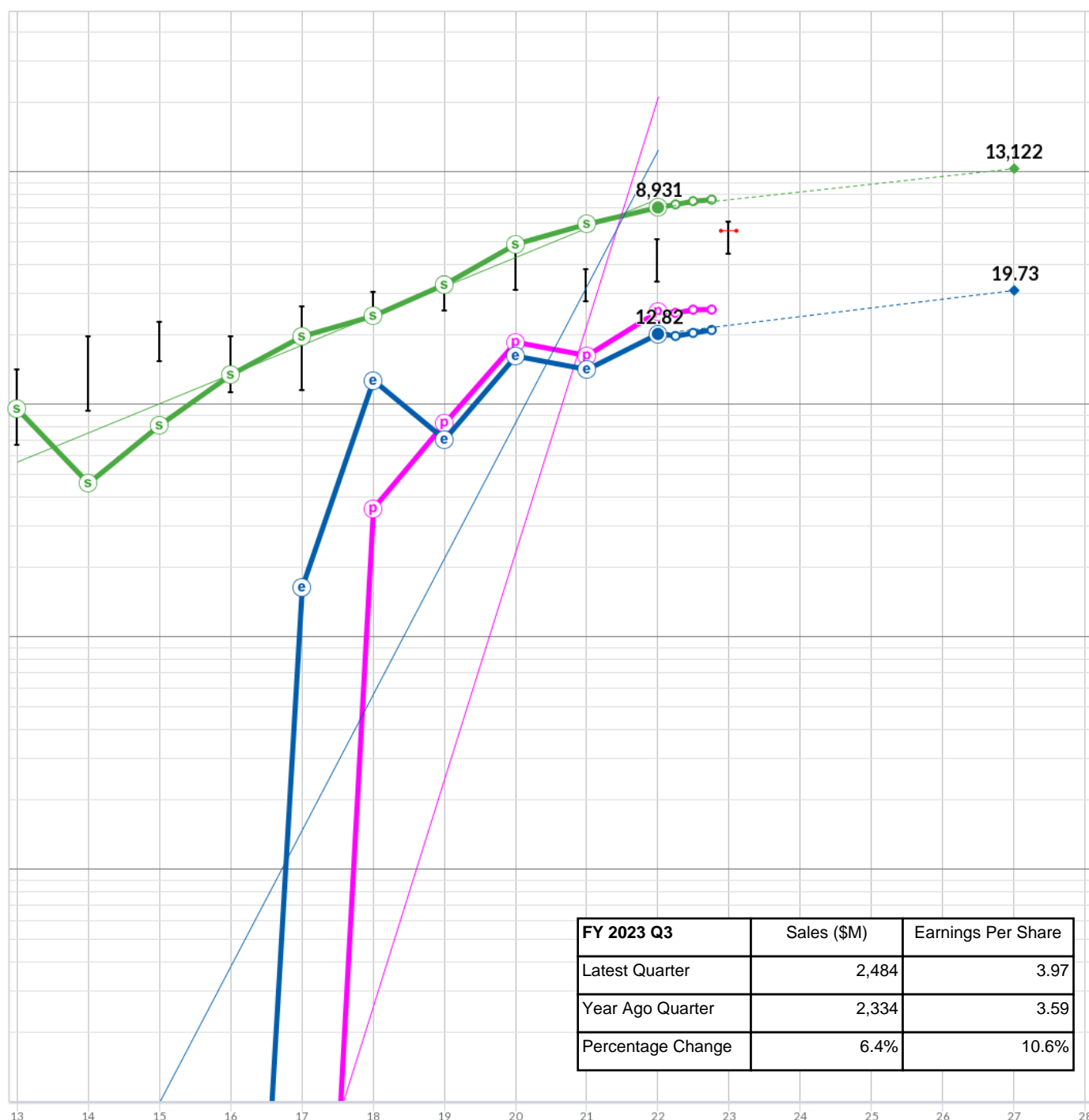


Stock Selection Guide

Company	Vertex Pharmaceutica		Date	12/11/23	
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)	260.6		1.0	76.4	
Debt (\$M)	744.7	% to Tot Cap	4.3	% Pot Dil	1.0

Symbol: VRTX

1 VISUAL ANALYSIS of Sales, Earnings, and Price



(1) Historical Sales Growth	33.6%	(3) Historical Earnings Per Share Growth	284.8%
(2) Estimated Future Sales Growth	8.0%	(4) Estimated Future Earnings Per Share Growth	9.0%

2 EVALUATING Management

Vertex Pharmaceutica

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Last 5 Year Avg.
% Pre-tax Profit on Sales	-80.5%	-126.6%	-54.0%	-4.0%	-0.6%	19.7%	33.5%	50.2%	36.0%	47.4%	37.4%
% Earned on Equity	-36.6%	-65.7%	-61.7%	-11.2%	14.7%	71.0%	22.2%	32.9%	24.1%	25.3%	35.1%
% Debt To Capital	27.2%	43.4%	46.8%	42.1%	23.0%	11.8%	9.7%	9.7%	8.5%	6.1%	9.2%

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 356.18 (12/11/23) **52-WEEK HIGH** 387.42 **52-WEEK LOW** 282.21

	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
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
2021	243.0	176.4	9.01	27.0	19.6	0.00	0.0	0.0
2022	324.8	214.7	12.82	25.3	16.7	0.00	0.0	0.0
AVERAGE		178.7		26.5	18.3		0.0	
CURRENT/TTM			13.33	29.1	21.2	0.00	0.0	
AVERAGE PRICE EARNINGS RATIO: 22.4					CURRENT PRICE EARNINGS RATIO: 26.7			

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 26.5 X Estimate High Earnings/Share 19.73 = Forecasted High Price \$ 522.7

B LOW PRICE - NEXT 5 YEARS

(a) Avg. Low P/E 19.0 X Estimate Low Earnings/Share 12.82 = Forecasted Low Price \$ 243.6

(b) Avg. Low Price of Last 5 Years 178.7

(c) Recent Market Low Price 176.4

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

Selected Forecasted Low Price \$ 243.6

C ZONING using 25%-50%-25%

Forecasted High Price 522.7 Minus Forecasted Low Price 243.6 = 279.1 Range. 25% of Range 69.8

Buy Zone 243.6 to 313.4

Hold Zone 313.4 to 452.9

Sell Zone 452.9 to 522.7

Present Market Price of 356.18 is in the **HOLD** Zone

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

$\frac{\text{High Price } 522.7 - \text{Present Price } 356.18}{\text{Present Price } 356.18} = \frac{166.54}{356.18} = 0.4676$
 $\frac{\text{High Price } 522.7 - \text{Present Price } 356.18}{\text{Present Price } 356.18 - \text{Minus Low Price } 243.6} = \frac{166.54}{112.58} = 1.5$ To 1

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

$\frac{\text{High Price } 522.7}{\text{Closing Price } 356.18} = 1.4676 \times 100 = 146.76 - 100 = 46.8$ % 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 $\frac{\text{Indicated Annual Dividend } 0.00}{\text{Closing Price } 356.18} = 0.0000 = 0.0\%$ Current Yield

B AVERAGE YIELD - USING FORECAST HIGH P/E

$\frac{\text{Avg. \% Payout } 0.0\%}{\text{Forecast High PE } 26.50} = 0.0\%$

AVERAGE YIELD - USING FORECAST AVERAGE P/E

$\frac{\text{Avg. \% Payout } 0.0\%}{\text{Forecast Average PE } 22.75} = 0.0\%$

C COMPOUND ANNUAL RETURN - USING FORECAST HIGH P/E

Annualized Appreciation 8.0 %
 Average Yield 0.0 %
 Annualized Rate of Return 8.0 %

COMPOUND ANNUAL RETURN - USING FORECAST AVG P/E

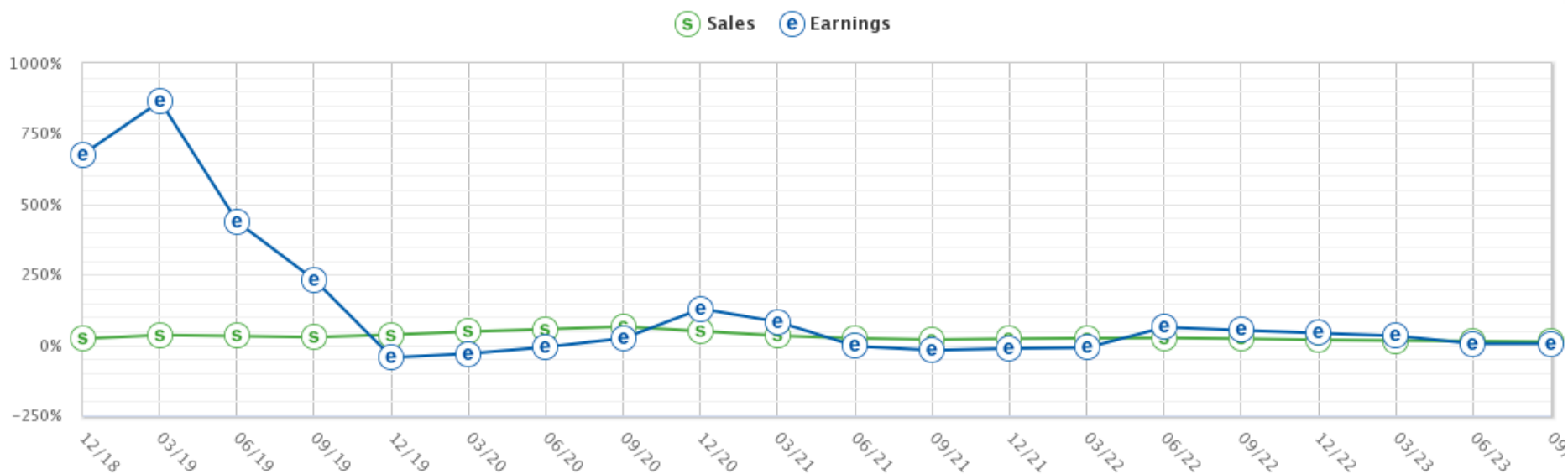
Annualized Appreciation 4.7 %
 Average Yield 0.0 %
 Annualized Rate of Return 4.7 %

Notes: VRTX SSG 12/12/23_Arvind

Date	Subject	Description	Type
11/10/23	FIRE Q3 2023	<p>VX-548, is a non-opioid option for pain that is in Phase 2 & Phase 3 trials which as the potential to be a blockbuster drug for Vertex.</p> <p>December 8th, the FDA will give a ruling on drug therapy for sickle cell disease and Vertex has several promising drugs in the pipeline.</p> <p>Vertex was down Q3 because the sales of older CF drugs did not meet analyst expectations.</p> <p>Vertex is presently a hold</p>	Community
01/09/23	Vertex doing well	Vertex continues to develop small molecules in the treatment of genetic diseases. Its recent collaboration with Maderna to package its RNA cystic fibrosis molecules in lipids is exciting. Sales and EPS continue on track. The recent decline in the Market makes shares inviting for long-term growth.	Community
07/12/22	Pipeline Update	<p>VX-880 (T1D treatment) was taken off hold by the FDA. Proof-of-concept was confirmed and enrollment in the trial continues.</p> <p>Vertex offered an all cash buy out of ViaCyte, their biggest competitor in the T1D treatment race. This deal should close later in 2022.</p>	Community
04/01/22	Pipeline	Vertex is making headway with a number of mid- or late-stage studies addressing such serious illnesses and conditions as sickle cell disease, beta thalassemia, Type 1 diabetes, kidney disease, pain, and protein deficiencies. The programs include Phase I/II clinical trial of VX-880, a stem cell-derived replacement therapy for Type 1 diabetes, and ongoing late-stage clinical trials on CTX001 for beta thalassemia and sickle cell disease, in collaboration with CRISPR Therapeutics	Community
04/01/22	Valueline Comment on 2021 Results	<p>Big gains in the CF product portfolio, led by Trikafta/Kaftrio, catapulted revenues by 22% in 2021; EPS would have been higher were it not for a \$900 million payment to CRISPR Therapeutics under an amended R&D collaboration. EPS in 2021 was down 12% from 2020..</p> <p>Valueline thinks EPS will be \$12.00 in 2022, \$13 in 2023 and \$16 in 5 years.</p>	Community
02/07/22	VRTX SHARES ARE UP at the end of 4thQtr	<p>In 2022, Analysts' expect VRTX's revenues to increase 12% Y/Y to \$8.5 billion after growing 22% Y/Y in 2021, which is largely attributable to the incredibly successful launch of Trikafta in late 2019. In the 4th quarter of 2021, Trikafta accounted for 82% of VRTX's product sales.</p> <p>Value Line (Dec 03 - 2021) sales growth estimates for LT (24-26) are Revenue 10,000 (\$mil) and for EPS Growth for LT (24-26) are 15.5. These figures were taken into account in developing SSG: In forecasting sales growth (11%) and EPS growth (11.2%).</p>	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	
09/23	3.97	10.6	1,179.2	47.5	0.2	2,483.5	6.4	12.2	13.33	4,309.0	44.6	9,654.2	849.0	19.7	5.1	7.0	11.0
06/23	3.52	12.5	1,161.5	46.6	13.4	2,493.2	13.5	21.2	12.95	4,306.2	45.3	9,505.0	942.1	21.9	4.7	9.5	13.8
03/23	2.69	-9.1	891.5	37.5	-6.6	2,374.8	13.2	21.5	12.56	4,169.1	45.3	9,208.0	909.2	21.8	32.2	45.6	15.9
12/22	3.15	5.0	1,076.8	46.8	23.6	2,302.7	11.1	24.0	12.83	4,232.4	47.4	8,930.7	909.0	21.5	42.1	55.0	17.9
09/22	3.59	9.5	1,176.4	50.4	8.7	2,334.3	17.6	20.9	12.68	4,026.6	46.3	8,700.6	740.3	18.4	52.2	46.5	22.0
06/22	3.13	1,103.8	1,024.4	46.6	2,414.8	2,196.2	22.5	20.9	12.37	3,932.9	47.1	8,350.4	727.2	18.5	63.2	63.1	24.9
03/22	2.96	18.9	954.8	45.5	16.3	2,097.5	21.6	20.2	9.50	2,864.2	36.0	7,947.6	2,179.0	76.1	-9.5	-12.7	23.9

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
12/21	3.00	30.4	871.0	42.0	-2.0	2,072.6	27.3	11.6	9.03	2,730.4	36.0	7,574.4	2,078.9	76.1	-12.3	-12.4	22.1	
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	
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				
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				

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	
03/14	-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				
12/13	0.19		-340.3	-96.9		351.2		45.8										
09/13	-0.54		-129.4	-58.4		221.7		0.6										
06/13	-0.26		-63.5	-20.4		310.8		2.8										
03/13	-1.43		-442.9	-134.9		328.4		29.4										