

Occasional Paper No. 2

The Increasing Growl of the Bear! (Previously considered an Endangered Species)

January 2008

Summary

This paper investigates three questions:

- Are we now trading within a global Bear market?
- What does this imply for Investors?
- What does this suggest about the optimal investment strategies over the next period?

Based on Quantitative Analysis the paper addresses these questions as follows:

1. It defines what is meant by a Bear market
2. It sets out data which represents the underlying trends in seven share markets (USA, New Zealand, Japan, Europe, Australia, China, and Hong Kong)
3. Using quantitative analysis and applying a set of transformational algorithms it develops a data series for each market called the “**S&L TREND REVERSAL**” line which identifies the date at which each market moves from a Bull phase to a Bear market.
4. The **S&L TREND REVERSAL** indicates that NZ, USA, Europe and the Japanese share markets have moved, or are moving, into a Bear market. China, Hong Kong and Australia remain in a bull market at this point (10 January 2008).

Three investment strategies are outlined for advisors to consider in a Bear market.

The benefits of switching into an alternative asset class such as the Permal FX, Financials, & Futures Fund are illustrated.

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1. Introduction

The purpose of this paper is to answer three questions on a quantitative basis relying only on information and trends extracted from objective historical share market data.

- Are we now trading within a global Bear market?
- What does this imply for Investors?
- What does this suggest about the optimal investment strategies over the next period?

The paper endeavours to provide some pointers to advisors and investors on how to proceed to manage the investment portfolio on a quantitative basis in the current financial markets environment.

2. Definition of Bear Market

While there are many variations in the detail of defining a “Bear market” the following is the S&L working definition:

A Bear market is accompanied by widespread pessimism. Investors anticipating further losses are motivated to sell, with negative sentiment feeding on itself triggering further declines in prices.

Prices fluctuate constantly on the open market; a Bear market is not a simple decline, but a substantial drop in the prices of a range of stocks over a defined period of time. A Bear market is marked by a price decline of 20% or more in a market stock index from a recent peak over a 12-month period.

Distinguishing between a Bear market and a market correction is not easy. Corrections are much shorter lived, whereas Bear markets occur over a longer period with typically a greater magnitude of loss from top to bottom.

Like everything in life a Bear market is easy to identify in hindsight but harder to recognise when you may have only just entered one. It may of course be one of those corrections in a Bull market phase. Typically approximately 70% of the time the equities market is in a Bull market phase.

Figure 1 illustrates the last Bear market phase in the USA, this prevailed from October 2000 until May 2003 a period of 2 and a half years. For the Australian market in Figure 5 the last Bear phase was from June 2002 until July 2003.

By adopting a quantitative approach our objective is to reach a sound conclusion on the question of a Bear market by interrogating financial markets historical data and without the need to rely on any view about the future.

S&L contends that having to rely on economic forecasts which are, normally, correct in only 50% of the cases, is not the best starting point for a solution to the investment portfolio management problem. Instead the key is to avoid forecasts but manage, in the various possible ways, risk and return on a quantitative basis. Diversification via asset allocation in uncorrelated activities is one important foundation stone in the risk management process.

On top of all the risk management systems, however, when adopting a quantitative approach the most important discipline remains that financial market trends, (or primary trends) must be followed promptly, (but never anticipated or forecasted) in their turning points.

The arrival of a Bear market, if indeed this has occurred, is such a primary trend and calls for the examination of modified investment strategies in order for investors to take advantage of it.

3. The Basis on Which Turning Points for Financial Market Trends Can Be Determined

Market turning points cannot be forecast in advance, but can reasonably be identified with a trend following approach. It is evident that to identify these turning points without excessive delay is always important and becomes paramount in order to alter portfolio asset allocation and thereby avoid incurring underperformance when markets are declining.

This is not to suggest that the active investment management objective is one of “fine tuning” in the short term by alternating and rapidly changing strategies with the danger of “whipsaw” and transaction expenses impacting upon returns.

Instead the challenge is not to be frozen in the headlights of the oncoming rush of adverse economic developments and adopt a more realistic investment management strategy which prevents the portfolio suffering the deepest valuation draw downs.

To achieve this outcome and identify the market turning points we use a combination of financial analysis, mathematics, statistical analysis and modern algorithms of data series in order to achieve the earliest possible identification of market turning points which confirm the arrival of a Bear market whilst avoiding false signals (and in turn using the same analysis to determine the switch from a Bear market to a Bull market).

While moving averages are a foundation stone of this analysis. In order to achieve less delay in the market signals without an increase of “false signals” S&L has completed further interrogation of market data utilising a series of transforming algorithms. This produces a series of numbers for each stock market called the “**S&L TREND REVERSAL**”.

This is the series S&L uses to determine the presence of a Bear market. A Bear market turning point (see Figure 1) is defined empirically by the date at which the “S&L TREND REVERSAL” (yellow line), which lies above the Moving Average (purple line) during a Bull market, intersects with the purple line and cuts below it.

This paper does not set out all the detailed algorithms used in establishing the proprietary “**S&L TREND REVERSAL**” line in yellow in each figure but a general explanation of the process is provided. As a point of departure a suitable time horizon has been considered by S&L for a mid-long term market moving average.

For the USA S&P 500 the moving-average (“MA”) purple line in Figure 1 is a plot of this S&L selected moving average. This series is considered by S&L to contain the core information relating the underlying market trend after the day to day noise is removed.

The yellow “**S&L TREND REVERSAL**” line is a new generation indicator. The purpose of this is to identify turning points in financial markets for long term trend reversals (whilst eliminating false signals generated by less sophisticated approaches).

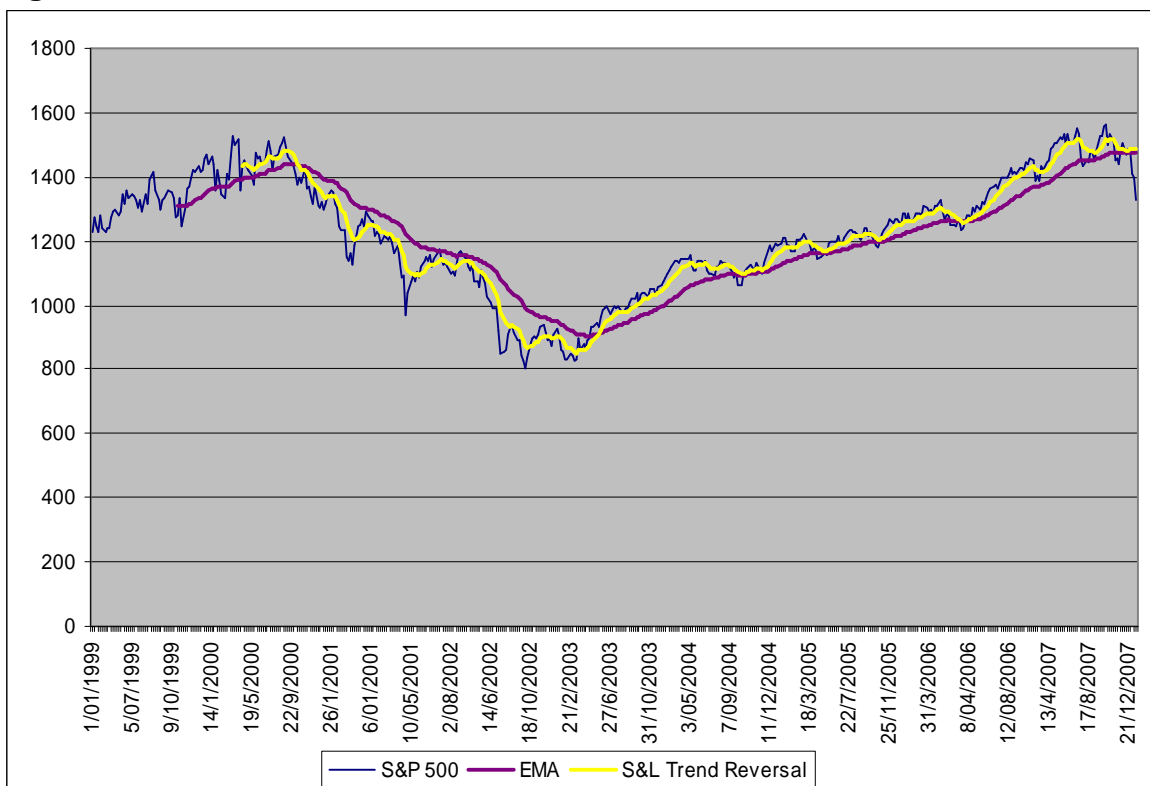
In Figure 1 over the last 18 years the **S&L TREND REVERSAL** has crossed the purple moving average on two previous occasions. In each case this signalled the move from a Bull to a Bear market or the reverse. It is to be noted that the current data indicates a further crossing point is occurring now.

S&L contends that the **S&L TREND REVERSAL** can acceptably show the primary trends of the S&P 500 index, without false signals for corrections or bounces (even considerable ones) keeping the course steady in the long–mid term direction.

In S&L’s opinion correctly identifying changes in primary stock market trends and acting on them is one of the most important disciplines in executing active portfolio management in a manner which outperforms the relevant benchmarks. It will not identify the top of a market but it will ensure the earliest possible identification of a primary trend which is one of the foundation stones of successful portfolio management.

By way of illustration the last USA Bear market was for a length of 30 months. In the past USA Bear markets have ranged in duration from 9 months to over 36 months.

Figure 1 United States



The second step in the analysis is to complete the same transformational algorithms on data derived from Datastream for other stock markets.

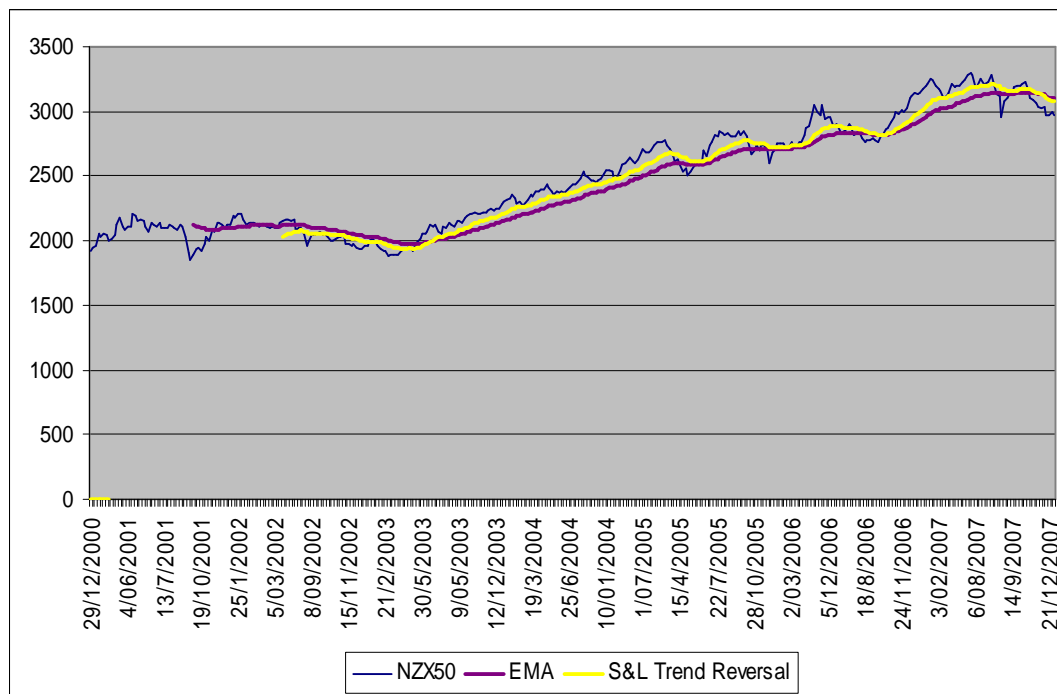
In addition to NZX 50 from 29 December 2000 to 4 January 2008, the other markets considered were the ASX 200, Nikkei 225, DJ Stoxx 600, SHANGHAI, and Heng Seng from 1 January 1999 to 10 January 2008.

The following graphs compare the indices interpolated with particular algorithms of “**S&L TREND REVERSAL**” in yellow and the market (MA) moving average in purple.

3.1 New Zealand NZX 50 Capital Index

In the case of the NZX 50. In Figure 2, the **S&L TREND REVERSAL** crossed the MA on the 30th of November 2007. Assuming one week to wait for confirmation of the signal, under a quantitative approach investors had the opportunity to reassess a long position in the NZ market by 5th December 2007.

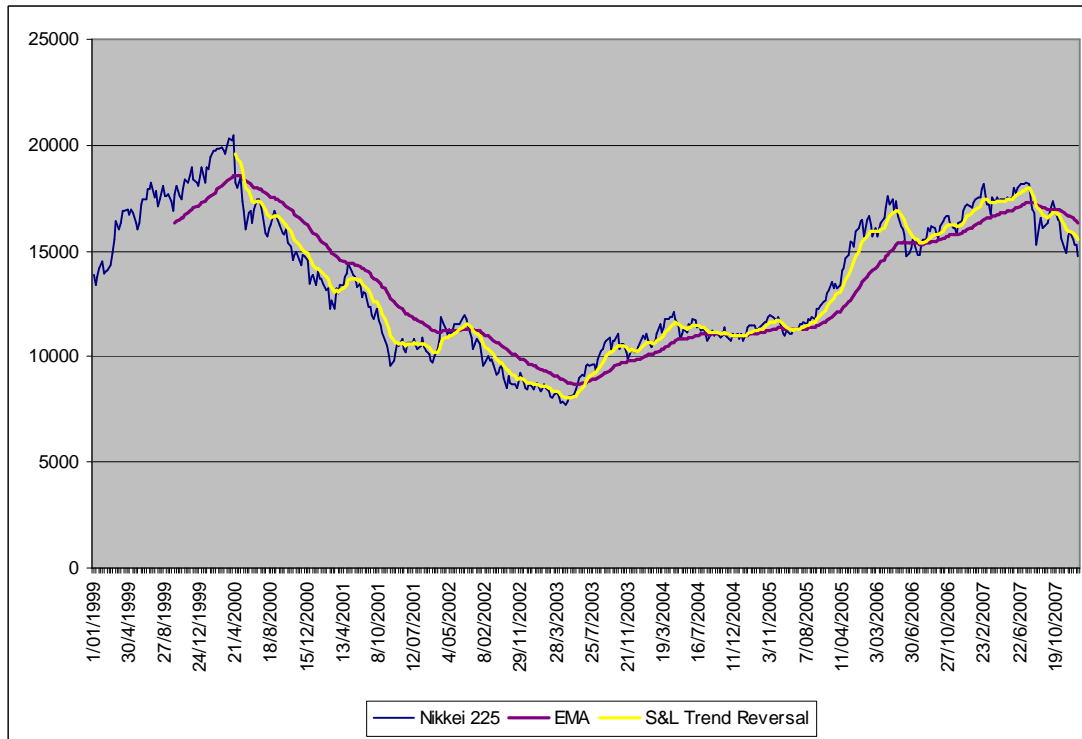
Figure 2 New Zealand



3.2 Japan NIKKEI 225

In Figure 3, this Nikkei 225 was the first major market to signal a reversal with the **S&L TREND REVERSAL** flagging a Bear phase three months earlier than in New Zealand at the end of August 2007. A quantitative investment strategy would have acted on this signal at that time.

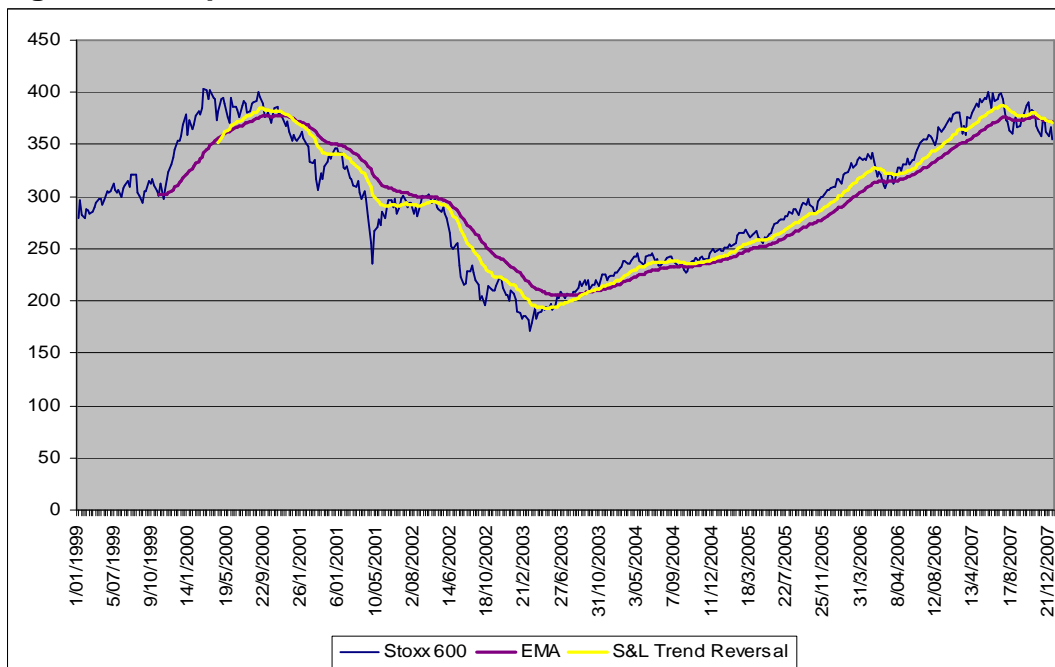
Figure 3 Japan



3.3 Europe STOXX 600

In Figure 4, the **S&L TREND REVERSAL** indicates that Europe has also tipped into a Bear market situation; this occurred very recently in mid December. Portfolio asset reallocation would have occurred at this point under a quantitative investment strategy.

Figure 4 Europe



3.4 Initial Conclusion on the Major Old World Stock Markets and NZ

Based on the application of the **S&L TREND REVERSAL** and its comparison with the respective underlying movements in each market it is clear that the USA, European, Japanese and the NZ share markets have already or are moving into a Bear phase.

From the perspective of a quantitatively based active portfolio manager this necessitates a material change in asset allocation in order to maintain out performance over the relevant index. How Portfolio advisors or investors might accomplish this is discussed in Section 5.0 below.

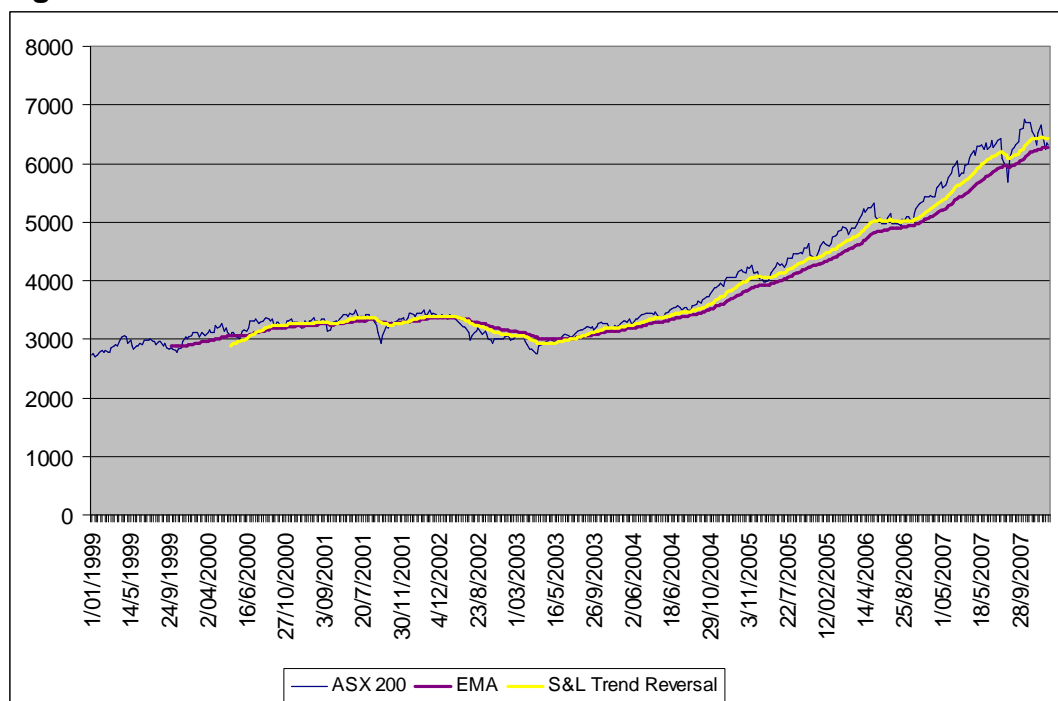
Before investigating alternative investment strategies it is instructive to consider the information derived from the application of the **S&L TREND REVERSAL** to the share markets of Asia and Australia (which is closely linked to these).

The market data here illustrates the current debate about the extent, or otherwise, of a contagion effect, either now or in the future, from the USA, European, and Asian stock markets. The first of these markets S&L has considered is Australia.

3.5 Australia ASX 200

The Australian market is much more closely linked to the fortunes of Asia than the New Zealand market. In Figure 5, the **S&L TREND REVERSAL** illustrates that Australia is still in a Bull market phase that began in August 2003. It is worthy of Note that the **S&L TREND REVERSAL** is currently approaching the MA. Developments will be reported to readers in the future as they occur.

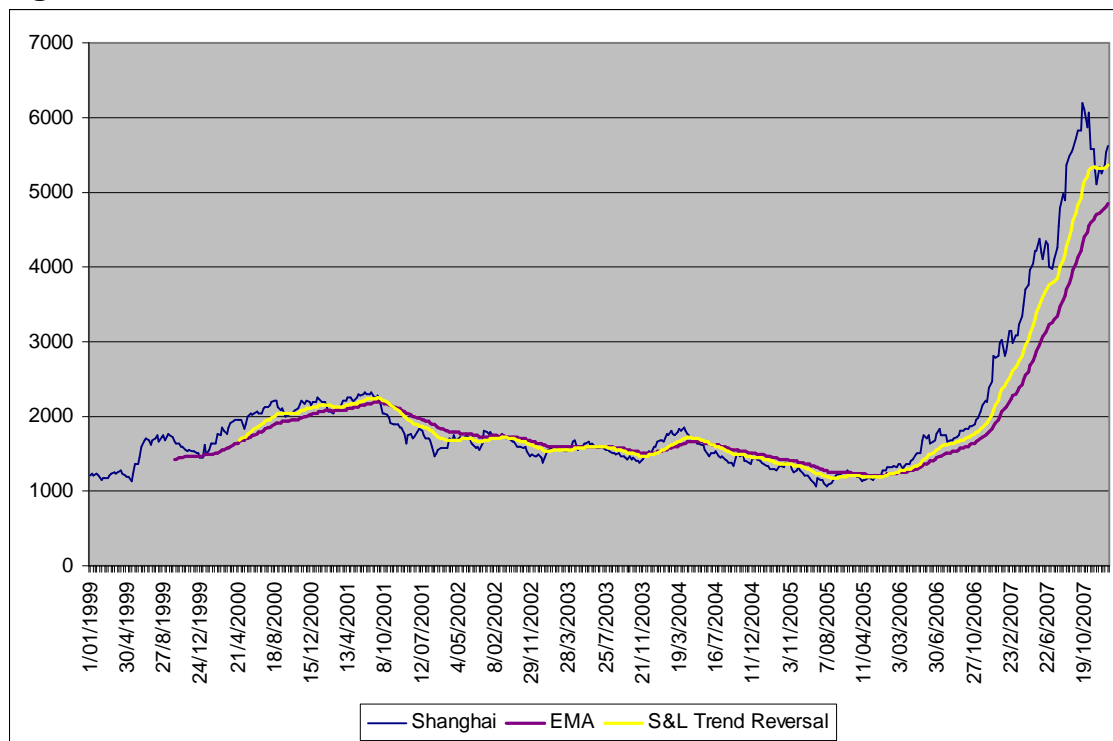
Figure 5 Australia



3.6 China SHANGHAI COMPOSITE

In Figure 6, the **S&L TREND REVERSAL** indicates that Shanghai index is still well within a Bull market phase as the Shanghai index has been undergoing a vertical, parabolic rise. Coupled to Hong Kong Heng Seng index that follows immediately, the current data gives some credence to the theory of decoupling of the emerging Asian economies from the major industrialised markets. It is important to remember, however, S&L and investment portfolio advisors task is NOT to validate economic theory, but preserve client's capital. The only inference is that currently China's stock market is in a Bull trend.

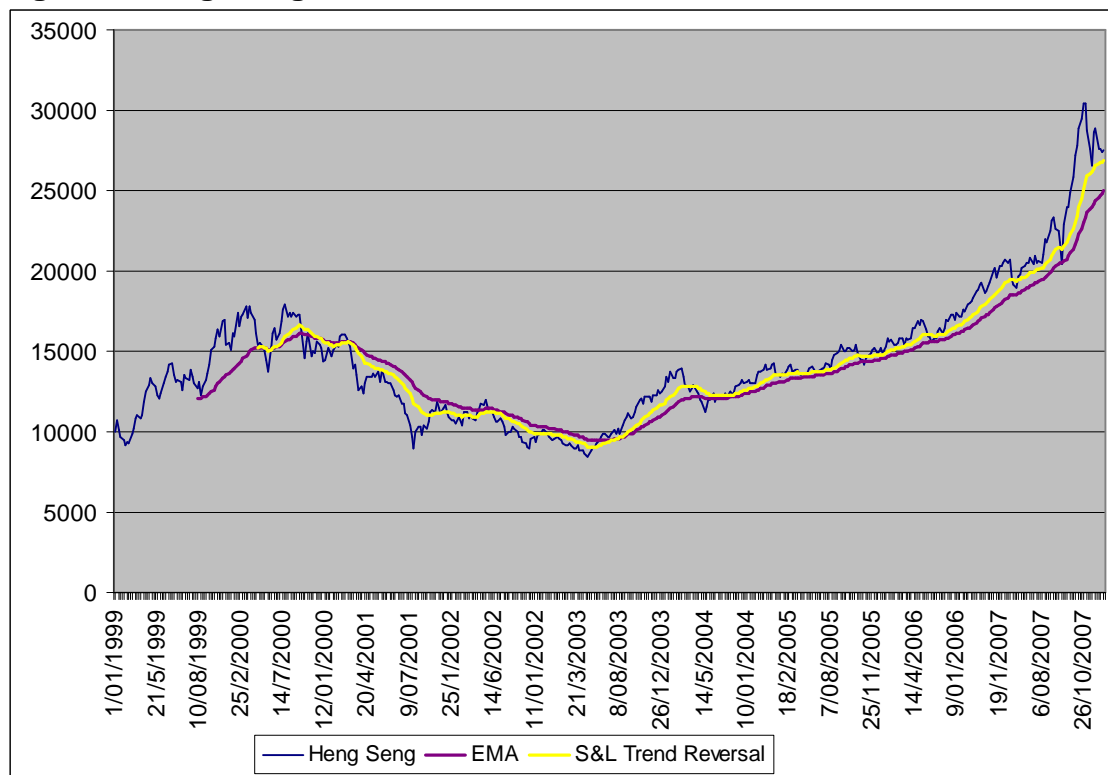
Figure 6 China



3.7 Hong Kong HENG SENG

In Figure 7, the **S&L TREND REVERSAL** presents a similar picture as Shanghai, an index that is still in a Bull trend, unfettered since August 2003. The **S&L TREND REVERSAL** has recently diminished its steep slope, due to a correction to the parabolic rise but it is still far from giving a Bear market signal at this point (information analysed to 10 January 2008).

Figure 7 Hong Kong



4. Conclusion on the Question of a Bear Market

The current question concerning the presence or otherwise of a Bear market has been investigated by S&L using quantitative analysis. This has involved developing and applying the **S&L TREND REVERSAL** on actual observed data market by market.

Based on stock market data analysed up to **10 January 2008** at this time our conclusions include the following:

- The USA, European, Japanese and New Zealand equities markets have entered or entering in Bear phase
- The Asian markets of China and Hong Kong remain in a Bull market
- Australia is also still in a Bull market.

Whilst the **S&L TREND REVERSAL** is a lagging indicator, the underlying algorithms used by S&L are designed to minimise the extent of this lag whilst at the same time ensuring no false signals trigger an inappropriate asset re-allocation.

The analytics up to 10 January 2008 do not yet shed any light on the question of whether or not contagion will impact on Asian markets and give rise to Bear markets in these geographies.

S&L does not share the view that the Asian markets have de-coupled from the USA and Europe. However, this is only an opinion – (beware if panic sets in all major pan-continental indices move towards a correlation of 1).

5. Options to Achieve Investment Performance in Bear Markets Which Exceed the Relevant Benchmarks

For those portfolio advisors who accept that the Bear market is in all probably in an early phase and these conditions will persist for some months, and who seek solutions for their investment portfolios; S&L suggests consideration of the following:

- To short the relevant equity market
- To go to cash
- To realise and re-invest in alternative assets

Each is considered briefly in turn:

Short the equity market

- May be complicated and expensive to execute the strategy
- Exchange traded indexes may provide one solution

To go to cash

- Simple to execute
- May not meet client return objectives
- May have the risk of being over weight a single asset class

To realise and re-invest in the alternative asset Class

- A low risk approach is to invest in alternative assets (i.e. a multi-manager hedge fund) with a track record of performance during Bear markets
- Leverage can be used to increase this financial performance
- Capital guarantee of principal reduces the risks
- A more aggressive strategy is to seek out a single manager hedge fund with an appropriate mandate

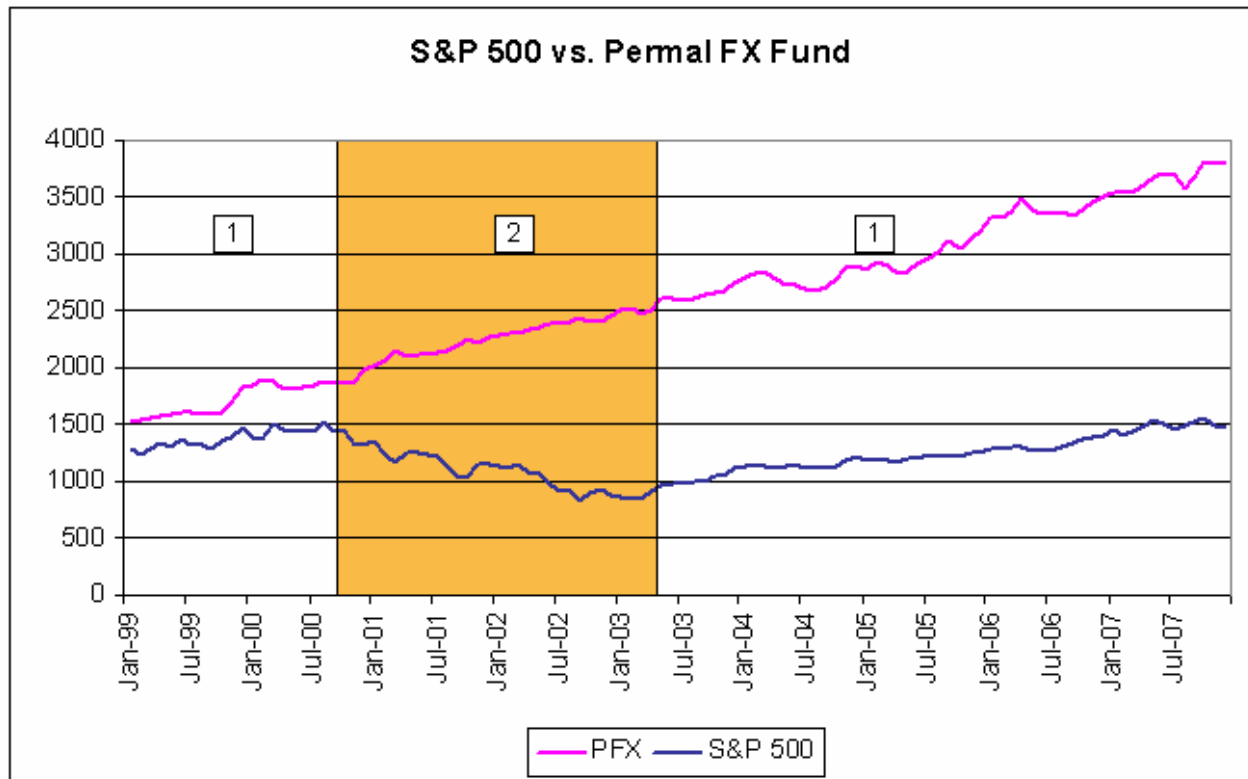
The example contained in Figure 8 below illustrates the respective performance of the USA market index and the Permal FX, Financial & Futures multi-manager fund over the period of the last Bear market. In this case the Bear market was from October 2000 for a period of 30 months.

5.1 The Role of Permal FX, Financial & Futures Fund (PFX) in Bear Markets

Over the USA Bear market phase using the turning points identified by the **S&L TREND REVERSAL** the respective performance of the Fund and the market were as follows:

- The S&P 500 -26.72 (from 1314.95 to 963.59)
- Permal FX Fund +38.92 (from 1876.39 to 2606.66)

Figure 8 S&P 500 vs. Permal FX, Financial & Futures Fund



6. Conclusion

S&L conclude that by utilising a quantitative approach to portfolio management it is possible to pinpoint the date of the entry of the New Zealand (and all other major) share market(s) into a Bear phase. The traditional portfolio investment strategy in these circumstances would be to exit the market. However, as an alternative investment strategy, there is a strong case to support an asset switch into an alternative asset class with a strong track record of performance in the past Bear market such as the Permal FX multi-manager fund.

Declaration of S&L Interest

S&L acts as the Manager of Kauri Income Units and Kauri Growth Units the proceeds of which are invested in the Permal FX, Financials & Futures Fund and other Permal multi-manager funds.

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