

For the New Year Issue of ADT, the Focus section is devoted to the wonderful world of Technical Analysis. In fact, this section reviews the progress of the subject as seen by a series of speakers at the very successful International Federation of Technical Analysts Annual Conference which was held in Sydney, Australia during November.

Hosted by the Australian Technical Analysts Association (ATAA), the event brought together practitioners from throughout the world, who shared views on all aspects of this ever increasing subject. In the articles that follow, we are pleased to reproduce papers by three particularly interesting speakers. Campbell Gorrie, the Technical Analyst at Sydney based brokerage Ord Minnett, discusses the intriguing notion of Roughly Right Is Better Than Exactly Wrong. Meanwhile, Japanese IFTA delegate Takehide Matoba, from Tokai International Securities in Tokyo, discusses an intriguing subject albeit with a lengthy title: A Quantitative Method of Position Control on the Basis of Non-Quantitative Market Views - A Synthesis of Traditional Technical Analysis and Monte Carlo Simulation Approach. After taking a few minutes to digest that headline, you might feel inclined to peruse elsewhere, but please don't! Would we publish a sub-standard paper for your edification? Absolutely not. The final paper from the IFTA conference (and we acknowledge with grateful thanks the assistance of all the speakers whose material we are publishing) is also from a local man. Sydneysider Will Slatyer introduces everything from his sailing insights, through a gamut of indicators, in his search for a trading edge.

Of course, although we have included some of the highlights of the conference, we could not possibly include all the information that was available. A brief review of the events is, therefore, most certainly in order.

Amongst the many high profile technical analysts presenting at the conference, were Daniel Gramza and Martin Pring, who flew in from the USA especially for the IFTA event. Gramza gave an essentially introductory presentation during the first day on the subject of Japanese Candlesticks. Meanwhile, expatriate Englishman Pring, gave two talks. The first was on the topic of using short-term momentum to identify long-term trends. Beginning with the three basic approaches (extreme behaviour, Domino effects and Character Interpretation), Pring went on to outline a series of approaches which can be applied to indicators such as ADX, ROC and the Herrick Payoff Index, as well as the McLellan Oscillator. His other presentation was equally thought provoking and was a discussion of many aspects related to contrary opinion. A large number of his points were very similar to the Focus section in our November issue.

Another excellent speaker on the IFTA programme was the Executive Chairman of HSBC James Capel Asia, Philip Gray, who was most entertaining and elucidating discussing the "Role of Technical Analysis in Asia", while also giving an Asian market outlook. Besides from delving briefly into the mysteries of Feng Shui, he looked very closely at the entire South-East Asian economic miracle and its recent 'hiccups'. He noted wryly that, as he spoke, the stock market capitalisation of HSBC group was, in fact, larger than that of the entire Thai bourse. Another anecdote, pointing to the remarkable drive that is commonplace in the region, was the story of a British banker posted to Hong Kong. Somehow, he just could not bring himself to be pleasant to the wizened little old lady who cleaned the apartment he had rented. Needless to say he was startled when, a month or two later, he found his tenancy abruptly terminated because of his anti-social attitude to the cleaner. But he was truly amazed when it transpired that she was the owner of the entire building!

Amongst Gray's most heartening comments for the assembled throng was the remark that:

"When markets are inefficient, technical analysis works and boy does it work in Asia!"

By this juncture, you have probably rumbled this introductory section. Okay, so let's face it, technical analysis is... well, many things: intriguing, sometimes infuriating, but - all things being equal - a rather useful little tool for traders seeking profitable elucidation. However, sexy it positively is not. One cannot imagine that anyone could use it as a successful chat up line, for instance. 'Hey would you like to come back to my place and peruse a few years of historical data with me,' really doesn't quite hit the spot. Nevertheless, one of the great things about the Sydney IFTA conference was the camaraderie amongst the delegates.

Meanwhile, the ATAA organised the conference superbly and show-cased some of Sydney's finest points in the process. On the final evening alone, a gentle cruise around the harbour was eclipsed by a wonderful sunset dinner at the opera house, overlooking the ocean for a memorable social evening finale. On other evenings, delegates ate well at the Hilton hotel - thanks to the largesse of the Australian Stock Exchange and the Sydney Futures Exchange. The organisers even spiced up the proceedings with a breakfast on Bondi Beach! However, as I was staying with friends some distance from the complimentary coach collection point, I graciously opted out of picking the sand from my muesli. Nevertheless, it was a nice touch, in a conference which was a sound show-case for Sydney and a good source of informative insight into some of the latest thinking concerning analytical alternatives to economics.

My thanks to Colin Nicholson, Tony Reeves and Larry Lovrencic - amongst others at the ATAA - for a job well done, as well as to Bruno Estier and all those at IFTA for their kind invitation to attend. Next year's conference will be held in Rome during late October. And if anybody can inject an element of sex appeal into TA, surely it must be the Italians! Oh, and they are also challenging allcomers to take on the Italian TAA soccer team, should any potential delegates be interested. Hmmm, I wonder who will be the first to come up with a soccer analytics package for their charting software...

In the meantime, enjoy the papers which follow, I think each is thoroughly well worth reading... but then I would say that, wouldn't I?

Patrick Young

As a field, we have traditionally come under criticism from other related fields for either being so lacking in rigour that our output contains little added value; or for being so specific and rule bound that our output, whilst being well defined, is so precise in an imprecise world, that the results are invariably financially less than enthralling.

It is these issues that I wish to address. For better or worse, many of these questions have no correct answers and many are unanswerable; but it is probably true that we are far more dogmatic, and emphatic, often under the guise of knowledge seeking, than our counterparts in the Financial Analysis and Economics fields.

Biases are best laid out, and my own are as follows:

1. A view that the two most useful technical concepts are the tendency of markets to trend and the inevitability of reversion to the mean when prices move well beyond a long term trend path;
2. A belief that researching the histories of companies and markets provides a deeper, richer and more accurate adjunct to a strictly visual interpretation of charts; and
3. A view that, of the information lying outside of the immediate market history, a study of business cycles is the most useful second order information.

Markets are not bridges

Our profession, and those closest to us - Economics, Economic History and Financial Analysis - have followed similar paths this century. From generally observational, anecdotal and subjective beginnings,

bodies of work are built up which seem to describe, if not exactly detail, new and useful ways of understanding the passage of financial life.

Thus, we think of seminal descriptive works - Lord Keynes' "General Theory of Employment, Interest and Money"; Joseph A. Schumpeter's "The Theory of Economic Development"; Benjamin Graham, David Dodd, Sidney Cottle and Charles Tratham's "Security Analysis"; and Robert D. Edwards and John Magee's "Technical Analysis of Stock Trends".

These are, in many ways, literary efforts that seek to describe the broad shape of a way of observing financial life, rather than offering proofs of validity or substantial detail.

Later comes the quantification process, where mathematical precision is applied in an effort to merge the database of financial reality with the sweep of what the Germans call 'weltanschauung' - a worldview. Thus arises Econometrics and econometric modelling; Econometric History, Quantitative Analysis and Technical Indicators / Systems Trading.

In this process is both gain and pain. The gains come from converting ideal assumptions into testable algorithms which, when applied to the financial database, can show to what degree the broad idea correctly describes reality. The pain comes from the knowledge that large parts of a 'soft' science idea are not capable of being subjected to hard sciences methodology. In Econometrics, qualitative factors often become exogenous variables or excluded under *ceteris paribus* - other things being equal - provisions; in Econometric History, lyrical diary descriptions of the Ante Bellum South are discarded in favour of head counts and physical descriptions of slaves at auctions; in Quantitative Analysis, an analyst's assessment of a firm's management culture becomes an individual, qualitative factor purged in favour of a market-wide scan of statistically significant correlated variables; and in Technical Analysis, all variations of an indicator's path and time length are iterated until an optimised result appears which, in its singular presentation, will invariably convince the less statistically inclined that the optimised parameters carry a higher likelihood of achieving a financially optimal outcome than any of the other probably hundreds of iterations undertaken.

An example will suffice.

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The above chart, taken from the unique chart database of Ned Davis Research (NDR) shows how optimising S&P500 prices from 1980 to 1995 for a 30 period Stochastic and varying combinations of buy and sell rules produces an optimal result which, by eye alone, appears to be stronger than all other undisclosed combinations until early 1996. Only in the real time trading of 1996 and 1997 does the design flaw (Rises above 32 = Buy) become apparent.

Unfortunately, the design flaw will work through even with walk forward testing, for the flaw is not within the design parameters, but simply that the algorithm needs a data set that is not available - future prices. This is not a problem normally encountered by engineers when building a bridge. Tomorrow's stresses and traffic will be of a kind with the data used in the bridge modelling and the bridge will almost always work in the future as previous incarnations of the bridge have worked in the past.

However, markets aren't bridges and future data sets for companies and markets change significantly in ways that don't apply to bridges. The problem we face is that the quantitative constructs we can build for modelling price behaviour in markets bear such a resemblance to engineering models that we come to think that the results will be as equally efficacious.

We are not in the prediction business

So many textbooks have been written on Technical Analysis which begin with the thought that our field exists in order to use current and past price action to predict future price action, that to deny this seems like heresy.

Yet it seems to me, at least, that we have fallen into the trap best exemplified by Ockham's three bladed razor, which is that we have tried to prove too much with the tools at our disposal. When William of Ockham propounded in the 14th century that "entities are not to be multiplied beyond necessity", he could well have been writing for us.

Even with the advances made in neural net applications we are still likely to be hampered by the recurring truth that the financial future is not forecastable in the same way as the re-engineering future is forecastable. The reason is obvious - not all of the variables which influence a financial outcome are able to be mathematically defined and not all of the defined variables behave in an orderly way. If we torture the data hard enough, it can appear that the past did behave in an orderly way; but it is an illusion provided by tremendous computing power which gives us a sense of neatness and order when in reality there was, not chaos, but ambiguity.

Our colleagues in Economics, Economic History and Financial Analysis do not claim to be able to predict the future and, quite rightly, think we lack intellectual rigour if we claim that power - especially when our track record in this area is so poor.

Rather our colleagues would claim only that their fields provide enough data sorting discrimination that their clients are able to make sense of, and better financial decisions in, the unfolding financial future as it happens. Whether the payout lives up to those expectations, and often it does not; is less important than having believable limits to value added claims.

Cycles may not repeat; but they do rhyme

With apologies to Mark Twain, we can probably say that he has best encapsulated what we ought usefully to be doing for ourselves and our clients. Moreover, economists and financial analysts would probably think that we had lowered the quality control barrier from levels that are not credible to levels that are both useful and achievable.

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The chart above, again from Ned Davis Research, is a good example. Within the chart, which was done early in 1997, is a schematic of the likely outcome for U.S. equity prices during 1997 if equal weights were applied to a range of factors which, this century, had been apparent in the U.S. stock market at points similar to early 1997. We now know that the actual outcome was roughly similar to the schematic.

Yet the chart was never presented as a prediction of what would happen; it was presented as a probable outcome if this year's financial data happened to happily coincide with previous engineering - like repeats of a similar situation. Although an engineer would be unhappy with the lack of precision, technical analysts - and our clients - ought to be reasonably pleased that the payout was roughly similar to the schematic.

In other words, like Twain and Ockham, we do too much if we ask for repetition; but do tolerably well if we ask for rhyme.

There is a quality ladder in any field

Ours is a curious profession. In ecumenical spirit, we welcome all ideas equally and seek to pass no judgements on whether any one is more worthy or efficient than any other. Now, although very democratic, it leaves us open as a profession to the criticism that our methodologies are of a very low order. After all, if we cannot discriminate between those competing technical methodologies to at least sort out which have proved to be useful in the past; then we cannot complain if other fields criticise that we lack standards.

In fairness, the work of IFTA and, here in Australia, the work of the ATAA, in setting up organized courses goes a long way to codifying and standardising our practices and methodologies. Moreover, it means base levels of knowledge can be established - a prerequisite for any field.

However, we probably need to do more. It is almost certainly the case that some of our methodologies are more useful, or at least considered by related professions to be more useful, than others.

In turn, some amount of sorting will establish a pragmatic quality ladder in our field. The pragmatism arises from what is considered useful for the age. An example would be the use of physical assets in business valuations for financial analysts. At the turn of the century in the U.S., and with a stock market strong in Raw Materials and Transport companies, the financial value of a listed company was often judged by the relationship between its stock price and its book value. Earnings were considered somewhat ephemeral and a company which had a reasonable P/E ratio but a high P/B ratio was considered to be nothing but "water" - a term of derision.

At the end of this century, using the P/B ratio (except for certain companies such as Brokerages and Property Trusts) in preference to a P/E ratio or a P/EBITDA ratio is considered naive.

Notice that the differing methodologies have not disappeared. The times have merely reshuffled their usefulness and their position on the quality ladder. Examples also abound in Economics, as between the Monetarist and post Keynesian schools, without the profession worrying unduly that good taste and democratic principle prevents them from comparing one methodology with another.

There always is a quality ladder in any field. The participants' rankings will change with time; but most professionals feel little hesitation putting the competing methodologies to the test through time.

The point is that most professions do this for themselves. We don't. Until we do, and until we are able to do this ourselves without becoming tired and emotional, we shall have problems being viewed as a profession.

Parenthetically, it is probable that my own biases and skills would be judged harshly under this environment as being rather too qualitative; but that has little to do with the validity of the argument.

Fitting dynamic markets into static theories is sub-optimal

We lose so much of the richness, diversity and informational content of companies and markets when we insist that they, their histories, and their future paths, fit neatly into a static model. Whether the model is quantitatively grounded in terms of indicator based and optimised trading systems; or qualitatively grounded in terms of a universal belief system based on sequences of certain numbers or the application of letters of the alphabet; when either occurs, often the desire to look further and deeper is lost. Instead, a frantic and unceasing journey begins in which the aim is to demonstrate that companies and markets, which change through time and a changing environment; instead remain frozen, static and locked in an unbreakable, predetermined dance with a set of numerical or alphabetical sequences.

The problem with these static theories is twofold. Firstly, they rarely work for any reasonable period of time without a new sequence having to be applied to remedy the defects of the former sequence. The second problem, however, is qualitatively worse for the dynamics of the company and its enveloping world are no longer embraced as a source of new information and learning; but rather attention is limited to trying to fit the world into a narrow belief system.

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As an example, take the NDR chart above of the long term trend in the total return of the Dow Jones Industrial Average and of its deviations from, and mean reversion to, that trend.

Several things are apparent. Based on past deviations from trend growth, it is probable that a period of mean reverting behaviour will set in over the next few years. The trend growth can, of course, continue; for the appearance of a ceiling just above current levels is just that - an appearance. There is no reason why even larger deviation should not be seen. It is improbable, of course, but far from impossible.

One's eye is taken by the 1925-1932 period. Surely we should repeat that experience? Not necessarily; for there are two shallower, quieter but nonetheless just as compelling outcomes and these are the periods 1905-1915 and 1960-1975. In these cases, the market reverted to the mean by spending many years consolidating within a large range as opposed to the more dramatic high volatility outcome of 1925-1932.

Just to make it more complex, the nature of the individual companies that make up the Index has changed dramatically this century. From the Raw Materials / Mining companies early in the century; to the Durable Goods companies of the first half of the century; and the Consumer Non-Durable / Services companies late in the century.

In truth, this one Index is an illusion. The companies change and the types of companies change. To gain some sense of which path this Index might take when finally it does mean revert, we shall have to know the companies now in the Index and their histories of mean reverting behavior.

It is possible that this great, changing playout of financial history in our century could be effectively captured by a spartan stream of numerical or alphabetical sequences; but it is improbable.

In fairness, it should also be pointed out that after quite some decades of masquerading as a realistic description of equity market reality, the Efficient Markets Theory in its strong version has been watered down or abandoned by academic quantitative analysts. It seems hard to believe today that such a barren and sterile theory so at odds with market reality could have held sway for so long. Yet it did - but when it needed to be transformed or abandoned, quantitative analysts did that job themselves.

Systems are, by nature, low-pass price filters

So wrote Ed Seykota - regarded as one of the most successful, and certainly most thoughtful, traders profiled in Jack D Schwager's excellent "Market Wizards". In a March 1991 article for Futures magazine, Seykota says the following "You cannot escape the fact that systems are, by nature, low-pass price filters. They do not predict - they either just dict (say what's happening) or postdict (say what's happened)."

Quite right too. Which means that we should probably back away from exact optimal systems solutions and try and live with solutions that are roughly right rather than exactly wrong: In other words, widening the price filter will probably yield results which are coarser but have more longevity.

The following two charts are good examples:

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The NDR chart above shows the "Rule of 20" at work on the S&P500. The main message is that when the P/E + CPI rises above approximately 22, then the market is expensive and one should expect some mean reverting behaviour in the months or years ahead.

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The NDR chart above is the same "Rule of 20" chart - but now "Priced for Perfection" with sell signals arising only when the P/E + CPI moves to just under 24. Although the efficacy of the current sell signal is almost certainly assured over the next year or so; raising the signal barrier this high will likely prove to be very sub-optimal in the future.

To paraphrase Seykota, using narrow price filters gives an illusion of accuracy that was never reasonably inferred from the static past data; let alone the dynamic price data of the future.

In our own work at Ord Minnett, we try, in a modeling environment, to work to the idea of roughly right is better than exactly wrong.

Neither one road, nor all roads, lead to Rome. Some may.

The synthesis of these points is, I suspect, some form of fuzzy logic that embraces much of the overlapping areas of Financial, Quantitative and Technical Analysis. Our own field, at its best, is capable of embracing many of the valuable parts of the other two fields to yield a richer approach to company and market price behaviour. That's the "some roads" approach. Even if the broader fuzzy logic methodology works, it will always, by definition, lack both knowledge of the future and a qualitative sense of the past. However, one suspects that this is the path we must follow, not only because it is likely to yield better results, but also because we are better in our profession when we work closely with Financial and Quantitative analysts. For myself, I shall have to hope that that path has a little room in it for those with a bent for history.

Campbell Gorrie

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A Quantitative Method

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of Position Control on the Basis of Non-quantitative Market Views - A Synthesis of Traditional Technical Analysis and Monte Carlo Simulation Approach

Introduction

The theme of this paper is to suggest a methodology by which one can control positions in a more scientific and quantitative way using traditional technical analysis. The paper suggests a synthesis of traditional technical analysis and Monte Carlo simulation approach. As an example, the paper shows that the quantitative application of Ichimoku Equilibrium Diagram, which is one of the Japan-originated traditional theories, can achieve an excellent risk-adjusted return in managing Nikkei 225.

Classification of Technical Analyses

Technical analyses can be classified into two categories. One examines the trend and momentum of the markets by studying quantitative indicators such as Moving Averages, RSI and Stochastics. The other