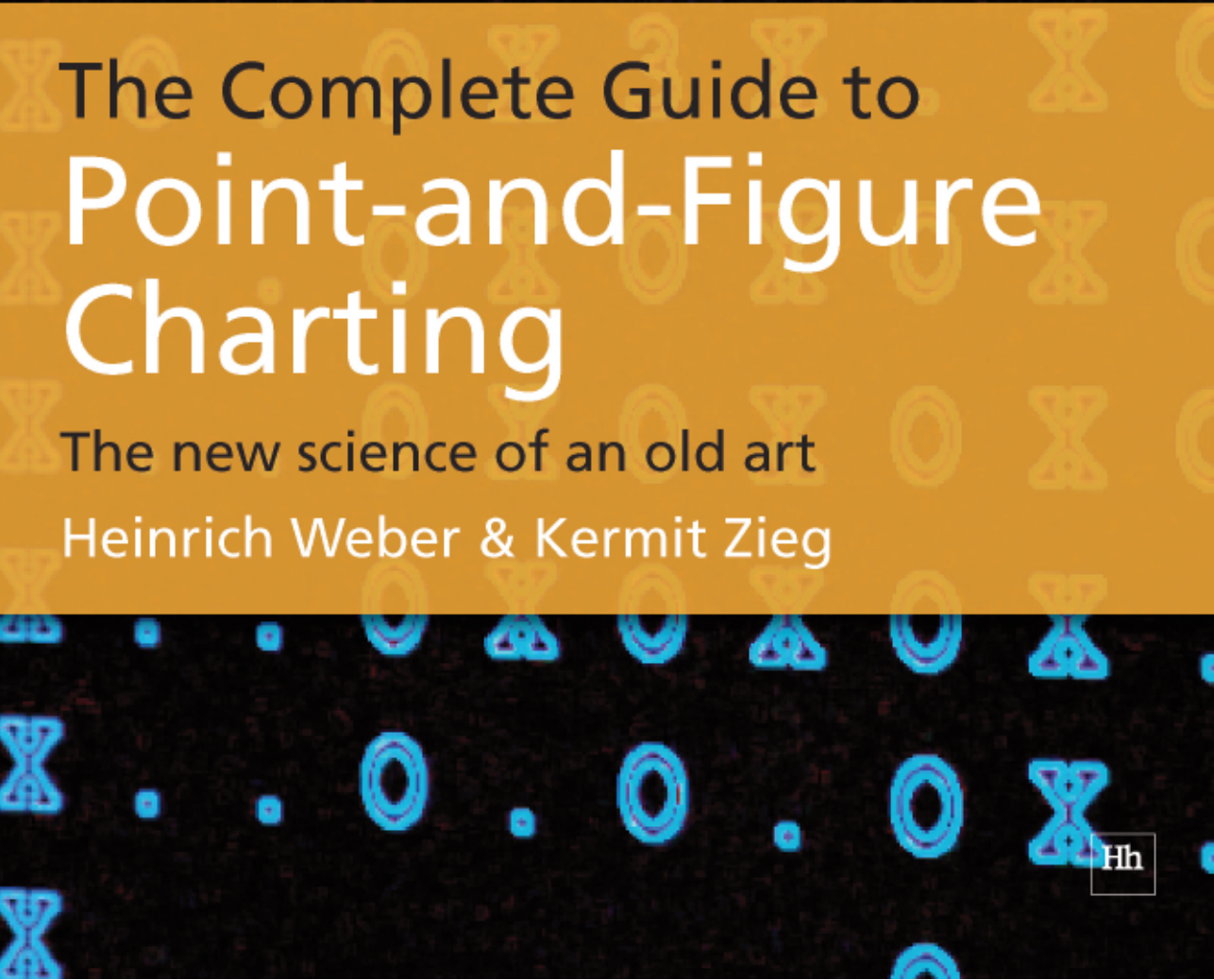




The Complete Guide to Point-and-Figure Charting

The new science of an old art
Heinrich Weber & Kermit Zieg



• • • **Sample** • • •

www.harriman-house.com/pointandfigure

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The Complete Guide to
Point-and-Figure Charting

by

Kermit Zieg and Heinrich Weber

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About the authors

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Being an avid investor since age 12, Dr. Zieg has a BS with a Finance Major from Indiana University, an MA in Investments from Ohio State University, and a Ph.D. in Finance and Investments also from Ohio State. Based upon over 40 years of personal investing experience and academic research, he has written nine books and numerous articles on many of the most successful investment strategies. He is a Full Professor of Finance and Investments at Florida Institute of Technology's National Capital Region campus in Alexandria, Virginia, where he keeps his finger on the pulse of the markets through active trading. He travels extensively, training, lecturing, consulting and serving as an expert witness.

Dr Zieg's research and writing is unbiased. He is not a broker, and does not manage money, other than his own. He doesn't publish a newsletter, and is not an investment advisor. His two major areas of trading and research interest are point-and-figure charting and options. In his study of point-and-figure charting conducted continuously since 1961, he has run thousands of tests (back tested and live), and numerous what-if simulations.

Dr. Zieg is active in trading options and fully utilizes point-and-figure in all of his decision-making. He lives in Vienna, Virginia.

Heinrich A. Weber

Heinrich A. Weber is a recognised expert in finance. He was co-founder and managing director of the emblematic market-making firm, Servisen Trading/QT Optec. He learned technical analysis while working with one of the early gurus, Ed Hargitt. In a joint venture operation with HSBC-James Capel, he directed the development of one of the first trading systems using the Hurst coefficient.

He is a partner and risk manager of the active Eurex member firm, DeTraCo. As a partner, he develops risk models and financial forecasting applications with AleaSoft¹, the European leader in the use of neural networks for the prediction of energy prices. Occasionally he does specific consulting in the securities area, some of which is conducted jointly with Dr. Zieg.

Heinrich studied at the Swiss Federal Institute of Technology (EPFL) at Lausanne, Switzerland, and is pursuing a PhD after receiving an MBA at Rushmore University.

He lives with his wife and two young daughters in Geneva, Switzerland.

¹ www.aleasoft.com

Preface

Who this book is for

Point-and-figure is the best of all technical analysis methods. That's our firm conviction. The aim of this book is to explain point-and-figure to European investors and traders, and we have therefore used European securities in all the examples given. But because p&f is universal, exactly the same concepts and techniques apply equally well to US securities. Prior to this European-focused work, the authors have written books applying p&f trading techniques to commodities and US equities².

This book covers every aspect of point-and-figure from the basic concepts to advanced technical information, because the book is meant for the novice as well as the experienced trader. We have included all the relevant information, from drawing your own charts manually to the computerisation of p&f, so the book can also serve the committed independent trader who controls his own computer environment.

What the book covers

We have put every effort into writing a book which is based on facts, research, and genuine market situations, in contrast to many technical analysis books which list all sorts of hypothetical buy or sell situations. This was done because we are professional traders, market makers and academics, so we understand the need for an approach that is academically sound, based upon rigorous testing and analysis, but which is also of practical use to active traders. Our book is a manual, not a compilation of anecdotal evidence. We are convinced that when you have studied it, you will understand:

- point-and-figure charting
- point-and-figure trading tactics
- the essence of optimisation
- the application of all this to real trading

The purpose of the book is thus to cover all material aspects of point-and-figure charting. Whether you are a novice or an experienced trader, you should find answers to all p&f-related questions. We explain the concepts thoroughly, though in a way that is easy to understand.

² Kermit C. Zieg, *Point & Figure Commodity and Stock Trading Techniques*, Traders Press, 1997

In this book, we use simple charts for illustrative purposes, but also real charts of the kind we rely on in our daily analysis and trading. We have mainly chosen charts of stocks from the FTSE 100, EuroSTOXX 50 and Techmark index. We also use some other interesting examples, such as the impact of the 1987 crash on the S&P 500 index or the decline of the Nikkei 225.

The book is structured in such a way that it can be used by readers of all levels of trading and investing knowledge from the novice to the experienced trader.

Structure of the book

The book makes use of many real and recent charts to illustrate the points made in the text. But in some instances, especially in the first part of the book, we use small excerpts of charts in order to illustrate a specific idea with the utmost clarity.

The book is divided into six sections, which are summarized below.

Section summary

Introduction

The uniqueness of point-and-figure is explained, and as a contrast some other types of price-charts are presented. The advantages of p&f are listed explicitly, and the method by which investment decisions are reached is briefly touched upon.

Drawing point-and-figure charts

In this chapter we explain how to draw a point-and-figure chart, with pencil and paper and also with computers.

Interpreting the charts

We explain the basic buy and sell signals, then more complex signals, and finally show how trend lines are incorporated into a chart.

Trading applications

Horizontal and vertical count methods are used to estimate the size of upcoming price moves. Stop-orders are used to protect positions and to enter into the market. Pyramiding is used to concentrate capital in the trending positions. The subject of risks relating to point-and-figure trading is dealt with. Swing trading is a trading style that profits from mid-term swings in the market and can be implemented well by adapting the point-and-figure parameters. Trading styles that generate a high number of transactions are analysed with point-and-figure. Other investments than stocks are briefly mentioned. And finally we list tips and strategies of experienced traders.

Advanced analysis and new optimisation techniques

Optimisation and simulation are explained in detail. We show you how to do it and how to avoid the most common trap – ‘over-fitting’. Then we list our most conclusive results and show you how to profit best from those techniques.

Profitability analysis

Here we summarize the original Davis, Davis-Thiel and Zieg studies, and also summarise the results of our most recent research regarding the profitability of point-and-figure trading.

Technical notes

Research in quantitative finance is explained. Technical details regarding scaling and optimising are clarified, and we show in detail how we have programmed our p&f computer program. Computer-related issues such as databases and data feeds are covered.

At the end of the book, you will find a bibliography, a glossary, an index of websites and a general index.

The structure of the book reflects a top-down approach, whereby we start with the two fundamental concepts of point-and-figure, namely the law of supply and demand and the discretization of price. Onto those concepts we build layer upon layer of more detailed information. The technical chapter – which constitutes the last part of the book – should help to resolve any remaining questions.

How to make the most out of the book

Novices

If you are new to point-and-figure and would like to apply the technique to guide your investment strategy, then the introductory chapters are a must. You have to become proficient in drawing a p&f chart yourself, and therefore it is *imperative that you do the exercises*. Once you have gone through the basics, we suggest that you do p&f charts of your favourite stocks.

When you feel you are familiar with the concept, you should continue to increase your knowledge base so that you will be able to apply point-and-figure to real trading. You will probably have to buy one of the software programs we recommend or subscribe to a chart service (some products allow for free trial periods). On page 24 we have listed the services which we use personally, with contact information for each.

Experienced traders

If you are knowledgeable about investing or trading, but want to know more about point-and-figure charting, we still recommend that you go through the introduction and the basics, and try the charting exercises. Once you are able to draw the charts set out in the exercises, study the trend lines and pyramiding, because both are different – although more precise – than in bar chart analysis. Then go to the chapter which is related to your investment or trading style. You will probably not need to go through the technical chapter.

Professional traders

If you are a professional trader and already have an understanding of point-and-figure, but would like to increase your arsenal of trading concepts, then you should read quickly through the basics and trading applications, where you may well learn something new, and then study in-depth the subject you are most interested in, be it day-trading, swing trading or optimisations.

Point-and-figure experts

If you are already an expert in point-and-figure, but are looking for some additional gems, we suggest you read through the Chapter 4 on optimisation, and Chapter 6 on technical matters. You will probably also want to study Chapter 5 on profitability analysis, because it includes new research. Note, too, the section entitled '*Tips from experienced traders*' which is part of Chapter 3.

Terminology

A quick note on the format of company codes used in the text.

All company codes use the format:

[Company symbol].[Exchange]

For example:

VOD.L - Vodafone shares trading in London
AEGN.AS - Aegon shares trading in Amsterdam
CARR.PA - Carrefour shares trading in Paris
SAPG.DE - SAP shares trading on Xetra

This is a standard code system used by information services such as Reuters.

Supporting website

The website supporting this book can be found at:

<http://www.harriman-house.com/pnf>.

Conclusion

The objective of this book is to provide the reader with all of the basics and the most significant technical topics to point-and-figure charting. It represents a training manual explaining everything you need to know to become a successful chartist in an easy-to-understand manner through a few words, accompanied by lots of examples and figures.

When you have worked through the book, you will know how to do it! It is a p&f ‘cookbook’. The recipe works, and the product is great.

We hope that you enjoy the book and that it will help you to become an even more successful market participant. Point-and-figure is easy to do, the best of all technical analysis systems, and therefore we encourage you to start implementing it for your benefit as soon as possible.

So let's get started!

Introduction

Why point-and-figure?

There are a number of charting methodologies including line, bar, candlestick, Kagi and point-and-figure, to name but a few. Each of these is illustrated below.

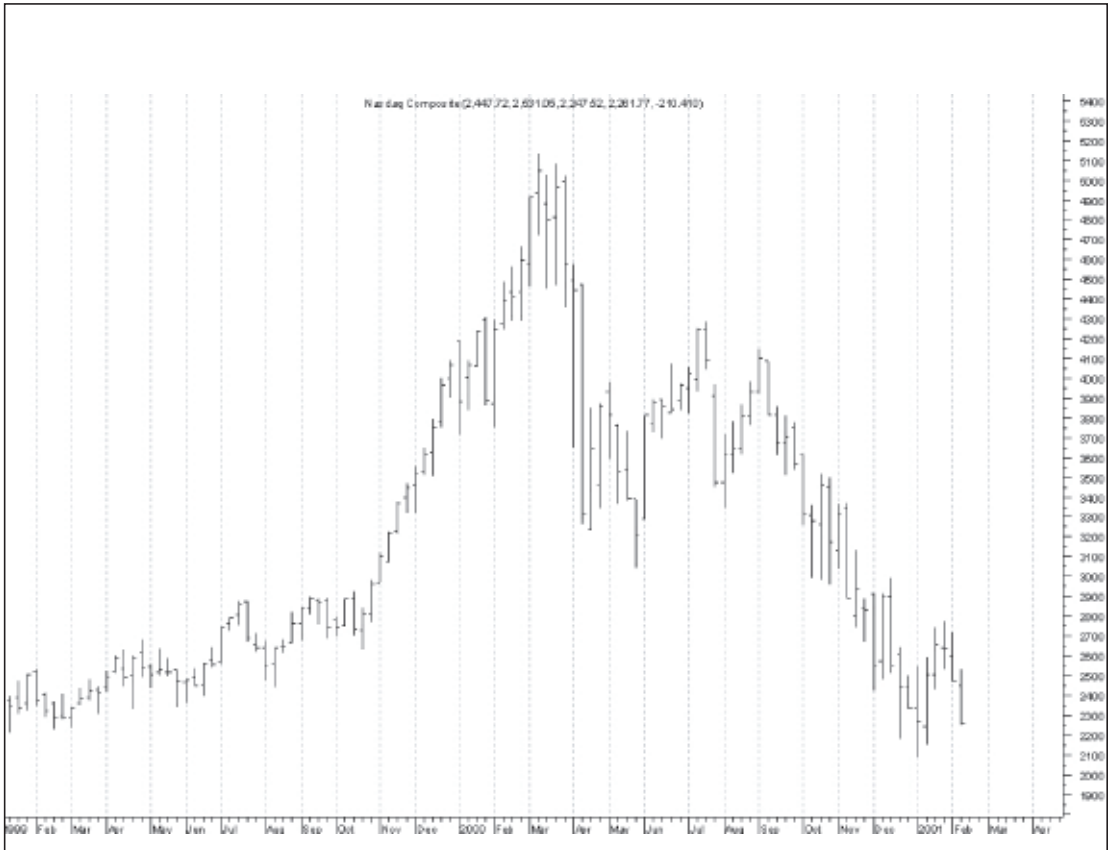
Chart 0.1 – Line chart of NASDAQ rise and decline



Source: MetaStock

The *line chart* is the simplest way to display the price history of a security, namely by connecting subsequent closing prices. It is the standard method used to display any kind of sequential data, e.g. temperature.

Chart 0.2 – Bar chart of NASDAQ rise and decline

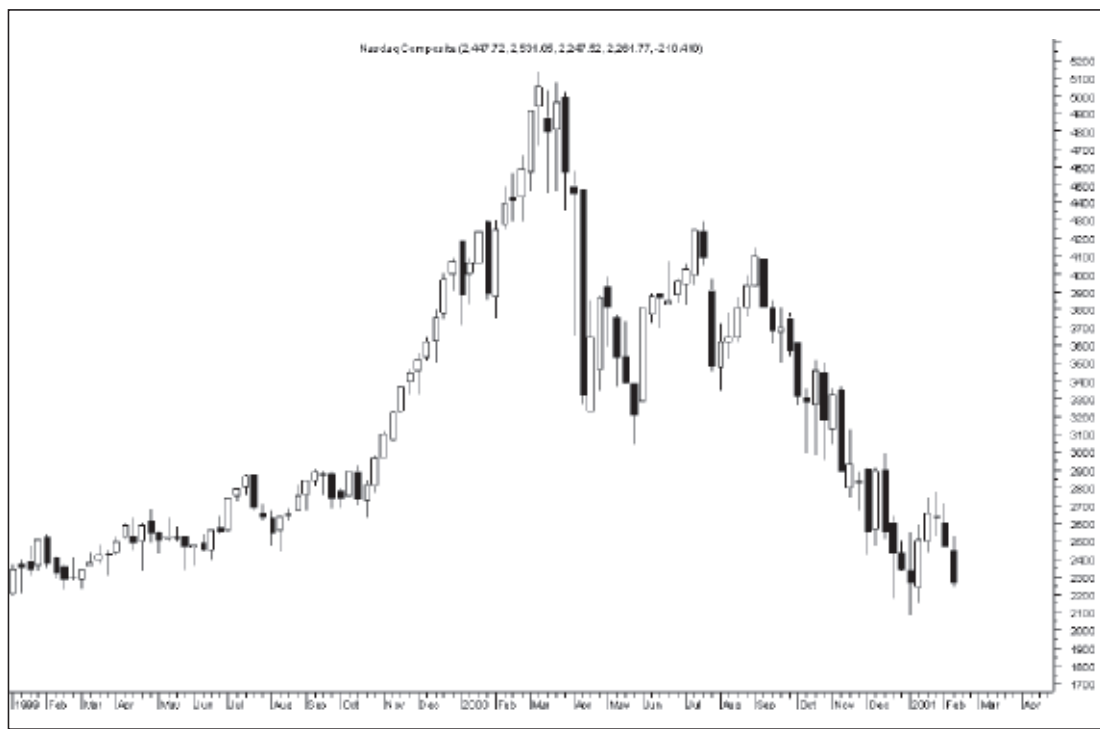


Source: MetaStock

In contrast to a line chart, the above *bar chart* – the most widely used chart type – also shows the trading range (open, high, low) in addition to the closing price. The high and low of the day define the length of the bar. The open is marked with a tick on the left and the close with a tick on the right side of the bar.

Like the line chart, the bar chart shows how the price moves over time using equal-spaced time intervals. In the chart above, you can see that calm periods like April 1999 are given the same importance as highly volatile periods like April 2000.

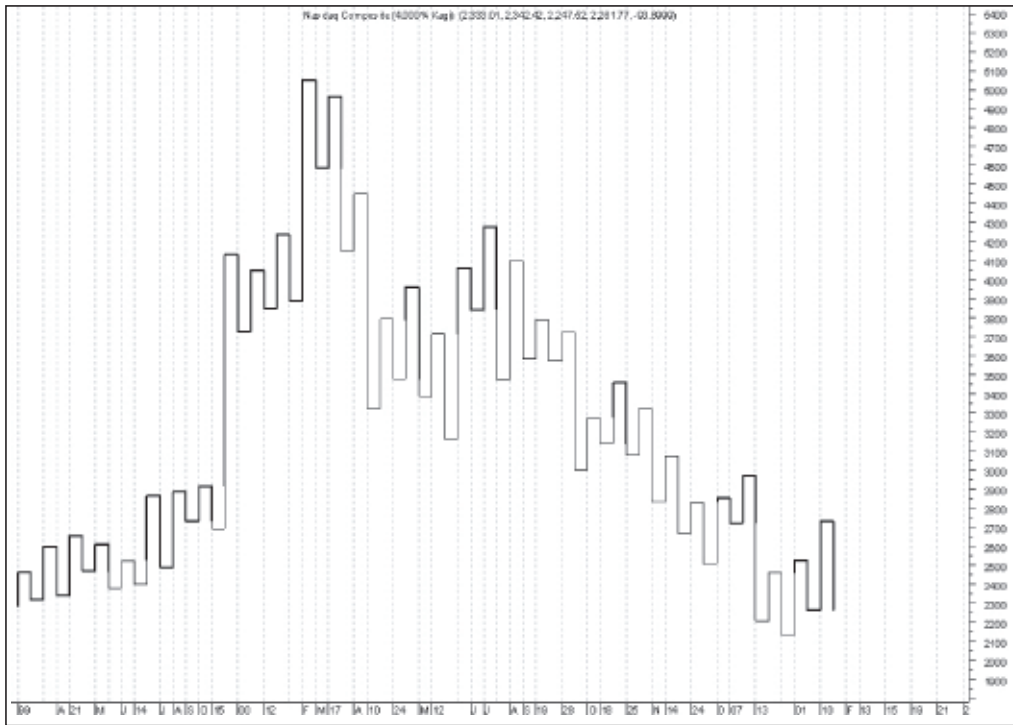
Chart 0.3 – Candlestick chart of NASDAQ rise and decline



Source: MetaStock

The *candlestick chart* tries to highlight patterns by coloring the rectangle formed by the high and the low either black (if close below open) or white (if close above open). This feature is used for visual analysis by identifying specific patterns, like a “big black candle” or a “morning star”. Interestingly, candlesticks are a very old concept, being used to analyse rice contracts in Japan around 1600.

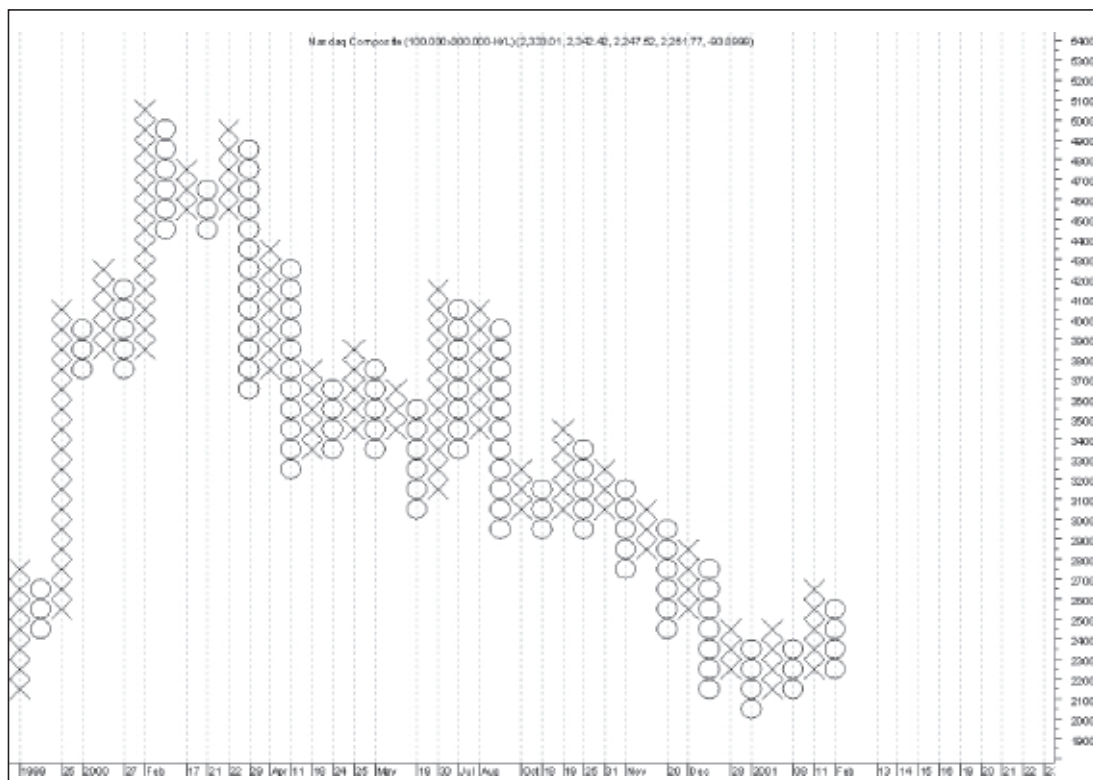
Chart 0.4 – Kagi chart of NASDAQ rise and decline



Source: MetaStock

The *Kagi chart* is a sort of Japanese point-and-figure chart. It dates back to the opening of the Japanese stock market and was introduced in the West much later. Its strengths are similar to the p&f charting technique – for example, in its use of a variable time axis.

Chart 0.5 – Point-and-figure chart of NASDAQ rise and decline



Source: MetaStock

Finally, the point-and-figure chart.

.....

Much has been written on all the charting types mentioned above, and there are strong supporters of each technique. But there are significant advantages of point-and-figure over all other charting systems. And so major are these benefits that if you know point-and-figure charting, there is no need to use any other system.

The powerful advantages of point-and-figure

Point-and-figure is truly superior to all other charting approaches for the following reasons:

- **It is easy to understand.**

It takes only a few minutes to become an expert p&f chartist! The techniques are simple. No maths skills, prior market knowledge or special tools are required. Just learn a few basics and you are up and running.

- **It focuses on what really matters: price movements.**

All other technical analysis is based on a fixed time axis, whereas p&f only considers price movements and therefore prevents erroneous trading signals originating from timeline-induced distortions.

- **The methodology is a chart and trading system in one.**

Not only does the p&f chart depict price moves, but most importantly the charts translate directly into a trading methodology, producing buy and sell signals!

- **It has been rigorously tested and it works.**

Numerous academic studies have been conducted over a span of decades and the results are always the same: p&f charting is profitable.

- **There are exact decision rules.**

You know exactly where to enter and exit trades. There is absolutely no guessing required.

- **It is universal.**

Once you know the basic rules you can chart every investment media including stocks, commodities, mutual funds, stock and commodity options, indexes, and even coins, stamps and art. The same techniques apply for all investment products.

- **It always gets you in on a major move.**

You will never miss a major move since there will always be an entry signal. You might choose not to trade the signal, but the signal is always there.

- **It works for long and short positions, and always displays stop-loss points.**

Whether you trade only long, only short, or both, the charts display all exact entry points as well as exact stop points. No guessing is required.

- **It concentrates money in the trending positions and keeps little in the whippy ones.**

The inherent pyramiding technique shifts money automatically into the profitable trades, exactly where you want your money to be.

- **It generates crystal-clear trend lines.**

In contrast to the typical bar chart and other charting methods, point-and-figure is non-ambiguous about where to trace the all-important trend lines. Again, no guessing is required.

- **The charts are simple to maintain.**

In 10 minutes a day you can manually maintain 100 charts. No computer or expensive subscription or data service is needed. All that is required is the daily newspaper, a pencil and graph paper.

Why is point-and-figure so appealing visually?

Because it is totally symmetric as defined by the two forces of supply and demand, described by the symbols O for supply and X for demand. This symmetry can be further appreciated in the instructions for drawing the charts which consist of two symmetric sets of instructions. Also, buy signals are the exact reverse of sell signals, and trend lines only exist with three angles: horizontal, diagonal up and diagonal down. Beauty through simplicity.

The investment decision

Investing involves a very limited number of decisions:

1. What stock (futures contract, equity option, index option, commodity option or other item) should I buy?
2. At which price level should I buy it?
3. Having purchased it, at which price level should I sell it?

To be a successful investor, one needs not only to select the best stocks to own, but buy them at the right time, and then employ appropriate exit strategies to stop-losses and let profits run.

The limitations of fundamental analysis

Most investment services, newsletters, advisors, and brokerage firms select stocks to purchase through the use of fundamental analysis, the reason being that wrong advice is easy to justify by pointing at a change in some exogenous variable, market environment or geopolitical situation.

Fundamental analysis involves the study of the quality of the company, its sales, earnings, management, and other factors relating to how the company has performed over recent history,

how it should fare in the future and how it compares with other firms within its industry sector. There are hundreds of factors, ratios and indicators that can and are employed to track past performance, anticipate future results and measure one company against its peer group.

But as important as knowing what stock to buy, is knowing *when to buy it*. How often have the fundamentals pointed to a very positive scenario, only to have the securities price collapse? Technical analysis is employed to determine *when* to buy the fundamentally strong stock.

The ideal investment approach marries fundamentals to technical analysis in order i) to identify the best stocks and ii) to select the most efficient entry and exit points. To use only one, fundamental or technical analysis, is to admit that the quality of the company does not matter, or that it is not important when to buy and sell. Both are needed.

If we had to decide whether fundamental or technical analysis is most important, and could employ only one, we would select technical methods. It is always preferable to own a beautifully market-performing stock, with well orchestrated buy and sell points, than an extremely strong fundamental stock that is going nowhere in the market.

There are dozens upon dozens of methodologies for evaluating security price movements (i.e. technical analysis). There are technical methods that utilize bar charts, moving averages, Bollinger Bands, Gann Arcs, Fibonacci Fans, Renko, Candlesticks, Standard Deviations and Price Rate-of-Change, to name but a few. Some are old, some new, some time-tested, and many totally untested. A few are simple to employ, but most are confusing. Others require a high degree of mathematical expertise, a fast PC with lots of hard drive space, and a person who desires to delve into the mysteries of the incomprehensible.

Then there is point-and-figure, one of the oldest, easiest to understand, simplest to employ, academically tested, and most profitable of the lot.

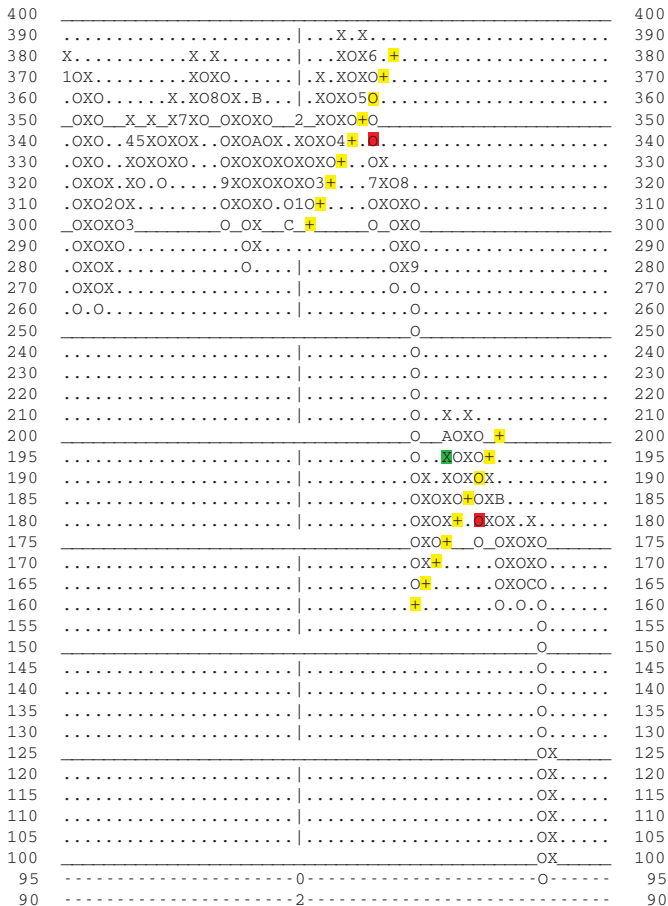
Since when has point-and-figure been used?

Point-and-figure charts have been around since the late 19th century. There is some anecdotal evidence that early forms of the technique were used by European traders even before Wall Street was founded in 1792. They were considered as an ideal way to keep track of stocks since they show the past history in a very concise, readable form and are easy to keep up and study. An experienced chartist can manually update 100 charts in 10 to 15 minutes per day. But it was not until 1958 when A. W. Cohen first published his book, *The Three Box Reversal Method of Point and Figure Stock Market Trading* that the techniques became widely recognized as a valuable market strategy. The original publisher of the Cohen book was Chartcraft, Inc., which is today the major supplier of subscription charts in the US.

Examples of point-and-figure in action

The success of point-and-figure charting is revealed by examining a handful of trading signals yielded by the system in recent years.

Chart 0.6 – BAE Systems [BA.L]

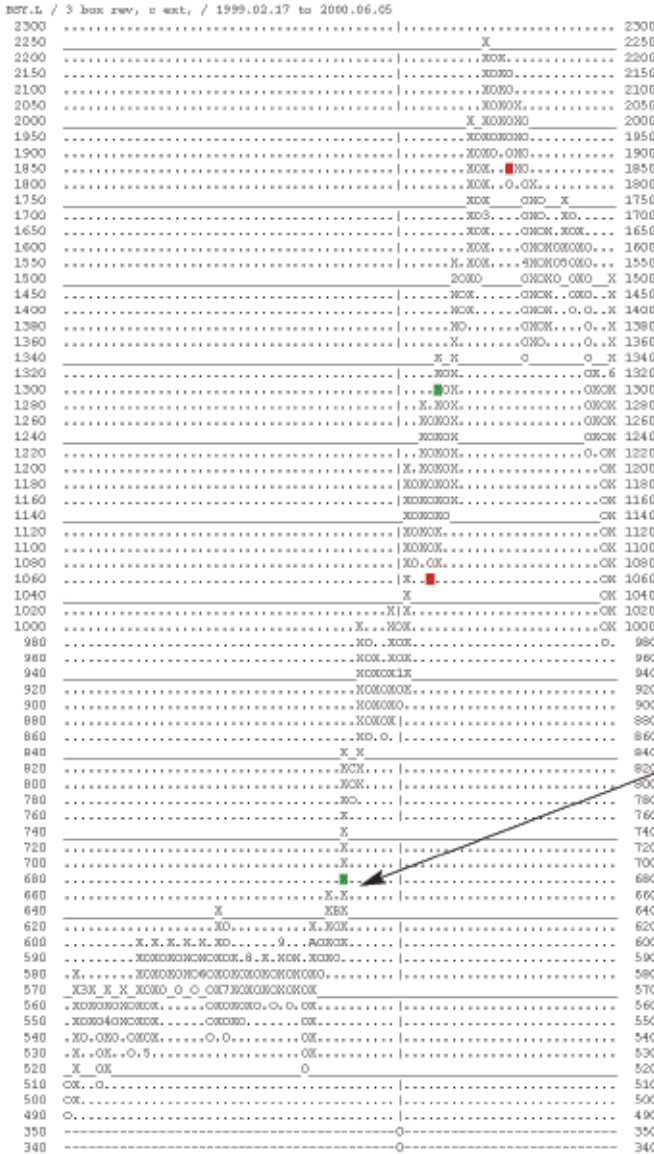


This BAE Systems [BA.L] chart covers the time span January 2001 until end of 2002. A trading range during the first 18 months between 260 and 390 is observed. Then a breakout which is defined by a simple signal and the breaking of a bullish support line. This strong sell signal, at 340 in autumn 2002, heralds the decline of the stock toward 100. Although a certain resistance to that move is experienced in the 175 to 200 region, which generates a small whipsaw: a buy signal is given at 195, and shortly afterwards another sell signal at 180. Thereafter, the downtrend continues, again introduced by the break of a support and a simple sell.

What do the different colours mean?

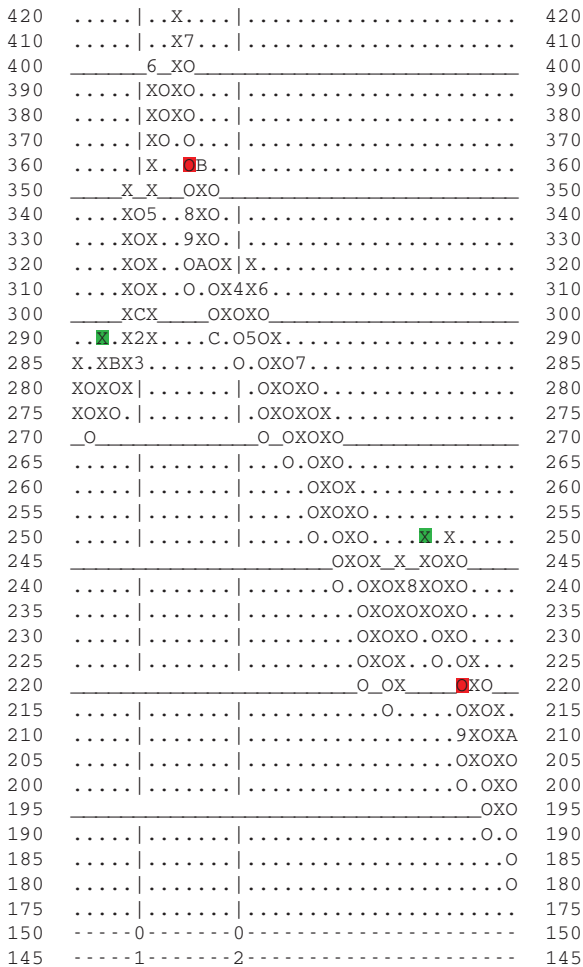
We use throughout the book **green** for a buy signal, **red** for a sell signal and **yellow** for other interesting characteristics, such as trend lines.

Chart 0.7 – BSKYB [BSY.L]



BSKYB [BSY.L] generated a buy at 680 in November 1999 and moved steadily up.

Chart 0.8 – Safeway [SFW.L]



As the chart above shows, point-and-figure got you well into a short in the down move of Safeway [SFW.L] during 2001-2002.

And, in particular, all the telecoms, dotcoms and techs generated sell signals and had you short over the major part of the meltdown – not to forget that p&f had you on the long side during the aggressive up move.

This is thus an introduction to point-and-figure charting. It is the beginning set of do-it-yourself instructions with the later chapters devoted to more detailed aspects of the process.

But for now, let's learn the tools.

Drawing point-and-figure charts

- Background
- How to draw the charts
- Computerised charting

Background

Point-and-figure charting has long been associated with images of serious-minded men hunched over notebooks in dark corners of brokerage offices and trading floors, making cryptic marks on box-ruled paper. Part-time speculators usually think of it as a valuable tool that is beyond their grasp, either because it demands too much time, or is too complicated, or requires access to time and sales data that isn't always available.

Hopefully, this book will correct these misconceptions. Anyone can keep p&f charts just as he can the more common bar graphs. All that's needed is a pencil and eraser, graph paper, daily high-low prices for each stock or contract to be plotted, and an understanding of a few simple rules. The result is a trading tool that is more useful than the standard bar chart, and that presents clearer pictures of what prices are doing, more precise indications of where to get in and out of a market, and more reliable predictions of how far price moves are likely to go.

The underlying philosophy: supply and demand

The basic premise of p&f charting and trading is that the *Laws of Supply and Demand*, and nothing else, govern the price of a security or commodity.

- When demand is stronger than supply, the stock's price rises;
- When supply exceeds demand, the price falls;
- When supply and demand are contesting for supremacy, the price moves sideways.

Point-and-figure extracts the essence of that battle for equilibrium between supply and demand by creating an interpretable graphic, the p&f chart. The chart is used to determine investment or trading strategy.

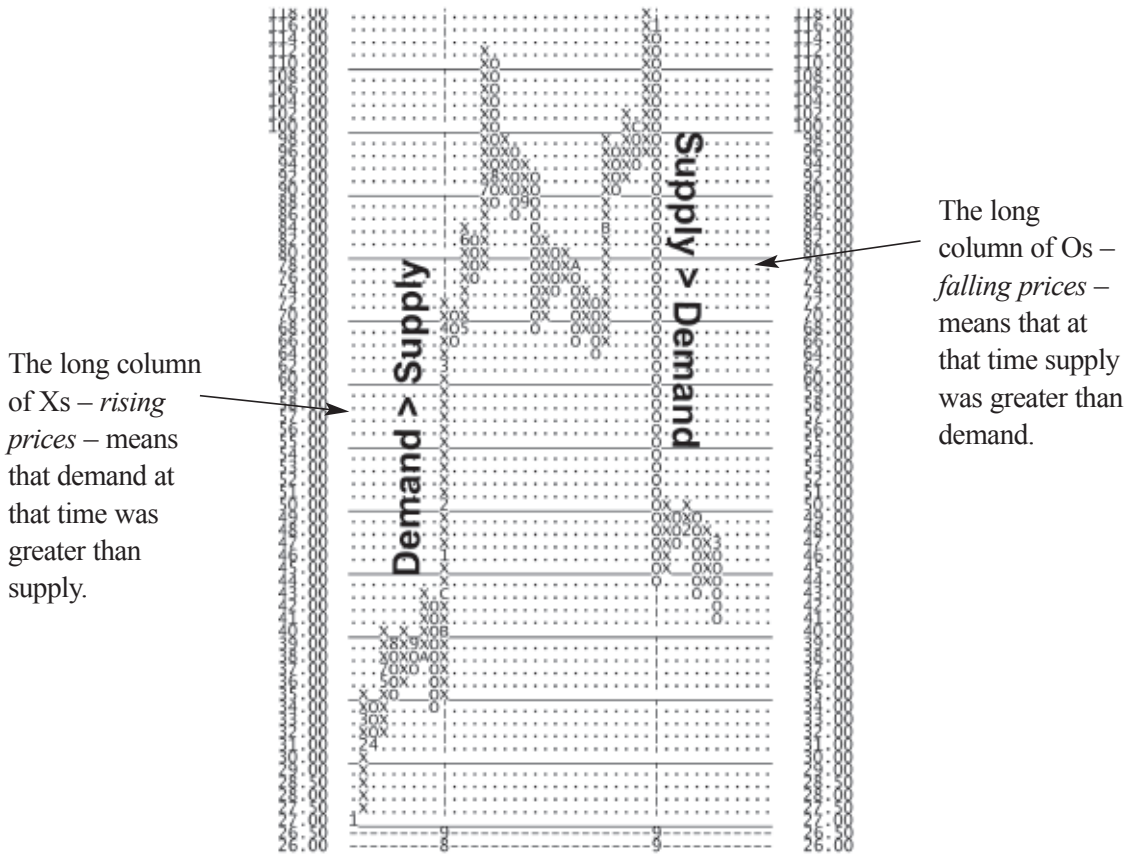
Representing the forces of supply and demand

Every p&f chart contains the following elements:

Long columns of Xs	Long columns of Os	Short alternating columns of Xs and Os
Signify greater demand than supply and therefore a rising price.	Signify greater supply than demand and therefore a falling price.	Signify a contest for supremacy between supply and demand from a relatively equal position.

The p&f chart is a pictorial record of the contest between the forces of supply and demand.

Chart 1.1 – Supply and demand in the case of Aegon [AEGN.AS]



General principles

Point-and-figure charts are unique in three ways:

1. Only **large significant moves** are noted, and minor fluctuations are ignored as having no relevance to the overall trend.
2. P&F charts **ignore the passage of time**. Dates may be indicated on the chart, but this is done solely as a matter of convenience, and has no relevance to decision making or to signal descriptions.
3. P&F charts **denote movements by the letters “X” and “O”** and not by lines, as in the more commonly seen line/bar charts.

How to draw the charts

The tools

Pencil and paper

As already mentioned, the only things necessary for successful p&f charting of stocks, commodity future contracts, options or any other investment are a pencil and paper, daily high and low prices for each investment being monitored, and an understanding of a few simple rules.

The pencil should be soft lead type which can be easily erased. The eraser should leave the paper smudge-free and the paper should have either the US ten squares to the inch with heavy rulings every five boxes, or the European 4mm grid. The 1mm engineering grid is, however, too tiny. Graph paper of the appropriate type is readily available at most office supply stores.

Pencil and paper in the computer age? In the modern world of computers and the internet, the reference to pencil and paper may seem rather old-fashioned. But we firmly believe that to thoroughly understand p&f charts, you have to spend some time manually drawing them. Only by doing this will you properly appreciate the subtleties of p&f. Once you have drawn charts manually, you may well decide to move on to using a computer. However, be aware that many of the most accomplished traders still prefer to maintain their p&f charts by hand.

Computer

Even if you take our advice and start by drawing charts manually, you will probably end up using a computer for p&f charting. Point-and-figure programs work on any standard PC. Below is a short description of the equipment that we use:

- **Reasonable hardware** (at the time of writing, we use as a desktop a Pentium IV, 2GHz, 512MB, 100GB Hard disk, and as a portable a Pentium IV, 2.66GHz, 256 MB Ram, 30 GB Hard disk). Because hardware gets cheaper and cheaper we recommend, the bigger the better. However, a reasonable PC should not cost a fortune.
- A reliable and fast **back-up device**; we use an IOMEGA Zip drive and a CD-Burner.
- Good p&f **software**. We recommend MetaStock, PFScan and Updata.
- A **very good screen**. Because p&f is so fascinating, you will spend a lot of time looking at the screen!
- **Fast access** to the data providers, especially for downloading prices of a large number of stocks. We use broadband internet.

Remember the most important task in computing is: back up!

Chapter 6 details the use of computers and the programming of p&f charting in more detail.

Learning by doing

The best way to learn how to draw a p&f chart is to work through an example. This is what we will do in this section.

The table below should be considered an excerpt of stock data. It is shown in the most widely used format, namely:

1. Date
2. Opening price
3. Highest price of the day
4. Lowest price of the day
5. Closing price
6. Number of stocks traded

Table 1.1 – Figures for P&F drawing example

Date	Open	High	Low	Close	Vol
1-Jan-01	37.25	38.25	35.75	37.50	1234000
2-Jan-01	39.50	40.12	39.25	40.00	1567000
3-Jan-01	37.50	38.50	37.00	37.25	1456000
4-Jan-01	37.00	37.50	36.50	37.00	1789000
5-Jan-01	37.00	40.25	37.00	39.00	2345000

Please read through the instructions overleaf, then roll your sleeves up, take a piece of paper and a pencil, and try to do the chart yourself.

Scaling the chart

As the prices are in the 29 to 60 range the box size of 1 is used (explained in the *How to scale the chart* section on page 31).

41.....
40.....
39.....
38.....
37.....
36.....
35.....

Day 1 - Starting the chart

Once the chart is scaled for the stock, the next step is to enter price movements. This is accomplished by *observing the daily highs and lows for the stock*.

If we start a new chart manually on blank paper we have to decide whether to put Xs or Os in the first column of the chart. Since there are no entries yet on the chart, the spread between the first day's high and low is important.

If the spread spans the value of three or more boxes *and* the price closes above the centre of the range, draw the appropriate number of Xs.

How does this work in practice?

In our example, Day 1, 1st January 2001, had a high of 38.25, a low of 35.75, and closed at 37.50. Because the high and low spans 3 boxes (36, 37, 38), with our pencil we would place a dot in the 36, 37 and 38 boxes, as shown in the chart below.

41.....
40.....
39.....
38...*.....
37...*.....
36...*.....
35.....

Since the closing price (37.50) is above the middle of the range (37.0), we would change the dots to Xs in the 36, 37, and 38 boxes, as shown below.

41
 40
 39
 38 . . . X
 37 . . . X
 36 . . . X
 35

Had the close been below the centre of the range, the entries would have been Os.

Note that if the range between the high and low had failed to span three boxes, dots would be placed in the boxes that were spanned, as temporary markers. For example, had the high on Day 1 been 37.50 and the low 35.75, dots would be placed only in the 36 and 37 boxes. The dots would serve as reminders of which boxes have been crossed until more days' price data became available.

If, on Day 2, the stock had a high of 38.25 and a low of 36.75, a third, and higher box (38) would have been reached, so the two dots in the 36 and 37 boxes would be replaced with Xs and a third X drawn at 38.

If, on Day 2, the range had been 37.25 to 34.75, a *lower* box (35) would have been crossed. The dots in boxes 36 and 37 would be replaced with Os, and a third O drawn at 35.

Once the first column of Xs or Os has been entered in the chart, *closing prices are no longer used in the charting process*. From now on, only high and low prices play a role.

Rising prices

On Day 1 in our example, the price advanced from box levels 36 to 38. Accordingly, we have a column of Xs in the 36, 37, and 38 boxes. Now that the first column has been drawn, the *continuation becomes considerably easier*.

The technique is as follows:

- If the current or most recent column is composed of Xs, look at the high for the day under consideration (the 'daily high'). If it is at least one box higher than the highest X in the current column, draw in the appropriate number of additional Xs.

For instance, if the current column has Xs at 36, 37, and 38 and the daily high is 39.25, you would draw a new X at 39. If the daily high was 40.125, you would draw new Xs at 39 *and* 40. Note that a box is considered crossed if the price hits the exact price point of the box. For example, if the daily high was 40 you *would* draw an X in the 40 box, just as you would if the high was 40.875. The 41 box could not be filled with an X until the price reached at least 41.

Day 2 - A new high

In our example, because on Day 2, 2nd January 01, there was a high of 40.12, two extra Xs are marked in boxes 39 and 40. The updated chart is shown below.

41
40 . . . X
39 . . . X
38 . . . X
37 . . . X
36 . . . X
35

If the daily high is high enough to require the drawing of one or more additional Xs in the current column, the *daily low is totally ignored*. This procedure of looking first at the highs and drawing more Xs continues as long as each succeeding daily high is one or more boxes higher than the last X drawn in the current column.

Price reversal

At some point, there will come a time when the daily high does *not* permit the drawing of new Xs. Only when this occurs is the daily low of interest. If the daily high is not at least one box higher than the highest X, the daily low is reviewed to determine whether the price advance has reversed. If the low is lower than the highest X by the value of three boxes, the price advance is considered temporally broken. In this case we look at the daily low to see if we have a price reversal and should thus draw three Os. If we can draw three Os, the new column is drawn with the first O being placed one column to the right of the X column and one box below the highest X.

Day 3 - A price reversal from up to down

On Day 3, since the 40.25 is not high enough to permit the entry of a new X, attention is focused on the daily low: 37. Because the low of 37 allows for three boxes (39, 38 and 37) below the highest marked box (40) to be filled, the trend is considered in the p&f chart as reversed, and Os are drawn downwards beginning one column to the right of the X column and with the highest O one box below the highest X. The chart at the top of the next page shows this price reversal.

41
 40 . . . X
 39 . . . XO
 38 . . . XO
 37 . . . XO
 36 . . . X
 35

Had the low been 36, four Os would have been drawn (39, 38, 37, and 36). Had the low been 35, five Os would have been drawn (39, 38, 37, 36 and 35). And so on.

But if the low had been 37.50, *only two* boxes would have been penetrated, and, since the three-box reversal method of p&f does not consider a trend to have been reversed until *three* boxes are spanned, no entries would be made for the day and the price would be regarded as still on the advance.

If neither one new X nor three new Os can be drawn, no entry would be made and the procedure would begin anew on the following day.

On the following and each succeeding day and as long as the trend is still up (meaning the current column is an X column) the high is reviewed first for new entries and only if no new Xs can be drawn is the low analysed for a three-box reversal. Regardless of how low the low may be, if the high permits the drawing of at least one new X, the trend is still up and the low must be disregarded. If the trend has truly reversed, even though a new X was drawn, the directional change will be revealed the following day when a higher high is lacking and the low is three or more boxes below the highest X.

Falling prices

If the current column is a declining column or a column of Os, the daily procedures are reversed. The daily low is analysed first. If the low is one or more boxes below the lowest O in the current column, the appropriate number of additional Os are drawn and the daily high is ignored.

For instance, if the current column runs from 39 down to 37 and the day's low is 35.75, a new O is entered at 36, and the high price for the day is of no concern. If, on the other hand, the low fails to permit the entry of one or more additional Os, as in a low of 36.50, the high would be analysed to determine if a three-box reversal had occurred. If the high were 40 or above, a reversal has occurred and a new column of Xs is drawn immediately to the right of the Os with the lowest X being entered one row higher than the lowest O in the most current of O columns.

If no new Os can be added and a reversal has failed to occur, no entries are made for the day and the procedure begins again the following day.

Day 4 - No new lower low and no price reversal, wait for the next day

On Day 4, the low price is 36.50, but would have to have been 36, lower, to add another zero. As a new lower low is not recorded, and the day's high is not high enough to signal a three-box reversal, we do nothing and wait for the next day's prices.

Day 5 - Subsequent reversal, this time from down to up

On Day 5, 5th January 3001, a reversal is made, as no new lower low is made, and the high of that day is above 40 – signalling a three-box reversal. The chart now looks as follows:

41
40 . . . X X
39 . . . X O X
38 . . . X O X
37 . . . X O
36 . . . X
35

The simple example above, using prices over 5 days, demonstrates nearly all the major features of a point-and-figure chart.

The basic elements of construction

From the previous example, we learnt that the major elements of p&f chart construction are:

1. How to scale the chart
2. How to start a new chart
3. When the box can be filled
4. When a reversal occurs

We'll now look at these elements in more detail.

1. How to scale the chart

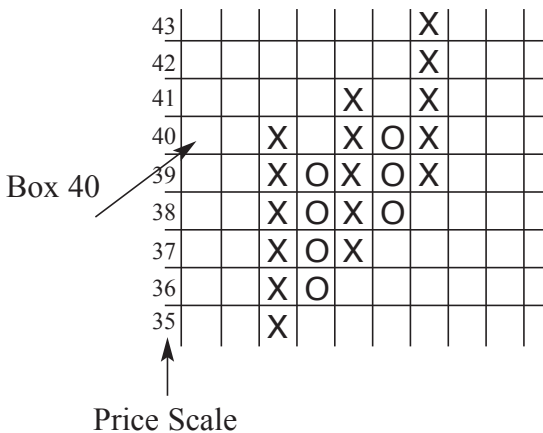
The first task in drawing a p&f chart is to scale it properly. This means assigning a value-range to the boxes. We say *value-range* because each box has an upper limit and a lower limit.

Definition of a box

The following figure explains what is referred to as a *box*. Manual p&f charts are always drawn on paper with a pre-printed grid, which is either filled with Xs or Os. Nowadays with computer-generated charts the grid is not explicitly present, as you will see throughout this book.

The figure below shows an excerpt from a typical computer-drawn p&f chart with a grid put over it. The grid that is put over the chart divides it into boxes. These are the *boxes* we refer to in the context of point-and-figure.

Figure 1.1 – Scaling for the Dow at 40 - 1897 and again in 1932



You can see on the figure that the numbers on the left refer to the box itself. *Box 40* is box 40, and not the continuous area between 39 and 40 or 39.5 and 40.5, just simply box 40. This

follows from the ‘discretizing’ of price and it differs from continuous scales like the one found on a ruler, where between 39 and 40, 39.5 can be found or estimated.

In point-and-figure only 39 and 40 exist, nothing in-between.

Why is discretization of price far superior to discretization of time?

Discretization means the division into small individual elements. In technical analysis – other than point-and-figure – the information is sliced into individual elements according to the time axis. The data or information is partitioned into weeks, days or multiples of minutes, and hence the horizontal time-axis or time-line is equally spaced. That is *discretization of time*.

But does time matter for a long or short position?

No, or only to a minimal extent. In point-and-figure the data is divided according to price; that is *discretization of price*. Does price matter? You bet! Point-and-figure has an advantage over other technical analysis methods through this fundamental difference in discretization of the information.

Think of it. It does really not matter if the Dow moves to 10,000 over 1 or 4 weeks. What matters is that it does move to 10,000. Does it matter if your favourite stock moves to a new high on a Tuesday or a Thursday? In bar-charts, yes, because it alters trend lines. In p&f it does not, and hence especially avoids fuzziness of such trend lines. The new high on Tuesday is treated like the new-high on Thursday in p&f, and a year with little price move action takes little room on a chart and a year like 1987 or 2001 with a lot of movement takes considerably more room; and that is what we believe is the correct representation of a market. Like in a history book where the era of the Neanderthals should occupy fewer pages than the 20th Century. In the bar-chart world, the 20th Century would be described in the same number of pages as 100 years of our ancestors fighting the sabre-tooth tigers and catching mammoths!

A final comment

Sure, if you trade options or derivatives for benefiting from the decay in time-value things are different and time obviously matters. However, for the great majority of traders out there in the markets what matters most are price moves. Only point-and-figure treats the importance of price moves in a way that we think is adequate - hence the superiority, in our view, of point-and-figure.

What constitutes Box 40 (or any other particular box) depends on your perspective:

1. If you are coming **from above with falling prices**, i.e. you are testing whether you can fill box 40 with an O, then the low has to be equal or smaller than 40.
2. If you are coming **from below with rising prices**, i.e. you are testing whether the box can be filled with an X, then the high has to be equal or greater than 40.

It is as simple as that.

Variable box sizes

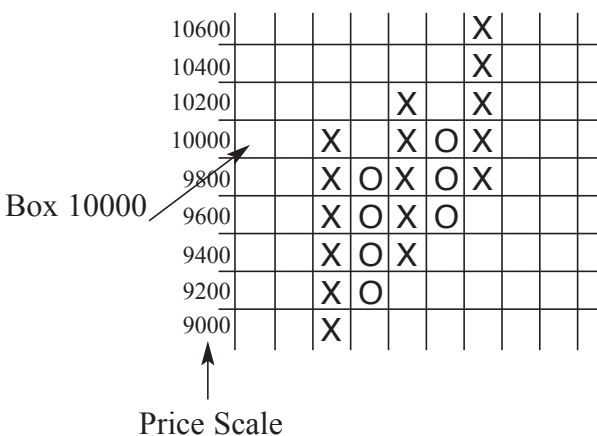
The p&f chart tracks price moves. Price moves are relative, which means that the absolute level of the price matters. That is why a 200-point down move on the Dow at a level of 10,000 is totally different from a 200-point down move at 1,200. At the lower level of 1,200 such a move is a crash whereas at the higher level of 10,000 it is only a slightly bigger-than-average move. The crash should be represented by a column of many Os, as Os mean descending prices, whereas the slightly bigger-than-average move should be depicted by only one or two boxes filled with Os. In order to achieve this sense of proportion, you have to use variable box-sizes. As a general principle: the higher the absolute price, the bigger the box.

We propose – again, generally speaking – that *a box should represent about 2% of a price move*. On that basis, the box for the Dow at a level of 1,200 would be of the size of 25 and at the level of 10,000 it would be 200. If you adopted these box sizes:

- with the Dow at 1,200, the 200-point ‘crash’ move would be marked by filling 8 boxes;
- with the Dow at 10,000, the 200-point slightly bigger-than-average move would be marked by filling only 1 box.

The chart below scales the Dow around a level of 10,000. The differences between the boxes are 200, and therefore we say that the *box size* is 200.

Figure 1.2 – Scaling for the Dow at 10,000



We will give some more details on scaling stock indices in a later chapter. But we would like to mention already at this point that a box size of 200 for the Dow between 6000 and 14000 would be chosen if a high level of compression were desired, e.g. for a long-term chart spanning several decades. For shorter time spans, box sizes for the Dow at that level of 100 or even 50 are more common. Intraday charts would be drawn with a box size of 20.

Standard box sizes

What you should keep in mind is that the box sizes become bigger as price increases. However, they can easily be found in the following table, where you see which box size you have to apply for which price range.

Table 1.2 – Standard box sizes

Price		Box Size
from	to	
6	14	0.2
14	29	0.5
29	60	1
60	140	2
140	290	5
290	600	10
600	1400	20

As an example, if a stock has a price history in the range of 30 to 40, from the table you can see that a box size of 1 is appropriate, because the price range lies within the 29 to 60 bracket.

As a rule of thumb, the box size is 2% of the value of the middle of the price range. For example, the mid-value of the range 600 to 1,400 is 1,000, which gives a box size of 20 (2% of 1,000). However, the classic US scaling system is widely used, and the standard system (given in the table above) is an extrapolation of this.

Extension of the standard scale

What you also see is that the previous table consists of repeating numbers. For the price range limits the repeating numbers are 29, 60, 140 and for the box sizes 1, 2, 5. With those numbers you can – by multiplication by 10 – get to any scale-values you want. For example, the Dow in a range of 6,000 (better not!) and 14,000 (hopefully) you use simply a box size of 200, found by multiplying the last row on the table by 10.

Example 1.1 – Variable box sizes

The scale is based on areas made out of 101 boxes, namely:

- 6 to 14, box size 0.2, (40 boxes)
- 14 to 29, box size 0.5, (30 boxes)
- 29 to 60, box size 1, (31 boxes)

then in order to get the scale for bigger values you multiply the range limits and the box size by 10, 100, 1000, 10000 etc. If you want a scale for smaller values you divide range and box sizes by 10 or 100.

Let's say that you want a scale for a stock that traded between 230 and 780. You multiply the above values once by 10, and you get:

- 60 to 140, box size 2, (40 boxes)
- 140 to 290, box size 5, (30 boxes)
- 290 to 600, box size 10, (31 boxes)

then you multiply by 10 once more to get

- 600 to 1400, box size 20
- 1400 to 2900, box size 50
- 2900 to 6000, box size 100.

Now you take values that allow the inclusion of 230 to 780. The result is thus:

- 140 to 290, box size 5
- 290 to 600, box size 10
- 600 to 1400 step, box size 20

That's it!

2. How to start a new chart

Strategy 1

Wait until 3 boxes can be filled and decide based on the closing price and the range (highest high to lowest low or, if not available, highest close to lowest close) whether to use Xs or Os. If close is higher than the mid-point of the range, use X and if close is lower use O. If on the first day it is impossible to fill 3 boxes, wait more days until this can be done. The decision to use Xs or Os for the first column is then based on where the last box is drawn. If it is filled on the high side, use X, if it is filled on the low side use O.

Strategy 2 (simplification)

If high and low are available: take first available price data and decide on range (high to low) whether to use Xs or Os. If close is higher than the mid-point between high and low, use X and if close is lower use O. We use this method in our computer programs.

3. When can the box be filled ?

The expression *box* has its origin in the use of a paper with grid lines for manual charting. The *box number* refers to the number on the vertical price-scale identifying the box. Testing whether a box can be filled depends on the direction of the price move. Two cases exist, either you come from above, testing for Os (falling prices) or you come from below, testing for Xs (rising prices). The box can be filled if and only if the price range – defined by the high and low – includes the box number.

Therefore:

- X – the price used in the charting process (normally the high of the day) has to be higher than or equal to the box number in order to draw the X.
- O – the price used in the charting process (normally the low of the day) has to be lower than or equal to the box number in order to draw the O.

Example 1.2 – Testing when a box can be filled

Assume we are testing if box 40 can be filled. In the case of:

- testing for **rising prices** the X can be drawn if the high is higher or equal to 40; or
- testing for **declining prices** the O can be marked if the low is lower or equal to 40.

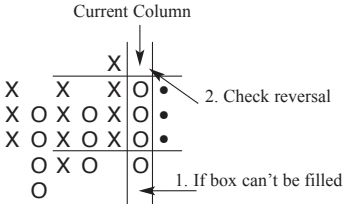
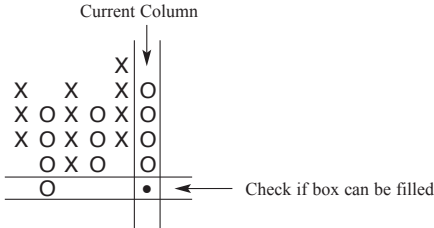
4. When does a reversal occur?

The reversal occurs when no new same symbol can be added to the current column; instead, a certain number – traditionally 3 – of boxes can be filled in the opposite direction, starting on a box one higher in the case of a reversal from O to X or one lower in the case of X to O.

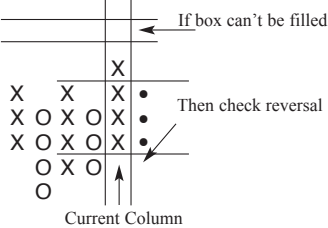
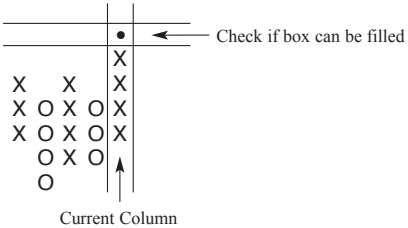
Note that in order for the box to be filled, the price has to touch or move beyond the limit of the box. The following graphic serves as an illustration. The dots refer to the boxes that have to be checked.

Figure 1.3 – Reversal patterns

Current column consists of Os



Current column consists of Xs



Advanced topics of chart construction

Price data used

In the following section, we answer questions related to the data input on charts. Our instructions are geared towards the most common type of charting which uses end-of-day data. However, some traders use different time horizons than an entire trading day.

Either you use:

- **price intervals**, typically *high*, *low*, or
- you do **real-time** charting and use the *last price* only.

Moreover, in charting of **illiquid assets** only the *close* or *settle* can be used, because high and low for the day do not exist.

Real-time charting is based on a continuous stream of prices, usually the prices at which the last transaction took place. We use this last price instead of high and low when we draw the chart and test it against box limits. On the other side of the spectrum we have prices such as real-estate indices or illiquid bonds. Here, too, we use the published price available instead of the high and low.

The following decision rules are based on the typical use of high, low, close for end-of-the-day charting of *liquid stocks*. However, in the other cases mentioned above you would substitute both high and low with the price given, either real-time or close/settle.

Summary of price data used for p&f charts

- **Typical end-of-day** (EOD) chart: *high*, *low*, *close*.
- **Real-time**: *last* (use as substitute for both high or low when applying rules for the typical EOD).
- **Illiquid asset**: *close* or *settle* (use as substitute for both high and low within EOD rules).

Crossing of box size levels

This is a relevant point if you use the classical scale and do the chart manually. Remember that the standard scale uses:

- box sizes of 1 for prices between 29 and 60,
- box sizes of 2 for prices between 60 to 140 and
- box sizes of 5 between 140 and 290.

Therefore, when your stock is hovering around a level like 60, 140 or 290 you would have to pay particular attention to the box sizes.

Let's look at the case where your stock – in which you hopefully have a short position – trades 150 points down from 240 to 90. For each down move of 5 points until 140 you will have to fill a box with an O. From there on, a 2 point move fills a box, as the new box size is now 2 points. So for the fall from 240 to 90 you would have to fill 45 boxes (20 from 240 to 140; 25 from 140 to 90). In comparison to a 150 point crash from 290 to 140, which would only affect 30 boxes.

The secret is to pay attention to those levels, that's all. First take a quick glance at the scale, then fill in the appropriate boxes.

Adjusting a chart for a dividend or capital issue

In the case of bonus issues, rights issues, extraordinary large dividends or any other material change in the equity-structure, the chart should be adjusted to reflect that change. As a rule of thumb: dividends, both stock and cash, of less than 10% are ignored.

Manual charting

For manual charting you would calculate a new scale, e.g. for a 1 to 2 split, the new scale would have scale values of half the old ones. You would then draw the new scale on the right hand side of the chart and use the new scale for the ex-split values. The same would be done for the dividend adjustment.

In adjusting a chart manually, it should always be borne in mind that some of the chart patterns in the old chart can disappear in the new chart. And in some cases, an adjustment will even change a chart from being bullish to being bearish or vice versa.

The problem arises when the stock data after the split gets situated exactly in a range where box size levels are crossed, most likely from above 200 to below 100. This is obviously a problem which is only temporary. If you feel that it disturbs your analysis, it can be overcome by using two charts in parallel, one with the old scale and one with the new scale. Then you have to inversely adjust the prices to be used in the chart with the old scale.

Computer charting

If you use a computer for your charts, you would simply adjust the data-series or download it after the split date – as data providers normally adjust data rapidly and correctly – and have the computer redraw the chart from scratch.

Time indication on charts

In the chart over the page all the basic features of a point-and-figure are included. On both sides of the chart the box size scale is displayed. A trend line consisting of '+' is also included.

Chart 1.2 – EuroSTOXX50 [.STOXX50E]

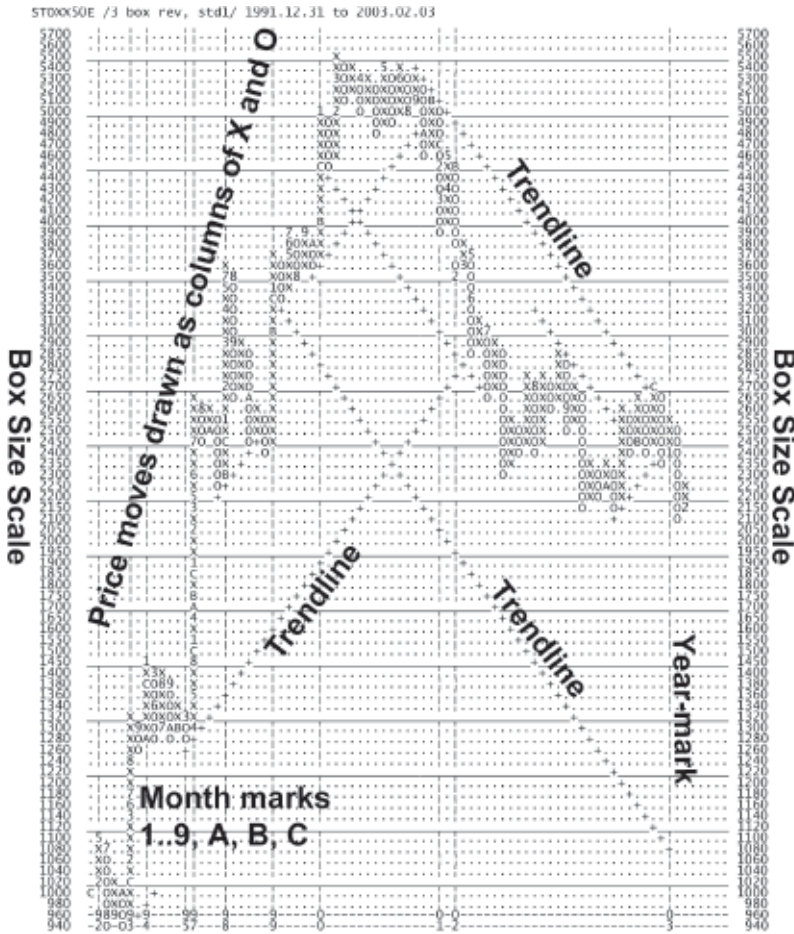


Table 1.3
Month codes

Jan	1
Feb	2
Mar	3
April	4
May	5
June	6
July	7
Aug	8
Sept	9
Oct	A
Nov	B
Dec	C

As mentioned, **point-and-figure ignores the passage of time**. However, for the purpose of comparability, but not for trading, letters are often used to mark the start of a new month, or a line to mark the start of a new year. Examples of both are shown above, with years indicated by vertical lines and, at the bottom, the last two year digits are printed. Months are drawn inside the chart, substituting Xs or Os with the month codes show in the table above right.

Another practical example

Just to make you an expert in charting, we have included another example: mmO2 PLC [OOM.L]. The data for mm02 in this period from January to February 2002 is printed opposite. It is in the format of: date/open/high/close/volume.

Starting on page 42 we will plot this data on a p&f chart.

Table 1.4 – Example price data for mmO2

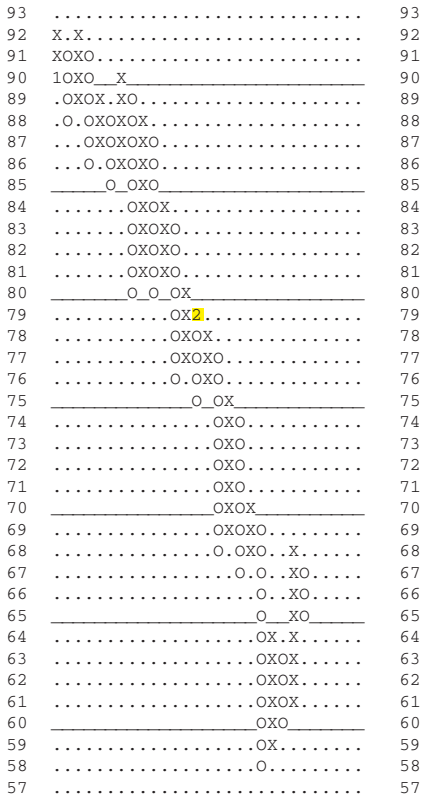
Date	Open	High	Low	Close	Volume
02-01-2002	86	90.25	86	89	32571772
03-01-2002	89.1	91.75	87.25	90.89	96608224
04-01-2002	92	92.75	88.75	91.25	83221424
07-01-2002	92	92.25	88	90.72	80453848
08-01-2002	89.61	92.5	88.5	91.56	149584448
09-01-2002	91	91.5	86.66	89.22	104319984
10-01-2002	87.5	87.75	85.25	86.5	134468912
11-01-2002	87.5	89.5	86.5	88.5	48392516
14-01-2002	85.25	87.5	84.81	85.03	34868488
15-01-2002	85	90	84.5	88	76452320
16-01-2002	86.5	90	80	88	73580800
17-01-2002	86.53	88.25	85.9	86.25	72097752
18-01-2002	86.75	88.25	85	85.53	104493032
21-01-2002	85.25	86.5	84.25	85.25	27617188
22-01-2002	85	86.84	82.5	84.94	48338120
23-01-2002	82	83	80	81.53	105278408
24-01-2002	81.03	84.25	81	82.47	94844912
25-01-2002	82.63	83.31	80.25	81.25	26047040
28-01-2002	81.28	84	79	79.43	69077912
29-01-2002	81.28	81.95	79	80.25	74353048
30-01-2002	79.53	79.53	75.5	78	94711624
31-01-2002	76.28	80	76.22	76.75	63062104
01-02-2002	77.28	80.16	75	79.13	85325560
04-02-2002	78.25	78.57	74.75	75.52	48750840
05-02-2002	75	76	72.25	73.81	101264192
06-02-2002	75.03	75.03	70	71.61	55556080
07-02-2002	70.72	74.25	68	71.7	83176912
08-02-2002	71.97	75	71.32	73.28	55047380
11-02-2002	72.22	75	71.25	71.5	45950152
12-02-2002	71.5	73.66	69.5	71.1	49905948
13-02-2002	71.53	72.38	66.1	68.27	153598560
14-02-2002	68.02	69.75	66.5	67.94	68061024
15-02-2002	67.98	70.5	66.5	67.25	78512064
18-02-2002	68.27	68.48	65.25	66.04	57734716
19-02-2002	65.98	66.5	62.5	64.66	70843168
20-02-2002	64.94	64.94	58	60.04	109770192
21-02-2002	63	63.75	58.98	62	71520240
22-02-2002	62.98	64.25	61.25	62.41	38584116
25-02-2002	61.73	63.75	60	61.45	84168552
26-02-2002	61.73	67	61.18	64.29	139078592
27-02-2002	65.23	68	63.5	64	98475920
28-02-2002	67.77	68.06	64.25	66	42747032

1. Constant box size

First, use the simplest scale, namely a constant box size of 1. Your grid will be made up of boxes which all have the same size 1, with the lowest box being 57 and the highest 93 (the range of the mmO2 data).

Below is the result of charting the data. We hope you get a chart that looks exactly the same.

Chart 1.3 – OOM P&F chart with a constant box size of 1



You might have forgotten to include the ‘2’ on line 79 indicating the start of February (month ‘2’) and the end of January (month ‘1’). The marking of months or any other time reference is not strictly necessary in p&f charting, because, as you know by now, p&f charts ignore the passage of time. Nevertheless, it is a common convention to mark new months with a number, because traders often like a maximum of information.

The numbering for months is very simple: 1-9 for January to September, and then the letters A, B and C for October, November and December respectively.

2. Standard box size

Now, and this is very important for your learning process, do the same chart with the standard scale. Remember the standard scale changes the size of the boxes. The size of the box increases – although in a staggered way – with the increase of the price.

Look up the box values in the *Standard box size* table on page 34. The information that you take from that table is that the boxes will have the size of 1 between 29 and 60, and 2 between 60 and 140. Now, using the standard scale, the chart should look like this:

Chart 1.4 – OOM with standard scale

94	.....	94
92	X_____	92
90	1O.....	90
88	.OX.....	88
86	.OXO.....	86
84	.OXO.....	84
82	OXO_____	82
80	.O.O.....	80
78	..O.....	78
76	..O.....	76
74	..2X.....	74
72	OXO_____	72
70	..OXO.....	70
68	..O.OX....	68
66	....OX....	66
64	....OX....	64
62	OX_____	62
60	....OX....	60
59	....OX....	59
58	....O.....	58
57	-----	57
56	-----	56

If you succeeded in drawing the two charts correctly, you have shown that you understand the basics. Congratulations! There is nothing more to learn in respect of drawing the basic chart.

What you do still need to learn is how to insert trend lines and, most of all, how to interpret a p&f chart and apply it to real trading.

You have observed with the above two charts two important aspects, namely that:

1. The standard scale is easy to do, and
2. The bigger the box size, the fewer columns, as reversals are less frequent.

Summary

We have noted the basic characteristics of point-and-figure charts:

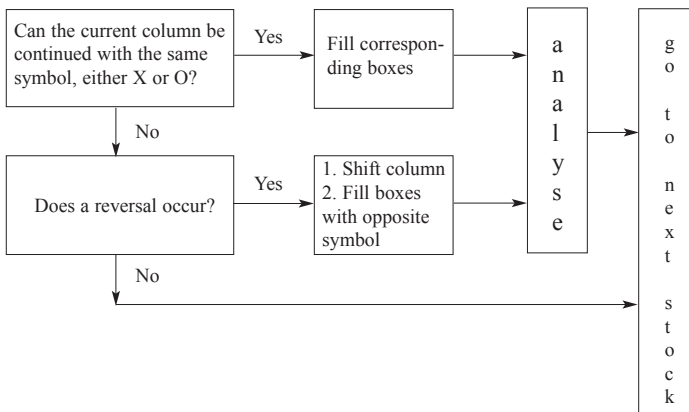
- Xs indicate rising prices.
- Os indicate falling prices.
- A column can never include both Xs and Os.
- Columns of Xs alternate with columns of Os.

Concise instruction for creating point-and-figure charts

1. If the current column consists of Xs, check if new Xs can be added, or, if the current column consists of Os, check if new Os can be added. If they can, add them.
2. If no new same symbol can be added to the current column, check if a reversal has happened and if so, start a new column with the opposite symbol. If no reversal has happened, wait for the next day's price data.
3. Interpret the chart for new buy or sell signals.

The above can also be represented as a flow chart:

Figure 1.4 – Flow chart describing p&f chart construction



What about volume?

Point-and-figure charts do not display volume in the way that bar-charts do. In our opinion this is not problematic, because volume often switches between being a leading or a lagging indicator and so is no use at all for predicting price moves. Moreover, we have not seen any scientific study that shows that volume can be used to forecast price moves. And one more consideration: reported volume figures are flawed because they are not consolidated with trading volume generated by derivatives or OTC trading.

Computerised charting

With the proliferation of PCs it is rare to find an active trader who does not have at least two computers, a portable and a PDA at hand! Recently we counted the number of PCs in our office and at home, and the number was surprising. But one can spend money in much more silly ways, and of course we have somehow to finance the turnaround of the tech markets. *So let's buy more hardware!*

But jokes aside, a good computer with fast internet access is indispensable. Therefore in this book we cover the aspects of computer application to point-and-figure extensively.

Price data

If you are computer literate, and willing to spend the time and money, historic price data is available from a number of data vendors. Depending on the vendor, the data may go back several decades and be available for download to your computer, or it may be on CD ROM. Current day data would be downloaded daily to update the historic data accumulated on your hard drive or on the CD ROM. Some databases give access to the historic data for free, the best known being *Yahoo*.

Recommended data vendors

- ADVFN (www.advfn.com).
- E-Signal (www.esignal.com), covers all major markets for a reasonable price.
- Global Financial Data (www.globalfindata.com), expensive though complete.
- LSE (www.londonstockexchange.com).
- MetaStock (www.equis.com): with Reuters Data Link.
- Olsen (www.olsen.ch) for tick data.
- Paritech (www.paritech.co.uk).
- TickData (www.tickdata.com): for US tick data.
- Updata (www.updata.co.uk): Trader II Professional's own data feed.
- Yahoo (finance.yahoo.com): in combination with the utility Hquote.

Software programs

You will need a software package that can create p&f charts from the daily high and low price data. There are several that do an excellent job. Often they also generate bar charts, candlestick charts, do technical analysis, and many even allow the user to view fundamental information on the selected investment.

A good p&f software program should include:

- Different possibilities to scale a chart (logarithmic, linear, user-defined).
- Drawing of automatic trend lines.
- Facility to access (in a user-friendly way) many different historical price series.

Robust software packages that create p&f charts include *MetaStock*, *PFScan* and *Updata Technical Analyst* and *Updata Trader*.

In each package you select the box size or scaling, and number of box reversal desired, and the system will automatically produce the chart. The charts generated from each program are accurate and very useable.

Even though each product produces excellent charts, there are significant differences in price and features of each software package. Some versions allow for intraday charts, others not. Some are configured so as to be connected directly to specific data feeds; others are independent of data vendors and feeds.

Recommended software programs

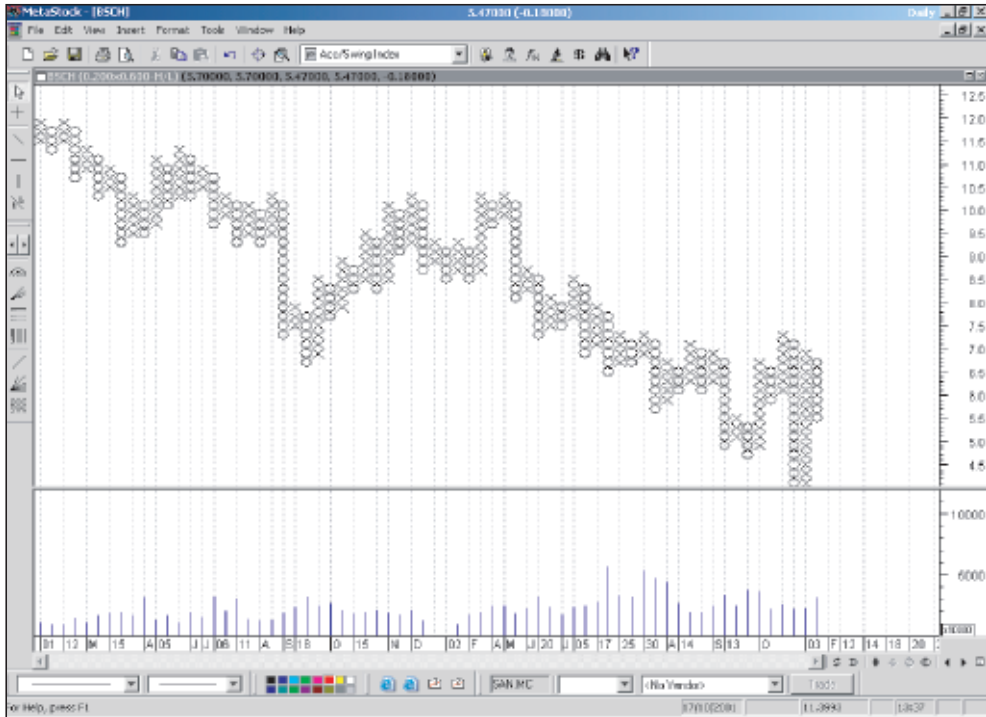
We have extensively tested the high end products of MetaStock, PFScan and Updata, and can happily endorse all three for the chartist interested in utilizing a PC to maintain point-and-figure charts.

- **MetaStock (www.equis.com):** for very basic point-and-figure.
- **PFScan (www.pfscan.com):** a software boutique's outstanding application with unique features for scanning entire markets for breakout signals.
- **Updata (www.updata.co.uk):** probably the worlds best point-and-figure charts. Moreover, Updata is an integrated trading platform, one of the best we know.

Example screen shots from each of these software programs – two in each case – appear on the next 6 pages.

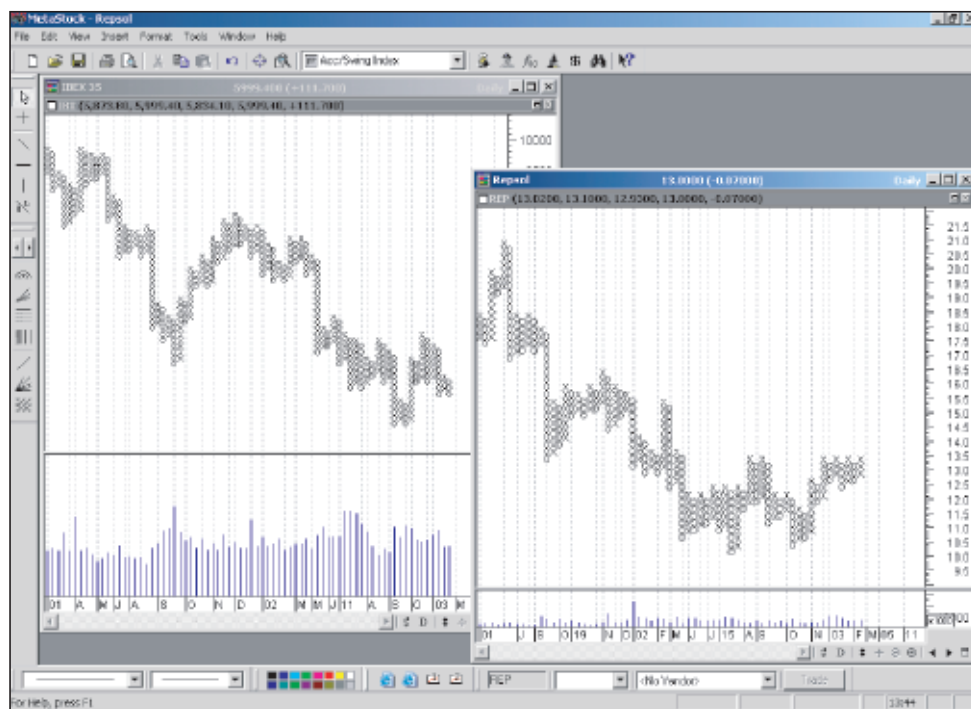
MetaStock

Figure 1.5 – Banco Santander [SAN.MC] with volume displayed by MetaStock



This is the basic screen layout of the MetaStock program. Because it is a universal technical analysis package it does not offer the advanced features one finds in PFScan or Updata. MetaStock p&f price-scales are always linear. They can, however, be changed in size.

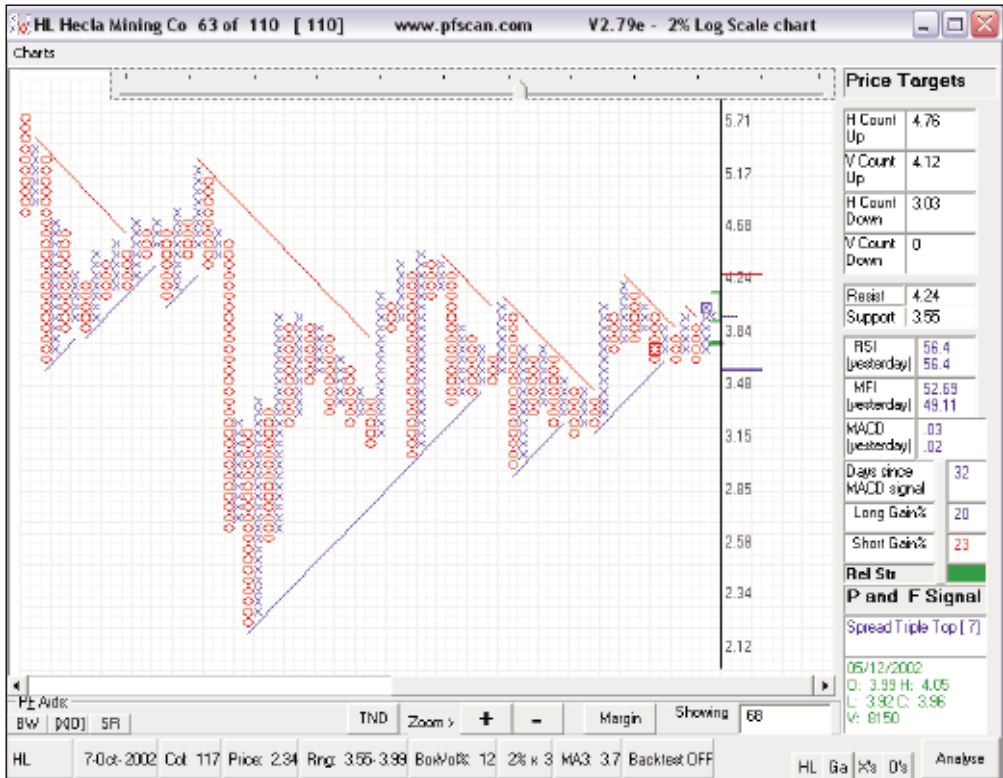
Figure 1.6 – Ibox35 [.IBEX] and Repsol [REP.MC], both with volume, by MetaStock



As shown above, it is useful to be able to have various charts in different windows for comparisons.

PFScan

Figure 1.7 – PFScan with trend lines, counts and signals

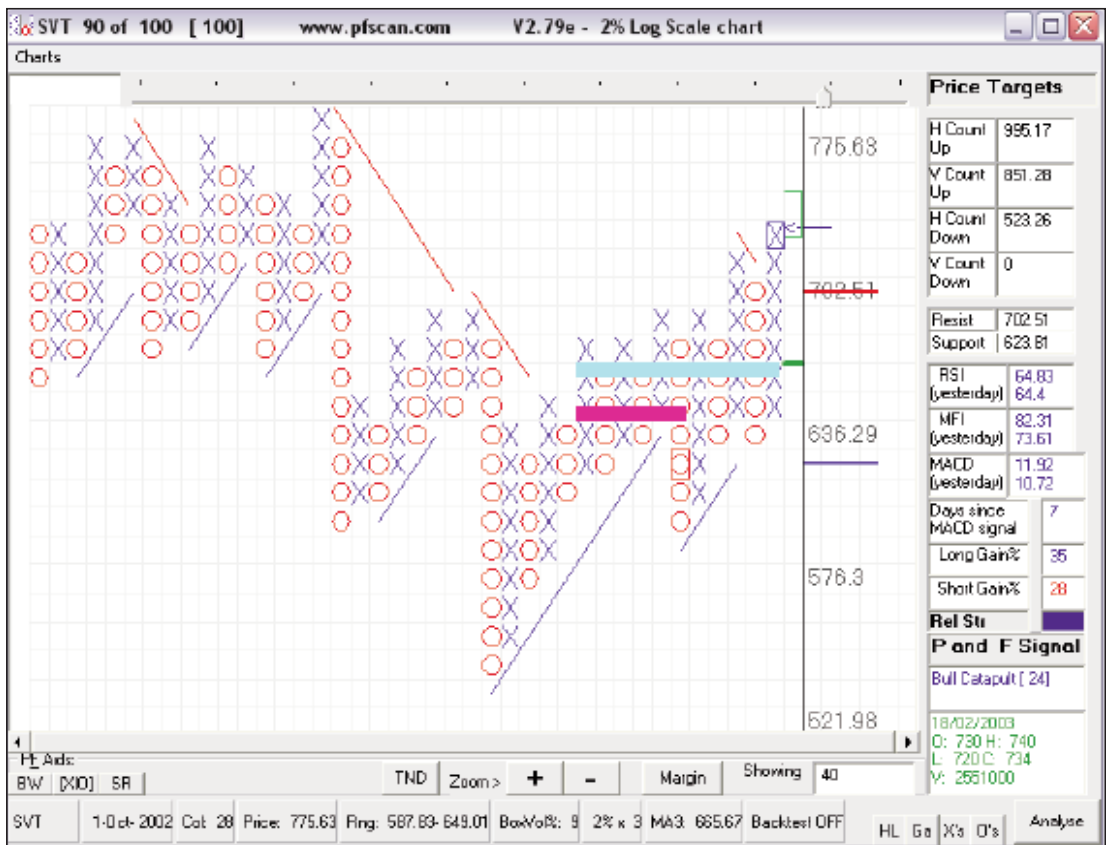


In this screenshot of PFScan, you can see automatic trend lines (bullish support and bearish resistance), plus current resistance and support levels (on the scale at the right side).

There is a list of additional indicators, price targets and signals shown in the right split-window.

At the bottom are various buttons which allow the charts to be zoomed, analysed or to be tested for signals and profitability.

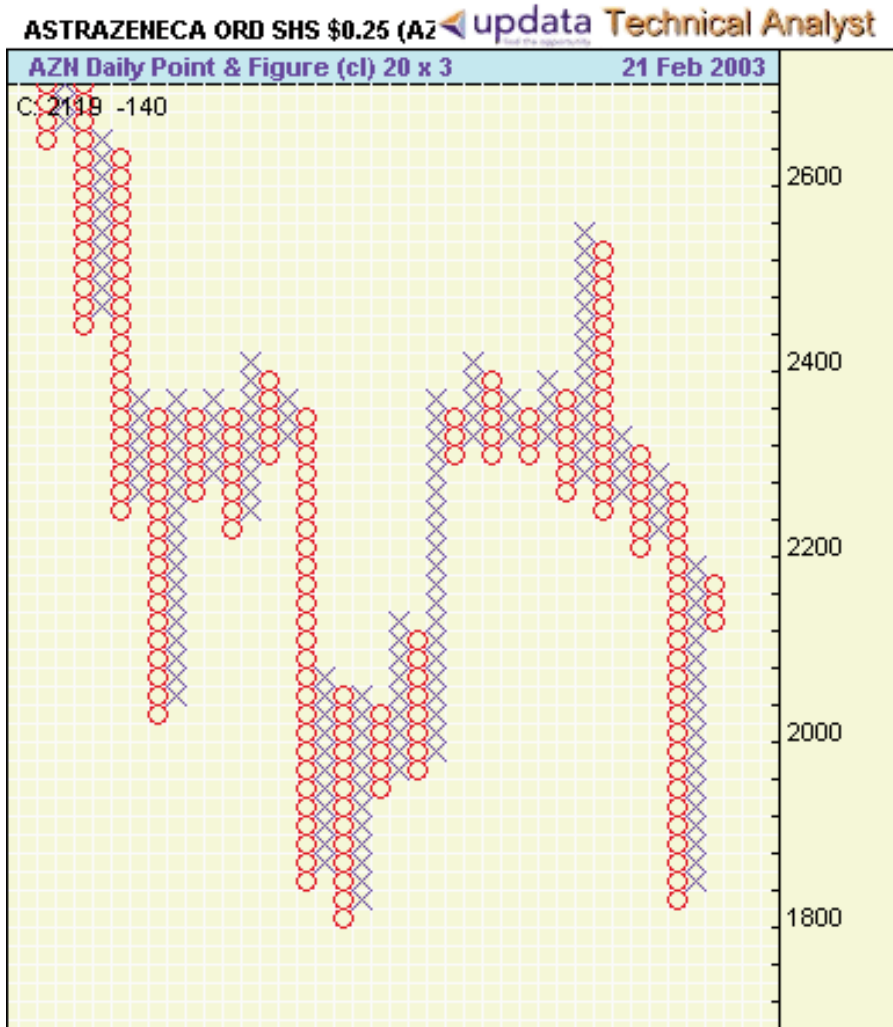
Figure 1.8 – PFScan with trend lines, counts and signals



Here we have zoomed in on a chart to increase the visibility of the price targets, indicators and signals. Note also that the most recent trading signals are indicated with framed boxes and thick horizontal bars

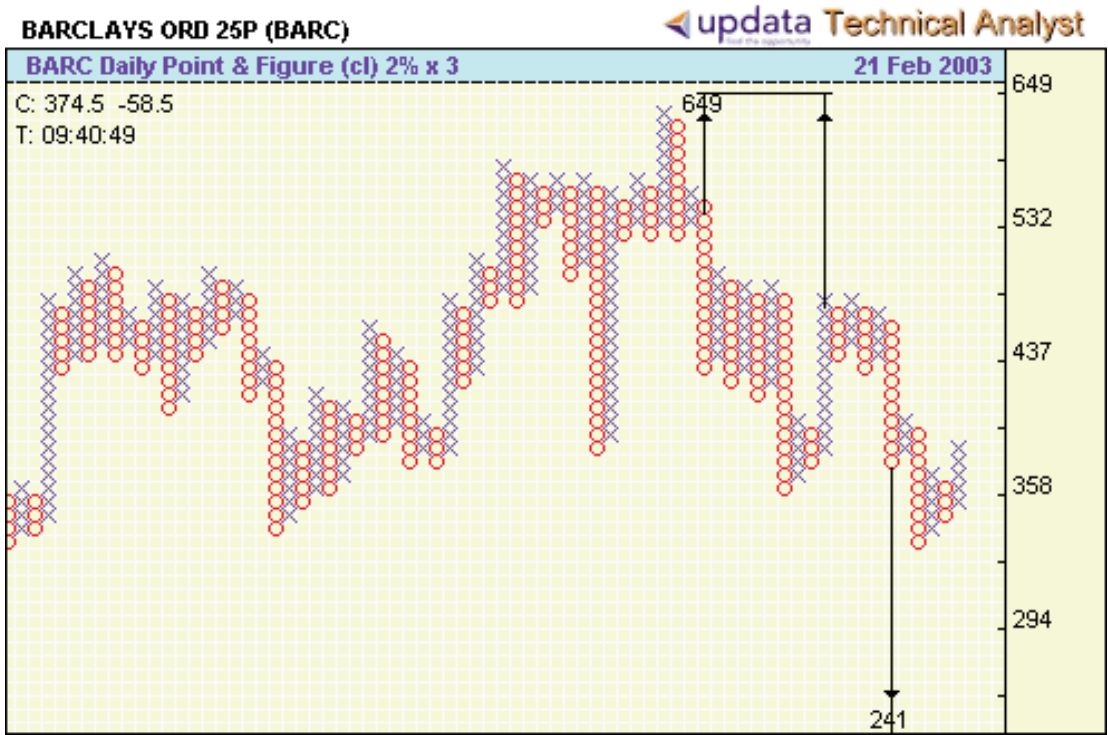
Updatea

Figure 1.9 – Updatea, point-and-figure



In this window showing AstraZeneca [AZN] p&f chart, you can appreciate the aesthetics of the Updatea design. For this chart, a linear 20-point box size scale has been used. Updatea allows a highly flexible definition of the box size scale.

Figure 1.10 – Updata, point-and-figure with horizontal and vertical counts



One of Updata's valuable features is the automatic performance of precise horizontal and vertical counts. The chart is based on a logarithmic box size scale.

Note: further references for software and data can be found in Appendix 3 on page 249.

Subscription charts

Besides constructing the charts yourself, there are a number of independent services that offer 'ready-made' p&f charts. We mention a couple of the better known ones below.

Chartcraft

If you are interested in US stocks you can subscribe to the excellent products of *Chartcraft* (www.chartcraft.com). They range from annual long-term chart books providing chart history going back many years, to monthly chart books with less historic data, but more current charts. They also offer weekly and daily email-based services, with the latest comments and charts. Their subscription charts are available for most US securities as Chartcraft is the oldest, largest, and most respected of the p&f charting services. All of their charts are also easily accessible online on the web.

Stockcube

You can also subscribe to Chartcraft's sister company's service *Stockcube* (www.stockcube.co.uk), which provides online p&f charts for non-US stocks, currencies and financial futures. However, note that Stockcube creates its charts based on closing prices.

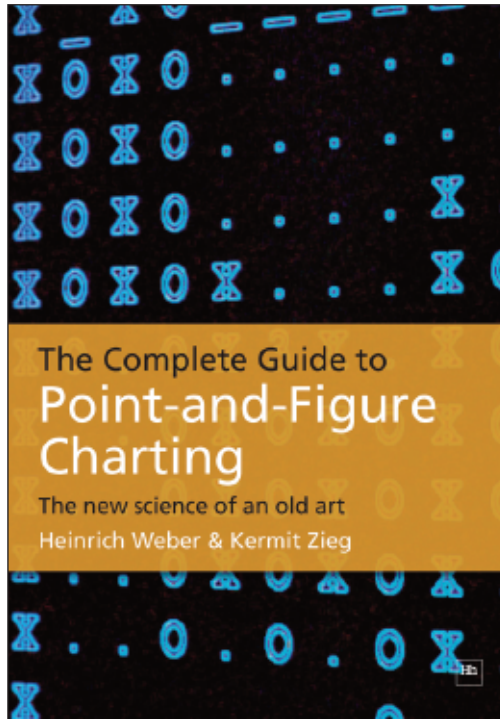
Both Chartcraft and Stockcube are known for their immaculate products and professional service.

For the professional trader we consider a subscription to such a service a *nice to have*. Most especially in order to complement your own charts, either drawn by hand or computer.

The Complete Guide to Point-and-Figure Charting

The new science of an old art

Heinrich Weber & Kermit Zieg



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