Technical Analysis

Point and Figure Charting

http://spreadsheetml.com/chart/pointandfigure.shtml

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ConnectCode's Technical Analysis Templates

Have you thought about how many times you use or reuse your technical analysis models? Everyday, day after day, model after model and project after project. We definitely have. That is why we build all our technical analysis templates to be reusable, customizable and easy to understand. We also test our templates with different scenarios vigorously, so that you know you can be assured of their accuracy and quality and that you can save significant amount of time by reusing them. We have also provided comprehensive documentation on the templates so that you do not need to guess or figure out how we implemented the models.

All our template models are only in black and white color. We believe this is how a professional technical analysis template should look like and also that this is the easiest way for you to understand and use the templates. All the input fields are marked with the '' symbol for you to identify them easily.*

Whether you are a financial analyst, stock investor, investment banker or trader. Or whether you are a student aspiring to join the trading world or an entrepreneur needing to understand investment, we hope that you will find this package useful as we have spent our best effort and a lot of time in developing them.

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1. Point and Figure Charting

1.1 Background

Point and Figure charting is a technical analysis technique that uses a chart with "X"s and "O"s for predicting financial asset prices. The "X"s are used to indicate rising prices and "O"s to indicate falling prices. The point and figure chart is very unique as it does not plot prices against time like other technical analysis charts. Volume is also not taken into account, so it is basically a chart based purely on price movements. The diagram below shows a simple Point and Figure chart.

21	21.000							
22	20.000							
23	19.000					X		
24	18.000				X		X	O
25	17.000		X		X	O	X	O
26	16.000		X	O	X	O	X	O
27	15.000		X	O	X	O		O
28	14.000		X	O				O
29	13.000	O	X					
30	12.000	O	X					
31	11.000	O						

This chart and its associated techniques are more than a century old and are now used by many traders as part of their technical analysis toolkit.

In the diagram above, the "X"s indicate rising prices while the "O"s indicate falling prices. Notice that the "X"s and "O"s are always in different columns. Basically, each time the price changes by a certain amount in the opposite direction, it is plotted in a new column. If the price is moving in the same direction, it is plotted in the same column.

1.1.1 Plotting the Point and Figure Chart

To get a rough idea of how the chart is plotted, assume a stock is currently priced at $13 and the price is in a downward trend. The first price $13 is plotted in the diagram below as the first "O" marked by the blue box. The price then drop to $11.90 and the second "O" is plotted. The price drops further to $10.80 and then third "O" is plotted. Now the price movement starts to reverse in trend. It rises to $12. At this point in time, nothing is plotted on the chart. In a Point and Figure chart, a reverse in trend requires the price to rise by a certain amount. Let's assume for now that it requires the price to rise by 3 or more boxes before an "X" is plotted. Now if the price rises to $14.20. Three "X"s indicated by the red box will be plotted on the chart. If the price rises further to $15.10, the next "X" will be plotted.

21	21.000						
22	20.000						
23	19.000				X		
24	18.000			X	X	O	
25	17.000		X	X	O	X	O
26	16.000		X	O	X	O	X	O
27	15.000		X	O	X	O		O
28	14.000		X	O			O
29	13.000	O	X				
30	12.000	O	X				
31	11.000	O					

1.1.2   Common Parameters

There are two important parameters to take note of in the Point and Figure Chart. They are the Box Size and the Number of Boxes.

- Box Size

    The size of the change in prices before plotting an "X" or "O" is plotted. By defining a box size, small changes in price are not reflected in the chart. This allows small fluctuations or noise to be filtered out from the chart. In the diagram and example above, the box size is set to $1. That means any increase or decrease by $1 will require an "X" or an "O". When plotting the point and figure chart, the direction of the price is always taken into consideration. For example, in an upwards trend, an "X" will be added if the price rises beyond the box size. In a downward trend, an "O" will be added if the price falls below another box size.

    A typical box size for a stock trading from $1 to $5 is $0.50 while a stock trading from $5 to $20, it is $1.

- Number of Boxes for Reversal

    The Number of Boxes for Reversal is used when the price changes in direction. In an upward trend, to plot an "O" of the reverse direction, it requires significant movement in the opposite direction before the trend is considered to have reversed. The number of boxes here is for specifying the amount (or the number of change in boxes in the reverse direction) before an "O" is plotted. For example, if we provide 3 as the Number of Boxes for Reversal, during an upward trend, it requires a negative change in price of 3 boxes before an "O" is plotted. This is the same for the downward trend. An increase in price equivalent to 3 boxes is required before an "X" can be plotted. When the reverse trend is met, three consecutive "X"s or "O"s are plotted. The reverse in trend is plotted in a new column.

X		
X	O	
X	O	
	O	

    The diagram above shows the price is initially in an upward trend. Then prices started to fall by 3 or more boxes. The three "O"s are thus plotted in a new column in the chart. This is where the beauty of Point and Figure comes into the picture. It takes several boxes to reverse a trend. That means only significant change in price movements is considered, other changes are treated as noise and ignored.
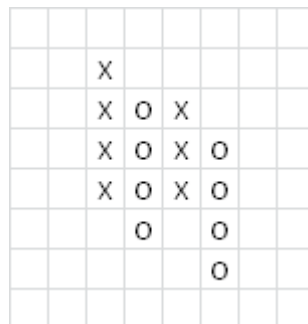
1.2   Some common patterns

This section illustrates some very common patterns traders use for predicting prices.

1.2.1   Bullish Signal
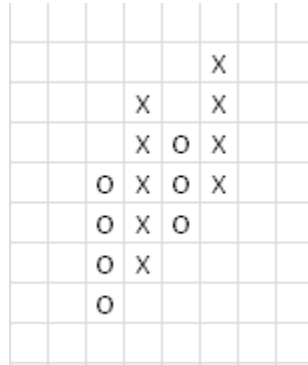
The diagram above shows a bullish signal. Notice each time the trend reversed to "X", the price went higher than the previous high. If a simple trend line is draw at the bottom of the "X"s, it shows an upward trend.

1.2.2   Bearish Signal

The diagram above shows a bearish signal. Notice each time, the trend goes downwards. The new low is lower than the previous low.

1.2.3   Support

The red line in the diagram below shows the support line. If the price suddenly drops below the support line, it is a signal that there is a high chance that the trend has changed and the trader might want to consider selling the assets.
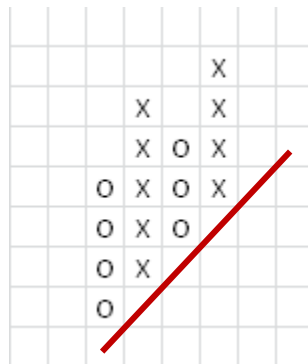
1.2.4 Resistance

The green line below shows the resistance line. This is where an asset's price will encounter resistance as it moves towards the resistance line.
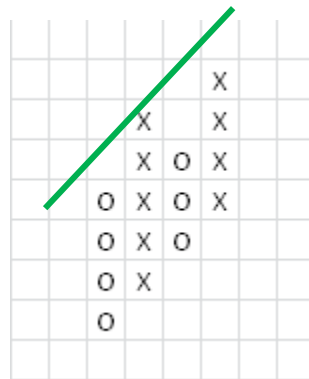
2. Point and Figure Chart Spreadsheet

This is a collection of spreadsheets that handle various Point and Figure charting scenarios. The users can either copy-and-paste market data into the spreadsheets or download data automatically from http://finance.yahoo.com to plot the chart.

Various parameters like Box Size and Reversal are provided. Each "Box" in a Point and Figure chart is shown in the first column of the spreadsheet. Spaces above and below the range of prices that the stock is trading in are also provided in case the chart is going to be further used for plotting manually. There are many investors and traders who enjoy plotting the charts manually to get a better feel of the market instead of just looking at the chart.

21	21.000						
22	20.000						
23	19.000				X		
24	18.000			X	X	O	
25	17.000	X		X	O	X	O
26	16.000	X	O	X	O	X	O
27	15.000	X	O	X	O		O
28	14.000	X	O				O
29	13.000	O	X				
30	12.000	O	X				
31	11.000	O					

2.1 Automatically downloading data

The PointAndFigureCharting-AutomaticDownloadData.xls spreadsheet automatically downloads data from http://finance.yahoo.com and placed them in the DownloadedData worksheet.

	A	B	C	D	E	F	G	H	I
1									
2				Point and Figure Chart					
3					Copyright© 2009-2010, ConnectCode. All rights reserved.				
4									
5		This worksheet downloads stock quotes automatically from http://finance.yahoo.com to plot a							
6				Point and Figure Chart.					
7	Inputs								
8	Start Date (MM/DD/YYYY)*				1/4/2009				
9	End Date (MM/DD/YYYY)*				7/31/2010				
10	Stock Quotes Frequency*				Daily				
11	Stock Symbols*				YHOO				
12	Box Size*				1				
13	Number of Boxes for Reversal*				3				
14							Download and Chart		
15									

Various parameters about the stock and dates for downloading data are described below.

- Start Date (MM/DD/YYYY)* - The start date to download the stock prices.
- End Date (MM/DD/YYYY)* - The end date to download the stock prices.
- Stock Quotes Frequency* - The frequency of data download, e.g. Daily, Weekly or Monthly.
- Stock Symbols* - Prices and Volume information of this specific stock symbol will be downloaded.

- Download and Chart button- Download the stock data and generate the Point and Figure Chart in in the "Output" worksheet.

Box Sizes and the Number of Boxes Before Reversal as explained in the previous sections can be configured in the Professional version of the spreadsheet.

Upon clicking on the Download and Chart button, data will be retrieved from the http://finance.yahoo.com site and placed in the DownloadedData worksheet.

	A	B	C	D	E	F	G
1	Date	Open	High	Low	Close	Volume	Adj Close
2	1/5/2009	12.72	13.01	12.39	12.86	11989900	12.86
3	1/6/2009	12.96	13.24	12.88	13	10056000	13
4	1/7/2009	12.71	13.16	12.45	12.71	24995900	12.71
5	1/8/2009	12.37	13.07	12.31	13.07	13929800	13.07
6	1/9/2009	13.42	13.56	12.9	13.13	19281000	13.13
7	1/12/2009	13.09	13.1	12.08	12.22	19976900	12.22
8	1/13/2009	12.09	12.79	11.78	12.1	25720400	12.1
9	1/14/2009	12.26	12.53	11.81	12.41	23595200	12.41

The data in the "DownloadedData" worksheet is then used to plot the Point and Figure chart in the Output worksheet as shown in the diagram below.

21	21.000							
22	20.000							
23	19.000				X			
24	18.000			X	X	O		
25	17.000	X		X	O	X	O	
26	16.000	X	O	X	O	X	O	
27	15.000	X	O	X	O		O	
28	14.000	X	O				O	
29	13.000	O	X					
30	12.000	O	X					
31	11.000	O						
32	10.000							

2.2 Using external market data

Instead of downloading data automatically, the user can choose to use existing market data with the PointAndFigureCharting.xls spreadsheet. If the files are available in Commas Delimited Values (CSV) files, simply copy and paste the data in the Date, Open, High, Low, Close format into the "DownloadedData" worksheet. Next go to the Input worksheet and click on the "Chart" button. The Box Size and Number of Boxes before Reversal can be configured in the professional edition of the spreadsheet.

	A	B	C	D	E	F
1	Date	Open	High	Low	Close	Volume
2	25-Aug-00	89.08	91.3	87.02	90.12	2242500
3	28-Aug-00	90.76	91.89	89.82	91.2	2798700
4	29-Aug-00	91.11	93.56	89.87	91.18	3528000
5	30-Aug-00	91.08	91.54	86	86.24	2560500
6	31-Aug-00	86.64	88.65	84.14	86.4	3178900
7	1-Sep-00	86.89	87.73	85.07	85.81	2378000
8	4-Sep-00	85.02	86.68	83.94	86.4	2321900
9	5-Sep-00	89.32	92.13	88.78	90.85	3232700
10	6-Sep-00	90.84	91.54	87.37	88.18	2235200
11	7-Sep-00	87.3	88.84	85.7	87.59	2887200
12						
13						
14	To plot the Point and Figure Chart, you can copy and paste your market					
15	data into this worksheet (format as shown above) and proceed with the					
16	next worksheet when you are done.					

2.3 Advance Point and Figure Chart

The stock price sensitivity is different at different price points. In simple terms, this means an asset typically moves by a different amount at different price points. For a penny stock, a tick may represent a movement of several cents. Whereas for a stock over hundreds of dollars. A tick may represent a movement of several dollars.

Different Box Size may be required for stocks of different prices. Moreover, a stock may move from over hundreds of dollars to a penny stock. Mechanisms to make sure their movements are capture accurately is required in the Point and Figure chart. This is achieved by using multiple Box Sizes in a single chart. This is shown in the diagram below and is supported by the PointAndFigureCharting-MultipleBoxSize.xls spreadsheet for charting with external data and the PointAndFigureCharting-MultipleBoxSize-AutomaticDownloadData.xls spreadsheet for charting with data downloaded automatically from http://finance.yahoo.com.

12	Box Size		Min (Greater)	Max (Less than or equal)*	Size*	
13			0	1	0.125	
14			1	5	0.25	
15			5	20	0.5	
16			20	100	1	
17			100	200	2	
18			200	300	4	
19	Number of Boxes for Reversal*				3	

Being able to specify multiple box sizes at different price points also allows different types of assets like commodities and currencies to be charted easily.

In the diagram above, for prices from $5 to $20 the box size is $0.5 while from $20 to $100 the box size is $1. This is reflected in the first column of the Point and Figure chart as shown in the diagram below. Each box is of the size $1 when the price is equal to or more than $20. Below $20 the box size is $0.5.

16	24.000	
17	23.000	
18	22.000	
19	21.000	
20	**20.000**	
21	19.500	
22	19.000	
23	18.500	
24	18.000	

2.4   Point and Figure Charting for FOREX

Though Point and Figure charting can be easily applied to FOREX, the movements of some currency pairs may require the support of a very small (or very large) Box Size.

The "**forex**" subfolder contains Point and Figure Charting spreadsheets that are able to support the following:

- Box Size – 0.0001 to 1000
- Number of Boxes for Reversal – 1 to 50

With the wide range of parameter values, the different currency pairs can be charted very accurately. On top of that, users using Excel 2007 and above will be able to chart more than 255 columns, to capture a long series of fluctuations in a single chart.