

Introduction To StockCentral Charts Part 2

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References

- ▶ For purposes of this presentation, I will mainly be using charts from StockCentral.com
- ▶ FREE educational information, available at www.stockcharts.com, will be helpful for background and related charting information
- ▶ Tip: Before you buy any books on technical analysis, visit the Chart School at StockCharts to get as much information as possible as this will help you make better, more cost effective book selections



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3

Prologue

- ▶ Never invest in any idea you can't illustrate with a crayon ~ Peter Lynch
- ▶ If all economists were laid end to end, they'd never reach a conclusion ~ George Bernard Shaw
- ▶ The genius of investing is in recognizing the direction of a trend, not in catching highs and lows ~ Anonymous



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4

Topics To Be Covered

- ▶ In Part 2 of this StockCentral webinar I will discuss:
 - Moving Averages
 - Moving Average Convergence Divergence (MACD)
 - Relative Strength Index (RSI)
 - Bollinger Bands (BBs)
- ▶ Moving Averages, MACD, RSI & BBs are found under “Overlays” tab



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5



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6

Moving Averages

- ▶ Moving averages are popular charting tools
- ▶ Smooth data, make it easier to spot trend changes, helpful in volatile markets
- ▶ Moving average has a look back period over which average is computed
- ▶ Can use single moving average can be used by itself or multiple moving averages can be used
- ▶ Most popular moving averages, often used together, are the 50 and 200 day averages



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7

Moving Averages

- ▶ There are several types of moving averages:
 - Simple moving average (SMA)
 - Exponential moving average (EMA)
 - Weighted moving average (WMA)
- ▶ Moving averages are lagging indicators, give late buy or sell signals



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8

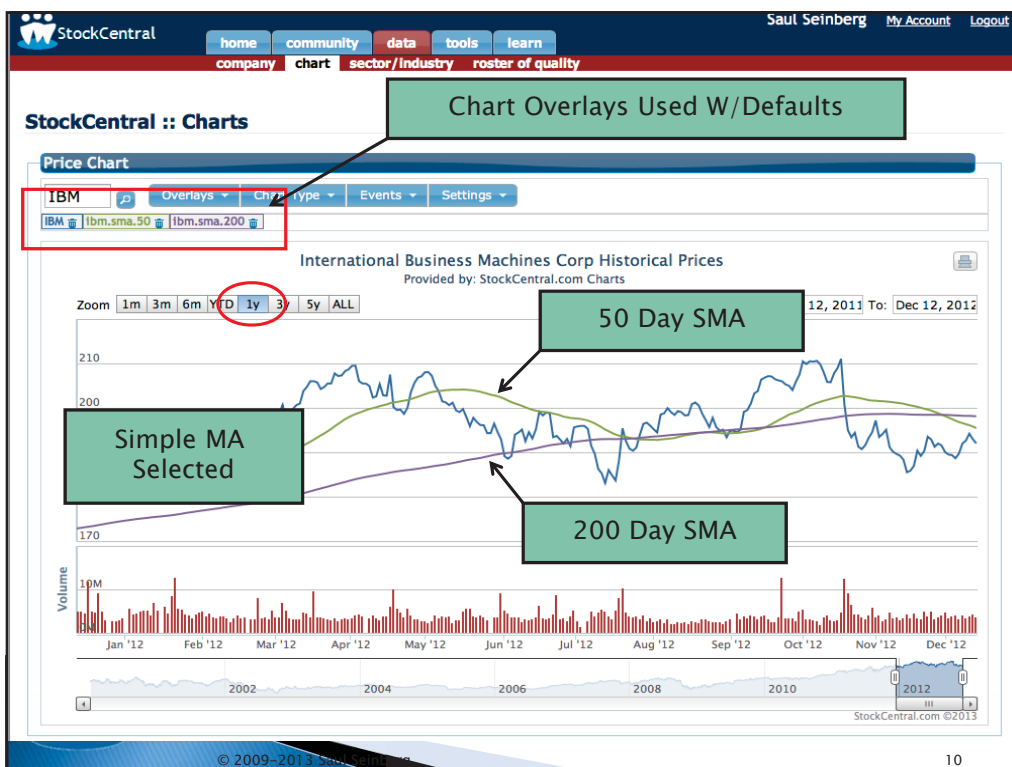
Simple Moving Average

- ▶ SMA formed by computing the average price of a security over look back period
- ▶ SMA is created using closing price
- ▶ 5 day SMA is calculated by adding closing prices for last 5 days then dividing total by 5
- ▶ After next day, oldest price is dropped, new price added and moving average recomputed



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9



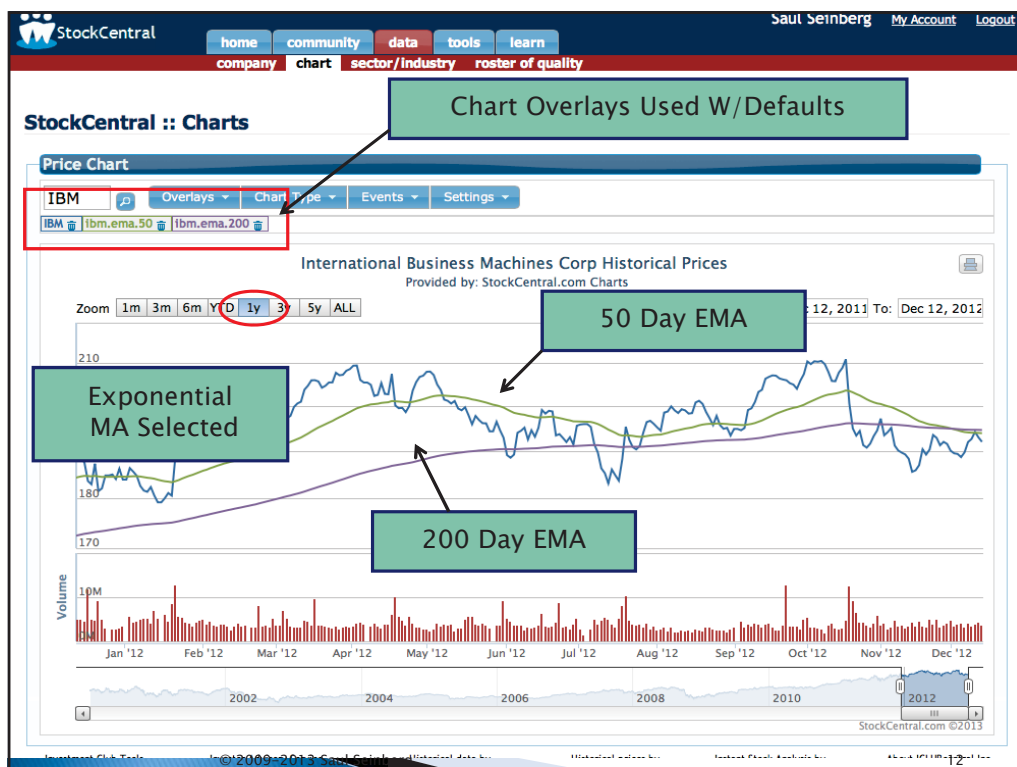
Exponential Moving Average

- ▶ In order to reduce lag in SMAs, technicians use exponentially moving averages (EMA)
- ▶ EMAs reduce lag by applying more weight to recent prices, making them more responsive
- ▶ Weighting is a function of look back period
- ▶ No values are dropped from an EMA



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11



Moving Averages

- ▶ Moving averages used to give buy and sell signals; determine trends
- ▶ If price line is above its moving average, trend is considered favorable
- ▶ If price line is below its moving average, trend is considered unfavorable
- ▶ If multiple moving averages are used, price line must be above or below all the moving averages to definitively show a trend; if between moving averages, trend is uncertain



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13

Moving Averages

- ▶ Moving averages generate buy and sell signals
 - When price line crosses from above to below a selected moving average, that is a sell signal
 - When price line crosses from below to above a selected moving average, that is a buy signal



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14

Moving Averages

- ▶ When two moving averages are used
 - Buy signal is generated when the shorter term moving average crosses from below to above the longer term moving average
 - Sell signal is generated when the shorter term moving average crosses from above to below the longer term moving average



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15

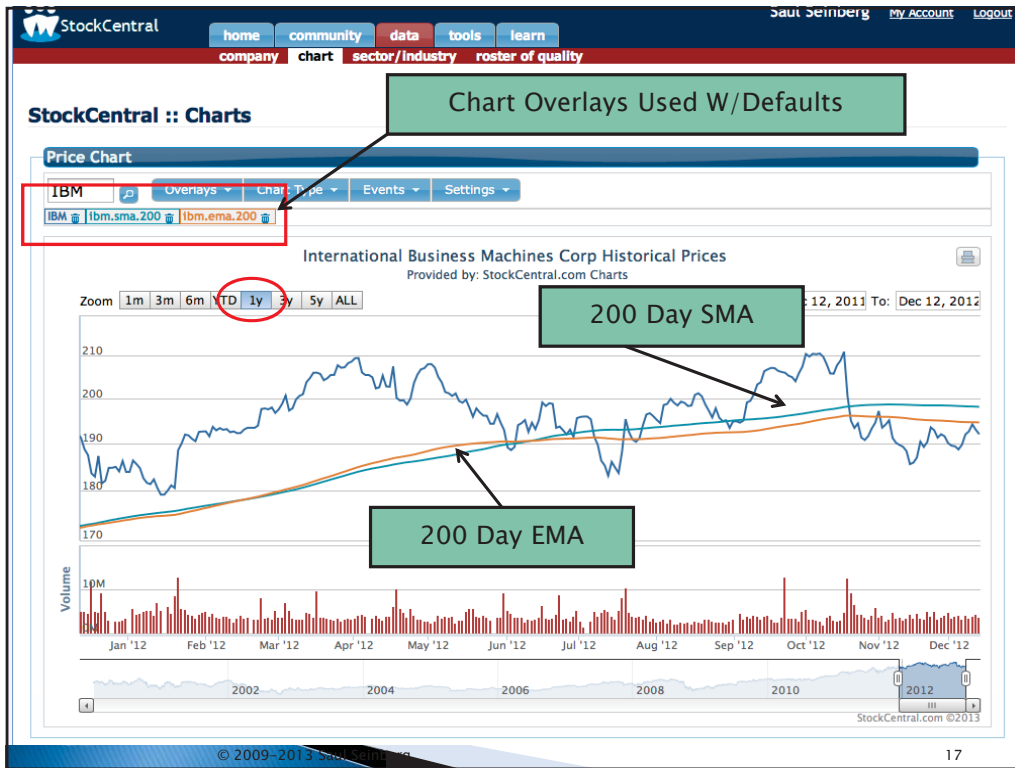
Moving Averages

- ▶ What period moving average should a growth or long term investor use?
- ▶ Since fundamental data is refreshed every 3 months, a 50 or 200 day moving average or both would be adequate to cover at least this period
- ▶ If you decide to try moving averages, start with one and experiment with both SMAs and EMAs
- ▶ Difference isn't as significant for growth investors




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16



StockCentral Charts

Questions?



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18

Bollinger Bands

- ▶ Indicator named after John Bollinger
- ▶ Bollinger Bands (BB) are a form of channel
- ▶ Channels originally defined as percentage or fixed dollar amount above and below moving average of price
- ▶ Bollinger proposed bands formed 2 standard deviations above and below 20 day price SMA



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19

Bollinger Bands

- ▶ Bollinger bands vary from the centerline SMA as a function of volatility
- ▶ Wider portions of the bands define areas where attractive option premiums are likely
- ▶ When prices move outside the bands, a trend continuation is likely as is return inside band
- ▶ A move originating at one band tends to go to the other band; useful for price targets



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20

Bollinger Bands

- ▶ BBs allow users to compare volatility over time
- ▶ By definition, BBs capture 95% of price action
- ▶ Contracting bands signal move, sometimes significant, but direction of move is unknown
- ▶ Price tend to hug bands, move from one band to another; prices define bands not vice versa
- ▶ BBs should never be used alone!



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21





Relative Strength Index

- ▶ RSI created by R. Welles Wilder, described in his classic 1978 book (New Concepts in Technical Trading Systems)
- ▶ RSI measures whether stock is overbought or oversold
- ▶ For RSI, think of each day's price change as an adjustment to a spring
- ▶ RSI depicts how spring has been tightened or loosened over look back period, usually 14 days



Relative Strength Index

- ▶ In RSI, values above 70 considered overbought, values below 30 considered oversold
- ▶ However, these values can remain above 70 and below 30 for extended periods; warnings
- ▶ A drop from above 70 to below 70 is viewed as a sell signal, consider context
- ▶ A rise above 30 from below 30 is considered to be a buy signal, consider context



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25

RSI Considerations

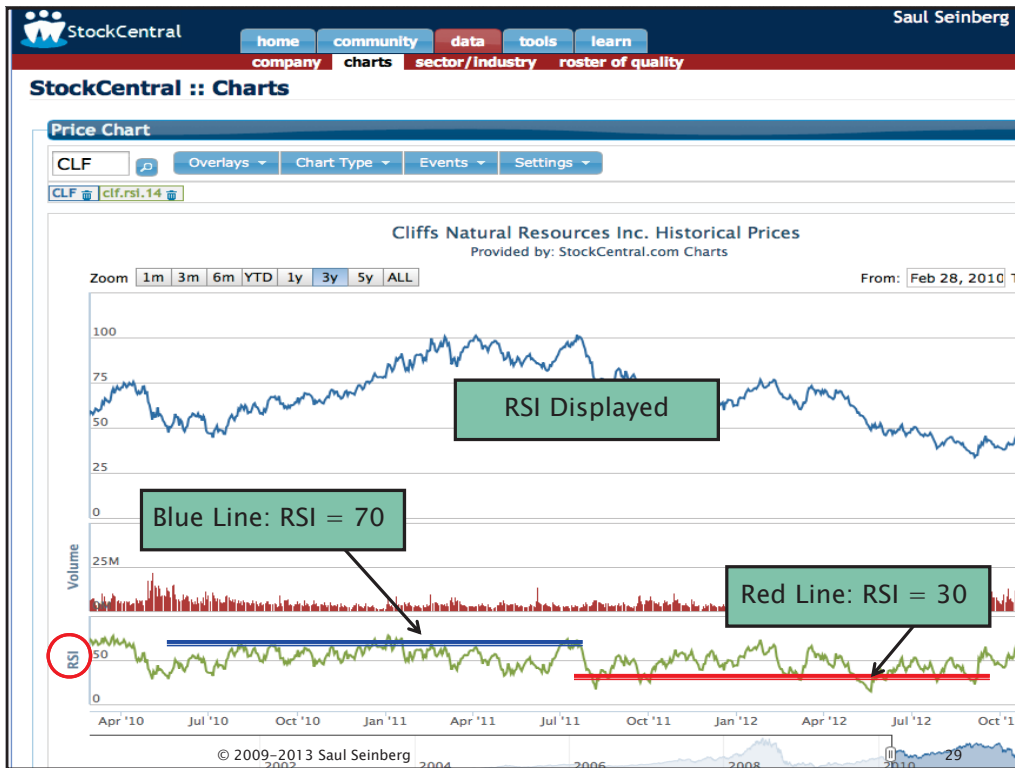
- ▶ RSI 50 crossovers can be used as buy or sell signal depending on the direction of cross
- ▶ RSI should not be confused with relative strength where stocks, funds or indexes are compared against each other's price
- ▶ Technicians often employ BBs in conjunction with RSI, MACD also used for this



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26





MACD

- ▶ Moving Average Convergence Divergence, pronounced “MAC-D,” written “MACD”, is another popular TA indicator
- ▶ MACD created by Gerald Appel in late 70s
- ▶ MACD is an improved use of moving averages, reduces but doesn't totally eliminate signal lag



MACD

- ▶ MACD is an unbounded oscillator that varies above and below a zero line
- ▶ Designed to combine momentum and trend in one indicator
- ▶ MACD produces buy and sell signals earlier than conventional moving averages



MACD

- ▶ MACD can be depicted as a two line graph or as a histogram
- ▶ MACD is more responsive than conventional moving averages, considered to have better predictive qualities
- ▶ However, MACD is not as good as RSI for identifying overbought or oversold conditions
- ▶ A TA analyst would use RSI or a similar indicator for that purpose



MACD

- ▶ MACD line is difference between two exponential moving averages
- ▶ The default MACD line is created using long EMA of 26 days and short EMA of 12 days
- ▶ MACD is the value of the 12 day EMA minus value of the 26 day EMA for the same period
- ▶ A 9 day EMA (signal line) is then plotted against the MACD line to create crossover signals and identify entry and exit points



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33





MACD Histogram

- ▶ A histogram is a representation of data points using adjacent rectangles, the height of each rectangle representing the value of each data point
- ▶ In MACD histogram, height of rectangle is the difference between the MACD and its signal line
- ▶ The MACD histogram is an informative and simplified form of the MACD indicator



Using MACD

- ▶ MACD buy and sell signals are derived in three different ways:
 - Histogram zero line crossovers; least reliable MACD signal
 - MACD line crossovers of the zero line, second most reliable MACD signal
 - Divergence between histogram and price of stock, produce the most reliable signals although not frequent



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37

Divergence

- ▶ A divergence occurs and buy and sell signals are created when price chart trend is opposite to trend shown by indicator
 - Bearish divergence occurs when the price chart trend is up and the indicator trend is down, one can be flat
 - Bullish divergence occurs when the price chart trend is down and the indicator trend is up, one can be flat
- ▶ In divergence situation, expect price chart to follow indicator trend
- ▶ Change in the price chart not immediate, may take several weeks to develop



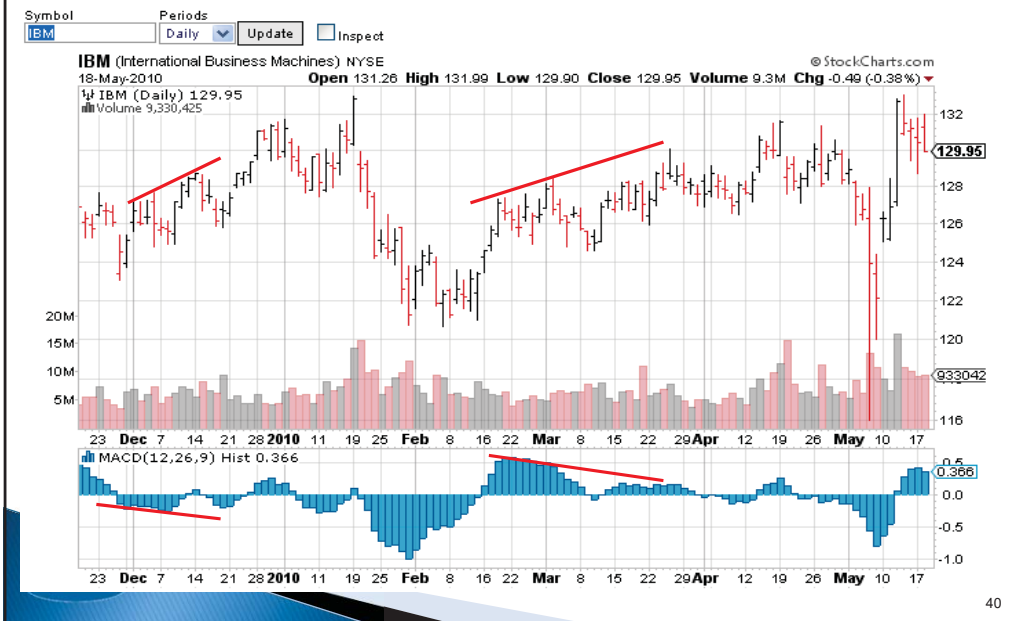
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38

Bullish MACD Divergence



Bearish MACD Divergence



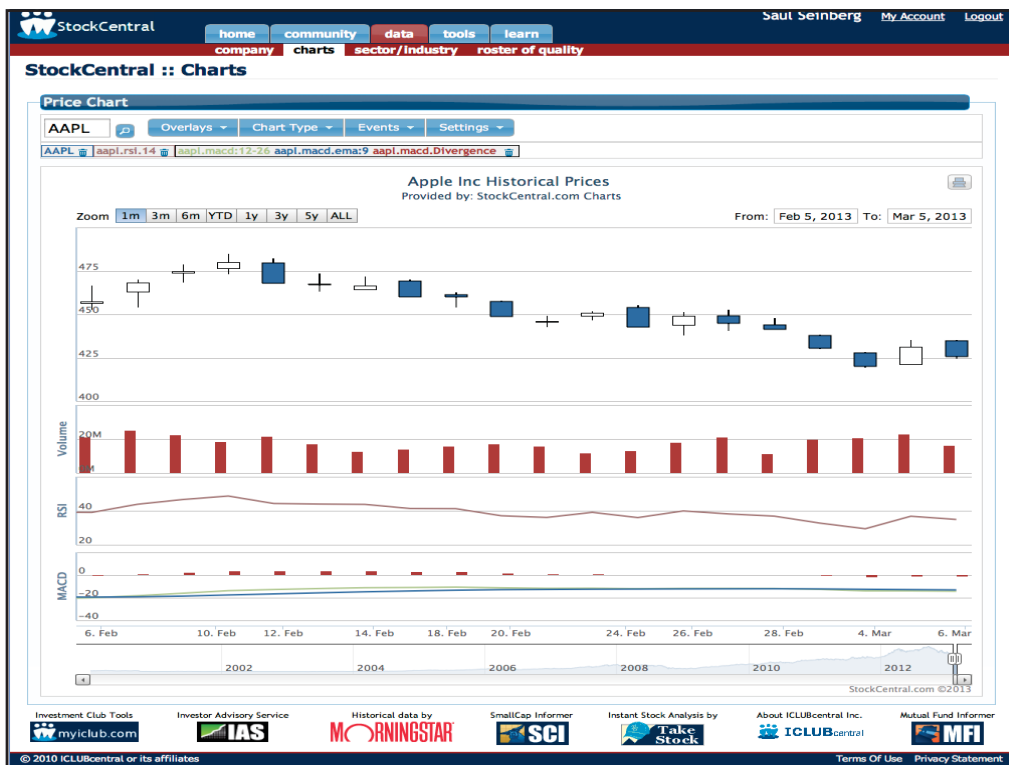
Case Study: AAPL

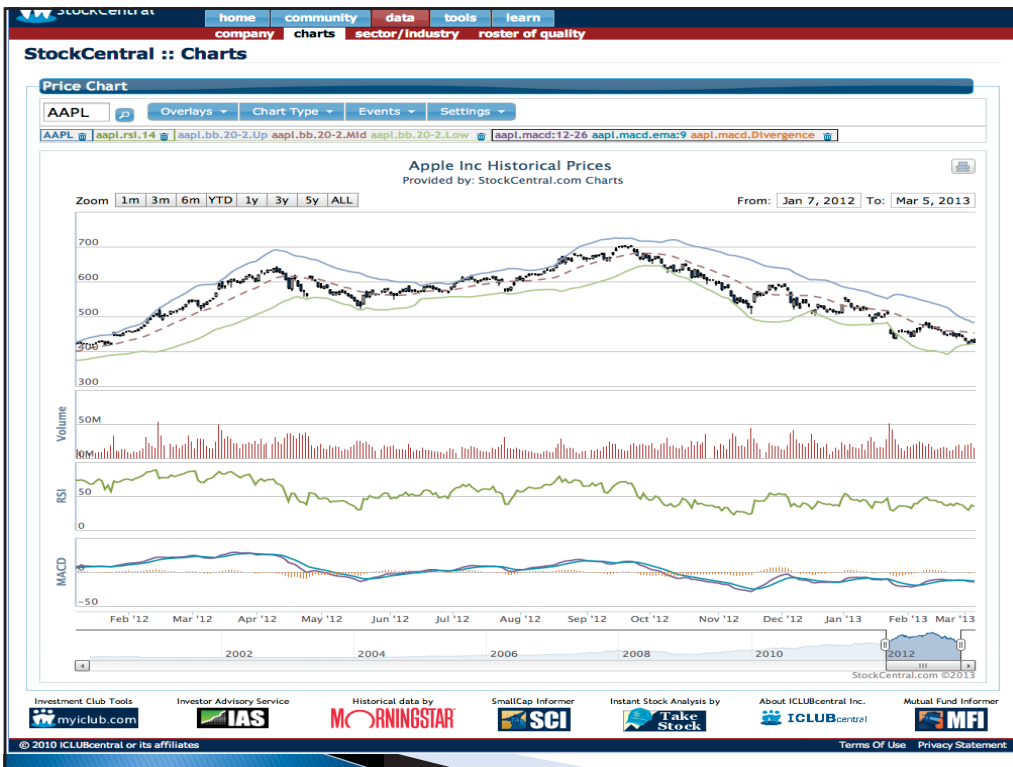
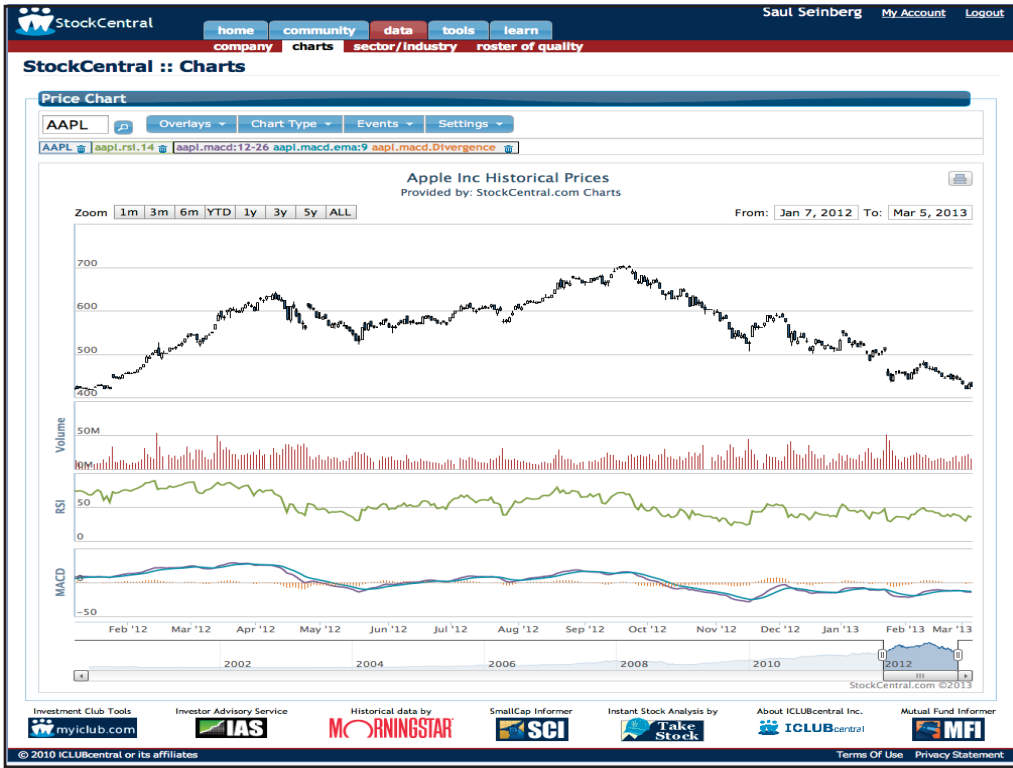
- ▶ Your club owns shares of AAPL
- ▶ A recent stock watch study on AAPL, using 16% growth rates, revealed that
 - PERT A growth rates have all declined for 4 consecutive quarters
 - Analysts earnings growth rate was 15.1% while sustainable growth was shown to be 32.9%
 - Current P/E is 9.8, avg. high P/E = 10
 - PEG is 0.61, Relative Value = 58.7%
 - Stock is in BUY zone with U/D of 3.0



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41





Case Study: INFY

- ▶ Your club owns shares of INFY
- ▶ A recent stock watch study on INFY, using 16% growth rates, revealed that
 - PERT A growth rates have all declined for 4 consecutive quarters
 - Analysts earnings growth rate was 15.0% while sustainable growth was shown to be 19.9%
 - Current P/E is 17.9, avg. high P/E = 23
 - PEG is 1.12, Relative Value = 87.7%
 - Stock is in BUY zone with U/D of 6.0



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45





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Questions?

