**ATAA**

## AUSTRALIAN TECHNICAL ANALYSTS ASSOCIATION INC.

# Newsletter

## July 1995

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## Contributions to the Newsletter

The Australian Technical Analysts Association Newsletter is published by the Australian Technical Analysts Association Inc (ATAA). It is a vehicle for the interchange of ideas and information about technical analysis of markets.  This forum is available at the discretion of the editor for the views of members, guest speakers and guest writers.

Contributing to the ATAA Newsletter is encouraged and will repay your effort by expanding and sharpening your analytical ability.   The emphasis of the Newsletter is on original articles, although consideration may be given to material of interest previously published in other publications.   Newsletters are published each January, March, May, July, September and November.  The deadline for copy is the last day of the previous month: ie December, February, April, June, August and October.

If you would like to discuss how you could contribute, telephone Roger Lawes on 02 375 6536.   Contributions should be addressed to Roger and sent to him at GPO Box N255 Grosvenor Place Sydney NSW 2000.  Our preference is that you submit articles in both hard copy and on IBM disk.  Software packages preferred are Microsoft compatible, Word and WordPerfect 5.1. However, most packages will generate an ASCII file, which will be fine.

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# In This Issue

## Welcome to New Members

Robert Vered NSW
Jenny Green NSW
Carol Raadgever NSW
Jack Jarman NSW
Kevin Lake NSW
Keith Donaldson VIC
Robert Poon VIC
Norbert Mihic NSW
Alan Taylor QLD
Peter Bucovaz VIC
Blair Fleming QLD
John Italiano WA
Rick Delahunt NSW
Gary Tong VIC
Neil Purcell QLD
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David Sherwin NSW
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George Bertram QLD
Finn Traugott-Schwensen QLD
Ian Brand VIC
John Kerr QLD
Sidney Waugh QLD
Robert Dungavell QLD
John Kuhnell VIC

# EXAMPLES OF USING TIME TO IDENTIFY TURNING POINTS IN THE MARKETS

### (For Beginners Part one)
### By Chris Christidis

## Cycles

"Everything in nature moves in cycles... our solar system moves in a cycle around the centre of the MilkyWay galaxy... the planets move in precise and predictable cycles around the sun... the cycle of the tilt of the earth causes the cycle of the seasons... the rotation of the earth produces the cycle of night and day...the full moon occurs with predictable regularity as do the rise and fall of the tides....These are all cycles we can understand and accept because we have an understanding of the underlying causes of these cycles."

Walter Bressert

So do cycles also exist in the stock market?

So what if they do you might say! The fact that they exist is of little more than a passing interest for an analyst, so why use them?

Cycles are a very powerful analytical tool for identifying trends and trend reversals. The fact that an analyst is aware of a major bottom in a dominant cycle, can add confidence to the decision making process. Cycles and their turning points are used by short term traders and investors in the stockmarket.

You've probably heard the same old adage "trade with the trend", if the trend is up, buy the dips; if the trend is down, sell the rallies. Each dip or peak is a short term cycle within a long term cycle, each could be equated as a single wheel rotating within the confines of a larger wheel, ie wheels working within wheels. As long as the larger wheel is rolling, the trend continues.

This article is aimed at the beginner and try's to show by way of simple examples that cycles exist in our local stockmarket in their various forms.
I hope that these few examples will arouse some curiosity and at least prompt you to investigate further. There are many books available on the topic, consult your local technical book shop or the Stock Exchange book shop in your capital city.

## Natural Cycles (Seasonals)

The seasonal cycles of our planet Earth, are natural cycles. They are the direct result of the mechanical movements between the Earth, Moon and the Sun. Seasonal tendencies help form cyclic patterns in most markets.

Important Natural cycle dates to be aware of are-
( Southern Hemisphere)

The Autumnal Equinox 20,21,22 March
The Vernal Equinox 21,22,23 September
The Winter Solstice 21,22,23 June
The Summer Solstice 21,22,23 December
The Apogee 3,4 July and Perigee 2,3 January
The lunar cycle- new moon and full moon and Solar Eclipses

If major time cycles coincide with an Equinox, Solstice, Apogee, Perigee or a Solar Eclipse they can combine to create powerful turning points in markets. A good example was the 1987 high in the Allords where on the 21st September 1987 (Equinox), a Solar Eclipse occurred. (Keep in mind the 21st September 1995.)

### Chart 1 - Daily Allords 1987 Crash
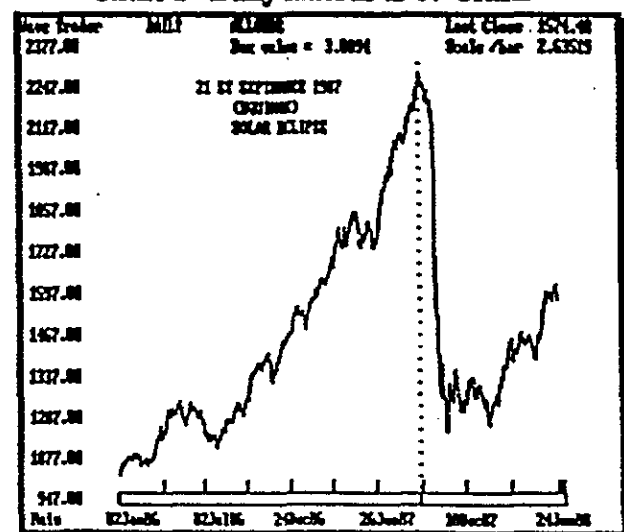
# Degrees from the circle of one year
# GANN

Each year the Earth passes through one orbit around the sun. Each orbit can be divided into 360 degrees as opposed to 365.25 days. Because the path of the Earth takes in its Orbit around the Sun is not a perfect circle but in fact an ellipse (an oval), the passage of time in degrees is not constant with the calendar days.

For example each 90 degree segment of the 360 degree circle is not regular in days by direct proportion as 1/4 of 365.25 = 91.3 days. Depending upon the seasonal time of the year, 90 degrees on the Solar Circle could take 89 days, 93 days or somewhere in between.

W.D.GANN, a legendary stock and commodity trader in the USA in the first half of this century, used precise mathematical and geometric relationships in terms of both time and price to amass a reputed $50 million from the markets. Gann's methodology contained elements of intricate mathematical ratios, simplistic natural geometry, and aspects of financial astrology.

Mathematics, he believed was the only exact science. There are three important points that can be proved with mathematics or geometry : The Circle, Square, Triangle.

There are 360 degrees in a circle, no matter how large or how small the circle may be. Gann used divisions of the circle in time (degrees and calendar) to ascertain turning points in stocks and markets. He divided the circle into eighth's i.e. 1/8 ,2/8 , 3/8, etc and applied these divisions to time. ( eg 3/8ths of 360=135, 5/8ths of 360=225 degrees. Note 225 = .618 of a calendar year)

Gann also used multiples(squares) of 90 and 144, i.e.(90,180,270, etc and 144,288,576,720) I have found these multiples to be very important in the local market.(See Chart 7 of CRA)

Important trend changes can occur at intervals of 90,120,180,225,240 and 360 and 720 degrees (twice around the circle) from highs or lows, although minor trend changes can occur every 30 degrees. (See Chart 2 of SPI below )

Some traders make decisions to enter or exit a market or stock purely based on time alone. For example, if a cycle has bottomed, traders position themselves on the long side and stay long for say a period of 30 degrees (or days), then they exit their positions, hopefully at a profit, purely on the fact that the cycle has fallen due, waiting then to re-enter the market.

**Chart 2 - Daily SPI Futures**
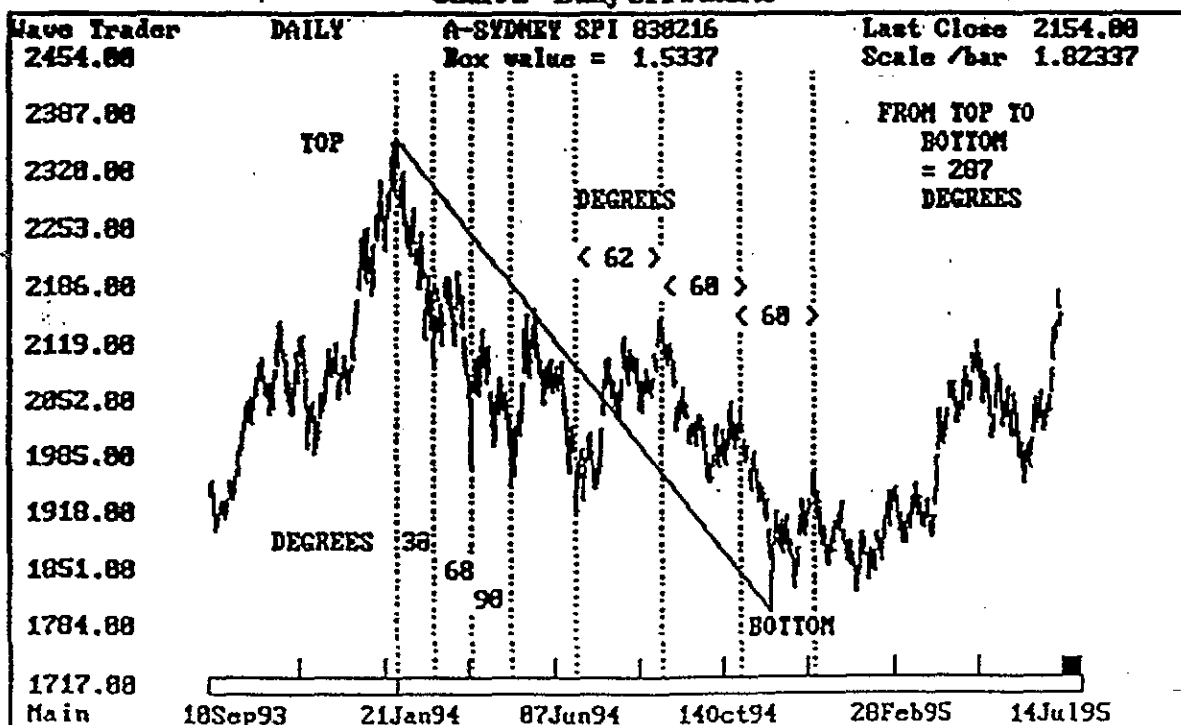
## Fibonacci Number Sequence

Leonardo Fibonacci, an Italian mathematician of the 13th century, visited Egypt and on his return disclosed a number sequence now bearing his name, as a solution to a mathematical problem involving the reproduction of rabbits. This amazing sequence of numbers is as follows - 1,2,3,5,8,13,21,34,55,89,144,233,377,etc all the way to infinity.

For those not familiar with the Fibonacci series, the series of numbers begins at one and generates new numbers in the series with an increase of approximately 61.8%.

Fibonacci numbers can be found in the spirals of sunflowers, the spirals on pine cones, and the ancient Greek and Egyptian's applied the numbers (the Golden Mean 1.618) to such diverse areas as music, art, and even the building of the Parthenon and the Great Pyramid of Gizeh.

Leonardo didn't really know these numbers had a connection to natural objects, and neither did anyone else for over 700 years. It's only been about 50 years since they've come to be known as one of the most important sets of numbers in the universe.

Guess where else they appear? That's right in the Stock market. I have found time after time the use of the numbers in the sequence to be very powerful.

In their book "The Elliott Wave Principle" Frost and Prechter state that "It is sufficient to state that the stockmarket has a propensity to demonstrate a form which can be aligned with the form present in the Fibonacci sequence"

### Fibonacci and the Allords -Charts 3&4

As you can see from the charts on the next page, Fibonacci time was present at some of the major turning points over the last 12 months or so.

The first chart shows that the Allords made a bottom 144 calendar days from the top of 3-2-94. A rally occurred only to see the main trend continue down.
The next bottom occurred 287 degrees (2x144=288) not days from the top (the use of degrees was explained in the previous section.)

I must admit that I was looking at 288 calendar days at the time, only to see the market slide further. The Allords rallied but the main trend still remained down.

A final price low was made on the 9-2-.95, but the retest of the low made on 15-2-95 was 377 days from the top, and naturally 233 days from the low in June 94. (144+233=377 ; 377 x .618 =233)

### Retest of the low

In some cases a time cycle might bottom after the price low. What I mean by this is that the retest of the low or high fails to break into new price territory, but a time cycle is due, therefore creating a higher bottom or lower top.

This is a very important point to keep in mind as many cycles can be missed by not being aware of the retest. Conversely, that doesn't mean you ignore the price bottom just because a prior cycle bottoms latter in time but not price, as we shall see in chart no.4.

There they are again (Chart 4), those Fibonacci numbers stand out. Since the Allords bottomed on 9-2-95 it rallied 89 calender days to the 9-5-95. The market came back did a 50% retracement in price from the bottom on 15-6-95 (which was 120 calendar days from the retest low 15-2-95) then took off. A pullback then occurred on 3-7-95 (the Apogee) 144 calendar days from the price bottom 9-2-95. (89 up & 55 across), the market then continued its upward trend.

### Fibonacci and Stocks -Charts 5,6,7

Fibonacci time can also be applied on stocks. Look at chart number 5 of CRA. You can see the clustering of times from previous short term tops and bottoms. Even inside the wedge that I have shown had 5,8,13,21 days between the minor swings. One should also be aware of Fibonnaci times in degrees (explained previous section). See chart 6 of CRA.

## EXAMPLES OF FIBONACCI TIME IN THE ALLORDS

### Chart No. 3
### Daily Allords Index last 18 months



Wave Trader      DAILY      ALLORDS                          Last Close   2845.70
2376.00                     Box value =  1.4903               Scale /bar   1.63352

<< 144 DAYS >>

<<<<<< 233 DAYS >>>>>>

<<< 144 + 233 = 377

<<<<<<<<< 288 DEGREES >>>>>>>>>     <<< RETEST OF LOW

Main      19Nov93      18Mar94      18Jul94      88Nov94      88Mar95      87Jul95

### Chart No. 4
### Daily Chart Allordinaries Index last 4 months



Wave Trader      DAILY      ALLORDS                          Last Close   2891.18
2119.00                     Box value =  1.4903               Scale /bar   3.11789

<<<<<<<< 89 DAYS >>>>>>>>>     9-5-95

3-7-95
APOGEE

<<<<< 55 DAYS >>>>>

9-2-95

<<<<<<<<<<<<< 144 DAYS >>>>>>>>>>>>>>>

Main      27Jan95      28Feb95      30Mar95      85May95      86Jun95      11Jul95

## Chart 5
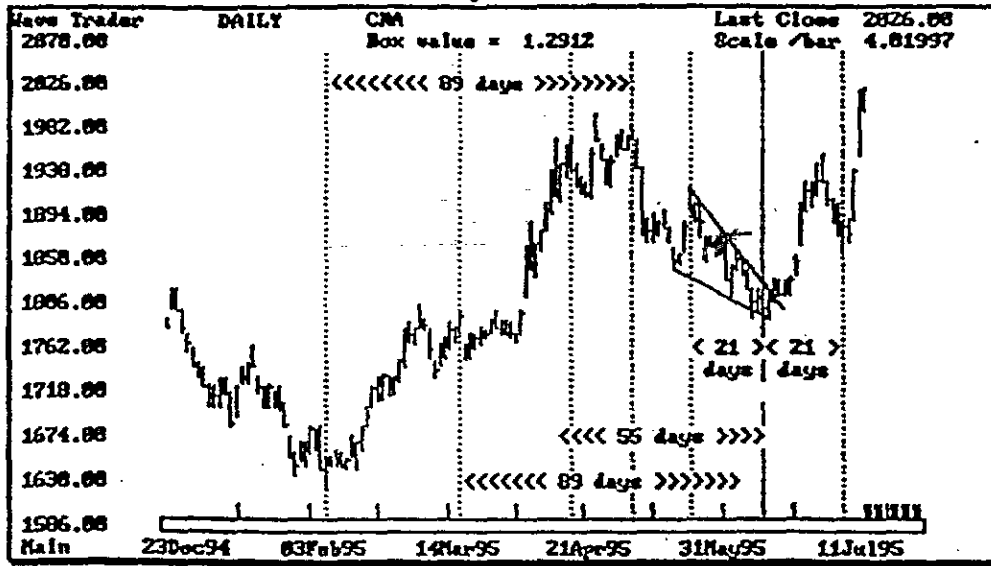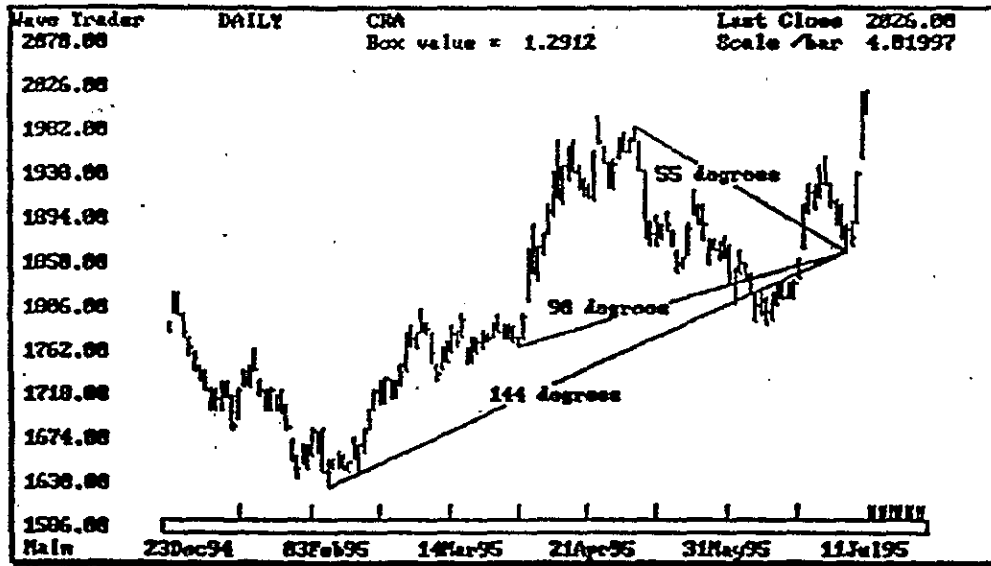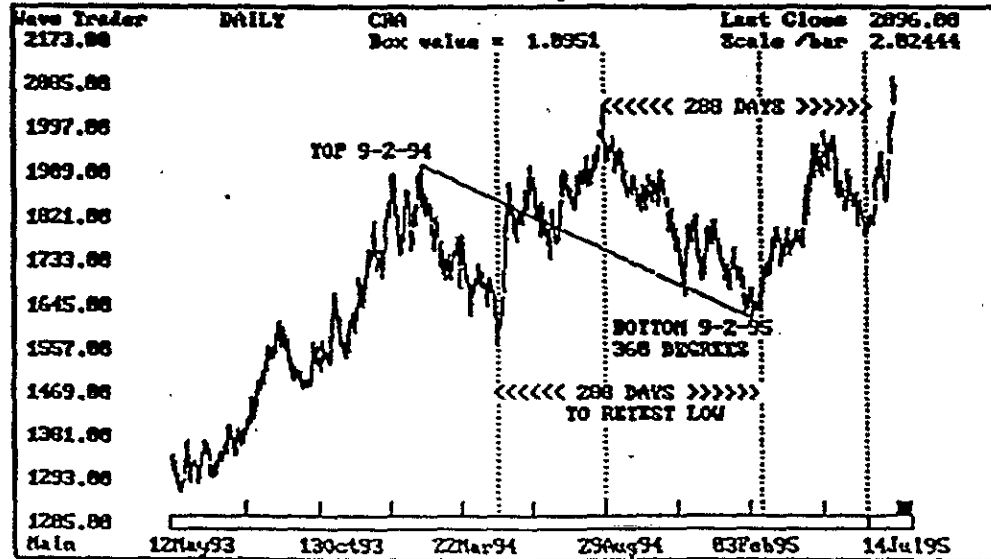## CRA daily from 9-2-95



## Chart 6 below



## Chart 7 - CRA Daily from 1993

# TIME CYCLE RATIOS

Gann once said "There is nothing new under the Sun, the past will continue to repeat itself time and time again."

Gann theory uses a vibrational technique for measuring relationships between waves of similar degree. Conventional Gann technique relies on square numbers i.e., .25, .333, .50, .666, .75, .875, 1.00, 1.5, 2.00, 4.00 , etc

Earlier I mentioned that Gann said, Mathematics, was the only exact science and that three important points that can be proved with mathematics or geometry were the Circle, Square, Triangle.

Bryce Gilmore in his book "Geometry of Markets " has applied ancient geometry to the markets and states that the basic underlying theory that one needs to appreciate, for the successful use of philosophical geometric charting, is that all waves of similar degree will relate mathematically.

He believes that Square ratios are only one third of the tools required for a comprehensive analysis of time cycles.

The other two thirds of the tools are made up of GEOMETRIC and HARMONIC ratios.

The Elliott Wave Principle primarily uses Geometric ratios, i.e 0.382, 0.618, 1.618, 1.902, 2.618, 4.236, etc as its mathematical base.

Harmonic ratios are an integral part of the whole concept i.e .293, 0.3535, 0.414, 0.586, 0.707, 1.414, 1.732, 2.236, etc

I shall explore the theory and use of Geometric and Harmonic Ratios in my next article.

## Most cycles are dynamic - not static

All markets work to their own dynamic system. Dynamic means they are interactive, i.e. they expand and contract over time.

Market cycles are directly related to the behaviour patterns of individuals acting on masse. Markets vibrate in price and time from highs to lows and lows to highs in minor trends, intermediate trends and primary trends.

Each trend of similar degree is the direct effect of an underlying cause. The cause is the constant vibration of the numerous cycles at work in any particular complex. Therefore the use of Time cycle Ratios can help identify the relationships between these trends of similar degree.

## What are Time Cycle Ratios

A time cycle ratio is the projection of a previous market trend or a series of market trends (time cycle) projected into the future, using the ratios mentioned previously. A time cycle is the length of time of a previous trend, be it a bear or bull trend.

For example you may take the time cycle of a bull trend (from bottom to top - number of days, degrees) and project it forward by Geometric or Harmonic or Arithmetic Ratios.

As markets move along, each confirmed minor, intermediate and primary degree top or bottom should be noted and used to compare future tops and bottoms to see if they relate to each other. This can be done manually (kept in a file) or stored on computer in some way.

I use CycleTrader/WaveTrader, a software package produced by Bryce Gilmore, of Australia which stores these tops and bottoms in a fact file which can be accessed for rapid analysis of current tops or bottoms for any relationship to past turning points. (See chart below and Chart 8 next page)

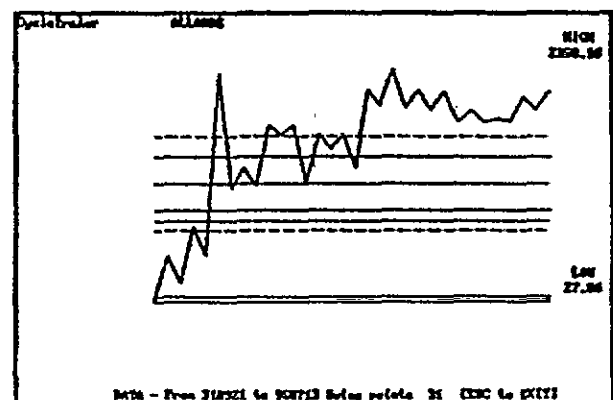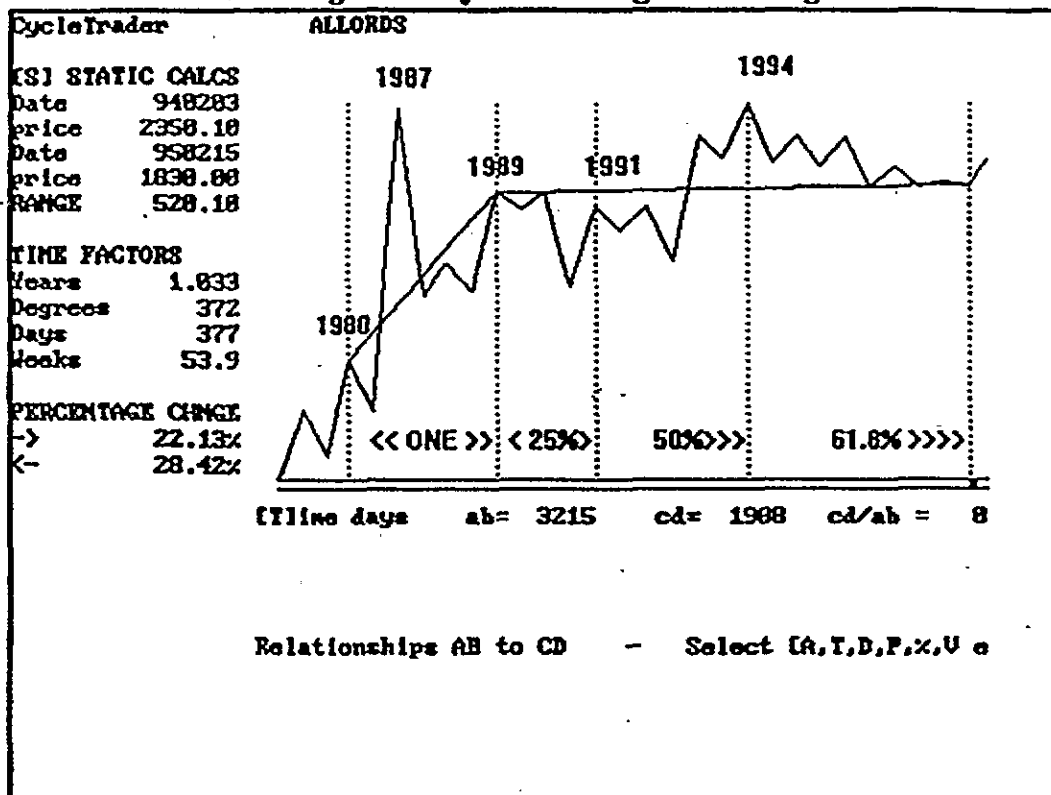**Allords Fact File(Swing Points) from 1931**

**CHART 8**
**Allords Fact File (Swing Points)**
**Showing Time Cycle 1980 high - 1989 high**



The above fact file shows the Allords from 1931 to the present. A Time Cycle from the 1980 high to the 1989 high has given strong turning points in the past. If you take the range in calendar days and project it forward 25%, you get the 1991 high, 50% of the range projected forward picked the high in February 1994 and recently 61.8% of the range picked the retest of the low on 9-2-95. (i.e 15-2-95). Now 66.6% (2/3rds) of the range projected into the future produces dates around the 17-19th July 1995. These are quality time cycle ratios.

There are many other examples of time cycles in our market, both minor and major. I have tried to show by way of simple examples some of them. When analysing the markets or stocks, time should be considered in conjuction with other factors such as pattern, position of indicators, etc.
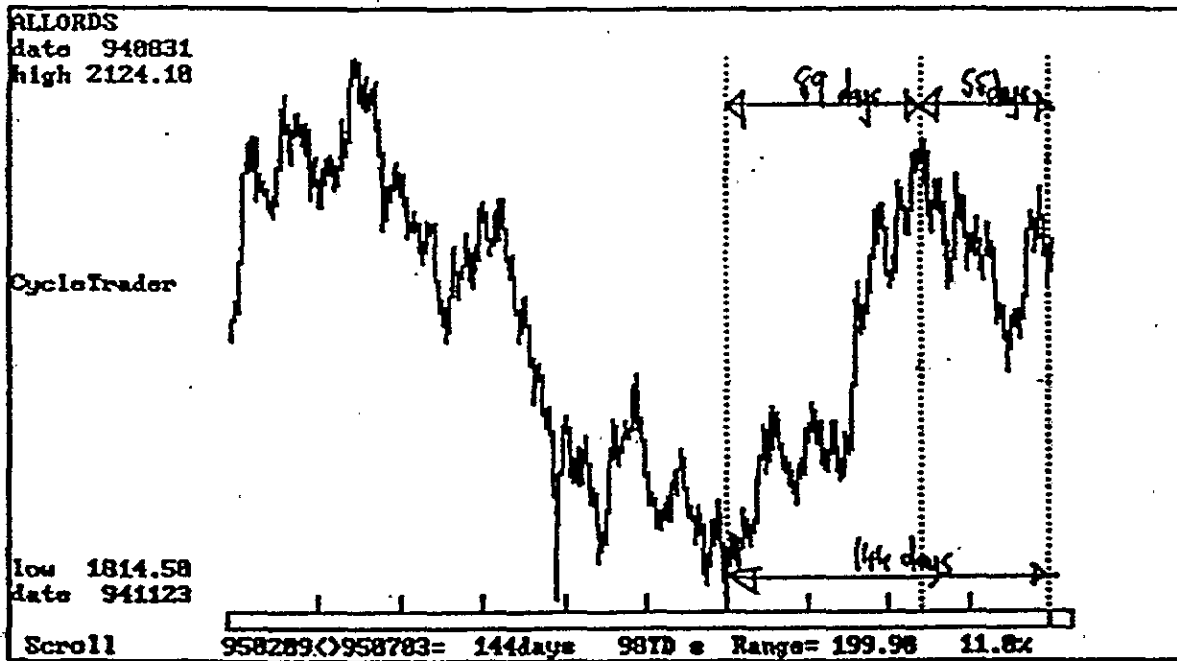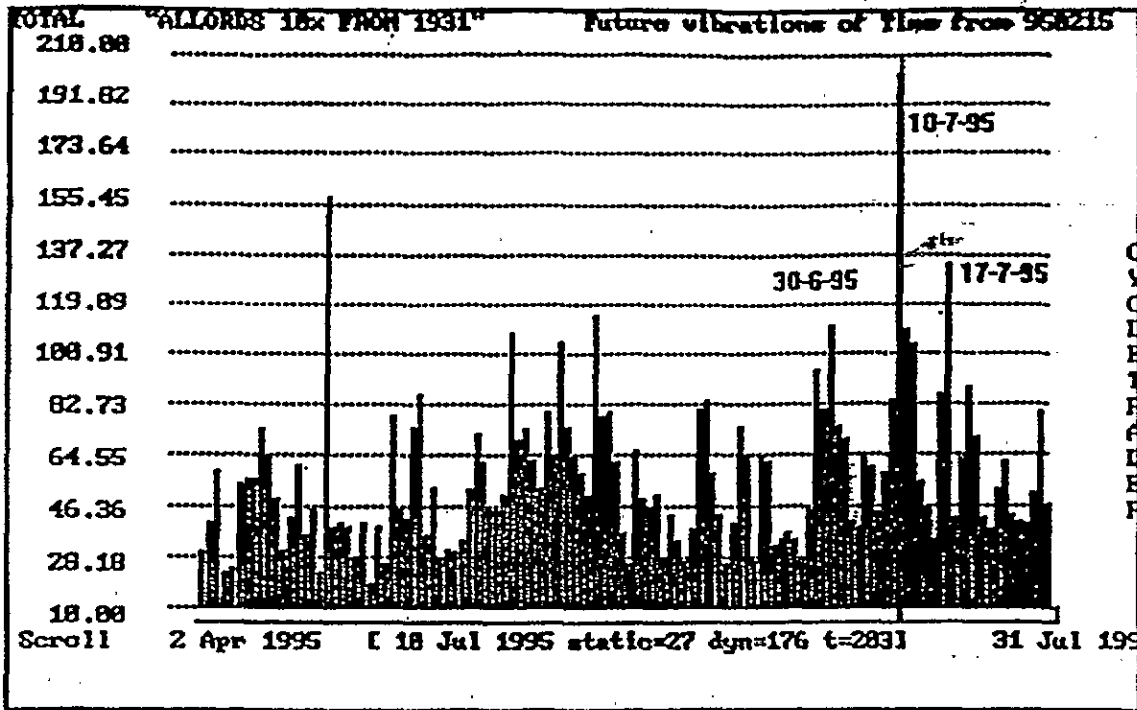I have included a worksheet (APPENDIX 1.) that I prepared on the 4th July for the Allords that I keep on file, which helps me answer questions that are always asked such as where is support, resistance, where's the market going, etc.

In conclusion Pythagoras once said,
**It is impossible for anyone to learn anything until he has experienced its truth for himself**

## References

"Geometry of Markets" Bryce T Gilmore
"Geometry of Markets II" Bryce T Gilmore
"CYCLES "          Samuel A.Schreiner, Jr (Donald I Fine, Inc)
"THE W.D. GANN Stockmarket Course" by W.D.Ga        nn....Lambert-Gann Publishing Co
"The Power of Oscillator/Cycle Combinations" by Walter Bressert (Workbook)
"Listen to the Market " Ivan Krastins (McGraw-Hill)
"Elliott Wave Principle" Frost and Prechter (New classics Library)

TOTAL    "ALLORDS 15x FROM 1931"     Future vibrations of Time from 950215

218.00
191.82
173.64
155.45
137.27
119.09
100.91
82.73
64.55
46.36
28.18
10.00

10-7-95
30-6-95    17-7-95

Scroll    2 Apr 1995    [ 18 Jul 1995 static=27 dyn=176 t=203]    31 Jul 199



ALLORDS
date 940831
high 2124.18

CycleTrader

low 1814.50
date 941123

Scroll    950209()950703=   144days    90TD @ Range= 199.98    11.0%

## TECHNICAL COMMENTS
### C. Christidis

① Strong Timing

② 50 % Retracement of last leg up.

③ Holding support 2000 level

ALLORDS                                          Date 4/7/95

## PRICE

Resistance - Last Swing High ............... 2050
............... - Pattern ............... 2030 — 2040
............... - Trendline ............... 2065
Support .... - Last Swing Low ............... 1945 + 1993
............... - Pattern ............... 1930 — 1960

Price Termination Target ............... Last Swing Up. Retrace — 1985, 1980, 1990

Bigger Picture —

## TIME

Static Counts from Last Swing - High ...... 55 days ... Low ...... 18
............... - Top ...... 55 days ... Bottom ...... 144 days
Wavetrader Windows of Opportunities Dates ... 10th July   30/6/95 — 4/7/95
17th — 19th July .. IMPORTANT
Major Cycles Due ...... ① 21 - 9 - 95
② 13 - 16th August 1995

Summary Future Important Dates ...............

## PATTERN

Bullish Interpretation

Traditional Chart Pattern ? — Possible Reverse Head + Shoulder Continuation
— Bigger Picture — Big Base (Possible R H+S)
Elliott Wave — 3 waves up to 2078·60
— 3 waves down to 1944·70
Bigger Picture — Shorter Term Possible Flat vs Triangle
Elliott Wave Alternate Count — 5 waves up to 2078-60   wave ①
— 3 waves down to 1944·70   wave ②
— Beginnings of wave 3

## INDICATORS

| TREND | MACD | 10 WEEK MA | 20 WEEK MA | STOCHASTIC | RSI |
|-------|------|------------|------------|------------|-----|
| UP. | Histo ↓  lines ↑ | 2018 ↑ | 1993 ↑ | UP. | 57/50 |

## TRADING STRATEGIES

BUY DIPS — Use stochastic daily. —

## SOME LEGAL ASPECTS TO ADVISING...

This brief article is intended to provide a basic overview of some of the legal issues surrounding the provision of advice in relation to futures contracts. Although you may not be advising, or may be inadvertantly advising, their are some key issues that you should be aware of. The article will focus on the legislation surrounding futures advice, but please be aware that similar principles also exist for the provision of advice in equity markets.

The basic legislation you should be aware of is Chapter 8 of the Corporations Law. The principal section is s1143 which provides:

> *A person must not:*
> *(a)    carry on a futures advice business; or*
> *(b)    hold out that the person is a futures adviser.*
> *unless the person is a licensee or an exempt futures adviser.*

Section 71(1) defines a futures advice business as,

> *(a)    a business of advising other persons about futures contracts; or*
> *(b)    a business in the course of which the person publishes futures*
> *reports*

Thus a person must not engage in the business of advising other persons about futures contracts unless they hold a Futures Advisers Licence. The Corporations Law specifically exempts certain activities from this definition, namely solicitors and accountants providing advice about futures contracts which is incidental to their practise. Advice about futures contracts provided through the media such as newspapers or periodicals or by way of an information service generally available to the public is also exempted from the licensing requirements.

The Australian Securities Commission ("ASC") is not only here to enforce the law, but also to help market participants comply with the legislative requirements. The ASC's goal is to maintain an fair, honest and efficient market for *all* participants, large and small. If you are engaged in activities of which you are unsure, or wish to run any hypothetical situations past us, please do not hesitate to confidentially call me at the Australian Securities Commission on (02) 911 2265.

The above notes were prepared by John Anderson , an officer of the ASC attached to the Markets Branch anbd specialising in Futures. John is a member of the ATAA and has agreed to speak at our Sydney meeting in September .

The Committee have sought some clarification in respect of concern by certain members with regard to providing articles for the newsletter and presentations where specific views are expressed.Whilst we understand that members are not at risk unless they encourage a party to trade by way of specific recommendation this area will no doubt be of interest to members generally.

John would welcome members queries in this area, and should local or interstae members have any concerns they would wish raised at the meeting then editor would be pleased to pass them on and report back John response.

# ASX Share Ratios

Share ratio contracts commence trading on the 14th July 1995. They will offer investors a new and interesting alternative investment and hedging opportunity.

The Share Ratio contracts are an innovative tool that enable investors to invest in a share's relative performance. Share Ratio contracts can also be used to hedge share investments which may perform poorly relative to the rest of the market. The contracts are leveraged investments and potential profits and losses can be greater than the money outlaid initially. Buyers and Sellers are equally exposed to potential loss.

For the Share Ratio market a new type of index has been created to measure the performance of individual shares relative to the whole share market. This is called the Calculated Ratio. These Calculated Ratios are indices of relative performance which are calculated and disseminated to the marketplace by ASX. Calculated Ratios compare one price against a benchmark.

For the first Share Ratio contracts traded on ASX the price of individual stocks are compared against the most widely known benchmark for the whole share market - the All Ordinaries Index.

The Calculation

$$\frac{\text{Share Price in cents}}{\text{All Ordinaries Index}} \times 1000$$

For example, lets assume XYZ stock is trading at $10.50 and the All Ordinaries Index is at 2000. The Calculated Ratio would be as follows:

$$\frac{1050 \text{ cents}}{2000 \text{ points}} \times 1000 = 525 \text{ points}$$

As with all indices, a Calculated Ratio level of 525 is meaningless in isolation - what is important is its movement - where it was before and where it is going.

Assume that over a week, XYZ rises by 10% and the All Ordinaries Index goes up by 5%. In other words XYZ out-performs the market.

| Day 1 | XYZ | $10.50 |
| | Index | 2000 points |
| | Ratio | 525 points |
| | | |
| Day 7 | XYZ | $11.55 (rounded) |
| | Index | 2100 points |
| | Ratio | 550 points    (1155/2100)*1000 |

Conclusion: A rise in the XYZ Calculated Ratio reflects the fact that XYZ has out-performed the market.

**It is important to realise that out performance can be achieved in a rising and falling market.**

The calculation works in reverse for a stock which under performs the market.

Lets assume instead that XYZ falls 5% and the All Ordinaries Index falls 10%. XYZ falls in price but still out-performs the market.

| Day 1 | Ratio | 525 points (as above) | |
|---|---|---|---|
| Day 7 | XYZ | $9.98 (rounded) | |
| | Index | 1800 points | |
| | Ratio | 554 points | (998/1800)*1000 |

Conclusion:  A rise in the Calculated Ratio from 525 to 554 points reflected the fact that even though the price of XYZ fell, the stock performed better than the overall market.

Calculated Ratios will rise if a stock has fallen by less than the market. Investors should also be remember that a Calculated Ratio can fall despite a rise in the share price if the market rises more.

### What is an ASX Share Ratio Contract ?
Share ratio contracts are cash settled equity derivatives that create payment rights and obligations depending on movement of individual shares relative to a benchmark index.

Share Ratio contracts have an expiry day so it is important that investors select a contract appropriate to their view. Contracts are based on the financial quarters with two settlement months available for trading at any given time. i.e. March & June, June & Sept, Sept & Dec, and Dec and March of the next year.

Share Ratio contracts will be traded on the ASX Seats system.  Orders must be placed through an ASX Member Organisation and a licensed securities advisor.

### Usage
Investors that have a view that a stock will out-perform the market could consider buying a Share Ratio contract over that stock. A contract holder can realise a profit or loss by re-entering the market and taking an opposite position. Alternatively , the contract can be held to expiry at which time it will be settled in cash.

All share market investments involve two types of risk, specific and market risk. Specific risk is concerned with the movement in a stock price for reasons solely related to the performance of the company. Market risk is the uncertainty of general market movements and the effect these trends might have on the price of individual shares.

ASX Share Ratios separate specific risk from market risk. Investors can focus their view of a company's performance without the uncertainty of general market trends. Those investors that have a view on a stock but less confidence about the general market trend may prefer their exposure to the stock using Share Ratio contracts.

### Requirements
All investors wishing to participate in the market must be clients of an ASX Member Organisation. Before accepting an order the Broker is required to provide you with a copy of an explanatory booklet provided by ASX Derivatives. The client must sign a Client Agreement Form and a Risk Disclosure Form.
### Margins
Share Ratio contract holders are not required to pay the full value of the contract when they enter into a

position. Instead, contract holders pay an initial margin. These margins are a variable amount of around 5% of the Share Ratio contract values and will be payable by both buyers and sellers. The contracts will be marked to market on a daily basis and clients will be required to maintain a level of adequate cover. Cover for positions can be either cash or collateral which includes approved securities, bank guarantees and fixed interest securities.

**Initial Contracts will cover the following stocks:**

> ANZ , BHP, CRA, MIM, NAB, NCP, WBC and WMC
> settlement months September and December 1995

**Contract Value**      $10 times the contract price.

**Price Tick**      minimum tick of 1 point = $10

**Adjustments**
Share Ratio contracts are adjusted for rights, bonus issues and other capital issues, but not for dividends. Depending on the issue, a change is made to the number of contracts held or the $10 contract multiplier so as not to disadvantage existing contract holders.

**Further details would be available from your broker or ASX Derivatives on their ASX Share Ratio information line 008 067 106.**

*The above details sourced from ASX publications and prepared by Roger Lawes.*

## Share Ratio Charts

The following charts cover the last twelve months and represent the Share Ratio for the stocks on which trading begins on the 14th July 1995.

They are obviously new instruments but as one would suspect they show characteristics of normal stock charts. I have drawn obvious trends and divergences. They trend well on occasions, show divergence, support and consolidation areas. Using ratio data with any number of momentum tools one suspects might produce interesting rewards.

The Newsletter would welcome suggestions of members ideas of what tools might be used, maybe some backtesting experience. Such results might be published in the next Newsletter..

One is always sceptical when a new market instrument raises its head. One suspects that the market will not gain depth, have low volumes and end up being untradable. I suspect that Share Ratios will not be a casualty in this way. The market is not dependant upon a Registered Trader to establish a market with spread problems. The volumes will be directed into just two series for each stock without the split experienced in the options market with a variety of strike prices and time series.

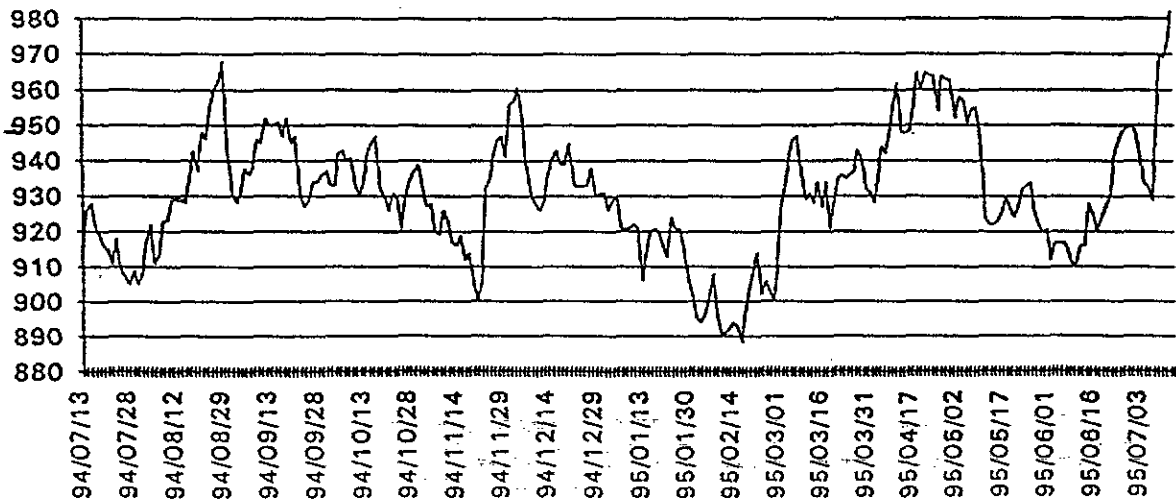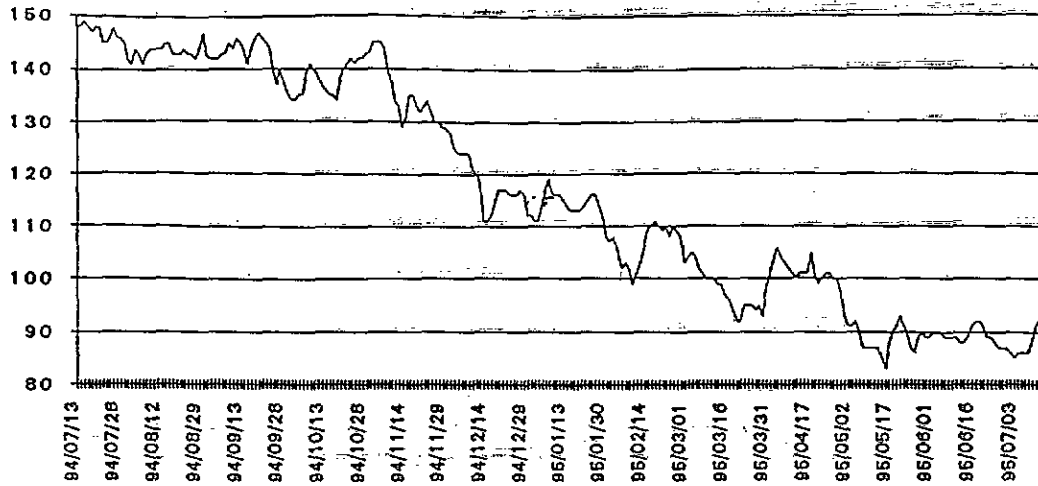As a trading vehicle do give them serious attention.
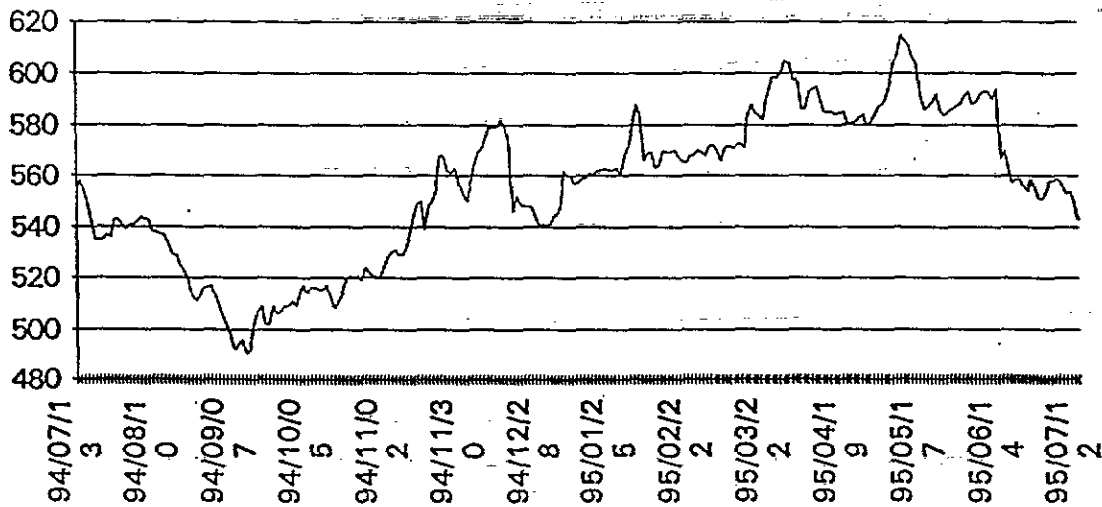
### ANZ Share Ratio
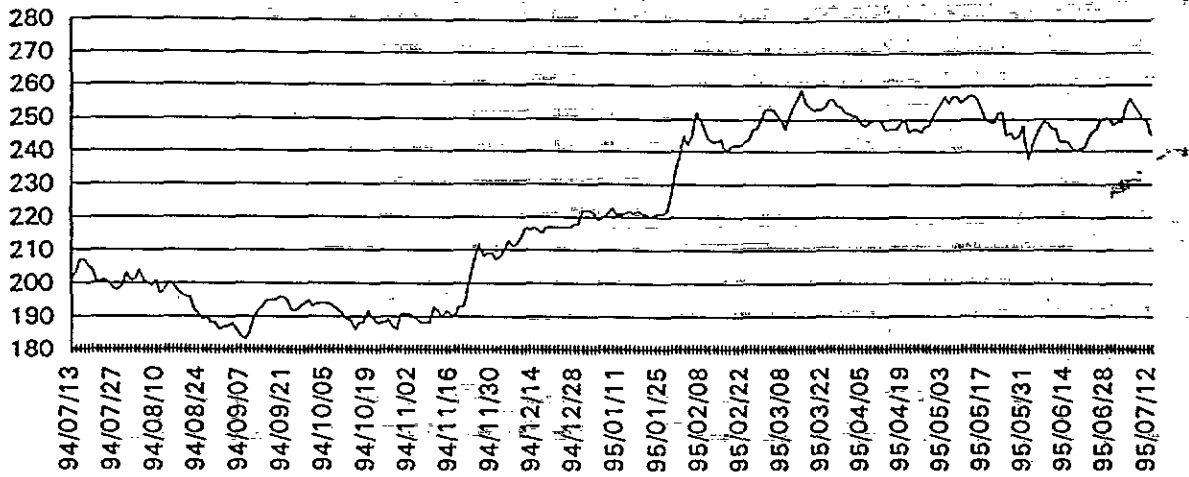


### BHP Share Ratio
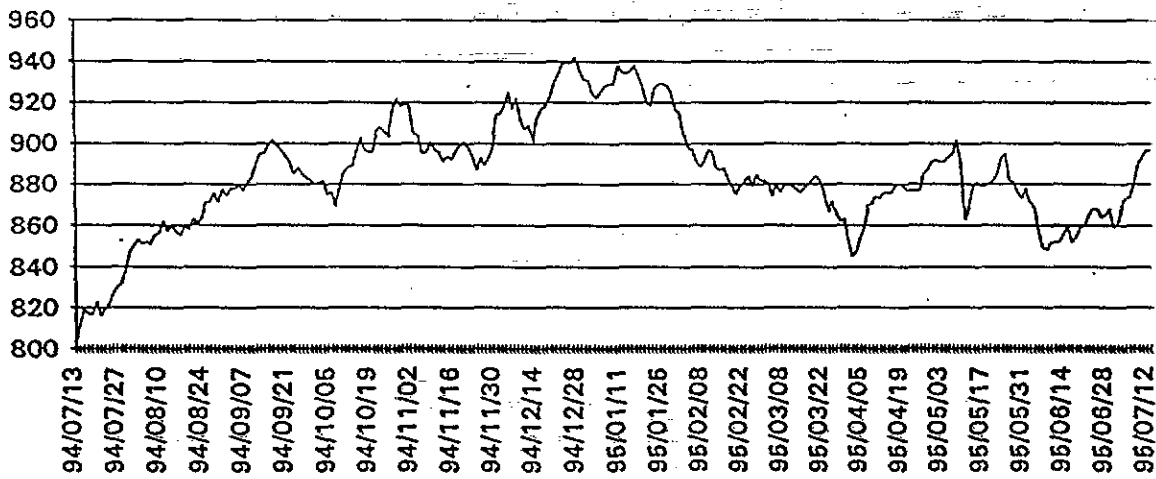


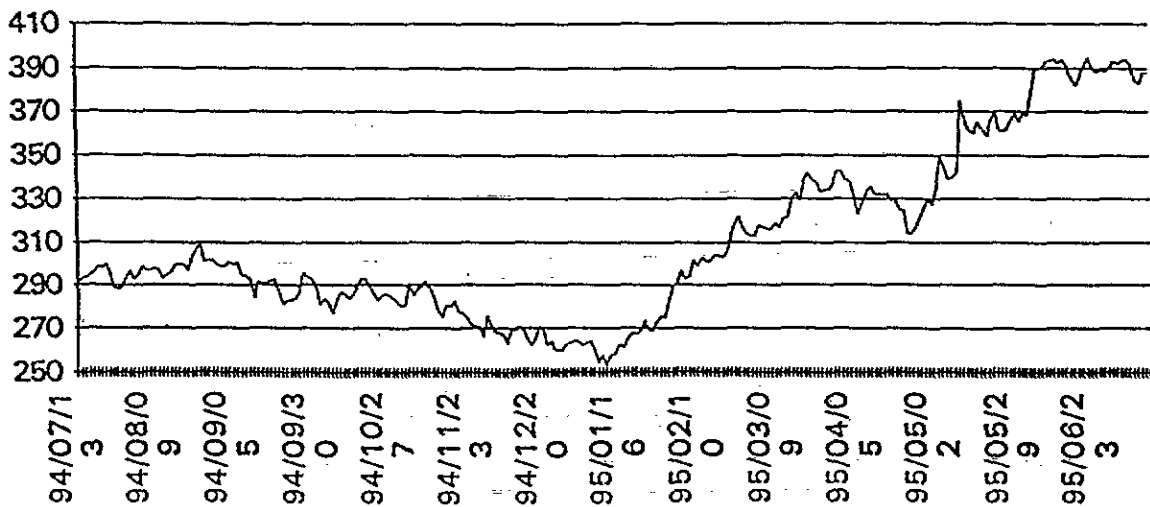### CRA Share Ratio
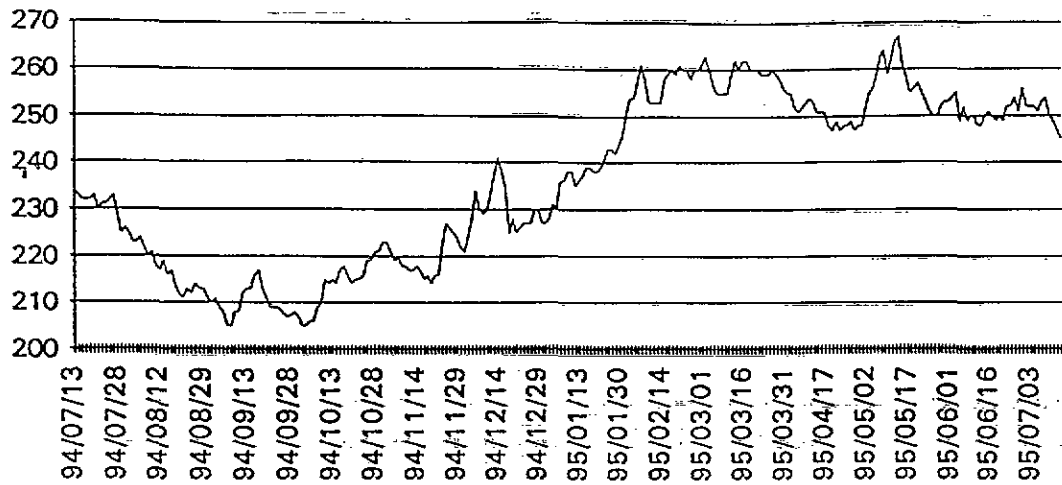
**MIM Share Ratio**
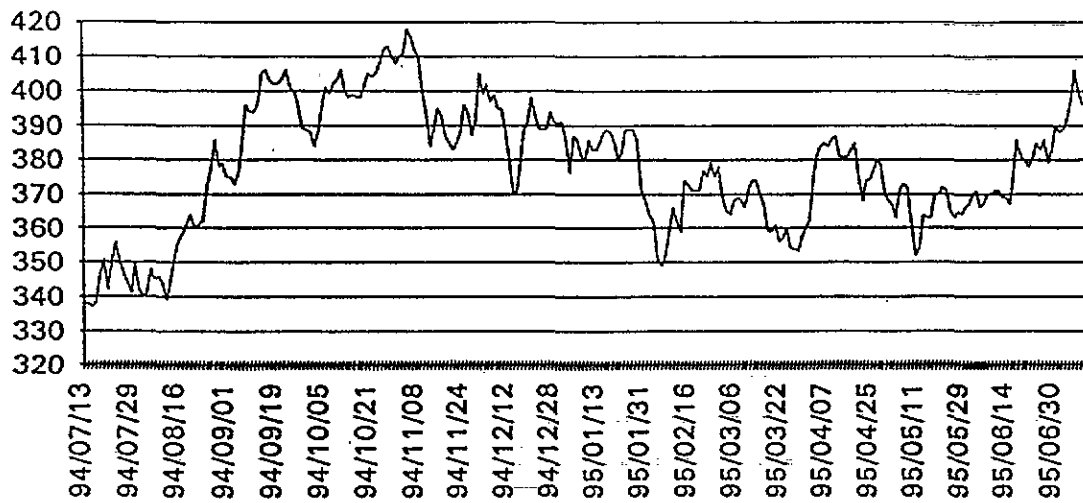


**NAB Bank Share Ratio**



**NCP Share Ratio**

## WBC Share Ratio



## WMC Share Ratio

# MARKET EFFICIENCY
## By

### ROGER MORRIS AIA AIAA ASIA MBA

The following paper is based on an examination of the literature dealing with market efficiency. The research was undertaken some three of years ago. The material is presented under the headings: Introduction, Weak Efficiency, Semi-Strong Efficiency, Strong Efficiency, Weak Level Tests, Semi-Strong Level Tests, Strong Level Tests, Explanations Other Than Market Efficiency, and Market Efficiency?

## Introduction
Technical analysts live in the belief that abnormal profits may be generated by adopting and quitting exposures to varying levels of financial gain and loss from trading in the markets on the basis of rules which utilise recent price and, on occasion, other information. In contrast, the Efficient Markets Hypothesis considers a market to be efficient in the sense that markets interpret and process information in such an efficient manner that the prices of securities are nearly always 'correct' in relation to published data. Under this hypothesis it is impossible to make economic profits by trading on available information.

In the literature three levels of market efficiency are identified (see, for example, Fisher & Jordan[1] pp617-634):

## Weak Efficiency
The market is efficient in the weak sense if future security price movements are independent of previous movements. In such a market, a study of past prices cannot help predict future prices.

## Semi-Strong Efficiency
The market is efficient in the semi-strong sense if security prices respond instantaneously and in an unbiased manner to new information. In such a market, it is futile for investors to attempt to identify undervalued or overvalued securities on the basis of published information.

## Strong Efficiency
The market is efficient in the strong sense if security prices fully reflect not only published information but also relevant information including data not yet publicly available.

Early detailed empirical studies indicated that, consistent with the efficient markets hypothesis, it is

difficult to earn above-normal profits by trading on publicly available data because such data was already incorporated in security prices. (See Fama[2] for a review of much of the evidence.)

The inability of professional agencies to forecast stock price changes was studied by Cowles[3] in 1933. The behaviour of stock and commodity prices like a random walk was studied by Working[4] in 1934 and Kendall[5] in 1953. In such circumstances, where price changes behave as if they were independent random drawings, the implication is that technical trading rules based on information in past price series cannot be expected to produce above-normal returns.

The current formulation of the efficient markets hypothesis is the Rational Expectations Hypothesis which considers that unexpected price changes in a speculative market must behave as independent random drawings if the market is competitive and economic trading profits are zero. (Samuelson[6], Mandelbrote[7]). Accepting that new information is independent over time, it follows that unexpected price changes arising from new information are also independent over time. Thus, unexpected price changes over time must be independent if expected economic profits are zero. The implication is again that technical trading rules, based on information in past price series, cannot be expected to produce above normal returns.

In many of the more recently published books on the Efficient Market Hypothesis, the empirical evidence, although referred to only in summary terms, is presented in such a manner that any reader who is not an investment professional will generally be led to believe that there is a voluminous and coherent body of evidence to show that the Efficient Market Hypothesis has been subjected to, and passed, various stringent tests. Keane[8], for example refers to:

(i) the random walk studies of random or patternless price behaviour which led to the concept of weak efficiency;

(ii) various tests of the speed and efficiency of the market's reaction to new information;

(iii) various studies which failed to find any professionally managed funds that performed better than the average on a consistent basis; and

(iv) the conclusion in 1978, of Professor Michael Jensen[9], a prominent market economist:

> "I believe there is no other proposition in economics which has more solid empirical evidence supporting it than the Efficient Market Hypothesis."

However, an examination of the literature reveals that neither the coherence of the results nor the stringency of the tests are as convincing as implied by the summary papers surveying the efficient market literature.

**Weak Level Tests**
Consider first of all the evidence of efficiency at the weak level.

In the late 1950's the Brownian Motion model was considered to be the most satisfactory representation of share price behaviour. However, there were two key sets of results which suggested that this model was inappropriate.

Firstly, Mandelbrot[10] showed that distributions of price changes were more peaked and had longer tails than would be expected for the normal distributions implied by the simple 'Brownian Motion' model. He suggested that a new class of distributions known as stable-Paretian should be used instead.

Secondly, Cootner[11] concluded that future prices were not independent of past prices. He put forward the hypothesis that 'professionals' could identify the 'current worth' of a share with reasonable accuracy and that sometimes, as a result of the activities of 'non-professionals', the actual share price would depart sufficiently from the current worth for the professionals to be able to profit from the share price being more likely to move towards its current worth in future than to move further away from it. If changes in current worth were random in nature, then the resulting price changes would also be random. Cootner suggested that the professionals' estimates of current worth would change gradually over time rather than in discrete jumps. He therefore concluded that price movements would tend to consist of relatively long segments each of which was constrained by 'reflecting barriers'. Throughout one of these segments, share prices would not be random but would behave as if there were reflecting barriers which forced them back towards their average value. Cootner tested this hypothesis by calculating transition matrices of price changes. His results confirmed that prices tended to move back towards a central value significantly more frequently than would be expected on the pure random walk model, but his method was insufficiently precise to formulate trading strategies by which to profit from this departure from randomness. He also realised that his investigations were not conclusive as the tests did not permit a definitive test of statistical significance.

Steiger[12] then took over where Cootner left off and tested Cootner's hypothesis in a more rigorous manner. He concluded that the existence of the type of non-randomness postulated by Cootner was indeed confirmed by the results.

Tucker[13] has subsequently noted that previous empirical comparisons have, in general, ignored the existence and effects of skewness on the process parameters of stable laws. Using 10 years of daily data (January 1976-December 1985), for 200 stocks and 3 stock indexes, he found that, based on log-likelihood ratio and log-odds tests, the general stable-Paretian model is dominated by higher order finite-variance models, even after accounting for documented skewness. He concluded that within the context of time-independent processes, it appears that stable laws are definitively less descriptive and in particular, the mixed diffusion-jump and compound normal models appear to be the most descriptive time-independent processes for daily stock-return series.

In late 1991 Chowdhury[14] demonstrated that conventional hypothesis testing procedures are not appropriate in the presence of nonstationary time series and, using a cointegration approach to account for the nonstationarity behaviour of various price series, rejected the "efficient market" hypothesis for 4 nonferrous metals - copper, lead, tin, and zinc traded on the London Metal Exchange

In a similar vein Durlauf[15], using a method involving spectral distribution estimates, tested weekly and monthly stock returns and provided some evidence against the null hypothesis that the holding returns are martingale differences and found violations of the random walk theory which appear to be robust to a relatively diffuse formulation of assumptions concerning the class of alternatives. This result showed that stock prices exhibit long-run mean reversion.

Juxtaposed with the above developments, McQueen & Grant[16] noted the inappropriateness of using observed mean-reversion based on ordinary least squares due to overstatement. Using generalised least squares randomization process tests they could not reject the random walk hypotheses at conventional levels of significance for the period 1926 to 1987 for stock returns.

Also, the work of Lukac and Brorsen[17] strongly rejected the random walk model and suggested that disequilibrium models describe daily futures prices more appropriately. They undertook a comprehensive test of the profitability of technical trading systems, simulating trading for 23 trading systems on 30 futures markets for 11 years resulting in all but 2 trading systems having significant gross returns with several of the systems generating returns significantly above transaction costs.

Lukac and Brorsen also assessed technical trading systems subject to several reoptimisation strategies to determine the usefulness of optimisation of parameters used by the systems. Trading of 2 technical trading systems was simulated for the period 1965-1985 on a portfolio of 15 futures markets, using 10 reoptimisation strategies, one random strategy, and 12 fixed parameter strategies. Findings indicated that the forecasting ability of optimisation is limited, being unable to forecast parameter sets that would produce portfolio profits better than a random selection strategy. Their results also rejected the random walk model for commodity prices.

An example of a short-term technical trading strategy was presented by Sweeney[18]. Based on past price movements it produced statistically significant risk-adjusted profits at levels of transaction costs surely available to floor traders and professional money managers but not to investors paying even the lowest discount commercial rates.

While the research literature appears to be relatively sparse concerning the performance of trading systems, industry literature provides additional insight. In 1984 Dr Baratz[19], in considering the question of whether, judged by performance, technical traders outperform their fundamentalist counterparts, examined the results achieved by 20 managed funds advisers who employed technical methods over a three-years' period from March 31, 1979 through March 31, 1982. During that span there was a huge surge in precious-metals and related prices, followed by a precipitous decline (July 1979-March 1980); a year-long slide in many futures prices, launched by a general limit-down day (December 1980-December 1981); and a multi-months' period during which several of the most liquid futures' markets were either choppy or trendless (July-November 1981). Although 1979-82 was a period well-designed to test strenuously the merits of any trading system all but one of the 20 commodity trading advisers (technical traders) showed profits during 1979-80, all but five during 1980-81, and all but two during 1981-82. Average annual profit rates were 48% while average largest percentage drawdown was 17.2%.

More recently, Babcock[20] has exhaustively examined the performance of a comprehensive range of technical trading systems:

> "Exhibit 12-15 shows a summary of the overall average performance of each system. Even though I made no particular effort to pick the best performing parameters for the various examples, and even though the same parameters were tested on each of 10 markets with individual optimisation, the overall performance showed a profit. This demonstrates the power of system trading in the commodity markets. With more care in creating your system, you should be able to produce considerably better profits than this average."

Pages 175-185 of *The Dow Jones-Irwin Guide To Trading Systems* contains Exhibit 12.15, a table setting out a range of performance statistics of 726 trading systems.

Semi-Strong Level Tests
At the semi-strong level, where efficiency would imply that all fundamental analysis based on publicly

available data is futile, the tests are very indirect in nature. Rather than addressing the question of whether the application specific criteria for investment appraisal can produce consistently superior results, the tests concentrate on whether prices react quickly, and in an unbiased manner, to certain easily quantifiable types of new information such as announcements of dividends, earnings and stock splits. Tests such as these cannot identify whether analysts can compare a share's rating against the fundamental background and assess whether it is dear or cheap.

But perhaps the most obvious criticism of the semi-strong tests in the modern portfolio theory literature is that only limited attempts have been made to examine security selection models which have been put forward by practitioners as systematic ways of achieving superior performance.

The equity selection model described by Weaver & Hall[21] is a good example of a formalised set of investment appraisal rules which could be regarded as convincing evidence that the share market in the United Kingdom is inefficient at the semi-strong level.

### Strong Level Tests

At the strong level, the evidence of efficiency is even more suspect. It is argued that if inefficiencies exist, then at least some market professionals should be able to exploit them and achieve above-average performance for the funds they manage. The tests carried out purport to show that there is no evidence that any expertly managed funds can perform consistently better than average. The conclusions of Jensen[22] regarding U.S.A. mutual funds are frequently quoted in this connection. However there are four quite separate aspects of his investigations which are questionable:

1. Long term returns are adjusted for risk as measured by the short term variability of price. Taking this as a measure of risk may be totally unsatisfactory.

2. It is assumed that the Capital Asset Pricing Model provides a realistic description of equity market behaviour.

3. There is a very serious lack of homogeneity in the sample as regards both the observation periods (which vary from 10 to 20 years) and also the investment profiles of the funds (which vary from bond funds to high technology funds).

4. Jensen bases many of his conclusions on a comparison of actual and expected frequency distributions of Student 't' values despite being aware that the usual normality assumptions may not be valid.

Fortune[23], in early 1991, assessed the then current state of the efficient market hypothesis. He found that the empirical evidence provides an overwhelming case against the efficient market hypothesis. The evidence exists in the form of a number of well-established anomalies, including: the small-firm effect; the closed-end fund puzzle; the Value Line enigma; the loser's blessing and winner's curse; and the January and weekend effects.

The tests applied to strong level efficiency have been extended in recent years. O'Brien and Srivastava[24] in late 1991 found in laboratory experiments that full information aggregation in complex multiperiod experimental markets with multiple stocks and experienced traders was inefficient.

A review of the market efficiency literature by Fama[25], in late 1991, divided the research into 3 categories.

Tests for return predictability, where the implications of the evidence on the predictability of return through time are the most controversial with the new research saying that returns are predictable from past returns, dividend yields, and various term structure variables. Event studies, which come closest to allowing a break between market efficiency and equilibrium-pricing issues, give the most direct evidence on efficiency. Tests for private information with new results on tests for private information clarify earlier evidence that corporate insiders have private information that is not fully reflected in prices. Fama noted that while the market efficiency literature should be judged on how it improves one's ability to describe the time-series and cross-section behaviour of security returns, because of the joint-hypothesis problem, precise inferences about the degree of market efficiency are likely to remain impossible.

### Explanations Other Than Market Efficiency

Recent literature also evidences a growing number of proposals competing with the Efficient Market Hypothesis.

Nonlinear dynamics in which nonlinear systems are characterised by trends and long-term correlations (chaos theory) has been explored by several researchers. Blank[26] uses a nonlinear dynamics approach to evaluate commodity futures markets and determine if any signs of a deterministic system underlying prices over time are present. The data used are futures prices for the Standard & Poor's 500 Index and for soybeans. The empirical results are consistent with those of markets with underlying generating systems characterised by deterministic chaos where nonlinearities are at least partially deterministic rather than stochastic in nature. Peters[27] also found that the Standard & Poor's (S&P) 500 Index has nonperiodic cycles governed by a chaotic attractor, that is, an underlying, nonperiodic attractor. An attractor arises because the relations among the variables that govern market movements are nonlinear. If the market is nonlinear, then the widespread use of standard statistical analysis is questionable, and in particular, the efficient market hypothesis and the capital asset pricing model are suspect as workable theories. Peters[28] also found stock returns, bond returns, and relative stock-bond returns each exhibit a biased process characteristic of fractional Brownian motion, specifically that 16.8% of stock returns, 21.5% of bond returns, and 24.5% of relative stock-bond returns are influenced by the past. In contrast to the efficient market hypothesis, the correlations derived from R-S analysis indicate that information is not immediately reflected in price, but ripples forward in time and across time scales.

David Hsieh[29], in studying the frequency of large moves in stock markets, found such frequencies appeared to be greater than would be expected under a normal distribution given alternate explanations. He found strong evidence to reject the hypothesis that stock returns are independent and identically distributed (IID). The cause was attributable to conditional heteroskedasticity rather than regime changes or chaotic dynamics. He found that while autoregressive conditional heteroskedasticity-type models do not fully capture the nonlinearity in stock returns, a more flexible model on conditional heteroskedasticity can. Booth, Hatem, Virtanen, Ilkka, Yli-Olli and Paavo[30] in early 1992 also provided international evidence on the existence of nonlinear dependence in stock returns and the corresponding suitability of autoregressive conditional heteroskedastic (ARCH) methods. Interestingly, Willey[31] in considering the results of his tests for nonlinear dependence in the daily prices of the Standard & Poor's Index and the National Association of Securities Dealers' Automated Quotations System 100 Stock Index found deterministic chaos rejected by 2 of 3 recently developed empirical tests. He proposed that the results show that changes in the price level of the 2 series are not deterministic, but are instead independent of past changes.

Another competitor in explaining the uncertainty underlying security prices is the variance gamma (VG) process proposed by Madan & Seneta[32]. Under this process the unit period distribution is normal

conditional on a variance that is distributed as a gamma variate. Madan and Seneta noted that the process is pure jump, approximable by a compound Poisson process with high jump frequency and low jump magnitudes delivering advantages that include long tailedness, continuous-time specification, finite moments of all orders, elliptical multivariate unit period distributions, and good empirical fit.

### Market Efficiency ?

There is a growing body of evidence in favour of inefficiency to a greater or lesser degree. Recent work also evidences the development of competing theories to explain the "inefficiency effects" as well as the study of strategies which appear capable of generating abnormal profits through the use of publicly available information.

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# The Advance Decline Accumulation
## Giving a Warning ?
### By Roger Lawes

In the last newsletter I looked at the 20 Leaders Index and The Small Ordinaries Index as a basis for determining whether the market advance we had experienced in the local share market was broadly based or shallow. What it seemed to indicate was that the Small Ordinaries index had lagged the main All Ordinaries Index in its performance except for a brief period indicating that the breadth of the market advance was shallow...

Another way of looking at the market depth is to plot the advance and declines in the form of an accumulation. This attempts to demonstrate divergences and variations to the main index behaviour which might give us a guide to a strengthening or weakening of the market as a whole.

The Accumulation is put together as follows:

|  | Advancing Issues | Declining Issues | Daily Change | AD Accumulation |
|---|---|---|---|---|
| Day 1 | 120 | 100 | 20 | 20 |
| Day 2 | 110 | 105 | 5 | 25 |
| Day 3 | 69 | 121 | -52 | -27 |
| Day 4 | 85 | 63 | 22 | - 5 |
| Day 5 | 106 | 44 | 62 | 57 |
| Day 6 | 121 | 42 | 79 | 136 |

One would expect that in a normal market advance that the Advance Decline Accumulation would match the performance of the main underlying market index in strength and pattern. At certain times though the AD Accumulation will vary and the basis for this variation needs to be determined.

The following charts demonstrate the position historically of the All Ordinaries Index and All Industrials Index since early 1985. From a study of the AD Accumulation we can best look at the performance by breaking up the chart into three clearly distinct sections. A brief note on those sections is detailed at the base of the charts.

The findings I find quite alarming.

The All Ordinaries Index has shown no underlying strength in this recent burst of activity over the last 3-4 months. Indeed the Advance Decline Accumulation actually made a low in June on the correction before the markets recent days burst upwards. There is clear divergence between the chart and the AD and I would have to conclude that underlying strength is weak indeed.

A trend support line can be drawn across recent lows, but this will be taken out now on any pullback of the market from this current rally. One would have to consider in that event that this might be a precurser to an overall market decline. The All Industrials position is similar.

The local market has received little attention from overseas investors as demonstrated by capital flows data... The local public are not demonstrating a great appetite for stocks and only the major funds continue to place funds into the market causing the rise in the All Ordinaries Index. However the underlying weakness in strength of the market leaves it extremely vulnerable.

## All Ordinaries Index



## Advance Decline Accumulation



A          B          C
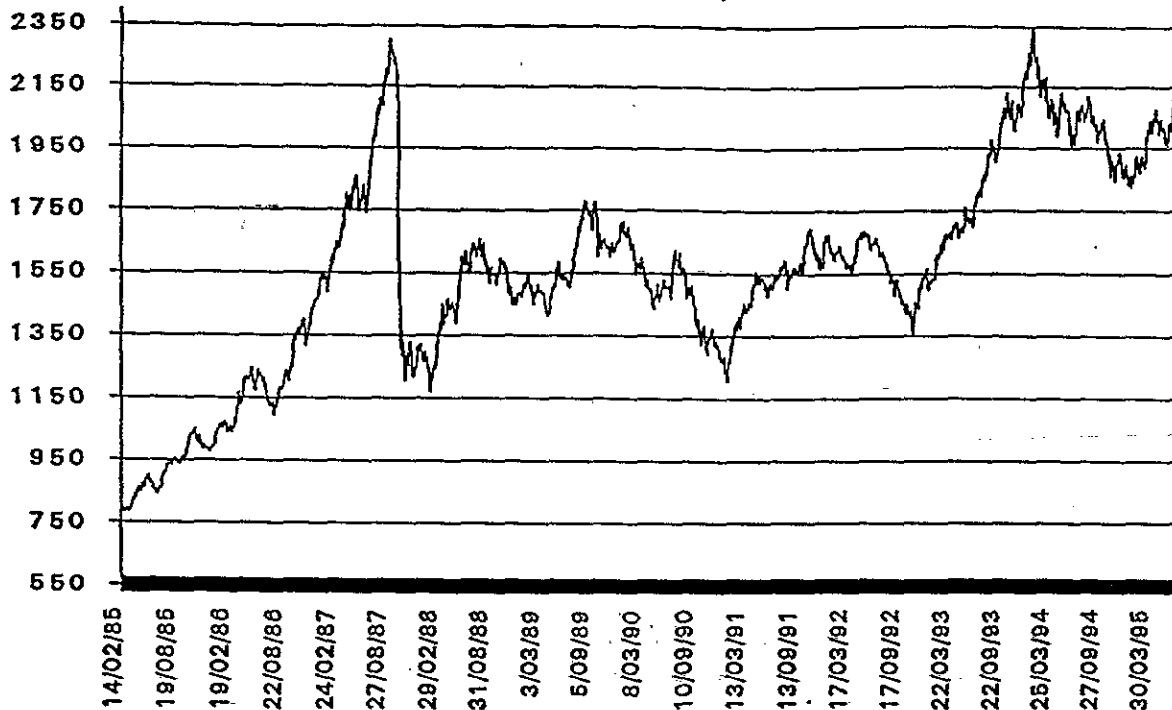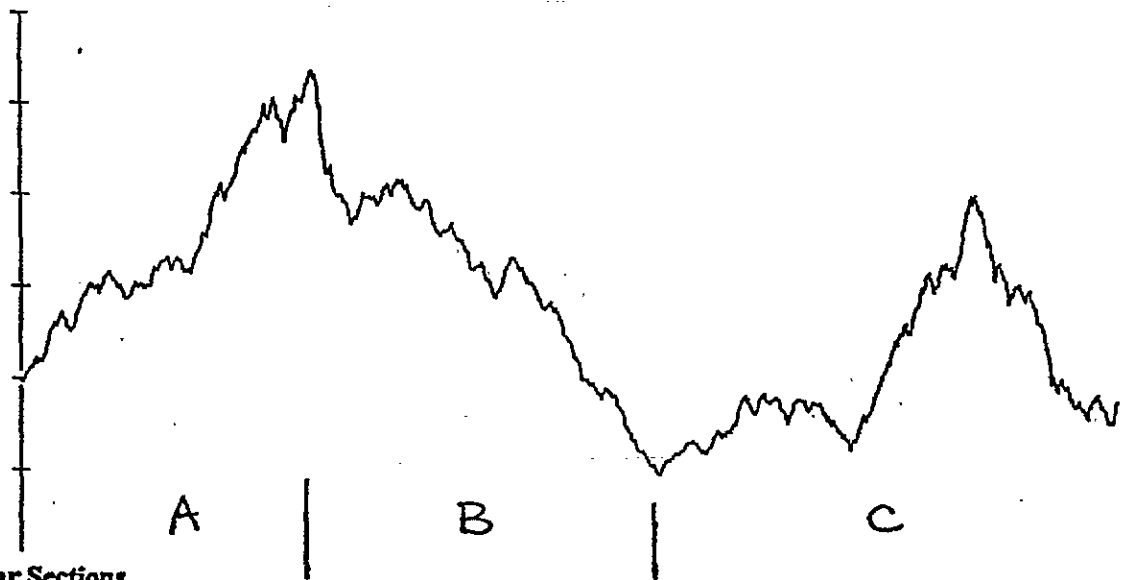
**Three Clear Sections**

**Section A**      Into the 1987 Highs Where the AD matched the market performance. Note though that in the last rise into the Sept 87 peaks that the AD underperformed the move on the Index. A warning sign of exhaustion.

**Section B**      The period from 1987 Highs to early 1991 lows Note that the AD just kept on falling demonstrating that the off loading of stocks was ongoing. The selling into the 1991 lows seems to have clearer the backlog.

**Section C**      1991 to date The AD performed in line with the market, although initially underperforming into the late 1992 lows (final selling pressure removed). From there a reasonable gain into the 1994 highs.(Note AD failure to make equal high with 1987). From the decline from 1994 the AD varies again from the All Ordinaries performance. It seems to have picked up some more baggage and can't even rally. This surely is a signal that the market is still facing ongoing pressure despite the All Ord's performance in recent weeks.

## All Industrials Index
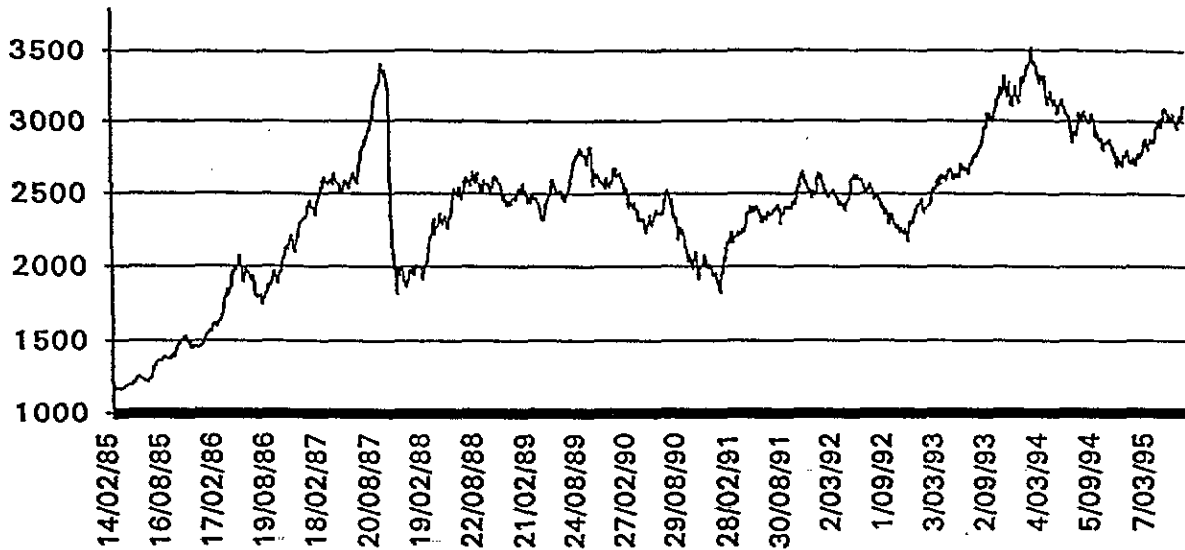


### Advance Decline Accumulation All Industrials



A          |          B          |          C
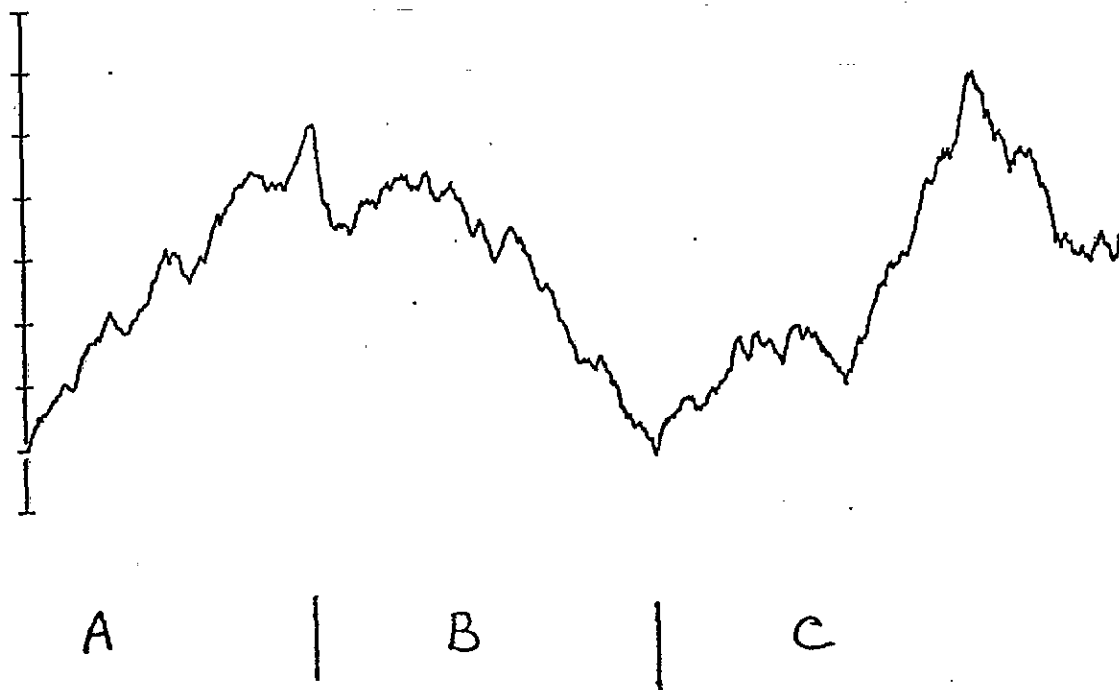
**Three Clear Sections**

**Section A**          Into 1987 Highs  like the All Ordinaries the AD demonstrates exhaustion into the highs.

**Section B**          Into 1991 Lows this AD had a better attempt at a move upwards after 1987 but failed. Note  the peak was much earlier than the Sept 1989 All Industrials high, setting up a divergence.

**Section C**          From 1991 Lows to date Note how the All Industrials matched the Index chart. It even managed to achieve a new high over the 1987 peaks. From this point though the chart is not dissimilar to the All Ordinaries AD demonstrated before.

Continued From Page 28

The technology sector in the US market has been the powerhouse of the US market advance. Here in Australia the leadership has been less clear with periods when Industrials and Resources have taken up the running. What is clear though is that the activity has been predominantly centred in very few stocks. The 20 Leaders Index would no doubt reflect the activity fairly well. As US investors should watch the technology stocks for a fall in strength so we should look to our leaders. An advance decline on the 20 Leaders Index would provide an interesting insight perhaps. I shall try to gain the data perhaps for the next newsletter.

The views expressed are obviously my own, I would be interested in hearing of any different interpretations which might be perhaps reproduced for the next newsletter.

Acknowledgement      I should like to thank Christopher Carr for providing the data on the Advance Decline Accumulation.

**Roger Lawes is a private client equity advisor with Potter Warburg Securities Pty Limited operating from Sydney. He may be contacted on (02) 375 6536**

# The 1995 ATAA CONFERENCE AND TRADE FAIR

Our 1st combined conference and trade fair, held in Sydney on March 18th & 19th was a raging success. Over 100 conference attendees, a dozen trade booths and 12 presenters analysed, associated and technicalised everything under the sun. The conference was typically considered by attendees as "good value for money" and "very informative".

Trade booths enabled members to purview the gamut of TA books, data sources, charting, analysis software and other associated services from a range of providers to the TA community. Discussion groups proved very popular while presenters applied themselves to covering a wide selection of topics:

> BHP, Gann and Elliott: the Next Two Years
> Three Technical Analysts Examine The Same Market
> Trading Australian Shares
> Privateers and Pirates in International Equity Futures
> Trading in Harmony With Nature
> People, Markets and Psychology
> The Year Ahead For Stocks
> Observations on the Stockmarket World
> New Zealand Technical Analysis and Trading
> Establishing a Funds Management Business
> Managing a CTA Business
> Developing Your Track Record to Become a CTA

In addition to considerable praise, attendees also passed on constructive comments for improvements next time around. These have been carefully analysed and brought forward for reference by future conference committees.

Early planning is afoot for next years conference. Indications are that it will be even more rewarding than this years.

**Prepared by Roger Morris**

# 20 Leaders Index
## By Roger Lawes

As an addition to the article on pages 28-31 I have included the following charts on the 20
Leaders Index. The first is a comparison between the All Ordinaries and the 20 Leaders with a
common base back to November 1994. Note that the 20 Leaders has outperformed by a mile.
Some interesting implications for share ratios !
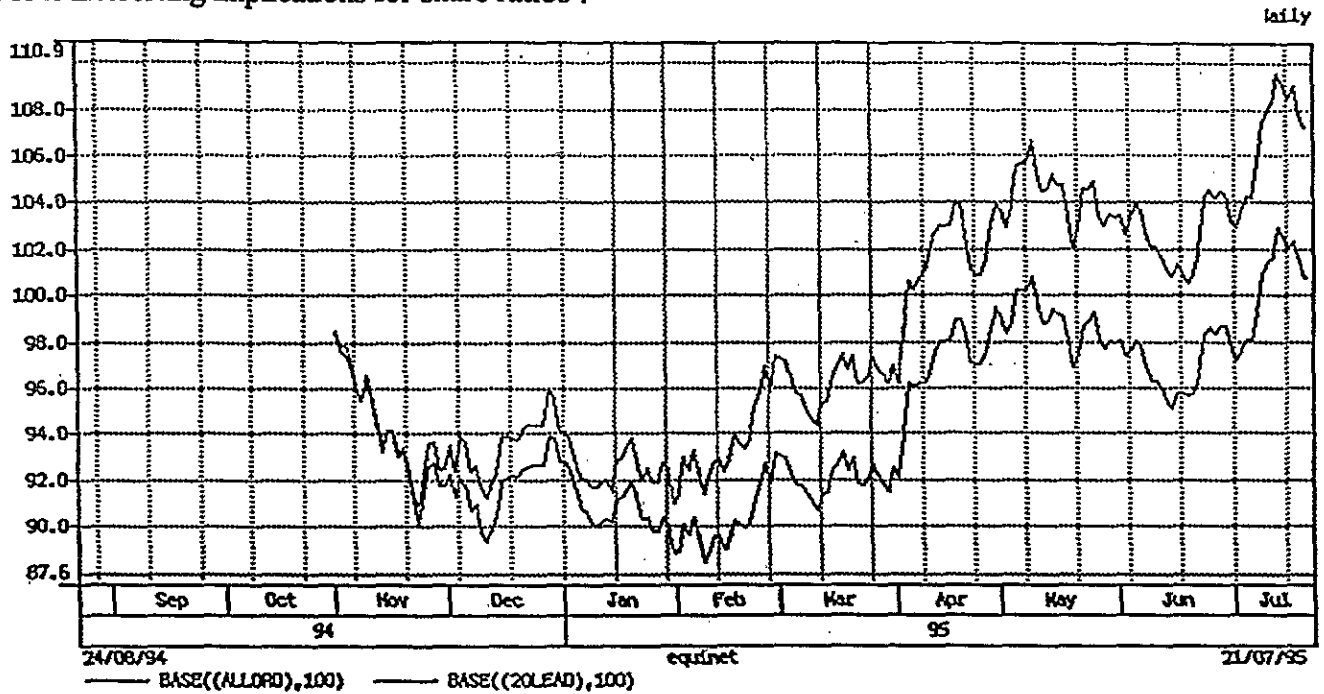


The chart below shows the actual 20 Leaders Index. Note that the Index has come close to double
topping with the 1994 high. It has retraced in excess of 85% of its loss. I do not have the data back to
1987 to compare but if anybody has the 50 Leaders Index note that the Index is coming into its third
retest of the 1987 highs. Whilst I acknowledge that the trend is up and pattern indicates an ascending
triangle where is the market strength to take it on ?
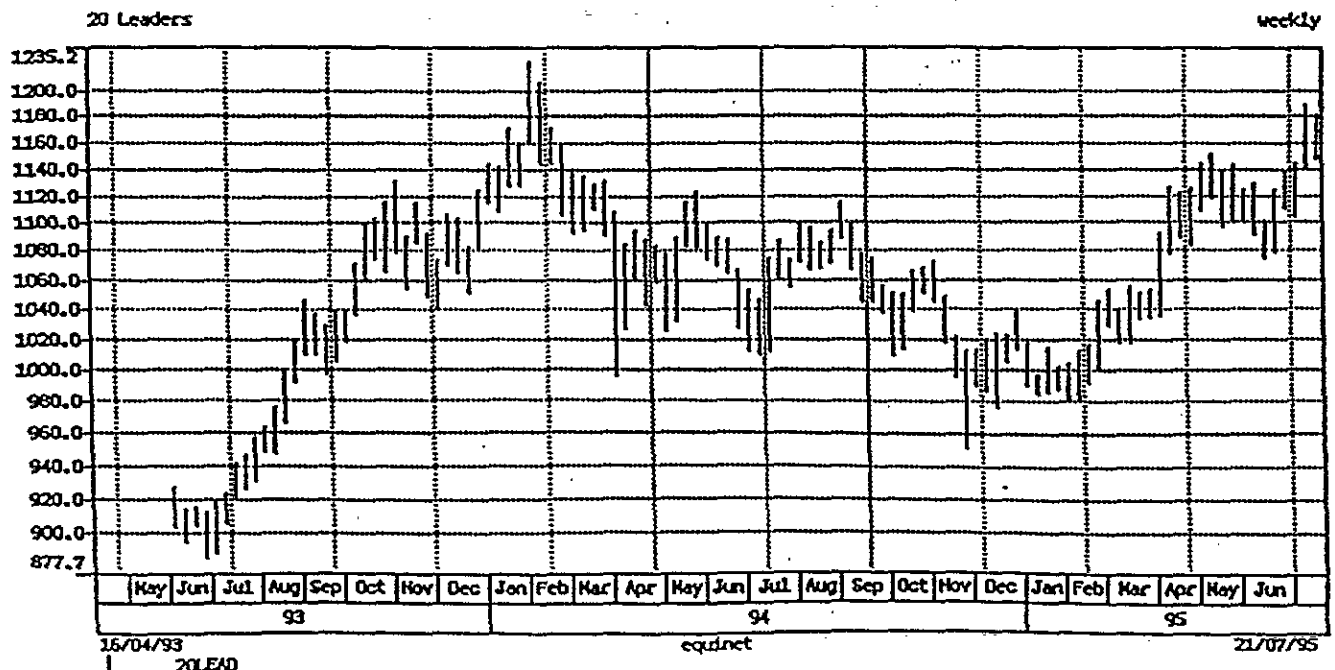
# Videotape Library

The ATAA has established a collection of videotapes that members may borrow. The videotapes are in VHS format and are available for loan to ATAA members free of charge. Members are only asked to pay the postage to return them promptly when they have finished watching them.

In order that the maximum number of members may take advantage of the library, they are asked to view each tape and return it within one week. Members taking too long to return video tapes may be dropped from the waiting list for further borrowings.

We lend these videotapes on a type of first-come-first-served basis and maintain a waiting list. While we will place you on the waiting list for more than one video tape, you will only ever be sent one at a time.

Members who have not received a videotape before are placed at the top of the list and will receive the next video that is returned to the library and was ordered by them. That member's name then drops to the bottom of the list and he/she will not be sent another video until his/her name works its way to the top of the list again.

This system ensures that all members experience a similar waiting period between videos, depending upon the demand. However, it also means that the order in which members receive their selections will be random, depending upon which video next comes back when their name is at the top of the list. However, members ordering Elder: "Technical Analysis in 52 Minutes" or Pring: "Principles of Technical Analysis" will be sent those tapes first, if they so request. This may delay receipt of the first tape, however.

If you would like to borrow any of the videotapes, contact Roger Morris to be placed on the waiting list. The preferred method is to fax or mail your order to him by ticking the tapes you want on the order form following this article.

<div align="center">

Fax: 02 486 3483

Mail: 1 Jumbunna Place Terrey Hills NSW 2084

Phone: 02 450 2376

</div>

## Subscription Reminder

**For those members who have not yet paid their membership subscription for 1995/96 a reminder that this was payable by the 30th June 1995. Please send your subscriptions in immediatley for renewal of your membership.**

# Videotape Library Order Form

[ ]     Appel: Day Trading with Gerald Appel
[ ]     Bierovic: How to Increase your Trading Profits with Synergy
[ ]     Bierovic: How to Synergise Oscillators with Trend Indicators
[ ]     Bierovic: How to Manage Your Account, Your Trades and Yourself
[ ]     Bolton-Smith: The Tried and True Indicators in the Market          (Sydney   meeting 19.6.95)
[ ]     Brise: The Inside Track to Winning (Deals with Open Interest)
[ ]     Elder: Technical Analysis in 52 Minutes
[ ]     Elder: MACD and MACD-Histogram
[ ]     Elder: Relative Strength Index (RSI)
[ ]     Elder: Directional System
[ ]     Elder: Triple Screen Trading System
[ ]     Elder: Elder Ray
[ ]     Elder: Stochastic
[ ]     Elder: Williams %R
[ ]     Elder: Psychology of Trading
[ ]     Fuller: World Markets for 1995 (Sydney meeting 7.4.95)
[ ]     Plummer: Forecasting Financial Markets
[ ]     Pontikis: Asset Allocation and Intermarket Technical Analysis(Sydney meeting      17.5.95)
[ ]     Pring: Basic Principles of Technical Analysis
[ ]             Pring: Price Patterns
[ ]     Pring: Support, Resistance, Trendlines & Moving Averages
[ ]     Pring: Momentum, Relative Strength and Volume
[ ]     Pring: Mechanical Trading Systems & Correct Investment          Attitudes
[ ]     Pring: Momentum 1 - Basic Principles of Momentum Interpretation
[ ]     Pring: Momentum 2 - Selected Indicators 1
[ ]     Pring: Momentum 3 - Selected Indicators 2
[ ]     Schwager: What it Takes to be a Great Trader
[ ]     Tharp: Peak Performance Trading (Sydney Meeting 24.4.95)

Name          ...........................................................................................................................

Address       ...........................................................................................................................

              State  .................................          Postcode ............................

              Phone (    ) ...............................(day)     ..................................... (evening)

If you would like to borrow any of the videotapes, contact Roger Morris to be placed on the waiting list.
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Fax: 02 486 3483
Mail: 1 Jumbunna Place Terrey Hills NSW 2084
Phone: 02 450 2376

# Australian Technical Analysts Association Inc
## Application for Membership

First Name:.................................... Family Name:.............................................

Company ( If membership paid by a company) : .................................................

..............................................................................................................................

Address:....................................................................................................................

...............................................State:...........................Postcode:...............................
Telephone:
(Business hours):........................................(Evening):.............................................

Facsimile:..........................................................

Do you use Technical Analysis for your trading/investing decisions ? :   Yes / No

If Yes, please describe your use of Technical Analysis:...................................................

..............................................................................................................................

..............................................................................................................................

For our records, how did you first hear of the ATAA ? ..................................................

..............................................................................................................................

Membership is by payment of annual subscription of $100.00.

For membership purposes, our year runs from July 1 to June 30.

We do not pro rata the annual subscription for memberships beginning part way through the year. Instead, we offer two concessions:

    (1)   Members joining between July 1 and December 31 receive a copy of all Newsletters published in that period.

    (2)   Members joining between January 1 and June 30 are credited with the remainder of the current year free, such that their initial subscription covers membership up to June 30 of the   year following the year in which they join.

For information call the Honorary Secretary, Colin Nicholson (02) 436 1610; or in other States, any of the local Committee listed inside the front cover of this Newsletter. Please mail the Application Form with a cheque for $100 payable to Australian Technical Analysts Association Inc. to:

        The Honorary Secretary
        Australian Technical Analysts Association Inc
        GPO Box 2774
        Sydney NSW 2001

# Australian Technical Analysts Association Inc

The aims of the Australian Technical Analysts Association Inc (ATAA) are:

* To establish personnel contacts between analysts both inside and outside of Australia with a view to promoting the theory and practice of technical analysis,

* To help raise the level of community awareness and respect for technical analysis,

* To provide meetings and encourage the interchange of materials, ideas and information in order to add to the knowledge of its members and

* To encourage the highest standards of professional ethics and competence among technical analysts

The ATAA is affiliated with the International Federation of Technical Analysts helping us to keep abreast of international markets and techniques.

Founded by a small group of technical analysts that met on a regular basis, the association was officially launched on 26 April 1990.

Membership is varied in employment, geography, market interest and approaches to the markets. Current members include corporate treasurers, fund managers, bank analysts and traders, stockbrokers, financial planners, private and local traders and investors. The members will be professional Technical Analysts, or people using Technical Analysis for private investing or trading.

Benefits include monthly meetings and a bi monthly newsletter, both of which provide an opportunity to learn technical analysis techniques, as well as being a forum for discussion and new ideas. In addition, members have access to a video tape library and discounts on various technical , psychology and trading courses and books.

Meetings are held in the evening each month except December and January ,in Adelaide, Brisbane, Melbourne and Sydney. Sydney meetings are usually held on the third Monday of the month, and Melbourne meetings are held on the third Wednesday, dependant on the availability of speakers, rooms and public holidays or special events. Meetings in other States are held around the same time. All meetings are advised in advance by mail. Membership of the ATAA is national and members may attend meetings in any State.

Entry to meetings is free to members. Visitors are charged $20.00 per meeting, but if they join within a month, the entry amount is deductible from the initial annual subscription.

Membership is open to anyone using technical analysis for their trading decisions, or wanting to learn how to do so. To join, complete the application form over the page and mail it to the Honorary Secretary.

For information call the Honorary Secretary, Colin Nicholson on (02) 436 1610 or in other States, any of the local Committee listed inside the front cover of this Newsletter.