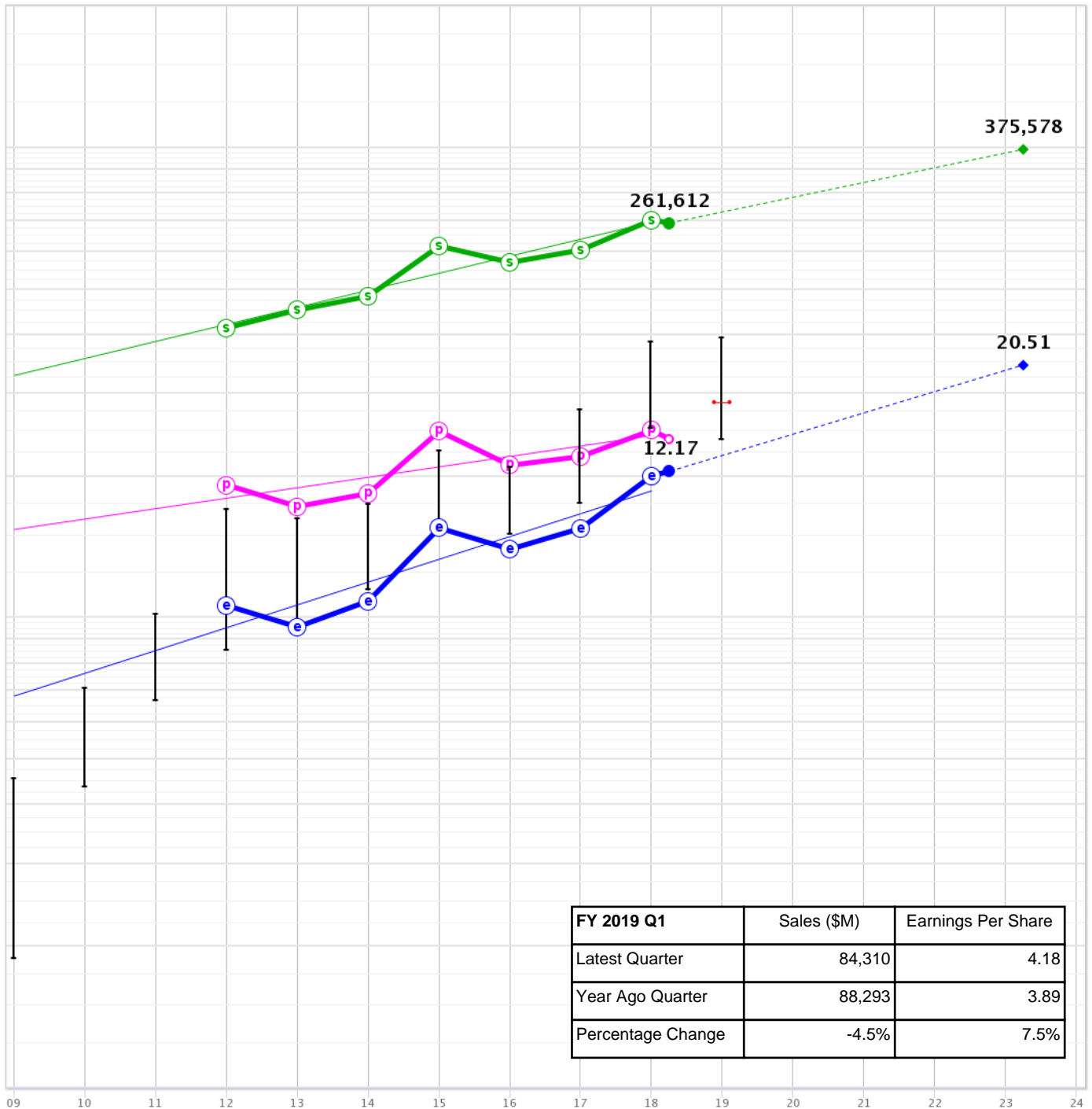


Company	Apple		Date	02/08/19	
Prepared by	GILLOGLY		Data taken from	BI Stock Data	
Where traded	NAS	Industry	Consumer Electronics		
Capitalization --- Outstanding Amounts	Reference				
Preferred (\$M)	0.0	% Insiders	% Institution		
Common (M Shares)	4,773.3	0.2	89.6		
Debt (\$M)	114,730.0	% to Tot Cap	49.3	% Pot Dil	0.8

Stock Selection Guide

Symbol: AAPL

1 VISUAL ANALYSIS of Sales, Earnings, and Price



- | | | | |
|-----------------------------------|------|--|-------|
| (1) Historical Sales Growth | 8.7% | (3) Historical Earnings Per Share Growth | 11.8% |
| (2) Estimated Future Sales Growth | 7.5% | (4) Estimated Future Earnings Per Share Growth | 11.0% |

2 EVALUATING Management

Apple

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Last 5 Year Avg.
Pre-tax Profit on Sales	28.1%	28.4%	31.6%	35.6%	29.3%	29.3%	31.0%	28.5%	28.0%	27.4%	28.8%
% Earned on Equity	25.8%	29.0%	33.6%	37.1%	29.0%	31.3%	40.9%	35.0%	35.7%	49.3%	38.4%
% Debt To Capital	0.0%	0.0%	0.0%	0.0%	12.1%	24.0%	35.1%	40.4%	46.3%	51.7%	39.5%

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 170.41 (02/08/19)

HIGH THIS YEAR 233.47

LOW THIS YEAR 142.00

	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
2014	103.7	68.3	6.45	16.1	10.6	1.81	28.1	*2.7
2015	134.5	92.0	9.22	14.6	10.0	1.98	21.5	2.2
2016	123.8	89.5	8.31	14.9	10.8	2.18	26.2	2.4
2017	164.5	104.1	9.21	17.9	11.3	2.40	26.1	2.3
2018	229.7	150.2	11.91	19.3	12.6	2.72	22.8	1.8
AVERAGE		108.9		16.5	11.1		24.9	
CURRENT/TTM			12.17			2.92	24.0	
AVERAGE PRICE EARNINGS RATIO: 13.8				CURRENT PRICE EARNINGS RATIO: 14.0				

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 16.5 X Estimate High Earnings/Share 20.51 = Forecasted High Price \$ 338.4

B LOW PRICE - NEXT 5 YEARS

(a) Avg. Low P/E 11.1 X Estimate Low Earnings/Share 11.88 = Forecasted Low Price \$ 131.9

(b) Avg. Low Price of Last 5 Years 108.9

(c) Recent Market Low Price 104.1

(d) Price Dividend Will Support $\frac{\text{Indicated Dividend}}{\text{High Yield}} = \frac{2.92}{2.65\%} = 110.2$

Selected Forecasted Low Price \$ 123.9

C ZONING using 25%-50%-25%

Forecasted High Price 338.4 Minus Forecasted Low Price 123.9 = 214.5 Range. 25% of Range 53.6

Buy Zone 123.9 to 177.5

Hold Zone 177.5 to 284.8

Sell Zone 284.8 to 338.4

Present Market Price of 170.41 is in the **BUY** Zone

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

$\frac{\text{High Price} - \text{Present Price}}{\text{Present Price} - \text{Low Price}} = \frac{338.4 - 170.41}{170.41 - 123.9} = \frac{167.96}{46.51} = 3.6$ To 1

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

$\frac{\text{High Price} - \text{Closing Price}}{\text{Closing Price}} = \frac{338.4 - 170.41}{170.41} = 1.9856$ X 100 = 198.56 - 100 = 98.6 % 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 $\frac{\text{Indicated Annual Dividend}}{\text{Closing Price}} = \frac{2.72}{170.41} = 0.0171 = 1.7\%$ Current Yield

B AVERAGE YIELD - USING FORECAST HIGH P/E

$\frac{\text{Avg. \% Payout}}{\text{Forecast High PE}} = \frac{26.1\%}{16.50} = 1.6\%$

AVERAGE YIELD - USING FORECAST AVERAGE P/E

$\frac{\text{Avg. \% Payout}}{\text{Forecast Average PE}} = \frac{26.1\%}{13.80} = 1.9\%$

C COMPOUND ANNUAL RETURN - USING FORECAST HIGH P/E

Annualized Appreciation 14.7 %
Average Yield 1.6 %
Annualized Rate of Return 16.3 %

COMPOUND ANNUAL RETURN - USING FORECAST AVG P/E

Annualized Appreciation 10.7 %
Average Yield 1.9 %
Annualized Rate of Return 12.6 %

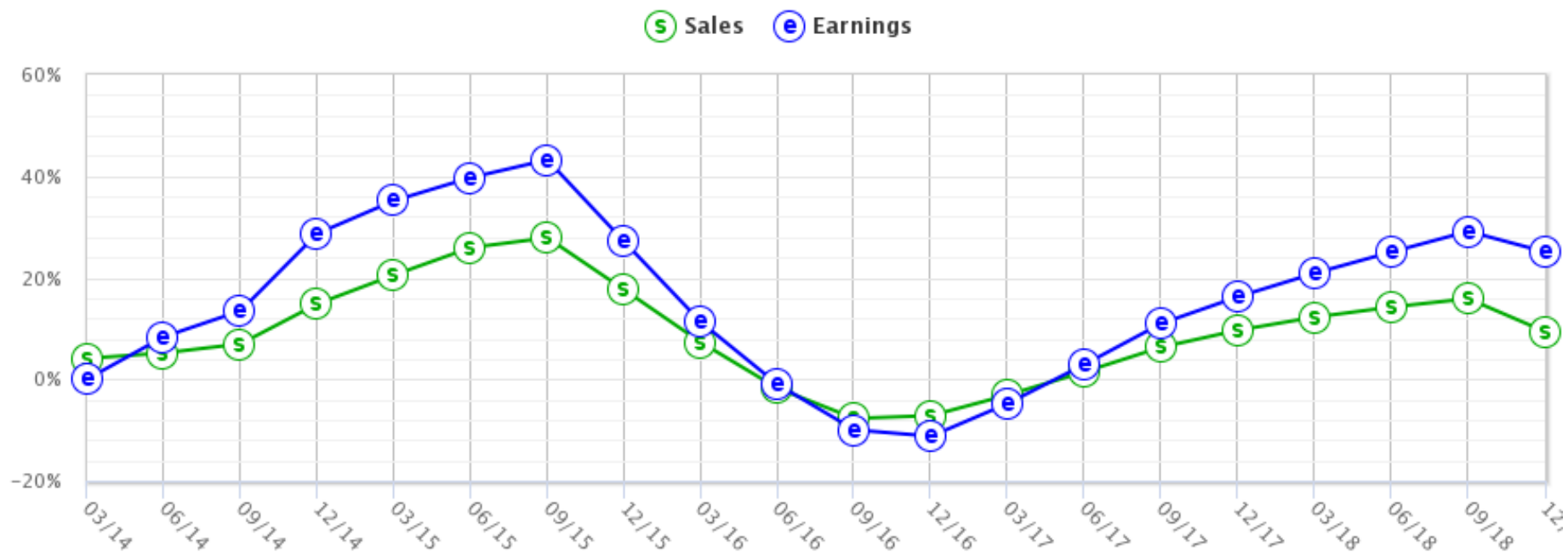
Notes: AAPL 2/11/19

Date	Subject	Description	Type
02/11/19	2-11-19 notes	Sales estimate of 7.5% is close to Manifest sales growth estimate of 8.1. EPS estimate of 11.0 per preferred procedure. Manifest PAR is below the sweet spot at 12.8%;but quality remains at 98.	Study
01/17/19	1-17-19 Fundamentals	<p>Sales kept at 7.5% to be close to VL Sales estimate number</p> <p>Earnings calculated by Preferred Procedure</p> <p>Manifest PAR is 14.7% (green) and Quality is 98 (blue)</p> <p>Net profit margin is 25.9% and Financial Strength is 91</p> <p>Per 1-2-19 Morningstar report "Despite significantly cutting our iPhone unit forecasts for China in the near term, we are maintaining our \$200 fair value estimate, thanks to stronger services and wearables expectations serving as the offset. With shares entrenched in 4-star territory, we see an adequate margin of safety as Apple's growth trajectory rests with its ability to better monetize its premium installed base, rather than grow iPhone units in a largely saturated smartphone market."</p>	Study
01/07/19	Apple update	<p>Apple Products:</p> <ul style="list-style-type: none"> -iPhones, iPads, App Store, Apple Watch, Apple Pay, iTunes, smart-home products, plus more. -Apple allows Samsung to feature iTunes video content on smart tv's + Airplay 2 (ability to instantly mirror your IOS, i.e. macbook, iPhone) -China isn't performing as well as expected, why? Per Bloomberg, slow economy, high prices, and less consumers taking short-term loans. Chinese competitors, Huawei Tech. and Xiaomi Corp. have offered cheaper phones that have made an impact on iPhone sales in China. <p>Growth opportunity:</p> <ul style="list-style-type: none"> -streaming video-service with original content; not sure if this is through Apple TV or will be available on multiple platforms -self-driving car project -AR (augmented reality) -Apple Pay -EPS expected to increase from 11.91 to 13.65 per value line -15.9% increase in sales from 2017 to 2018 -2.72 dividend, expected to increase to 3.12 for 2019 -\$147.93 1/7/19 closing price 	Community

12/29/18	New VL Dec 2018 Update	<p>December 2018 - VL 12/18 T2 S2 Note the Services margin & growth rate!</p> <ul style="list-style-type: none"> * Zone: BUY * Forecasted High Price: 373.0 * Forecasted Low Price: 150.0 * Closing Price (12/28/18): 156.23 * Upside Downside Ratio: 34.8 To 1 * Potential Price Appreciation: 138.8% * Total Return (High P/E): 20.1% * Projected Return (Avg P/E): 14.7% * Buy price to satisfy US/DS of 3 to 1 and 15% total return: 194.2 * Buy Below price based on zoning selection: 205.9 * RELATIVE VALUE Current PE: 13.2 / Average 5 Year PE: 13.8 X 100 = 95.3% * PROJECTED RELATIVE VALUE Projected PE: 11.6 / Forecast Average P/E: 13.3 X 100 = 87.2% * PEG Ratio Projected PE: 11.6 / Forecast EPS Growth Rate: 13.0% = 0.9 	Community
12/22/18	RE Ratio	Lowered PE to 14	Community
04/20/18	New Stock Presentation 18Apr20: KG	<p>APPL is a BUY. It has an excellent Quality 99 but its PAR is below ave at 9.4%. This is confirmed by the Mar 30 2018 VL, which while bullish is long term, shows little PE expansion. However, it is unique in position. It has over \$285B in cash and either purchases competitors or places it wants to grow, gives it back in the forms of dividends or does a share buy back. I have a conservative Sales growth of 7.5%, less than VL or Manifest. I did the PP and it came out to 8.3% EPS, but I went with the ACE as I don't see how it does not grow faster. Its 2A is good, reasonable debt and a vg ROE. This is either dividend play or a steady grower. It is no longer a growth company but it has a license to print money.</p>	Study

Quarterly Growth Trend Data

Graph: Trailing 4 Quarters, Last 5 Years of Data



Period	Quarterly Data								Last 12 Months Data										
	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		
12/18	4.18	7.5	23,906.0	28.4	-11.6	84,310.0	-4.5	16.5	12.17	69,779.0	26.7	261,612.0	10,165.1	14.6	25.1	4.2	9.4		
09/18	2.92	41.1	16,421.0	26.1	18.0	62,900.0	19.6	14.0	11.88	72,903.0	27.4	265,595.0	12,311.5	16.9	29.1	13.8	15.9		
06/18	2.34	40.1	13,284.0	24.9	17.5	53,265.0	17.3	13.3	11.03	70,399.0	27.6	255,274.0	13,479.6	19.1	25.1	12.9	14.2		
03/18	2.73	30.0	16,168.0	26.4	10.1	61,137.0	15.6	14.5	10.36	68,423.0	27.7	247,417.0	14,746.9	21.6	20.9	11.2	12.2		
12/17	3.89	15.8	27,030.0	30.6	11.8	88,293.0	12.7	25.8	9.73	66,939.0	28.0	239,176.0	16,164.1	24.1	16.2	9.8	9.7		
09/17	2.07	22.5	13,917.0	26.5	14.2	52,579.0	12.2	23.0	9.20	64,089.0	28.0	229,234.0	15,514.3	24.2	11.0	4.4	6.3		
06/17	1.67	17.6	11,308.0	24.9	8.0	45,408.0	7.2	22.9	8.82	62,360.0	27.9	223,507.0	15,566.6	25.0	2.9	-2.9	1.5		
03/17	2.10	10.5	14,684.0	27.8	3.8	52,896.0	4.6	24.9	8.57	61,521.0	27.9	220,457.0	15,760.1	25.6	-4.8	-9.9	-3.1		
12/16	3.36	2.4	24,180.0	30.9	-1.6	78,351.0	3.3	26.0	8.37	60,979.0	28.0	218,118.0	15,735.6	25.8	-11.2	-16.1	-7.2		
09/16	1.69	-14.2	12,188.0	26.0	-19.1	46,852.0	-9.0	26.0	8.29	61,372.0	28.5	215,639.0	15,725.0	25.6	-10.0	-15.4	-7.7		

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
06/16	1.42	-23.2	10,469.0	24.7	-27.7	42,358.0	-14.6	25.5	8.57	64,246.0	29.2	220,288.0	16,479.1	25.7	-1.0	-6.8	-1.8	
03/16	1.90	-18.5	14,142.0	28.0	-23.8	50,557.0	-12.8	25.6	9.00	68,250.0	30.0	227,535.0	17,625.6	25.8	11.2	5.1	7.2	
12/15	3.28	7.2	24,573.0	32.4	0.6	75,872.0	1.7	25.3	9.43	72,672.0	30.9	234,988.0	18,998.3	26.1	27.1	20.7	17.6	
09/15	1.97	38.7	15,062.0	29.2	31.3	51,501.0	22.3	26.2	9.21	72,515.0	31.0	233,715.0	19,120.4	26.4	43.2	35.6	27.9	
06/15	1.85	44.5	14,473.0	29.2	38.0	49,605.0	32.5	26.2	8.66	68,925.0	30.7	224,337.0	18,180.7	26.4	39.7	32.2	25.9	
03/15	2.33	40.4	18,564.0	32.0	34.3	58,010.0	27.1	26.9	8.09	64,936.0	30.6	212,164.0	17,107.4	26.3	35.2	27.1	20.5	
12/14	3.06	47.8	24,416.0	32.7	37.9	74,599.0	29.5	26.2	7.42	60,190.0	30.1	199,800.0	15,723.1	26.1	28.7	19.9	14.8	
09/14	1.42	19.6	11,472.0	27.2	13.1	42,123.0	12.4	26.2	6.43	53,483.0	29.3	182,795.0	13,971.1	26.1	13.5	6.6	7.0	
06/14	1.28	20.0	10,484.0	28.0	11.1	37,432.0	6.0	26.1	6.20	52,154.0	29.3	178,144.0	13,591.3	26.1	8.4	2.5	5.2	
03/14	1.66	15.2	13,818.0	30.3	7.1	45,646.0	4.7	26.0	5.99	51,105.0	29.0	176,035.0	13,416.3	26.3	0.0	-4.2	4.1	
12/13	2.07	5.0	17,709.0	30.7	0.2	57,594.0	5.7	26.2	5.77	50,192.0	28.8	173,992.0	13,176.7	26.3	-8.5	-10.3	5.7	
09/13	1.19	-4.2	10,143.0	27.1	-6.9	37,472.0	4.2	25.9	5.67	50,155.0	29.3	170,910.0	13,144.4	26.2	-10.1	-10.1	9.2	
06/13	1.07	-19.8	9,435.0	26.7	-20.5	35,323.0	0.9	26.9	5.72	50,905.0	30.0	169,404.0	13,158.9	25.9	-5.9	-5.1	13.8	
03/13	1.44	-18.0	12,905.0	29.6	-16.9	43,603.0	11.3	26.0	5.98	53,331.0	31.5	169,104.0	13,616.7	25.5	2.2	3.9	18.8	
12/12	1.97	-0.4	17,672.0	32.4	1.1	54,512.0	17.7	26.0	6.30	55,958.0	34.0	164,687.0	14,168.6	25.3	25.6	28.0	28.8	
09/12	1.24	23.0	10,893.0	30.3	23.9	35,966.0	27.2	24.5	6.31	55,763.0	35.6	156,508.0	14,014.6	25.1	59.6	63.0	44.6	
06/12	1.33	19.6	11,861.0	33.9	24.2	35,023.0	22.6	25.6	6.08	53,661.0	36.1	148,812.0	13,506.5	25.2	68.4	73.8	48.3	
03/12	1.76	92.2	15,532.0	39.6	96.6	39,186.0	58.9	25.2	5.86	51,351.0	36.1	142,360.0	12,652.9	24.6	95.5	100.5	62.8	
12/11	1.98	115.6	17,477.0	37.7	119.5	46,333.0	73.3	25.3	5.02	43,719.0	34.2	127,841.0	10,668.5	24.4	96.0	101.1	67.6	
09/11	1.01	51.9	8,791.0	31.1	61.0	28,270.0	39.0	24.7	3.95	34,205.0	31.6	108,249.0	8,291.3	24.2	82.7	84.5	66.0	
06/11	1.11	122.2	9,551.0	33.4	122.5	28,571.0	82.0	23.5	3.61	30,875.0	30.8	100,322.0	7,210.1	23.4	67.1	59.2	64.1	
03/11	0.91	92.0	7,900.0	32.0	96.1	24,667.0	82.7	24.2	3.00	25,616.0	29.3	87,451.0	6,028.7	23.5	61.8	52.1	62.7	
12/10	0.92	75.4	7,963.0	29.8	67.4	26,741.0	70.5	24.6	2.56	21,745.0	28.5	76,283.0	5,089.4	23.4	63.4	49.6	57.5	
09/10	0.66	0.6	5,461.0	26.8	-13.6	20,343.0	25.3	21.1	2.16	18,540.0	28.4	65,225.0	4,543.2	24.5	67.0	53.7	52.0	
06/10	0.50	159.6	4,292.0	27.3	147.8	15,700.0	88.3	24.2	2.16	19,399.0	31.7	61,120.0	5,359.9	27.6				
03/10	0.48	150.5	4,029.0	29.8	132.9	13,499.0	65.4	23.7	1.85	16,839.0	31.3	53,757.0	4,855.9	28.8				
12/09	0.52	106.3	4,758.0	30.3	108.3	15,683.0	54.3	29.0	1.57	14,540.0	30.0	48,421.0	4,434.7	30.5				
09/09	0.66		6,320.0	38.9		16,238.0		33.6										
06/09	0.19		1,732.0	20.8		8,337.0		29.0										
03/09	0.19		1,730.0	21.2		8,163.0		30.4										
12/08	0.25		2,284.0	22.5		10,167.0		29.7										