

Financial aspects in designing spreadsheets for Internet Trading in the Australian Stock Market.

AN INVESTIGATION OF THE USES OF DEPTH OF FIELD IN FINE TUNING STRATEGIC PLAYS IN THE AUSTRALIAN STOCK MARKET AND ITS IMPACT ON SYSTEMS DEVELOPMENT FOR FINANCIAL STUDENTS

Paul Lucas and Peter Mayall

**Schools of Information Systems and Economics and Finance, Curtin Business School
Curtin University of Technology
Western Australia**

Key words: Strategic Analysis, Depth of Field, Stochastic, Stock, Shares, Technical Analysis

Contact Address:

Paul Lucas
School of Information Systems
Curtin Business School
Curtin University of Technology
Phone: 08-9266-7037
Fax: 9266-3076
E-mail: Lucascpa@bigpond.com

ABSTRACT

This paper identifies the role and use of depth of field in fine tuning strategic positions in the Australian Stock market resulting from the use of tools made available using the Internet.

This paper also examines the threats and opportunities exerted on the activities of the traditional Stock Broker in the Australian market as a result of the Internet being used by individual traders.

Many investment companies touting for funds from the general public proclaim that time in the market is more important than timing in the market. The marketing claim is supported by research studies showing that over the long run (10 years or so) there is not much difference in performance measured by return on capital employed whenever a position is taken, ie it does not matter when you enter the market as long as you give it 10 years or so.

This paper discusses and disproves these marketing propositions. Moreover the importance of fine-tuning strategic plays using depth of field analysis is illustrated using a number of case studies taken from the Australian Stock Market during 1999/2000.

It will be shown how such analysis impacts upon the design and development of an information system and how it has been used to aid students in the analysis and development of DSS implementations.

AN INVESTIGATION OF THE USES OF DEPTH OF FIELD IN FINE TUNING STRATEGIC PLAYS IN THE AUSTRALIAN STOCK MARKET AND ITS IMPACT ON SYSTEMS DEVELOPMENT.

INTRODUCTION

Many investment companies touting for funds from the general public proclaim that time in the market is more important than timing in the market. This claim was based on research studies showing that over the long run (10 years or so) there is not much difference in performance measured by return on capital employed whenever a position is taken. In general, the industry purports that an investor can expect a return from the average share trust of 10-12% per annum over a 10-year period.

What the marketing people neglect to mention is that this is the average performance of the share index and not the results experienced by applying selective picks based on applied research and strategic analysis combined with using tactical timing plays.

This paper discusses some aspects of strategic analysis combined with tactical timing plays using depth of field analysis and stochastic concepts facilitated by using tools on the Internet.

Over the last two years, developments brought about by the Internet have forced many international financial service institutions to re-examine the way they conduct their existing business practices and develop new ones.

The initial motivation was to leverage technology in the hope of increasing market share but many institutions found that they were **losing** market share by not keeping up with developing creative ways of utilising and manipulating information to help their clients make decisions.

This has been dramatically demonstrated in the Australian Financial Sector where the traditional Stock brokers had to quickly adjust to providing research and information services on the Internet. In addition brokers had to respond to the developing range of services and techniques made available by the Internet and to the increasing demands of a rapidly expanding group of "Internet educated" independent traders.

These "Techno-traders" are being liberated by the power of information being released with the inevitable democratisation that the Internet affords when information is freely shared and analysed instead of being filtered by the traditional myopic monopolistic stock broker who decided what their clients "needed to know".

A good scenario to illustrate this "secret mentality" is to examine the empowerment of knowing what information exists and what information is available to a client of a traditional stockbroker in Australia.

When inquiring about a share price. A typical client with limited access to relevant information and who does not know any better will ask their broker: What is the current share price? They may even venture to get the opening, high and low of the day compare that with the yearly high/low, or some other comparative period and then make a decision, possibly aided and abetted by their broker.

It is unlikely that the broker will share or tell them about the existence of the unique Australian feature known as the “depth of field” which when understood and applied totally changes the risk profile of many stock plays in relation to timing.

Of course, clients who do ask about this will receive valuable insight about the strength of the stock, but may find their broker only grudgingly reveals such information. On the Internet these “depth of field” features are becoming more and more common on different Internet sites thus enabling more questions to be asked and explored.

The Internet like most things involving freedom and democracy is a two edged sword - with more information comes more power and opportunity - but with the cost of responsibility and the need for more disciplined analysis.

Besides the interchange of terms, general communication, questions and information between brokers and clients, a basic grasp of how the market operates and its influence on the All Ordinaries Index is a necessary pre-requisite to leveraging opportunities in the market in Australia.

Further, when investing in the Stock Exchange, it is clearly important to look at historical trends over some defined period not only in the stock itself but also its relationship to the All Ordinaries Index and the relevant sectors. This has traditionally been the province of the full-fee broker.

Independent traders are now challenging this traditional role through the provision of On-Line Internet broking services which have rapidly evolved within the last two years.

This paper is organised as follows:

First, in discussing the Australian Internet On-Line Industry, we examine the structure of the Industry and the evolving relationships between the various participants.

Second the Strategic views of the All Ordinaries is explained.

Third the Strategic approaches of the following companies – Normandy Mining Limited (NDY), and Woolworth Limited(WOW) is explored and analysed.

Fourth we explain the tactical approach using Stochastic concepts and Depth of Field using NDY as a case study.

Fifth we discuss the impact of analysis on designing DSS systems by students in our courses.

CURRENT AUSTRALIAN INTERNET SETTING

Since March 1999, corporate developments have had a dramatic impact upon the current Internet Broking Scene and upon the Australian Financial Sector - notably the launch of In-house providers such as One.Tel (ONE), Ecorp (ECP) via PBL and NCP and the Anz bank (ANZ) and E*TRADE (ETR) alliance.

CURRENT INTERNET BROKING SCENE: threats to fee structure

The main threats to the traditional stock brokers in Australia such as J.B.WERE, HARTLEY POYNTON, DEUTCHE BANK, SHAW et al are the On-Line broking sites with the dominating companies being Commonwealth Banks trading arm of Comsec, Greenline, Sanford and E*TRADE who are aggressively competing with the traditional broking costs of minimum fees of \$100 plus or fees ranging between 1% and 2% on value of portfolio compared to the basic Internet deals of 0.1% or \$50 flat trading fees.

ON-LINE BROKING COSTS

Value of trade (A\$)	1,000	10,000	30,000
Transaction broking costs			
COMSEC	\$24.95	\$29	\$29
GREENLINE	\$29	\$29	\$29
SANFORD	\$28.95	\$28.95	\$30
E*TRADE	\$49.50	\$49.50	\$49.50

Commonwealth Bank's (CBA \$24.95) discount broking operation, is probably the best guide of what can be achieved in On-Line broking. In only 2 years it has created 60,000 On-Line customers compared to ANZ's estimated 30,000 On-Line customers from its 200,000 client base.

Based on E*TRADES 18,000 customers and current market capitalisation, CBA's Comsec is worth \$1.1 billion. ANZ's alliance with E*TRADE, a highly rated technical site, enables ANZ to overcome the technology hurdles of On-Line broking and presents an alternative method to in-house development when entering the Internet Broking market. It is expected that all the major banks will have similar alliances by the end of 1999.

POTENTIAL ON-LINE CUSTOMERS OF MAJOR BANKS

	ANZ	CBA	NAB	WBC
Total On-Line customers	200,000	170,000	18,000	60,000
-of which are On-Line broking customers	30,000*	60,000	5000	20,000

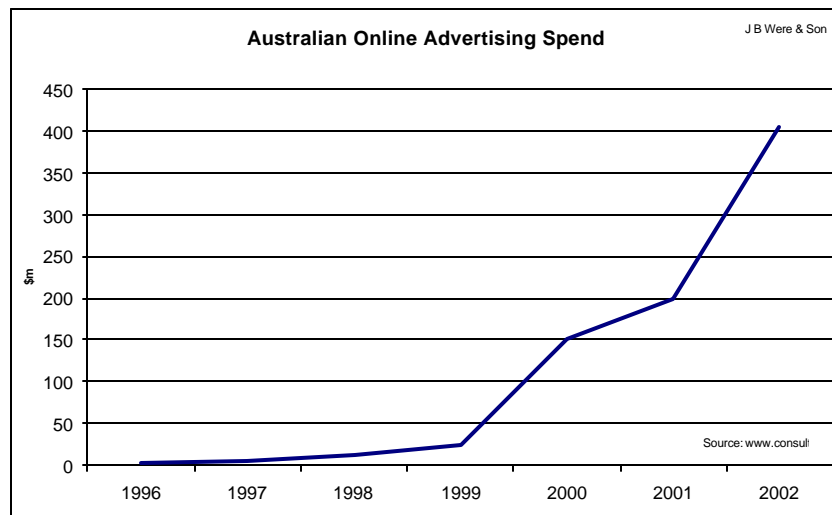
Source Company data

*** E*TRADE HAS 18,000 probably evenly distributed between the 4 banks.
Since June 18 1999 E*TRADE and ANZ have formed an exclusive alliance.**

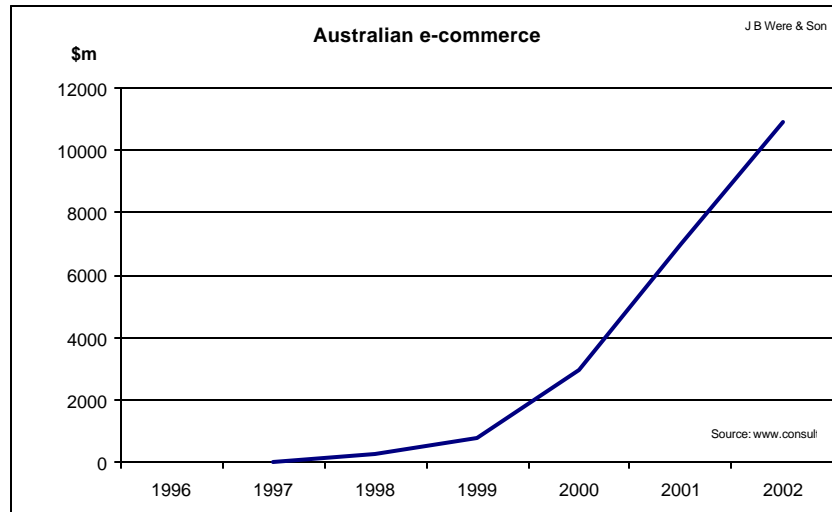
POTENTIAL E-TRADE BUSINESS TRENDS

Another clue to the huge growth potential of Internet broking can be gleaned from Ecorp's prospectus where it forecasts 181% over the pcp. These projections have been made on the basis of the increase in monthly trading volumes since commencement of its operations via "ShareTrade". It is important to note that only 16% of trades are conducted On-Line compared to 95% of E*TRADES On-Line service, with the remainder being trades initiated by other methods such as telephone or e-mail.

⋪ www.consult has estimated that On-Line advertising will increase to \$405m by the year ending December 2002, which would then represent 4.8% of total Australian main media advertising.



⋪ www.consult estimates that Australian ecommerce has grown from \$16m in the year ended December 1996 to \$253m in the year ended December 1998. It is estimated that this will increase to \$10.9b by the year ending December 2002 - a compound annual growth rate of 156%.



It is clear that the traditional stockbrokers are going to be severely threatened by the rapid expansion of On-Line broking. How then, can they compete?

Most studies show that the best way to make money from the Internet lies in the provision of services and manipulation of information. I believe that the traditional brokers will respond by delivering superior quality and superior analysis of information via On-Line services and more competitive fees and services.

An indication of the quality and depth of research to valued clients can be shown with some examples taken from J.B. WERE. a full fee service broker shown below.

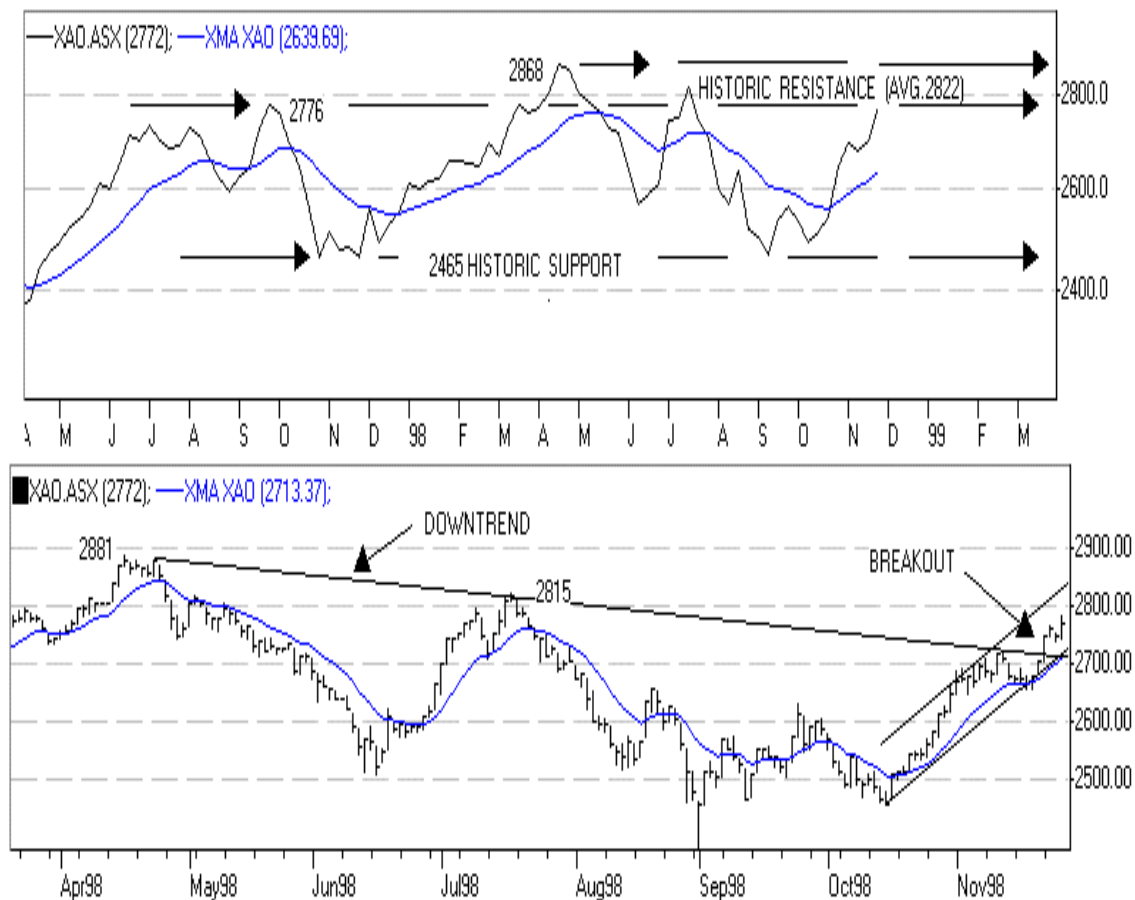
However, despite the abundance and quality of information available these days, it is clear that more time must be spent on disciplined analysis and reflections made on their impact on designing superior decision support systems.

Second the Strategic views of the All Ordinaries is explained.

When investing in the stock exchange it is clearly important to look at historical trends over some defined period not only in the stock itself but also its relationship to the All Ordinaries Index.

ALL ORDS INDEX

Weekly closings with 13 week average – April 1997 to November 1998 (upper chart)
Daily high, low, close with 13 day average – March 1998 to November 1998 (lower chart)



Current Value: 2772

Approaching the upper bounds of trading range

View: Having survived a test of the historic support at 2465, the market is now approaching the historic resistance at 2776-2868 – the upper bounds of the range. With daily and weekly averages in bull mode again it is likely that following a period of consolidation, an attempt at new highs is likely, with an early estimate of 2982 coming into focus.

Nearby Support: 2767, 2754, 2721;

Nearby Resistance: 2812-2815, 2825, 2857

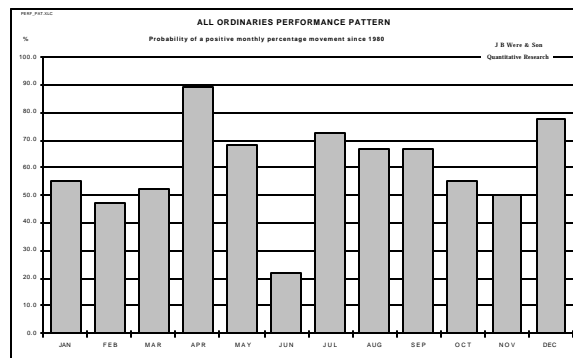
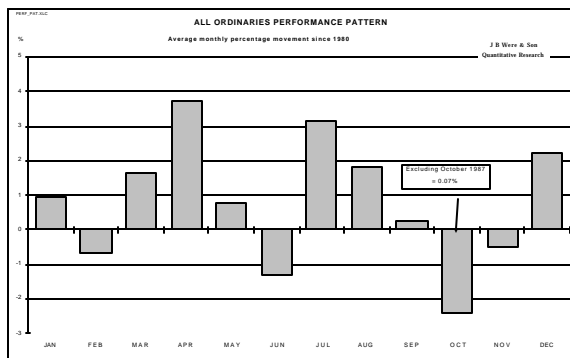
Points of Interest:

- < **Weekly Chart** The index only needs to appreciate a further 2%-3% to enter the zone of historic resistance at the upper bounds of the wide trading range – an area likely to attract profit taking. Following a period of consolidation, a move to new highs is likely.
- < **Daily Chart** The feature here is the breakout from the downtrend extending from April 1998, which provides scope for a test of the highs at 2881, and a possible break to new record highs,

following a consolidation phase.

Also below, are the monthly charts supplied by JB WERE Stockbrokers. They indicate the typical strength of the tax loss selling pressures, and show the typically poor performance of the equity market during June and stronger performance during July (both in absolute returns and probability of the market returning a loss) since 1980.

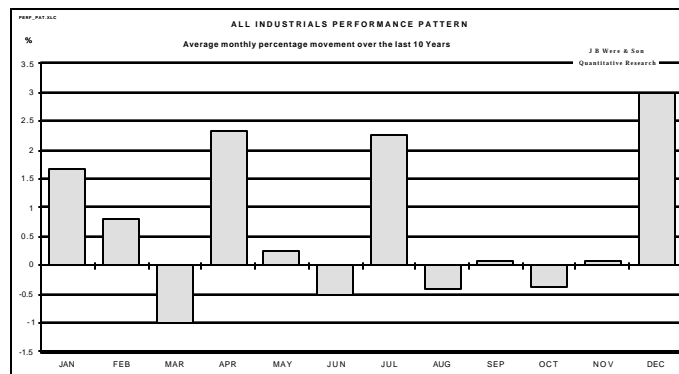
From these charts it is clear that timing in the market is crucially important both in terms of probability of outcome and average monthly performance. Clear trading patterns emerge showing buy periods in FEB, JUN, OCT/NOV and sell periods in JAN, APR/MAY, JUL/AUG in particular. This applies on both the data taken since 1980 and those taken in the last 10 years.

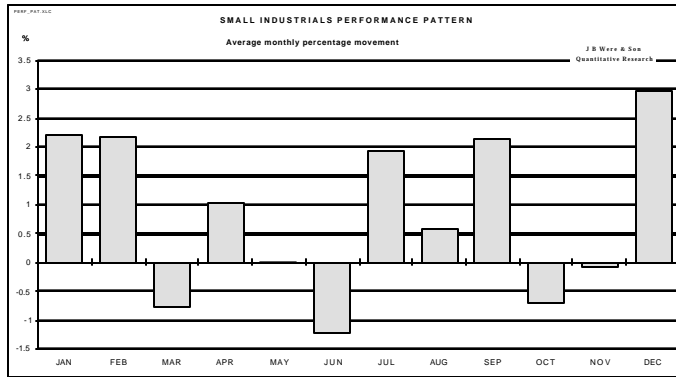
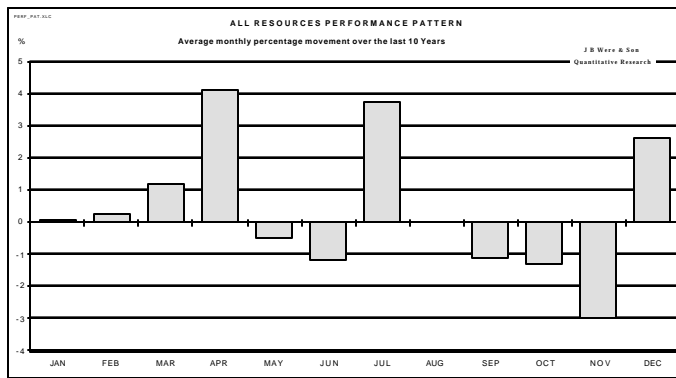
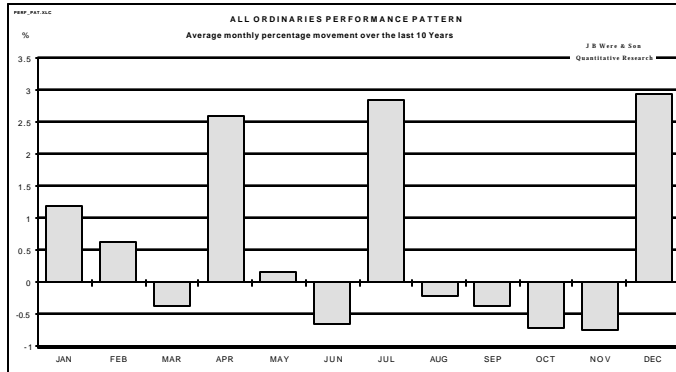


On the other hand there are some subtle differences when one compares the All Ordinaries with the All Industrials and then again with the All Resources and the Small Industrials as shown below.

Seasonally pattern of the Australian Market:

The charts below plot the average monthly return of the key benchmarks in the Australian equity market (All Ordinaries, All Industrials, All Resources and Small industrials) over the last 10 years. They show a consistent pattern of a typically weak June followed by a stronger July. This suggests that a strategy to exploit any opportunities from tax loss induced selling pressures during June will typically be supported by a stronger seasonal market pattern in July.





Third the Strategic Analysis of Companies

When making any stock selection there are clearly strategic industry issues to be researched as well as technical stock performances to be investigated. Using as examples the stocks, Normandy Gold Mining (NDY) and Woolworth LTD (WOW) below, we can appreciate some of the issues involved in stock selection.

NORMANDY MINING LIMITED

Hedge book restructure delivers \$650m

RECOMMENDATION:

ACCUMULATE

Stock Code: NDY (149¢)

- **Normandy now has the funding capacity and the asset mix to deliver a steady growth in EPS.**
- **The growth profile could be expanded further through offshore gold developments (Yamfo, Perama Hill) and Australian Magmetal.**
- **Our valuation has been upgraded to \$1.35/share (+6%).**

KEY POINTS:

- < \$650m will be extracted from Normandy's existing book, such that a similar amount of hedging will remain (i.e. 4.3m oz), but at much lower deliverable prices. Short dated forwards will be converted into puts allowing upside leverage on the gold price.
- < The A\$30/oz fall in the A\$gold price since October has given Normandy a \$100m additional benefit in this proposed hedge book restructure. (The marked-to-market value of NDY's book was A\$550m on 30th September).
- < Net debt will reduce from \$785m to \$135m. Post the sale of the Power and Pipe division (expected soon). Normandy could move into a net cash position.
- < We believe Normandy's debt capacity will be preserved to fund its existing asset mix. In total, capital expenditure of \$700-800m could be required to fund expansions (Callie, Vera Nancy) and new mine developments (Yamfo Sefwi, Wandoo and Magmetal).
- < In conclusion, this restructure is a smart move to capture the value of an intangible asset and prepare the balance sheet for a new substantial growth phase.

INVESTMENT ARITHMETIC

ASX Code:	NDY	12 month Price Range:	183¢ - 96¢
Issued Capital:	1,699m ord.	Market Capitalisation:	\$2,532m
Key Shareholder:	Tiger Group 11.7%	Turnover:	\$140m/month
Latest Price:	149¢		

Year end June	1997 Actual	1998 Actual	1999 Estimate	2000 Estimate	2001 Estimate
Net Profit (\$m)	123.5	118.8	138.8	152.6	171.1
EPS (diluted) (¢)	7.6	7.0	8.1	9.0	10.0
EPS Growth (%)	(58.8)	(6.0)	15.9	9.0	11.2
PER	19.7	21.3	18.4	16.6	14.9
DPS (¢)	6.0	6.0	6.0	6.0	6.0
Yield (%)	4.0	4.0	4.0	4.0	4.0
Franking (%)	50	50	50	25	25
CFPS (¢)	24.1	26.0	25.5	22.6	24.1

P:CF	6.2	5.7	5.9	6.6	6.2
Assumptions:					

In analysing the selling of the Hedge Funds JB Were have notional adjusted their impact on the financial statements

Profit and Loss Effect

- 1) J B Were have upgraded near term profits by up to 14% due to reduce interest payments.
- 2) The profit from the hedge book was "amortised" over the next 10 years, matching the same delivery volumes and times as previously committed. Hence, the Normandy revenue will be unchanged, but it will contain a large "accounting" item of pre-earned or pre-received income.

Cash Flow Effect

- 3) The loss of hedge premium will be offset by increased interest payments to some degree. The effect is to notionally reduce cash flow by \$100m pa. Other effects resulting from the sale of hedge funds are:
- 4) Net debt of \$785m will reduce to \$135m (\$207m cash, \$342m debt). Sale of the Goldfields Pipeline, which could raise \$170m, will take Normandy into a net cash position.

Valuation Effect

- 5) Subsequently the Share valuation has been upgraded by 6% to \$1.35/share (+8¢/share) due to a higher realised value on the hedge book and accrued tax benefits.

When marked-to-market valuations matter

The market is continually told that marked-to-market valuations on hedge books don't matter, and yet, we now have the second major example that they do matter (the first was when Newcrest extracted A\$300m from its hedge book in late 1996).

What prompted Normandy to sell the Hedge Book?

There are probably numerous reasons:

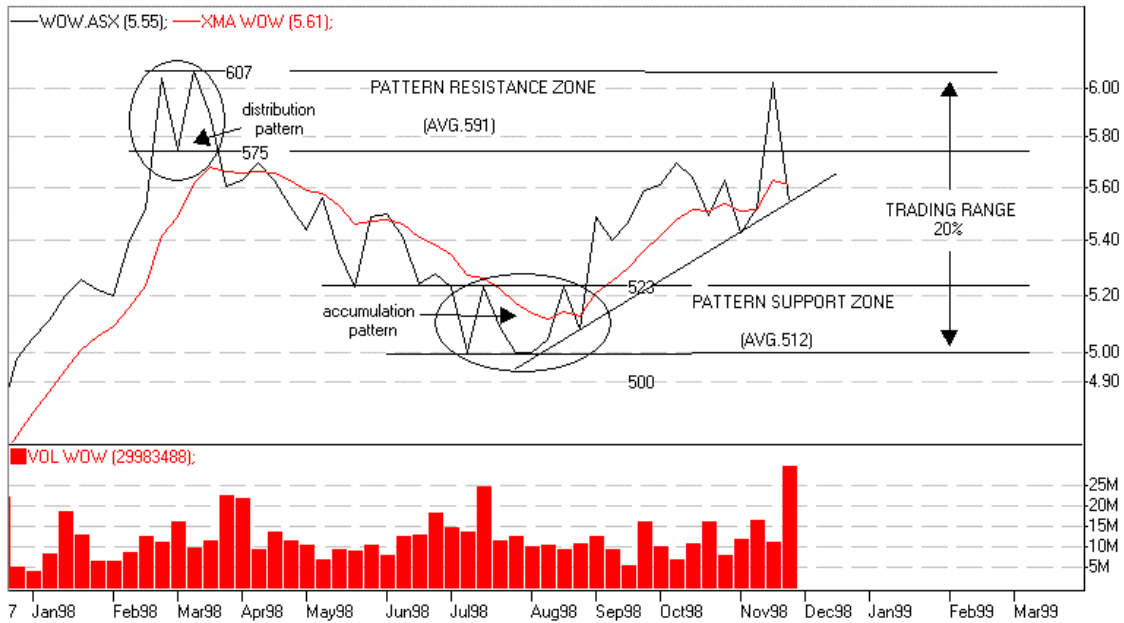
1. It strengthens the balance sheet at a time when significant expenditures are being committed to.
2. It eliminates counter party risk and protects one of the company's major assets.
3. It encourages North American investors to value the hedge book but more realistically (but at the same time maintaining downside price protection).
4. It removes a potential funding avenue for Magmetal in the USA.

What is so smart about Normandy's deal?

- < 1) Timing has gained an extra \$100m with the sharp decline in the A\$ gold price.
- < 2) No tax is payable on the \$650m because capital gains are offset against capital losses.
- < 3) The value of the hedge book has been realised, but price protection has been maintained.
- < 4) They have achieved a large funding base to acquire gold producing assets in one move.

WOOLWORTHS LIMITED

Weekly closings with 13 week average - December 1997 to November 1998



Current Price: A\$5.55

Testing the local uptrend.

View: The idea of a trading range continues to gain merit. Chart oriented investors may be inclined to take a buying stance during dips into the lower 1/3 of the developing range - say below \$5.36.

Strategy - buy into expected support/sell into expected resistance.

Nearby Resistance: \$5.57, 5.63, 5.75

Nearby Support: \$5.43, 5.36, 5.23

Points of Interest

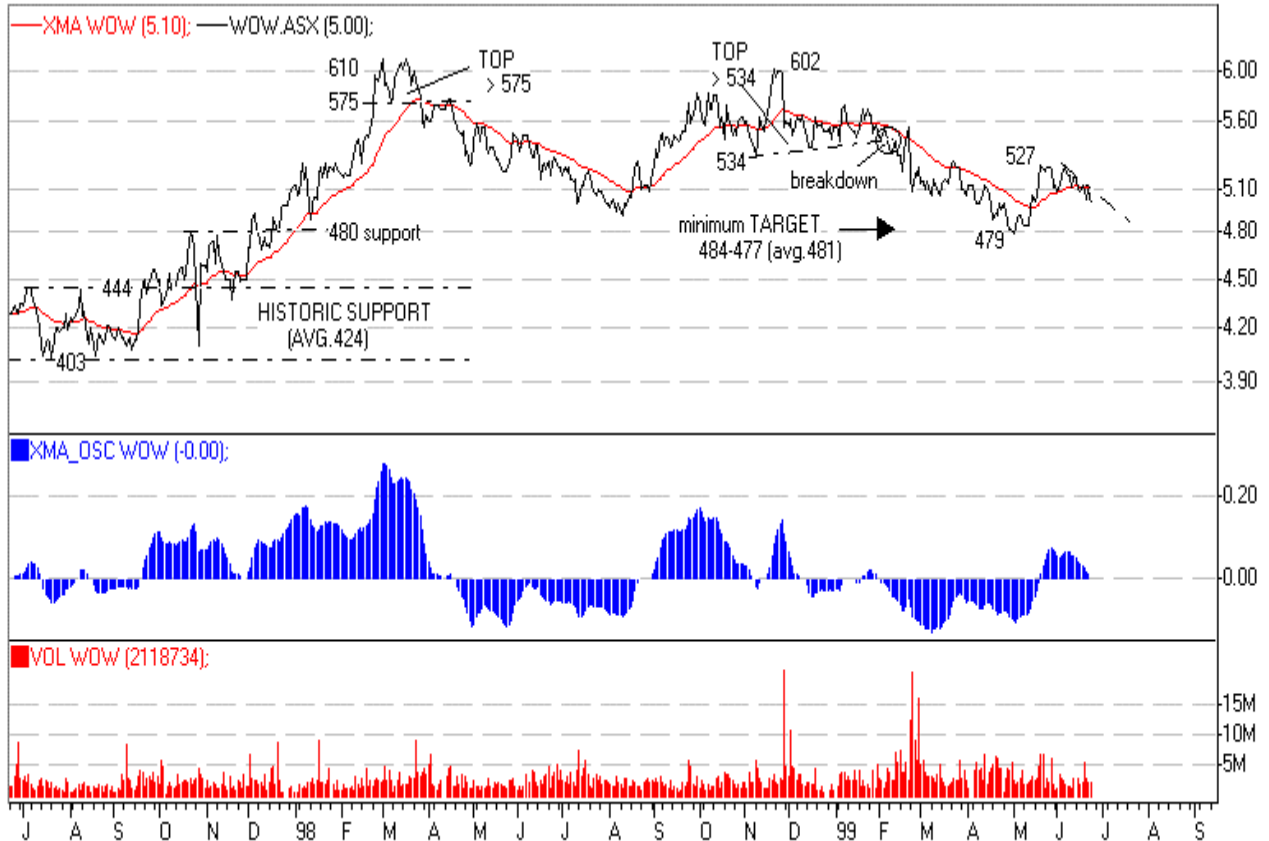
- < The idea of a "large trading range" is gaining merit following the sharp sell-off from the "pattern resistance zone" >\$5.75. Fresh support could be expected within the lower 1/3 of the range, say <\$5.36, and especially <\$5.23 where an "accumulation pattern" was traced out during July/August'98.

WOOLWORTHS LIMITED

Daily closings with 34 day average – June 1997 to June 1999 (upper chart)

Moving average oscillator (middle chart)

Volume (lower chart)



Stock Code: WOW (A\$5.00)

Drifting back towards recent lows

Action: Bear conditions continue to prevail; review as a possible buy during likely weakness into a second probe of the target area in the \$4.84-4.77 zone.

View: Following the 10% bounce from the \$4.81 target, technical indications are deteriorating. Indications currently favour prices testing \$4.84-4.77 again, and additional weakness to \$4.62 is not out of the question. Caution.

Nearby Resistance: \$5.08, 5.18, 5.27;

Nearby Support: \$4.96, 4.92, 4.86, ...4.79

Observations

< Following a 10% bounce from the early May low, technical deterioration is becoming evident as prices sustain below the average, which is now starting to decline. A further test of the \$4.84-4.77 target looks likely, and a bearish downside estimate to \$4.62 will gain credibility as prices sustain below \$4.86.

GOLD SECTOR RESEARCH

Statistics say: Buy in June, Sell in July

KEY POINTS:

- < A 70% chance of a positive movement in gold equities combined with an average monthly gain of 8% in July makes it the standout month over a 19-year period to register good performance in gold equities.
 - < The underperformance in June, followed by the rise in July can only really be pinned on the reversal of tax loss selling. There is no apparent seasonality to gold price (although gold demand does have seasonal factors i.e. Indian Monsoon). If this relationship is correct, it indicates that for 19 years (on average) tax losses in the sector have been available for realisation. Which then suggests a trading mentality is required (on average) for the sector.
 - < Candidates for tax loss selling include Lihir, Resolute, Aurora & Goldfields. Recent negative performance suggests tax loss selling has been underway in these stocks, except for Niugini and Goldfields (liquidity issues).
 - < Newcrest looks like it will be the only gold stock to rise in the year and hence has been immune from selling purely for tax purposes. Likewise, Delta, Sons of Gwalia and Ross Mining should be protected (to an extent due to their relative outperformance).
 - < Our key buys remain Newcrest & Delta. For large cap exposure prefer Normandy in the short term and for takeover potential and value: Acacia.
-

The candidates for tax loss selling

The table below highlights the share price performance of the major gold stocks since June 30, 1998.

Obviously the stocks with the worst performance in the financial YTD are the most likely candidates for selling (Lihir, Resolute, Aurora, Goldfields). Acacia and Normandy have also been poor performers, which may induce, or may have already induced some selling.

Newcrest is the only large gold stock to finish in positive territory for the year and will be immune from any tax selling.

The final column gives the performance of the stocks in the past month (23 days). The good correlation between poor yearly performance and poor recent performance confirms that tax loss selling is underway.

Anomalies include some stocks not sold down recently (ie. Goldfields, Niugini) due to liquidity and others that have been sold down (ie. Delta) despite good yearly performance.

POTENTIAL TAX LOSS SELLING CANDIDATES IN THE GOLD SECTOR

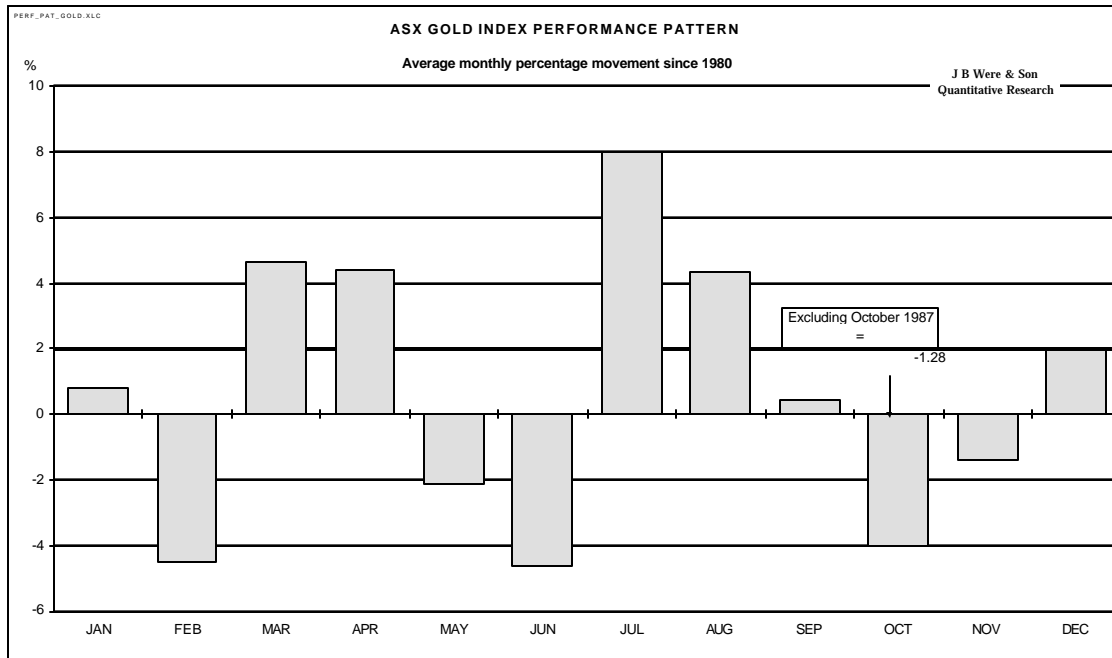
Rank of Stocks by Discount of Current Share Price to
Financial Year to Date Average Price (Average of Daily Closing Price)

Coverage: Gold Stocks in the All Ordinaries Index covered by J B Were

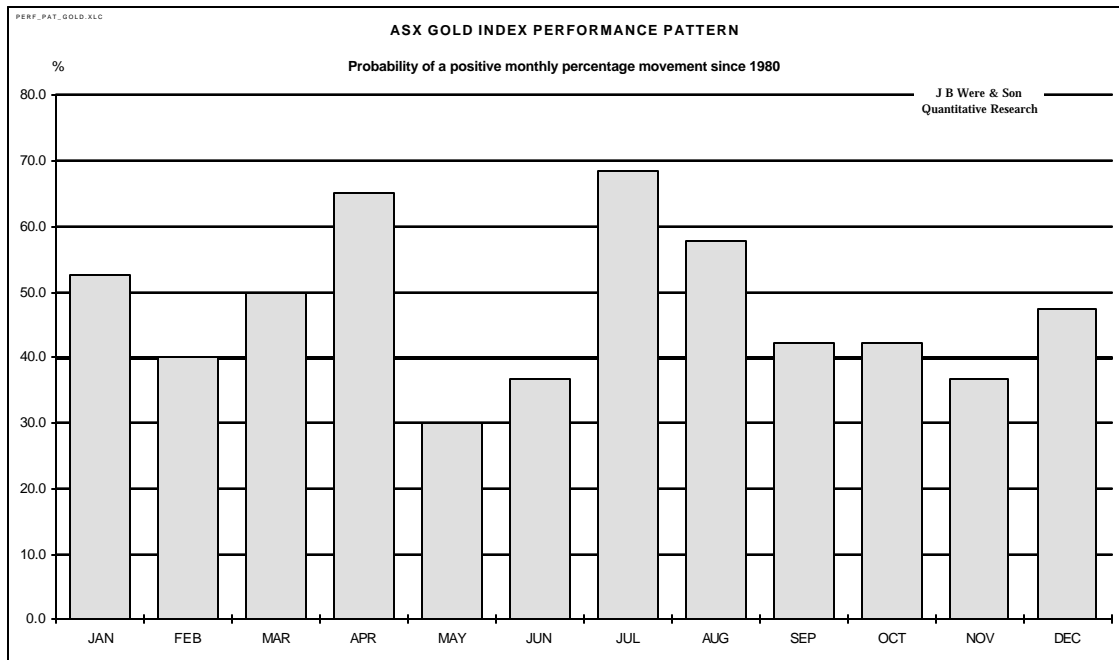
	Stock's Financial Year to Date Performance			J B Were Recommendation		
	Average Financial YTD Price 1/7/98 - 23/6/99	Current Price	Premium/Discount of Current Price to Financial YTD Price	Long Term	Short Term (1=Sell, 2=Reduce, 3=Hold, 4=Accum 5=Buy)	Price Move June YTD
ALL ORD	2796	2991	7.0			3.1
ALL RES	1041	1182	13.5			8.4
LHG	170	90	-47.2	HOLD	3	-21.1
NML	215	130	-39.6	HOLD	3	-13.3
RSG	116	73	-37.3	HOLD	3	-21.5
AUG	110	74	-32.9	HOLD	3	-17.8
GLD	140	95	-32.3	HOLD	3	1.1
AAA	213	151	-29.2	ACCUM	4	-6.8
NDY	133	97	-27.1	ACCUM	4	-11.0
CNG	45	35	-21.4	HOLD	3	-18.6
RSM	88	73	-17.4	BUY	4	-17.0
SGW	456	381	-16.5	HOLD	3	-4.5
DGD	221	198	-10.5	BUY	5	-11.6
NCM	246	312	26.8	BUY	5	2.1

Historical Patterns

Over the past 19 years, June is historically the worst month for gold equity performance. Only to be followed by the best month of performance in July (+8%).



When you combine this positive performance with historical data on the probability of receiving the right sort of performance, July is the best month by far.



Having done the overall analysis on strategic timing plays so far as the All Ords/Industrials/Resources/Small Industrials is concerned it is now important to look at particular stocks and tactical plays using stochastic and depth of field techniques.

Four Tactical approaches using Stochastic concepts and Depth of Field

Having done the strategic research to buy or sell any stock. There is still the question of exactly **when** to transact. The tactical problem can be simplified by using two concepts: stochastic and depth of field analysis.

Stochastic is a moving average indicator that gives some precision as to when a stock is in an oversold or overbought state. This normally corresponds to the 20 or 25 and the 75 or 80 percentile positions on a chart. Using the %d moving average a sell or buy signal is indicated. (See slide).



Depth of field is a feature of the Australian Stock market where open orders for buying and selling a stock are tracked On-Line second by second. Analysis of this unique Australian feature of the ASX enables discerning tacticians to exit or enter at the right price for the day. Not only can prices at the margin be discerned but also by noting the buyers and sellers entering or exiting the market lower down the open order list. When analysed over time, many broad strategic plays can be fine tuned, thus affording more realistic exit and entry points (See slide)

ASX Code:

ASX Code	Last	+/-	%	Open	High	Low	Trades	Volume	Value	Status
NDY	147	-1.0	-0.70000	146	147	145	92	1,060T	\$1,544T	Normal

Buyers				Sellers			
	Number	Quantity	Price	Price	Quantity	Number	
1	7	595T	146	147	619T	6	1
2	7	270T U	145	148	444T	7	2
3	5	49,640	144	149	304T	4	3
4	6	31,000 U	143	150	1,026T	9	4
5	2	25,000	142	151	160T	8	5
6	4	14,750	141	152	194T	7	6
7	4	14,400	140	153	73,409	10	7
8	1	10,000	138	154	88,600	7	8

Figure 1: The impact of analysis on designing DSS systems

It should be clear that even a simple concept of plotting price requires the assumptions to be clearly analysed and made explicit when designing a system to aid a sell or buy decision. For instance what is a buy price? It could mean a variety of things such as:

- Last Selling Price,
- Closing Price
- Opening Price
- Highest Price of the Hour/Day/Week/Month/Year
- All of the above plus Duty and Brokerage
- All of the above plus Capital Gains Tax
- All of the above plus Cost of Money etc

At what price should we sell? Requires many assumptions to be examined such as:

When it earns a profit of 10% plus

When it reaches the 80th percentile on the daily stochastic

When the price has fallen more than 2% of our Stock Loss/ Stock gain filter

When the price gives a "good" return.

When the price has exceeded the return required in our parameter list and so on

It is clear that there are many tools available via discussion groups on the Internet which could be incorporated in a DSS system. Whatever technology exists now and in the future nothing will work unless the strategic quality of analysis and the tactical application of these tools are applied with rigour and discipline. Therefore it is imperative to force developers or traders to be very explicit about what is implicit in their trading systems so other people can understand and duplicate them.

Thus we need to encourage developers and students to explore and examine issues such as, relating to what factors enable a system to discern what is a good buy price? Does the system know at what price it should be selling at?, when a buy decision is programmed. Making explicit these issues will go a long way to helping traders beat the market, by enabling them to design systems enabling them to achieve annual returns that exceed 50% consistently when the norm is 15%.

References:

The World Wide Web !!! Good sites to visit in Australia are:

www.Sanford.com.au

www.Paritech.com.au

www.Jbwere.com.au

www.Egoli.com.au

www.ASX.com.au

These sites are a good starting point and contain many related links.