
# A Medium Term Methodology for Trading Equities and CFDs

# **Reference Manual**

Share Wealth Systems

September 2015

## Copyright Notice



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Quantum Methodologies acknowledges the development efforts by the late Akis Fotiadis in making the first release of SPA3 TradeMaster a reality in August 2004.

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## FOREWORD

The development and release of SPA3 in August 2004 was the most significant event in the continual evolution of the Share Profit Advantage$^{TM}$ methodology since its first release in October 1998. Our research efforts have continued, and will continue into the future, to ensure that our customers gain the benefits of using tested and up-to-date tools to invest in the stock market in a medium-term timeframe.

The development of the SPA3 Module in Beyond Charts+ was an important part of our strategy to reduce the time taken to analyse the markets with SPA3 and to make SPA3 available to investors in different geographic locations and to investors trading different equity markets. Research of SPA3 in other markets and instruments such as ETFs continues.

This, combined with a number of other factors as listed below, has brought about the need for this Tenth Edition of the SPA3 documentation in which the following substantial changes have been made over time:

1. The SPA3 Manual was divided into two manuals in Edition 4, namely the SPA3 Getting Started Manual and the SPA3 Reference Manual.

2. SPA3CFD was documented in the Fourth Edition as a separate manual after research was completed early in 2008 for using SPA3 to manage a leveraged SPA3 portfolio that comprises both CFDs (or margin lending stocks) and unleveraged stock positions.

3. Due to the implementation of trading on margin using CFDs, many of the SPA3 TradeMaster screens were changed to accommodate the necessary functionality additions for leveraged trading.

4. The SPA3 Module has been programmed into a new technology platform called Beyond Charts+. The relevant screen shots have been changed in the Tenth Edition.

5. An improved SIROC indicator has been devised which has lead to an improved SPA3 Edge. The relevant portions of the SPA3 Manuals have been updated accordingly.
6. This manual was modified as the Eighth Edition when the September 2012 White Paper entitled "Revised SPA3 Risk Management and Money Management Rules" was first published. Chapters 6 & 7 have been extensively modified. Ensure that you also read this White paper as part of this Manual.
7. The Ninth Edition included the necessary changes for the release of SPA3 NASDAQ.

It is suggested that holders of previous editions of SPA3 manuals only refer to this Tenth Edition.

New customers should note that this SPA3 Getting Started Manual has been sequenced so that you start reading from Chapter 1 and work your way through the manual. You should not attempt any trades until you have worked through the entire SPA3 Getting Started Manual.

You should also read the entire SPA3 Reference Manual within the first two to three months of starting to manage your SPA3 portfolio but it is not necessary to read the entire SPA3 Reference Manual before starting your SPA3 portfolio.

Throughout this manual and in all Share Wealth Systems sourced material we have used the words “active investor”. These words best describe the majority of SPA3 customers. Where the terminology of “investor” is used, the reference is generally to people who do not have the knowledge, tools and time to actively invest in the stock market or are passive in their investment approach.

At the end of the manual you will find a list of additional reading material, which is relevant and recommended. We strongly recommend that you read and study “Trading in the Zone” written by Mark Douglas. Understanding and learning his material will greatly enhance your performance with a mechanical methodology such as SPA3 or any trading approaches for that matter.

We are confident that both new and existing customers will derive great benefits from the material presented in Tenth Edition of the SPA3 documentation.

We welcome your feedback and suggestions.

## IMPORTANT NOTICE

Because the “financial advice” information in this publication is general in nature, it may not be relevant to your individual circumstances. Before making any investment or financial planning decisions, you should consult a professional adviser who can help you decide whether your decision is appropriate for you.

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## CONTENTS

# 1

# MULTI-STRATEGY INVESTING

This Chapter analyses the essence of long-term investing success by deploying multiple strategies in the market.

The following topics are covered in this Chapter:

- Multi-Strategy Investing
- Positioning of Share Wealth Systems methodologies

## 1.1 Diversification and Multi-Strategy Investing

At the highest level, there are two main streams of investment philosophy for direct investment in the stock market:

1. Random walk theory, i.e. market moves are entirely random and cannot be timed in any way. Those that follow this philosophy believe the investment solution is diversification in many stocks across a single market or across multiple markets over a long time period. This is done to minimise risk of downside, to make returns potentially less volatile (i.e. flatten the equity curve) and to try to mimic the market indices as close as possible. Their motto is: 'Time in the markets, not timing the markets.' Generally, such investors follow Modern Portfolio Theory with their investments. One of the problems with this approach is the close correlation between all stocks in bull and bear markets.
2. The market is not random. A link exists between current market price action and recent past market action. Such a dependency exposes a market bias that can be exploited using market-timing techniques. Investors that follow this philosophy believe in 'time in the markets and timing the markets.'

Share Wealth Systems subscribes to the second philosophy.

To minimise the risk of losing capital (either initial investment capital or realised profits), Share Wealth Systems believes that diversification of low correlated strategies rather than diversification only of stocks, provides a good balance of risk and reward for active investment in the market.

Low correlated strategies are those that do not mimic each other, i.e. they are strategies that typically will do the opposite to each other in most market action. While this cannot be guaranteed all the time, it should occur most of the time. An example of two low correlated strategies are a strategy that profits from stock prices rising and another that profits from stock profits falling, i.e. short selling. In a sideways moving market either may be able to make decent profits, yet in a

strong bull market the short selling strategy typically would not make profits and in a bear market the 'long' strategy typically would battle to make profits.

However, to maximise returns, Share Wealth Systems believes that focusing on a dedicated strategy with an edge that minimises drawdown and maximises growth provides the best active investment approach.

## 1.2 Market Strategies

In the long term, our aim is to provide tested and repeatable methodologies to support the following market strategies:

1. Long term investment for using Exchange Traded Options (ETOs) to derive income and protect capital from downside risk. This is effectively a variation of the collar options strategy.
2. Long term active investment in equities deriving returns from capital gains and dividend income.
3. Medium-term active investment in equities. Profits are generated from stock prices rising in the medium-term.
4. Short Selling equities. Profits are generated from stock prices falling over a 1 to 5 week period, on average.
5. Short-term trading in leveraged instruments. Profits are generated from short-term positions of around 1 – 10 days in the relevant leveraged instrument.
6. Medium-term trading of leveraged instruments. Profits are generated from a combined portfolio of stock prices and CFDs (or stocks on margin) rising in the medium-term over periods of around 7 – 10 weeks.

The SPA3ETF, Intelledgence, SPA3, and SPA3CFD Methodologies are now in place for Strategies 1, 2, 3 and 6, respectively.

- Investment goals.
- Risk profile.

- Time available for managing investments.
- Trading and technical analysis skills.

## 1.3 Multi-Strategy Outcomes

Using a multi-strategy approach to active investing has advantages and disadvantages. Depending on the above five criteria one active investor will see another's disadvantage as an advantage and vice versa. Nonetheless, the outcomes of using a multi-strategy approach, particularly if the strategies have a low correlation are:

- Downside risk should be reduced based on the lower probability of both strategies achieving their largest drawdown at the same time. Particularly for low-correlated strategies, drawdown to a multiple strategy portfolio should be less than a single strategy portfolio because each different strategy will produce different returns and, at any time, work against achieving the largest drawdown for the portfolio as a whole.
- The price to pay for minimising drawdown is that equity peaks of a multi-strategy portfolio may not be as high as having a single strategy portfolio.
- However the combination of points 1 and 2 is that the equity curve should be flatter.
- Over the long term returns should be maintained with a higher risk to reward ratio and a less volatile equity curve for a portfolio.
- In a strong trending market, total returns may be held back by the underperforming low correlated strategy.

As many active investors would know, controlling risk takes priority over trying to maximise return. This is why it can make perfect investment sense to use at least two strategies in your direct investment in the market. If maximising portfolio growth is your primary objective than a single strategy should be your preference.

For more detail in multi-strategy investing please visit the Education Centre at www.sharewealthsystems.com Members Zone.

# 2

# TRADING SYSTEMS

This Chapter introduces generic trading systems and discusses some key issues about investment in the Stock Market.

The following topics are covered in this Chapter:

- The benefits of using a Trading System
- Know your trading term
- Purpose of a Trading System
- Trust the Trading System

## 2.1 Introduction

Since the mid seventies, technical analysis has progressed from being treated with contempt to being widely accepted in the investment industry as a legitimate approach to improve the timing of entry and exit points. Most Fund Managers and large broking houses employ experienced technical analysts to complement the more traditional forms of market analysis they have used over time.

Technical analysts contend that everything about a stock is reflected in its price movement. Prices are affected by market sentiment (i.e. changing attitudes) and generally move in trends. Economic, political, monetary and psychological forces are all reflected in market sentiment.

Technical analysis at its most basic level is about the early identification of a change in trend. In fact many experts in the field refer to it as the art of identifying changes and/or continuations in trend.

Why do many chartists lose money in the stock market? Experts say that pre-requisites for making profits in the stock market on an on-going basis are consistency, objectivity and discipline. Perhaps chartists lose money because they use the charts as an 'art' to support their opinions rather than being objective, consistent and having no expectations when they do their analysis.

There has been a huge increase in the number of technical analysis toolbox solutions available in the market. Every charting package has a plethora of indicators to choose from, all requiring various settings, giving almost inconceivable scope and variation to represent basic share data in different forms. Indeed if the indicator you want does not exist, you can invent one of your own! No wonder critics of technical analysis remark that 'whatever you want to see in a chart, there is an indicator that will help you cement that view'!

Share Wealth Systems has researched and designed investment methodologies using technical analysis to time entry to and exit from positions in the market.

Understand there is no such thing as a perfect system for investing in the stock market. No system can pick every bottom and every top of a trend, or trap every trend. There is also no system that can prevent a loss trade.

However, by the time you have read this manual you should understand that you can definitely make money in the market using a system that produces more loss trades than profit trades! It does this by uncovering a bias in price action that provides the trader with a probabilistic edge in the chosen markets.

## 2.2 The benefits of using a Trading System

The main benefits of using a Trading System are:

- Remove emotion from the buy/sell/hold decision.
- Remove personal ego from the buy/sell/hold equation.
- Exclude outside influences and 'noise' from the buy/sell/hold decision.
- Achieve objectivity and consistency, and hence trust and confidence, in the buy/hold/sell decision-making process.
- Overcome personal expectations of the market.
- Overcome human biases that are detrimental to profitable active investment.
- Improve size and consistency of returns from your investment in the stock market.

With a correctly designed trading system **you** know exactly what your entry and exit criteria are and you can enter the market with trust and confidence that the trade will either be profitable or limited to a small loss. The word 'you' is highlighted above because you and you alone are responsible for all decisions

that are taken in the market. Your broker, friends and the market are certainly not responsible!!!

Using a trusted, robust and consistent trading system will make you objective about your buy and sell decisions. What is meant by objective? The dictionary definition of objectivity is 'uninfluenced by emotion, surmise or personal prejudice' and that is precisely what you want in your trading decisions!

Making emotional trading decisions is probably the biggest reason why investors make losses, particularly large losses, in the market. The two main emotions that cause inconsistent buy and sell decisions are greed and fear - greed to make more profit and fear of making less profit, a large loss, of being proven wrong about your trading decision, or of missing out on a handsomely profitable trade.

Often traders will stay with a losing trade because they want to prove that the trading decision they made was the right one. More often than not this egotistical action will lead to losses. Being right is very important to human beings. However, active investment is about making money not about being right. Active investors have to learn that money can be made in the market even when the active investor is wrong as much as 50% to 70% of the time.

Naive investors also act on outside influences that lead to emotional illogical actions. These influences, which we call 'noise', include: brokers, 'friends', newspapers, newsletters, TV, chat forums and so called 'experts' who often have opposing views on the market. These outside influences will often convince the uninformed investor to take a position in the market because he/she does not have a consistent set of criteria against which to check whether the position should be taken. As a result, every position will probably be entered for a different reason.

The uninformed investor has inconsistent buy/sell criteria on which they act. If you don't have a system then it will be easy for outside influences to impose their objectives on you. These will be different every time and will almost definitely NOT be consistent with your objectives.....they will be consistent with the objectives of the outside influences. Even if the outcome of inconsistent

decision-making is profitable it will unlikely be possible to repeat the positive performance in the future.

Taking action on emotions or ego and reacting to outside influences all lead to unpredictability and inconsistency in the buy and sell decisions that over time will cause sporadic large loss trades that erode or eliminate profits and that cause severe market under performance. It is these 'outlier' negative trades that need to be eliminated from your portfolio.

## 2.3 Know your trading term

A lot has been written about an investor 'knowing the term' of any position that they take in the market. For example, when a long term 'buy and hold' position is taken, the investor must be prepared to ride the ups and downs of the market but must also be prepared to accept a lower compounded annual return from that investment. Typically, the 'buy and hold' approach will require less time, effort and knowledge on the part of the investor and hence is viewed more as a 'passive investment approach'.

The main problem with the passive 'buy and hold' investment approach is that the investor may sit on losses for long periods of time before their investment starts returning profits. Stocks can be out of favour for many years. During that time the investors' capital is not working well but may eventually return a profit. If an investor grows impatient and sells while the stock is in loss territory, it may return a significant loss and every now and then a total loss in that trade.

In addition, investors can watch frustratingly as their hard earned profits rise and fall over the years with cyclical and 'defensive' stocks that move sideways in wide trading bands. The problem is most investors do not have the knowledge to actively time their entries and exits. Hence long-term 'buy and hold' investors have no choice but to tolerate the ups and downs and the sub-index returns that result.

Investors who are prepared to put in a little extra effort for a better potential return may adopt a medium-term trading approach. This way, the potential pitfalls of the 'buy and hold' approach can be avoided, like the large loss trades, and sustained profits can be more readily assured.

Likewise short-term traders must be fully aware of the term they are trading. The short-term trader can undergo extreme stress and psychological pressures in their endeavours to trade volatile swings in the market.

Short-term trading is a far riskier venture that can return large profits but can also return large losses and, in fact, can even wipe out the inexperienced trader. Short-term trading requires:

- Multiple hours of daily attention and effort.
- Extensive knowledge of markets.
- Extensive experience in using technical analysis to trade.
- Immunity to stress caused by market volatility and illogical and inexplicable movement of share prices in the short-term.
- The ability to differentiate between the characteristics of equities and instruments that lend themselves to short-term trading and those that do not.
- Psychological strength to deal with extended periods when more loss trades than profit trades occur.

If you wish to become a short-term trader, one way of reaching their ranks is through the ranks of the medium-term active investor. That is, gain experience and knowledge while exposing yourself to a lower risk of losing your capital with less effort requirement. Then slowly build from there.

Most short-term traders manage medium to long-term portfolios anyway, as the two are not mutually exclusive. The successful short-term traders apportion only part of their trading capital to short-term trading because of the risks and stress

involved. Only a fool will constantly deploy all their investment capital to short-term trading.

Share Wealth Systems believes that a medium-term approach suits the greater majority of private active investors in the market with the potential to achieve the best balance between risk and reward as well as effort and reward. Specifically medium-term is a suitable period for new active entrants to the market.

Experienced active investors with large capital available for investment may spread their capital over three portfolios, each having a different term. As you will learn in this manual it is important that each portfolio is managed individually with its own methodology. When a stock is purchased for a particular portfolio (and therefore investment period) you need to be consistent through the ownership period of that stock. For example do not convert a stock you have bought for medium-term trading to long-term simply because the price has dropped and you have missed the exit signal! Equally if the stock price has increased by 50% do not employ a short-term strategy of taking the profit on what is meant to be a medium-term trade. Again, be consistent.

## 2.4 Trust the Trading System

Using a trading system means having a probabilistic edge in the market over your chosen term for each trade. (Visit the Members Zone on the www.sharewealthsystems.com website and read the Advanced Coaching Notes for more details on a probabilistic edge and the SPA3 Edge.)

As a result, over time you will grow your capital base according to the goals and objectives that you have set for actively investing in the market. Put another way, trading the market using a trading system is about greatly increasing the probability of profitable active investing.

The active investor has to be confident that, over a large sample of trades, the entry and exit signals that are used will greatly improve the probability of

executing profitable trades that are larger than the loss trades and, hence, of making money.

Having trust and confidence in a trading system leads to consistency in the buy and sell decision-making process. Consistency, trust and confidence means ‘knowing in advance how to act in any circumstance based on predetermined and tested rules’. Stop for a moment and think how powerful a psychological edge that is when taking on the markets. This is why a trading system with unambiguous well-defined entry and exit rules is required. It is extremely important that once a system is adopted that you strictly adhere to the rules.

A trading system is robust and consistent if it can continue to return measured results that meet predetermined criteria across the broad market over a large sample of trades covering different market conditions.

Not having a trading system is one of the main reasons why the majority of active investors have large loss trades that wipe out the profits from other profitable trades. Having a trading system and not adhering to it is just as bad as not having a trading system. Disciplined use of the trading system will follow if the active investor has confidence in the system. Confidence will be generated through belief and belief will be generated through proof of past performance and live performance. This will result in a positive trading attitude and a mindset that leads to trading success.

And so the cycle will continue.

# 3

# SPA3 METHODOLOGY

This Chapter introduces SPA3 as a methodology.

The following topics are covered in this Chapter:

- What is a methodology
- Designing a methodology
- Research objectives and outcomes for SPA3
- Research approach to SPA3

## 3.1 Beyond a Trading System

All market participants need to recognise that risk and investing in the market are inseparable. Large portions of this manual (in particular the Chapters on Risk Management and Money Management) are devoted to defining risk, differentiating the different types of risks, assessing the risk and finally managing that risk.

Many experts put forward the view that effective Risk Management and Money Management are the most crucial elements required to make profits in the market over the medium to long term. Through poor Money Management it is possible to lose significant amounts of your capital even with a system that has a positive expectancy. (Visit the Members Zone on the www.sharewealthsystems.com website and read the Advanced Coaching Notes for more details on expectancy and the SPA3 Edge.)

On the other hand, it is true to say that effective Risk Management and Money Management, 'without a successful trading system that has a positive expectancy, will simply result in you losing your capital over a longer period' (Ralph Vince – The Mathematics of Money Management).

The key is to have a trading system with a positive expectancy and integrated Risk Management and Money Management for that Trading System. This is precisely what the **SPA3 Methodology** gives you; **SPA3 Trading System, SPA3 Risk Management and SPA3 Money Management** as shown in Fig.3.1 .

## 3.2 Designing a medium-term methodology

### 3.2.1 Objectives

When designing a trading system and accompanying risk management and money management rules it is important to define the objectives of the methodology at the outset.

For SPA3 it was decided that the focus would be on finding medium-term trends in the equities market that would provide profitable trading opportunities.

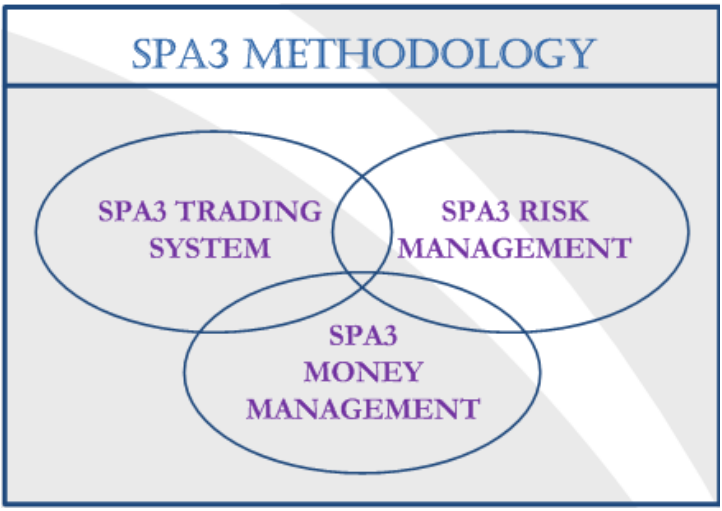



Fig.3.1

For SPA3CFD the objective was to use the SPA3 Trading System to signal medium-term trends where, if available, a CFD could be traded instead of a stock and thereby achieve leverage across a portfolio that traded both CFDs and unleveraged stocks and hence turbo boost SPA3 returns.

SPA3 was developed to meet the requirements of many active investors who explained how they would like to invest in the market given the following typical circumstances:

- Active investment in the stock market.
- Limited time available for market analysis.
- Prepared to put effort in to gain knowledge.
- Varying levels of risk averseness.

- Anticipated average returns of 10-15 compounded percentage points per annum better than the overall market index over a five year period.
- Maximum drawdown levels of <25% using Risk Profile 1.

To achieve these objectives, the following criteria were used in the development of SPA3:

- The trading system itself must be simple to use for both the beginner and the advanced active investor with a minimum number of steps and signals.
- The entry and exit signals must be simple to understand, recognise and interpret relative to subjective technical analysis techniques.
- It should take a relatively short amount of time to use on a regular basis but provide flexibility for advanced use.
- Sufficient opportunities must be presented by SPA3 for the active investor to make full use of their investment capital.
- Priority is given to consistency, robustness and eliminating large loss trades over high profitability.

SPA3 meets these requirements by offering well-defined unambiguous and inter-related buy and sell signals, rules and strategies for entering and exiting positions in the market and for managing the risk associated with investment in stocks using advanced money management techniques.

SPA3 suits the majority of medium-term active investors. Over a large sample of trades it will deliver a profit to loss ratio of around .45, i.e. 45% of trades are profitable. Hold periods range from 2 to 60 weeks with an average hold period of 5-6 weeks. The size of profit trades are around 2.0 times the size of loss trades, i.e. the profit ratio is approximately 2, excluding brokerage. It provides sufficient trading opportunities to effectively utilise available investment capital during most market conditions.

SPA3 has been designed to ensure that portfolio drawdown is minimised, profits are protected, the size of loss trades is minimised and trends are exploited as well as possible. SPA3 picks changes in trend both up and down and stays with

upward trends for as long as possible for a medium-term horizon when one develops. The SPA3 exit signals are often considered the most powerful aspect of the trading system.

The combination of the SPA3 risk management and money management rules will ensure that the amount of capital exposed to the market is tuned to the prevailing market conditions. This plays a major role in minimising drawdown and maximising portfolio growth when rising out of drawdown to new equity peaks.

### 3.2.2 Statistics for publicly traded SPA3 portfolios

Whilst statistics are provided here for individual portfolios that have been paper traded on a 'live' basis, it is preferred that readers refer to the Exploratory Simulation in the September 2012 and December 2012 White Papers for the ASX and NASDAQ, respectively. These White Papers provide detailed results from 10's of 1000's of simulated historical SPA3 portfolios.

In this manual, reference will be made to a public portfolio that has been traded since January 2001 on the Australian Stock Exchange (ASX) using the SPA3 Methodology. The statistics shown below are based on the **completed trades** as at 10th April 2012, i.e. unrealised profits in open trades are not included in the statistics.

This portfolio continues to be traded on a ‘live’ basis using market closing prices and every trade is published as and when it is made. The **SPA3 Portfolio - Risk Profile 1** SPA3 TradeMaster database file can be downloaded by customers within SPA3 TradeMaster* and analysed in any and every way that you may wish to.

The following statistics include brokerage on all trades.

| | Profit Trades | Loss Trades | All Trades |
|---|---|---|---|
| Trades | 550 | 614 | 1164 |
| Profit or Loss % | 15.44% | -8.36% | 2.54% |
| Ave Holding Days | 47 | 31 | 39 |
| Largest Trade | 175.73% | -30.23% | - |

| | |
|---|---|
| Profit / Total Trades | 47.25% |
| Profit Ratio | 1.741 |

| | Costs Per Transaction |
|---|---|
| Average $ | $33.75 |
| Average % | 0.19% |

| | Returns | | |
|---|---|---|---|
| | SPA3 | $XAO | |
| Compound Annual Return | 18.77% | 2.73% | |
| Return on Capital Invested | 586.87% | 35.21% | |

Table.3.2

The total profit and CAGR for SPA3 Portfolio - Risk Profile 1 includes dividends and interest over the life of the portfolio.

The market suffered a number of major corrections during this period;

July 2001 – September 2001 12 weeks -15.79%

March 2002 – March 2003 12 months -22.29%

November 2007 – March 2009 16 months -55.55%

In summary the statistics from this portfolio for this period are slightly inferior to those from our long-term performance expectations of the SPA3 Methodology. However, they are clearly superior to the performance of the overall market and all, bar maybe a handful, of Managed Funds.

Notice that the portfolio has delivered an excellent overall profit despite there being more loss trades than profit trades. How has this been achieved? Quite

simply the SPA3 Methodology ensures that profit trades are locked in according to their volatility and loss trades are closed as early as possible allowing the active investor to quickly find another high probability trade. As a result the profit trades are about 2½ times the size of the loss trades and the average hold period for losses are shorter than the hold period for profit trades.

An important point that should be evident from these statistics and which should not be lost on the new investor, is that no importance should be placed on any single trade ending up as a profit or loss. Accept this and you have already taken a positive step in your journey towards becoming a successful active investor.

* In TradeMaster, you can download the latest portfolio by opening the File Menu -> Portfolio Tools -> Selecting your preferred Portfolio from the drop down box then clicking the Download & Import Portfolio button.

** For more information on the SPA3 Public Portfolios please download the trading plans available on the www.sharewealthsystems.com Members Zone.

### 3.2.3 Making your money work harder

Most readers would understand how important the re-investment of profits into future trades is and the huge positive impact this has on portfolio performance resulting in compounding of profits. This is the holy grail of active investment. The chapter on SPA3 Money Management rules covers this topic quite adequately.

However there is another element of medium-term active investing using the SPA3 Methodology that can have an even bigger impact on the longer term performance of any SPA3 portfolio. It is also one of the more important reasons why the actual results achieved by SPA3 active investors can vary so much over an extended period.

And that is: optimum use of trading capital.

This is best illustrated using some more statistics from SPA3 Portfolio - Risk Profile 1 that are provided in SPA3 TradeMaster.

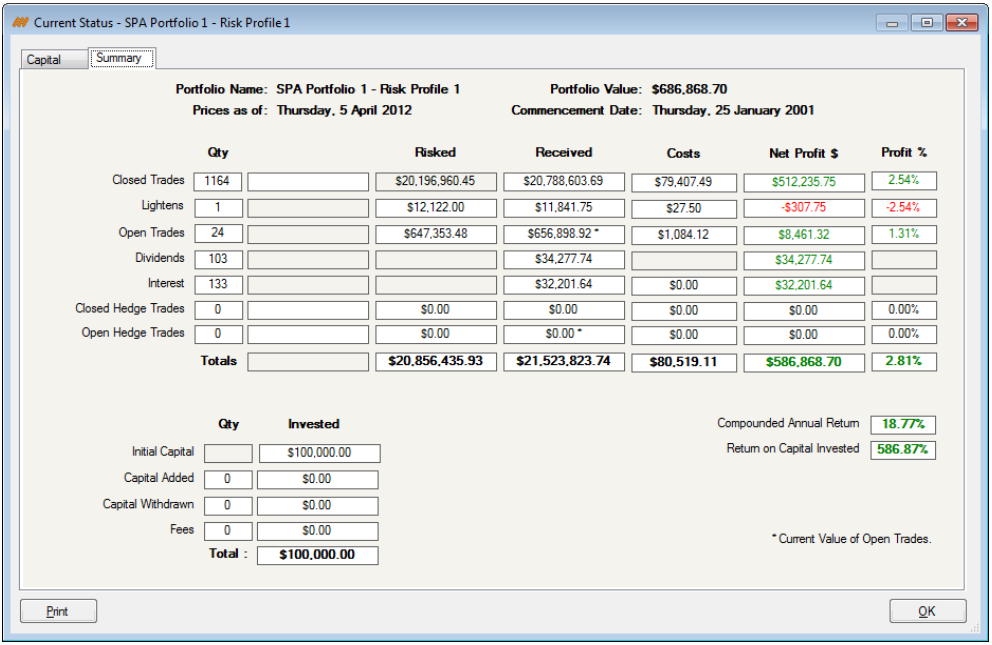



Fig.3.3

Fig.3.3 shows that the initial capital of $100,000 has been invested in the market many times over. In fact over the 11.3 year period, the money has been invested 201.9 times more than a buy-and-hold strategy. While the 2.54% return looks small it is on a very large number! This is one of the key elements of the success of the SPA3 Methodology or any active methodology that has an edge. The only way to achieve this multiplier effect is to ensure that your money is active in the market according to the SPA3 Risk Profile as a result of you taking SPA3 trades whenever you have available capital.

Understand this key point which will be a major factor in determining your ongoing returns and you will have taken a giant step towards becoming a competent active medium-term investor!

If you do not take SPA3 trades when you have available trading capital then you should not calculate your % return on the initial trading capital. For example, if only 50% of the 1164 trades had been taken in the SPA3 Portfolio - Risk Profile 1, then only 50% of the initial trading capital, i.e. $50,000, should be used to calculate the percentage returns that you achieve.

SPA3 also works your money harder by:

- Increasing your position sizes according to the increased value of your portfolio.
- Finding pyramid opportunities in open trades.
- Allocating position sizes according to probabilities.

As we head into more detail about the methodology it is important that you burn these concepts into your mind.

Further notes on Fig.3.3 :

- The portfolio has accumulated $32,201.64 of interest over the life of the portfolio. This interest has been earned on the cash component of trading capital, especially during high market risk periods when SPA3 forces the portfolio mostly or all into cash. The interest is reinvested back into the portfolio allowing position sizes to grow as the portfolio value increases.
- The portfolio has earned $34,272 in dividends. These dividends are re-invested back into the portfolio.
- Unrealised profit in Open Trades as at 10th April 2012 was $8,461.32. As these profits are realised, through exit signals occurring, the Closed Trades statistics will change, e.g. the 2.54% average Profit % will change accordingly.

# 4

# SPA3 AND THE TRADING PLAN

This Chapter introduces the Trading Plan and explains where it fits relative to the Methodology.

The following topics are covered in this Chapter:

- Why you need a Trading Plan
- The main components in a Trading Plan

## 4.1 Introduction

This chapter provides a more detailed background to the Trading Plan chapter in the SPA3 Getting Started Manual.

After reading Chapters 2 and 3 you should understand the major components that make up a Methodology and why you would use a trading system. You should also realise that a Methodology is not a stand-alone entity that fulfils all the requirements to trade the market profitably.

A Methodology does not define:

- Why you are investing in the stock market.
- The results you hope to achieve from your investments.
- The timeframe for you to achieve them.
- How much money you will invest in the market, invest in the specific methodology or invest in each individual trade.

Active Investment is a serious activity. It should be treated as a business with the objective of increasing the wealth of the shareholders. Every successful business has a Business Plan that defines its Mission, Goals and Objectives, Strategies, Action Plans etc. Your Trading Plan is your Business Plan. Your Trading System is a part of the Trading Plan. A Trading Plan must be developed and documented before investing in the market just like a Business Plan must be developed and documented before opening the doors of a business.

## 4.2 The main components in a Trading Plan

There are six main components in a Trading Plan:

- Mission Statement

  'Why are you investing in the market?' The answer may be to grow capital or to provide income now, or in the future.

- Goals and Objectives Statement

Details the amount you will invest, the time period, and the expected return both over the entire period and at various stages along the way.

It also details your investment skills goals. These are probably more important than your financial goals and objectives.

- Trading System

Defines the exact technical criteria for opening and closing a position in the market (buy and sell signals). In the context of this manual, the Trading System is part of the SPA3 Methodology. A Trading System is required for each market strategy whether it's a medium-term or short-term trading strategy, or, say, and options or CFD based strategy.

- Risk Management

The tools and rules to recognise, assess and manage risk according to your risk profile. In the context of this manual, Risk Management is part of the SPA3 Methodology. Risk Management must be integrated with the specific Trading System.

- Money Management

How capital is managed and allocated to individual trades. In the context of this manual, Money Management is part of the SPA3 Methodology. Money Management must be integrated with a particular Trading System and its Risk Management.

- Process Management

The regular routines and processes required for adhering to the signals and rules of the Trading System, Money Management and Risk Management.

All six components are vitally important for consistently profiting in the market. It is true that most market participants probably practice each component to some degree. Equally they all have profitable trades at some stage if only due to randomness. The key is to be consistent in your approach and your processes and the profits will follow.

Remember, your Trading Plan does not exist until you have committed it to paper in as much detail as you can.

## 4.3 Formulating your own Trading Plan

The following sections will assist you in understanding how to go about formulating your own Trading Plan. Later in this manual you will find the Trading Plan used for the SPA3 Portfolio 1 which you can use as a foundation for your own plan. There is also a Risk Profile template which should be completed before commencement of trading. You will only be able to complete the risk profile once you have read and understood the information contained in the next four chapters of this manual.

### 4.3.1 The Mission Statement

What is my purpose for actively investing in the market?

The Mission Statement deals with 'why?' Examples of investment purposes may include:

- Invest via a private super (pension) fund for retirement initially for portfolio growth and then for income in later years.
- Grow a capital base in a specific timeframe for a specific purpose, e.g. $50,000 for an extended overseas family holiday or a house extension.
- Earn income from dividends, while growing the base capital.
- Establish a capital base from which to derive income to pursue a dream that does not earn or require income.

- How does it fit in with your life mission statement?
- Are you doing this for your family?
- Your retirement?
- Your children's education?
- Are you doing this for a worthy 3rd party cause?
- Are you doing this to achieve skills for a career change?
- To achieve financial freedom so that you can spend your time on a cause?
- Is it for capital growth or income or both?

If you don't have a purpose for actively investing in the market then stop reading now and do one of two things; establish your purpose and commit it to paper or cease all investment in the market until you have determined and committed your purpose to paper.

All investors have different purposes for investing in the market. It is suggested that if your purpose is 'to make money' go back and think again. Human minds don't know how to comprehend such non-specific purposes.

Purpose drives you to persevere when the going gets tough, to learn more, to read more, to do some self-analysis to improve your psychological approach to active investment.

It is also possible that you may actively invest in the market for multiple purposes such as the examples above. In this case you might establish different portfolios for the different purposes and possibly even use different mechanical trading systems with different risk management and money management rules for each purpose, i.e. a different methodology for each purpose.

### 4.3.2 Goals and Objectives

This section deals with what you wish to achieve through active investment in the market, how much you wish to achieve and by when you want to achieve the

stated goals. Specificity is required in the Goals and Objectives Statement.

What are my trading/investment goals? This is where you set your return objectives.

These are the realistic periodic financial goals that you need to achieve to attain your stated purpose. Here you work back from your purpose as stated in your Mission Statement and calculate by how much you need to grow your capital to achieve your purpose in the time that you have available. Then the periods can be broken down into shorter periods, such as years, quarters and months. This process may also assist in establishing how much capital you will make available to achieve your goals and the ultimate objective, which, in turn, is driven by your purpose for active investment.

These goals will be reviewed periodically based on performance acheived and modified accordingly.

What are my risk objectives?

This is where you set the maximum drawdown that you are prepared to tolerate in your portfolio.

What are my analysis skills goals?

These might include different technical and / or fundamental analysis skills goals such as learning more about:

- momentum indicators,
- support & resistance,
- Fibonacci retracements,
- relative strength analysis,
- candlesticks,
- devising a technical analysis trading system,
- the correlation of debt to equity ratios to stock performance,

- etc.

What are my trading mindset skills goals?

These might include different trading attitude goals such as:

- devising a process to achieve consistency (hint: you need to use a mechanical system),
- overcoming the fear of buying stocks that have reached a new all time high,
- learning to trust my system and my regular trading processes,
- learning how to be at peace with any outcome for my trades,
- etc.

We suggest that the mindset skills goal that should be focused on is achieving consistency and there is no better way of achieving consistency than using a mechanical trading system.

### 4.3.3 The Trading System

The Trading System comprises technical and/or fundamental indicators that define the entry and exit signals to buy and sell a particular share/commodity in the market.

All active investors MUST have a Trading System that is tested, robust, and consistent. If you are deploying more than one market strategy you need a Trading System for each.

How much time do I have on a daily and weekly basis to follow the rules and signals of my Trading System?

How much stress and volatility am I capable of putting up with while actively investing in the market?

In which markets will I actively invest?

The goals and objectives set in section 4.3.2 will determine the market strategies, investment timeframe, the effort required and in which types of instruments you will actively invest.

If your strategy is medium-term trading in equities or trading a combined equities and CFD portfolio then SPA3 is the Trading System for this strategy in your Trading Plan.

There is no need to document the SPA3 signals and rules in your Trading Plan as these are already set out in this manual.

### 4.3.4 Risk and Money Management

The Risk Management section of the Trading Plan deals with the various risks in the market and how you manage those risks. These risks can erode initial capital or profits.

The Money Management Plan deals with how to allocate capital within a portfolio.

Your Risk Management and Money Management must be consistent with your Mission Statement, Goals and Objectives Statement and your Trading System. To establish a risk management and money management plan an investor must try to answer a number of core questions:

> How do I construct a portfolio with the entry signals from my Trading system?
>
> What are the various risks that could affect my portfolio?
>
> How do I assess the risks that could affect my portfolio?
>
> What is the risk associated for each entry signal?
>
> How do I deal with market risk and what actions will I take based with my assessment?

Will I use technical exit signals or will I use financial stop losses to exit trades?

If I use stop losses, how and where will I set my stop losses?

How much money am I prepared to allocate to individual trades?

How much money am I prepared to risk on individual trades?

How will I assess portfolio heat?

How and where will I take a profit from an open trade if my portfolio becomes overheated; ie. portfolio heat?

Will I trade all stocks in the market or will I focus of certain categories of stocks? If so, which ones will I leave out and why?

If you are a medium-term active investor in equities then the SPA3 Methodology provides answers to these questions. If you are trading other instruments over a different term, you need to devise the appropriate Risk Management and Money Management rules that are consistent with your Trading System for trading that particular market strategy.

The SPA3 Methodology provides flexibility within the SPA3 Risk Management and SPA3 Money Management rules to meet different risk profiles and amounts of investment capital. To meet these different profiles, each active investor using the SPA3 Methodology needs to customise their Risk Management and Money Management rules by deciding:

- Your Risk Profile.
- How much capital to allocate to medium-term trading and / or leveraged medium-term trading using SPA3CFD.
- How much capital to allocate to different entry risk levels.
- How many open positions you should have in each entry risk level, if applicable.

Once these decisions have been made you need to document them in your Trading Plan because they are crucial to achieving your goals and objectives.

The SPA3 Portfolio - Risk Profile 1 public portfolio uses SPA3 Risk Profile 1. It is recommended that those new to SPA3 get started on Risk Profile 1 and then after a few months of trading review your SPA3 Risk Profile.

You will need to have an understanding of the material presented in Chapters 6 to 8 before you are able to customise the SPA3 Risk Profile to match your personal risk profile. Chapter 2 of the SPA3 Getting Started Manual is designed to assist you with the finalisation of your Trading Plan and your Risk Profile to a level that you can get started.

The operational tasks of managing the trades and the risks in your portfolio become a structured process. You do need to document the SPA3 Risk Management and Money Management rules in your Trading Plan as each SPA3 user typically has variations on their own Risk and Money Management rules.

### 4.3.5 Process Management

Process Management entails regular routines that are followed to enforce adherence to the signals and rules of the Trading System and rules of the Risk Management and Money Management components of the Trading Plan for a particular market strategy.

Performance Measurement is also part of Process Management and is of vital importance. If you do not measure your performance how do you know how well or poorly you are doing and where to make adjustments to your trading processes or trading mindset? It is important to put a Measurement Plan in place and then to use an iterative process to apply necessary adjustments to your psychological approach, risk management or money management plan.

All active investors need to develop their own Process Management routines and Performance Management Plan. This must be included in your Trading Plan.

SPA3 TradeMaster reports all the necessary measurements for SPA3 and SPA3CFD active investment.

Discipline is required at all stages during the process of active investment. Here are some considerations for inclusion in your Trading Plan:

**AT ENTRY:**

- Only stocks that meet the Trading System rules must be purchased.
- The correct position size must be allocated according to the Money Management rules.
- Know the exit signals for that entry signal BEFORE placing the order for the trade.
- Open a new position on the next trading day after a signal. Buy at market between 11am and 12 noon, or 3.00pm and 3.30pm (choose one period).
- Once bought, the trade details must be checked and entered into SPA3 TradeMaster.

**DURING THE TRADE:**

- Daily routines for exit and lightening signals as well as pyramid opportunities.
- Weekly routines to analyse the Overall Market Index and the Sector Indices for Risk Management lightening of open positions. Depending on the market being traded the Overall Market Index for SPA3 Market Risk in Beyond Charts+ is:
  - NASDAQ:NASDAQ Composite ($COMP)
  - NYSE:S&P500 ($SPX )
  - ASX:ASX All Ordinaries ($XAO)

**AT EXIT:**

- Exit according to the Trading System rules.

- Close the position during the next trading day after an exit signal occurs between 11am and 12 noon, or 3.00pm and 3.30pm (choose one period).
- Record the exit details in SPA3 TradeMaster.

**PORTFOLIO MANAGEMENT**

- Maintain the % invested as formalised in the Risk Management section of the Trading Plan.
- Seek another entry signal in the appropriate Entry Risk that has available capital for investment into the market.
- Check for pyramiding opportunities.
- Review of portfolio capital to ensure that capital is balanced across Entry Risks.
- With SPA3CFD, ensure that your overall exposure does not exceed your planned exposure. E.g. if you planned to trade with x3 portfolio leverage then ensure that you are not leveraged at x3.5.

**PERFORMANCE MANAGEMENT**

- Conducted monthly.
- Check how many trades were NOT entered and exited according to the Trading System Rules.
- What made you break your entry and exit rules? Outside influence? Fear? Nervousness? Hesitation? Lack of confidence? Lack of trust?
- How are you going to improve this?
- In how many trades were the Money Management rules broken?
- When you had available capital in your portfolio, were there trades, including pyramiding opportunities (that met the rules), which you did not

take? Why did you not take them? How can you improve your mindset to follow the rules and take these trades?

- How many profit trades were there in the month?
- How many loss trades were there in the month?
- What was the net profit for the month?
- How much brokerage was paid in the month? Can you reduce your costs?
- Does this meet your Goals and Objectives for the month? For the last quarter? For the last 6 months? For the last 12 months?
- If not, were the causes inside or outside of your control; ie. system risk such as a "black swan" event?
- Are there steps that you could take to avoid this in the future?
- Have I exceeded my Risk Objective as stated in the Goals & Objectves?
- If so, what actions will I take?
- Do you need to modify your Trading Plan as a result?
- Do you need to improve your skills in any area and how will you go about it?

# 5

# The Equity Curve Mindset and SPA3 Risk Profiles

This Chapter covers the importance of overcoming the stock picking mindset. Successful active investors know that the issue of any individual trade ending up with a loss or profit is of no relevance in the long run. This chapter explains why many fail to achieve this level of thinking.

The following topics are covered in this Chapter:

- Too much emphasis on individual trades
- Persistence with market strategies
- The Equity Curve
- Drawdown and Equity Peaks

## 5.1 Introduction

Two of the main reasons that most active investors fail in their endeavours to grow their capital through timing the market are:

1. Placing too much emphasis on individual trades and
2. Not persisting with strategies that they start using.

Let's deal with persistence first. No strategy works brilliantly all the time in the market because the market cycles through different phases of rising, falling and traveling sideways for varying lengths of time. This means that EVERY strategy that is deployed in the market will either stagnate or will go into drawdown for periods of time. How long the period is will depend on what the market does, if the strategy is executed correctly.

It is during the times of stagnation and drawdown that the great majority of active investors have difficulty persisting with particular strategies. What they do is chop and change their strategies trying either to find a single strategy that works brilliantly in all markets or match different strategies to the prevailing market at any given time. Both are impossible to achieve.

Because investors have difficulty persisting with, or rather, remaining consistent in their execution of particular strategies, they are not successful in the markets over sustained periods of time. "I tried that once and it didn't work!" or "It worked for a while!" are their anecdotes at social gatherings quite confident that their assessment of the scenario is 100% correct!! What is typically incorrect is their paradigm of assessing what can and what cannot work.

Part of the reason that they do not persist and the main reason that they fail with active investing is their inability to raise their thinking threshold to investing at the portfolio level. They operate at the 'stock picking' level, putting all their energy and time into trying to pick a winner or more appropriately, trying NOT to pick a loser!

Successful active investors raise their level of thinking to the 'big picture' level, that is, the portfolio level. Practically this is done by focusing on the equity curve rather than individual trades. The outcome of individual trades is of no concern to

the successful active investor who objectively defines entry and exit points to individual trades regardless of whether the previous individual trades were winners or losers. They have this mindset because they know and fully accept, as a part of who they are, where profit and loss trades fit into their overall big picture trading approach.

Their focus is on the outcome of the combination of trades over a large sample over a long period of time. This is their edge in the market. The larger the sample, the higher the statistical reliability is of achieving the outcome of a researched edge. The equity curve that results from the large sample of trades is what is of utmost importance to the consistently successful active investor.

Taking this a step further, the active investor who thinks at the portfolio level will adapt quickly to multi-strategy investing understanding that individual strategies will have a positive impact on the equity curve when the market cycle suits that strategy.

For more detail on the stock picking mindset please read the Advanced Coaching Note entitled **The Equity Curve Mindset and SPA3 Risk Profiles** on the www.sharewealthsystems.com Members Zone. In this Advanced Coaching Note you will discover why, on a closed trade basis, a SPA3 portfolio, or any mechanical trading system that cuts its losses and lets it profits run, will always initially go into drawdown.

# 6

# SPA3 RISK MANAGEMENT

This important Chapter covers the major types of risks you will face in the market and how to combine the SPA3 Risk Management processes with SPA3 signals, rules and strategies.

The following topics are covered in this Chapter:

- Objectives of using Risk Management and Money Management
- What is Risk Management and Money Management
- Identifying different Investment Risks
- SPA3 Risk Management Strategies

Whilst Risk Management and Money Management are extremely important topics, they are also vast and complex topics. In this Chapter and Chapter 7, which covers SPA3 Money Management, the focus is how to combine SPA3 Risk Management and SPA3 Money Management processes with the SPA3 Medium-term Trading System signals, rules and processes. This approach means that the text is more specific than trying to cover the entire topics of Risk Management and Money Management.

It does however mean that you will be exposed to SPA3 Signals before you have learnt the definition of these signals. At this stage it is not important that you understand the specific signals. Concentrate on understanding the issues relating to Risk Management and Money Management as the level of your success in the market will ultimately be determined more by these issues than the signals themselves. It is recommended that once you have read Chapter 9 on the SPA3 Signals that you return and read Chapters 6 and 7 again.

Because Risk Management and Money Management are interdependent, the introductory sections 6.1 and 6.2 below discuss both Risk Management and Money Management. The remainder of Chapter 6 covers Risk Management and Chapter 7 covers Money Management.

## 6.1 Objectives of using Risk Management & Money Management

The objectives of applying strict Risk Management and Money Management rules are to:

- Preserve trading capital, that is, stay in the game.
- Limit portfolio losses when consecutive trades do NOT go in the direction originally expected from analysis.
- Limit portfolio drawdown when adverse market conditions prevail.
- Protect profits in profitable trades and in a portfolio.
- Grow capital using position sizes that do not take too much or too little risk according to prevailing market conditions.
- Achieve compounding of profits through re-investment of realised gains.

These objectives are the same whether trading leveraged or unleveraged instruments. Be aware that when trading CFDs in your portfolio with SPA3CFD, drawdowns and returns are magnified compared to trading unleveraged equities.

Uninitiated investors may not accept that they need to apply Money Management rules in their trading. This non-acceptance will inevitably lead to large loss trades that will greatly reduce, or more likely, eliminate ALL profits and significantly eat into investment capital. It makes little sense to learn and practice mechanical entries and exits using SPA3 but then to take a subjective and inconsistent approach to Risk Management and Money Management. Too many large loss trades, especially, on margin, can have a devastating effect of portfolio growth.

While all SPA3 traders can use similar entry and exit signals (parameters can be varied), it is in the area of Risk Management and Money Management that SPA3 traders are able to exercise flexibility. This flexibility allows you to customise the SPA3 methodology to best fit your own personal risk profile.

You must determine and document your personal risk profile before commencement of trading. Once determined, your risk profile must be followed in the same mechanical manner as you follow the SPA3 signals.

## 6.2 What are Risk Management and Money Management?

Risk Management and Money Management are about:

- Managing risk at the time of entry to a trade and during a trade. Specifically it is about managing the overall risk of your trading capital should the market turn against your open positions.
- Sizing the amount of capital to allocate to the trade based on the probability of success, the risk being taken in the trade and current portfolio value.
- Determining when to expose capital to the markets and how much, and when not to.

What risk is there to manage you may ask? The answer is the risk of drawdown. Whilst drawdown is a certainty, it must be limited according to your risk profile through disciplined adherence to personalised risk management rules.

Risk Management and Money Management also play a significant part in the psychological aspects of trading the market. Having a Trading System and not adhering to it or not applying Risk Management and Money Management rules is as good as denying that:

1. You are subject to experiencing the human weaknesses of emotion and ego. Trading the market in this mode of denial or over-confidence is extremely dangerous. It displays a mindset of “I’m bigger and better than the market” or “I don’t make loss trades” or “I’ll intuitively know when to get out of a trade when the time comes”. Risk Management and Money Management, therefore, play a major role in controlling the effect that your emotions can have on individual trades and in having a structured approach to active investing.
2. There are a vast number of different variables that can affect your portfolio at any given time most of which you don’t have any control over. Nobody knows what the immediate future holds and hence nobody knows what will happen next in the market or any individual trade. However you can control how you allocate your capital and how and when you exit your positions. You do this in recognition of the fact that you cannot control the millions of market variables that can and do affect your portfolio negatively.

## 6.3 Investment Risk

When it comes to active investment in the stock market, the concept of Risk Management is about controlling the amount of capital that may be lost to the market in the event that the market or a stock turns against your open positions.

**Definition of Investment Risk:** the downside potential of open positions in the market.

Investment Risk can be broken down into two kinds of risk that could cause downside potential: **market risk** and **specific risk**. Market risk is the risk that arises from general overall market movements. Specific risk arises from events that are specific to a particular listed company or a group of companies in the market, such as an industry sector.

Modern Portfolio Theory (MPT) teaches diversification as the method to use to minimise (since elimination is impossible) investment risk. MPT contends that specific risk cannot be controlled because there are too many factors that influence specific risk and because price action in the market is random. MPT assumes that matching the performance of the overall market index is acceptable in return for minimising market risk in investment portfolios through diversification.

There are four shortcomings with this thinking. Firstly, MPT assumes that large portions (30% - 50%) or entire portfolios cannot be withdrawn from the market in a short time span (a few days). Secondly, the return that the index provides might not be good enough for active investors!! Thirdly, MPT may not have researched the scenario of creating a portfolio where entering and exiting positions in the market is done according to a consistent methodology that has integrated timing, risk management and money management rules. Fourthly, all stocks tend to have a high correlation during bear markets meaning that diversification is limited in reducing drawdown to less than that of the overall market.

The foundation for MPT is the belief that price action in the market is totally random. SPA3, or any successful trading methodology, proves that biases do exist and that trends start and stop following certain price action patterns in the market.

Passive investors may find the MPT approach acceptable - until they invest in gaining some advanced active investment knowledge or until they experience a 55% bear market such as in 2008, 1987 or the 1970's.

Active investors who use technical analysis to invest in the market do so understanding the following:

1. The price action of a stock discounts everything known and unknown about that stock and ultimately measures sentiment of the participants regarding the stock. Sentiment creates the supply and demand that determines the direction and the variability of the share price.
2. Biases exist in the market that can be captured and exploited using technical analysis to determine price entry and exit points.

Using certain tools, strategies and methodologies based on price action it is, therefore, possible to assess your risk in the market and take appropriate action to control that risk. Using these methodologies, it is possible for active investors to achieve returns far in excess of the overall market index. Knowing how to manage risk requires you to firstly be able to recognise the risk and then assess that risk applying the appropriate risk controls that follow below.

### 6.3.1 Types of Investment Risk

As mentioned above there are two main types of risk, **market risk** and **specific risk**.

**Market risk** is the downside potential that relates to the entire market.

**Specific risk** is the downside potential that relates to an individual stock. The downside potential could be caused by any of the following:

- The **industry sector** to which the stock belongs.
- Market **sentiment** towards the particular stock, as measured by volatility.
- The lack of sufficient **liquidity** in the issued shares of the company.
- Shock announcements by or about a listed **company**.

Using technical analysis tools all the risks can be assessed and managed except for company risk, which includes shock announcements by or about a company that causes immense downside sentiment on the share price. An excellent example of this is ASX listed Biota in 1999 when approval for testing of their influenza drug was denied by the USA authorities and the Biota stock price

dropped by nearly 50% over 2 days. Another good example is ASX listed AMP's announcement to the market on 1 May, 2003 which caused the stock price to tumble by approximately 35% when the stock came out of suspension 2 days later. Another is Billabong (ASX:BBG) in 2011 when it dropped 44.23% following a shock announcement.

There are plenty of similar examples in all stock exchanges around the world.

### 6.3.2 Managing Investment Risk

The potential return of various trades can be impacted by market risk and specific risk. The two main controls that you need to have in place to manage these risks are:

- A finite, structured and unambiguous exit strategy through a Technical Exit Signal or a Stop Loss.
- Allocating appropriate capital:
    - for investing in the market at the porfolio level based on risk assessment and,
    - to a trade, both at entry and during the course of the trade, based on risk assessment.

The exit strategies, in terms of SPA3, are the Trading System exit signals and rules (as defined in Chapter 9) and the Risk Management exit rules, as defined in this Chapter. Exit signals and rules will ultimately determine the relative size of profit trades to the size of loss trades. Winning exit strategies obviously require that profit trades are relatively larger than loss trades, e.g. profit trades average 25% and loss trades average 10%. However, entry and exit strategies alone will NOT determine overall whether an active investor will make or lose money in a managed portfolio. Portfolio level Risk Management and Money Management are required to complete the picture.

The Money Management controls, which are dealt with in the next Chapter, relate to allocation of capital to individual trades. A simple example for the less-experienced is if a 25% profit trade is allocated $8,000 and a separate 10% loss trade is allocated $30,000, then the active investor will actually lose $1,000 between the two trades, despite having a larger percentage profit trade than the loss trade.

Generic Risk Management techniques will be discussed before discussing specific SPA3 Risk Management Rules. This has been done to put SPA3 Risk Management into context with other techniques that are discussed in technical analysis circles.

## 6.4 SPA3 Risk Management Strategies

SPA3 utilises a number of Risk Management Strategies.

SPA3 uses strategies that reduce exposure to the market by analysing the overall market, the sector that a stock belongs to, sentiment risk and liquidity risk which are covered in this section.

### 6.4.1 Managing Market Risk

Market risk is the downside potential that can result in a share caused by the general movement of the overall stock market.

Obviously one way of avoiding market risk is not ever having any money invested in the market! However, this approach will be of little interest to those committed to profiting from investment in the market. Accepting the market risk is the first step to understanding it and looking for ways to manage that risk.

As SPA3 is a medium-term methodology for going “long”, profits are generated when the trend of the stock is up. Generally when the market is trending up there are more stocks that are trending up. This is obviously a good time to be going “long”! However, when the market is going “sideways” or “down”, there are generally still medium-term trends which allow the smart investor to profit from but most stocks do fall during down markets.

SPA3 provides you with:

- A mechanism to determine the market risk, and
- Choices for determining the action you will take depending on your personal Risk Profile.

Throughout this text, the term ‘Overall Market Index’ (OMI) will be found. The OMI for SPA3 ASX is the All Ordinaries ($XAO). The OMI for SPA3 NASDAQ is the NASDAQ Composite ($COMP).

In the USA, the NASDAQ Composite ($COMP) is used for the NASDAQ and the S&P500 ($SPX) is used for the NYSE and ARCX (ASE).

**High Market Risk**

The market risk is considered **High** when a SPA3 High Market Risk signal occurs on the OMI. For more on the indicators used see section 8.2.

There are two risk profiles for managing market risk:

**Risk Profile 1**

*When the Market Risk is HIGH:*

No new positions will be opened.

*When the Market Risk changes to HIGH:*

All open positions will await the next individual SPA3 exit signal to occur before exiting

OR

All open positions will be exited the following trading day after Market Risk changes to HIGH.

**Risk Profile 2**

*When the Market Risk is HIGH:*

No new positions will be opened until in TradeMaster the percentage “Invested” box in Portfolio Menu -> Current Status is less than 50% and a new position that is to be opened does NOT take the percentage “Invested” to greater than 50%.

The planned position size for new trades across all Entry Risks will be reduced by 1/2.

Pyramiding of open positions is not allowed.

*When the Market Risk changes to HIGH:*

Each open trade will wait for the first occurrence of a DS lighten signal, at which time it will be lightened by 1/3 of the recent maximum.

It is important that you:

- Know your strategy and commit to a risk profile BEFORE the overall MARKET DOWNTURN arrives.
- Adhere to the lightening strategy indicated in your strategy
- Accept the risk/reward equation that results from your choice of strategy.
- Are vigilent for a turn to the upside to increase exposure in the market when it comes.

Share Wealth Systems has invested considerable resource into understanding the impact that these strategies have on portfolio performance.

We have found through our research that Risk Profile 1 provides a better return with less drawdown over the long-term - Risk Profile 1 is the recommended risk profile for most active investors. It is only recommended to use Risk Profile 2 during secular bull markets.

All of these strategies are suggestions and all are acceptable. The strategy you use will depend on your risk profile. Even if you decide not to trade using the SPA3 methodology during periods of high market risk, the SPA3 Methodology is working for you, adapting to your level of risk averseness and need to limit draw down.

**Low Market Risk**

After market risk has returned to **low**:

Using Risk Profile 1 you will immediately re-enter the market with full position sizes.

OR

Using Risk Profile 2 you have the choice of keeping the open position sizes as they are, or increasing them as detailed in the pyramiding strategies in the next Chapter on Money Management and brokerage spent on the trade does NOT exceed 2% of the overall trade value post increasing the position size. Capital allocated to new positions should return to full position sizes.

### 6.4.2 Managing Sector Risk

**High Sector Risk**

The sector risk is considered **High** when a SPA3 High Sector Risk signal occurs on the Sector Index. For more on the indicators used see section 8.2.

**Risk Profile 1**

*When Sector Market Risk is HIGH:*

Full Position sizes will be taken as long as the Market Risk is Low

**Risk Profile 2**

*When the Sector Risk is HIGH:*

The planned position size for new trades across all Entry Risks will be reduced by 1/2.

Pyramids of open positions are not allowed.

*When the Sector Risk changes to HIGH:*

Each open trade will wait for the first occurrence of a DS lighten signal, at which time it will be lightened by 1/3 of the recent maximum.

No action will be taken for subsequent DS Lighten signals.

Many of the points made regarding market risk apply to sector risk although a sector index obviously covers a smaller segment of the market. In addition some sectors have a few stocks that have a large weighting on the sector index. There is therefore greater scope for divergences between the movement of the sector indices and stocks that belong to various sectors.

As is the case with managing market risk, the important points with sector risk are that:

- You must know your strategy BEFORE the any SECTOR DOWNTURN arrives.
- Your lightening strategy MUST be committed in your Risk Profile and
- You must accept the risk / reward equation that results from your choice of strategy.

**Low Sector Risk**

The sector risk is considered **Low** when a SPA3 Low Sector Risk signal occurs on the Sector Index. For more on the indicators used see section 8.2.

*Sector risk returns to low*

You have the option of keeping the open position sizes as they are, or increasing them as detailed in pyramiding strategies in the next Chapter on Money Management.

By taking this action, the capital allocated to new positions should return to full position sizes.

### 6.4.3 Managing Sentiment Risk

Volatility is defined as "changeable" in the dictionary. When it comes to share prices, volatility is the amount that a share's price changes while moving up and down during a period of trading. The more volatile a share, the higher the potential profit that is on offer. However, from a Risk Management viewpoint, there is a risk of greater downside potential. This risk must be managed whilst allowing the opportunity for a high potential profit to develop. Volatility can, therefore, be used as a tool to assess sentiment risk in a stock.

Once the risk is assessed it must be managed. In order to manage risk effectively, the active investor must have an objective method with well-defined rules.

To achieve the assessment of sentiment risk, two indicators have been designed in Beyond Charts+, based on Welles Wilder's Average True Range (ATR), called the ATRE (Average True Range Exponential) and ATRVE (Average True Range Volatility Exponential).

To manage sentiment risk a volatility-based system has been designed in Beyond Charts+ called Volatility Stop (VS). The Volatility Stop indicator values are based on the ATRE. The ATRE, ATRVE and Volatility Stop are defined and explained in section 9.6. Volatility-based Risk Management exit signals have been designed using these indicators.

A Volatility-based exit signal is best described as a price-action Relative Stop Loss. That is, the setting of the Stop Loss exit is relative to the variability of the share price at that time. If the share price exceeds its upper boundary of variability then profits should be taken because sentiment in the share is beginning to reach extremes on the upside, thereby increasing the risk of downside potential. The boundary is 'relative' because the level of Stop Loss changes every day in relation to the variability of the share price. Therefore, market price action is used as the basis for calculation of the amount of capital placed in the trade (or that is sold). It is relative to the volatility of the price movement of the stock.

Two types of Volatility exit signals have been designed as a part of the SPA3 Trading System to manage trades that are, or become, higher risk trades as sentiment risk grows in the trade.

The two Volatility exit signals are SPA3 Risk Management exit signals designed to take profits (or limit losses) from the trade when sentiment in the stock is at an extreme. When sentiment is at an extreme the risk of potential downside in the stock has risen to a level where a SPA3 medium-term exit signal would be too delayed to lock in profits and minimise peak to trough draw-down, i.e. the price retracement from the high price during the trade to the exit price. A re-entry signal has also been designed for stocks where the volatility continues to be high after a high volatility exit has occurred but the trend may potentially continue.

The results of the Risk Management rules are astounding but they do not work perfectly 100% of the time. The point is that NOTHING EVER WILL - it’s a probability game!! The important thing is to have rules and to follow them. If some profit is left on the table that is fine, don't make a pig of yourself by getting too greedy and trying to squeeze every ounce of profit out of the trade. To quote William O' Neil, "Bulls can make money in the markets, even bears can…but pigs can't”.

### 6.4.4 Managing Liquidity Risk

Avoid investing in shares that are illiquid, i.e. where trade values are low. While you may have little trouble buying the desired quantity of shares, the risk is that when an exit signal occurs, you may have difficulties in selling all of your position due to the lack of liquidity.

The recommended rule is to only invest in stocks whose average traded value over the 3 previous months is at least 5x but preferably 10x the position size that would be purchased according to the position sizing rules in Chapter 7 on Money Management. Generally avoid stocks that have a volume of ZERO shares traded on any day, excluding periods of suspension, within the last 3 months.

For more information on liquidity in Beyond Charts see section 9.3.6.

When using SPA3 Alerts and SPA3 Scans in Beyond Charts+, you are able to define the number of zero volume trading days for potential trades you are prepared to accept as formalised in your Trading Plan. The zero volume days are set in each SPA3 Parameter profile. In addition the minimum average daily value of shares traded can also be stipulated. SPA3 Alerts and SPA3 Scans will ignore all SPA3 signals for stocks that do not meet these criteria.

### 6.4.5 Managing Company Risk

Company risk is difficult to manage as the downside is usually caused by shock announcements by or about the company, which typically occur too quickly for the risk to be assessed and managed. Also, very seldom is there evidence of price action before the shock announcement. Of course, if there is, then an exit signal is usually generated prior to the shock announcement.

The SPA3 Methodology provides you with the opportunity to minimise the downside impact of company risk through.

- Generating sufficient trading opportunities to ensure that you have your trading capital spread across the maximum number of open positions

allowed in your Trading Plan.

- Limiting the maximum amount of capital allowed in any single position.
- Money Management rules that reduce the amount of capital to be allocated based on the market capitalisation of that stock.

### 6.4.6 Summary

The Risk Management component of the SPA3 Methodology provides a comprehensive toolkit to manage the many risks associated with trading in equities.

The major elements of SPA3 Risk Management are:

- Finite, unambiguous exit strategy through a Technical Exit Signal or a Volatility Stop.
- Strategies which can be customised according to your risk profile to manage
- Market risk
- Sector risk
- Volatility risk
- Liquidity risk
- Company risk

In Chapter 2 of the SPA3 Getting Started Manual on Finalising your Trading Plan you will be introduced to the SPA3 Risk Profile which will assist you in formalising your personal Risk Profile.

In the September 2012 White Paper for ASX active investors entitled "Revision of SPA3 Risk Management and Money Management Rules" detailed portfolio exploratory simulation research was documented. Ensure that you study this White Paper, it contains important research outcomes on Risk Management.

SPA3 NASDAQ active investors should study the December 2012 White Paper which contains detailed portfolio exploratory simulation on NASDAQ portfolios from 2000 - 2012.

# 7

# SPA3 MONEY MANAGEMENT

Following from the Risk Management Chapter, this Chapter covers the rules that determine how much capital should be allocated to an individual trade.

The following topics are covered in this Chapter:

- Introduction to Position Sizing
- How much capital is required
- Rules for Position Sizing in individual trades
- Portfolio Capital Allocation
- Pyramiding Strategy

The Money Management rules for SPA3CFD are described in the SPA3CFD Reference Manual. This chapter on Money Management should be read before reading the SPA3CFD Reference Manual.

## 7.1 Introduction to Position Sizing

Active investors understand and acknowledge that risk exists in the market and that the risk needs to be managed and controlled. Ultimately Money Management controls the absolute downside (hence investment risk) and absolute upside potential of individual trades and of the portfolio as a whole through the managed allocation of capital.

**Definition of Money Management:** the rules that determine:

- The amount of capital allocated to a position in the market (position size) relative to the total amount of portfolio capital.
- The amount of an active investor's portfolio capital that is risked per trade.

Each trade will carry a different level of probability of producing a profit and a different potential profit or loss. The higher the potential loss that can be derived from a trade, the higher the risk that needs to be controlled.

The method to control the risk is to allocate less trading capital to trades with a potentially larger expected loss and more capital to trades with a potentially smaller expected loss. The 'expected' loss is calculated using quantitative analysis of 1000's of trades and determining the average loss by trade volatility as calculated at time of entry.

When using SPA3 entry signals their potential profit level and downside as determined by, amongst other factors, their volatility, differs for every trade.

In addition, the spread of portfolio capital across individual trades will change depending on the total amount of active investment capital. A total trading capital of $5,000 will be allocated in a different manner to that of $50,000 and, in turn, to $500,000. It would not be productive to spread $5000 across more than 2 trades whereas the spread of trades would change enormously for $50,000 and for $500,000 of active investment capital.

The allocation of capital, therefore, becomes a trade-off between how many open positions an active investor can manage, maximising returns, controlling risk and

how many opportunities an active investor's method (or trading system) presents them with to take positions in the market.

## 7.2 How much capital is required?

It is ironic that generally the less capital novice investors have the more risk they take. They focus on higher risk trading instruments or higher risk trades seeking the large quick returns. Besides the additional volatility risk, they then magnify that risk by allocating too much capital to these high risk trades. Too much is a relative term. It is this very mindset that leads to most novice investors losing in the market. In fact, **lack of capital** is one of the biggest reasons why most novice investors are "taken out" by the market.

With more capital, more opportunities can be traded which, in turn, through compounding, can increase absolute returns if the active investor knows how to manage the risks, has the discipline to follow the rules and allocates capital according to the risks being taken.

So how much is more? Although an active investor could start with a minimum of A$7,000 to actively invest with a medium-term strategy whilst following the SPA3 Trading System, Risk Management and Money Management rules, it is recommended that a larger capital base for active medium-term investment in the market be used.

We recommend that a minimum starting capital of A$20,000 be used for SPA3 trading on the ASX. The portfolio exploratory simulations covered in the September 2012 White Paper entitled "Revision of the SPA3 Risk Management and Money Management" simulates portfolios that start with $25,000 but less can be used provided the lowest brokerage rates around $10 or 0.1% are used and the correct position size is used. With SPA3CFD, starting with less than A$25,000 on the ASX is possible because more exposure can be achieved through leverage trading CFDs.

The main reason for A$20,000 being the minimum starting capital is the minimum brokerage that is paid to transact in the market. In Australia, assume a minimum brokerage of $30 or 0.15%, whichever is the greater, a trade size of A$2,000 would incur brokerage of 1.5% of the position ($30 ÷ A$2,000).

If a trading system averages 4% movement per trade (excl. brokerage) then the buy and sell transactions would use up 3% leaving just ¼ of the gross profit for the trader with the broker getting ¾ of the gross profit. You can change brokers to reduce your brokerage but there is a limit to how low you can reduce your brokerage rates. The answer is to increase your trade size which means you need to increase your trading bank.

Ensure that you read the September 2012 White Paper to learn about brokerage and the affect that it has on medium term active investing.

An approximate upper limit on medium-term trading capital would be around A$800,000 to A$1,000,000 per portfolio in the Australian market due to liquidity reasons. Basically, with larger amounts of capital, it is suggested that:

1. two or more SPA3 portfolios are established,
2. capital be allocated to other market strategies that are lower risk and require less effort (and achieve lower returns), or
3. Australian and South African investors consider off-shore markets. This is why Share Wealth Systems has researched SPA3 for trading on the NASDAQ.

Otherwise the only limit on capital that can be used for medium-term active investment is imposed by the liquidity of and the number of stocks on the exchange being traded.

There is, however, a school of thought that if you trade a system that over time continues to provide excellent returns, then you should commit as much capital to that system as you can possibly lay your hands on, market liquidity permitting!

For SPA3 active investors in the United States or elsewhere in the world trading the NASDAQ it is mandatory that you read the December 2012 White Paper for trading stocks listed on the NASDAQ.

The same principles as discussed in the context of trading the ASX apply to trading the NASDAQ.

A starting capital of a minimum of US$20,000 is recommended for actively investing on the NASDAQ but ensure that you minimise the brokerage rates that you pay when starting with a small portfolio.

## 7.3 Position Sizing for individual trades

For ASX SPA3 active investors, refer to the September 2012 White Paper entitled "Revised SPA3 Risk Management and Money Management Rules".

For NASDAQ SPA3 active investors refer to the December 2012 White Paper.

Both White Papers can be accessed from the Help Menu from with the Beyond Charts+ charting software.

Click here to view the Sept 2012 White Paper

## 7.4 Capital Allocation Rules

Trading a SPA3 unleveraged portfolio the following rules should be followed (these rules are modified when trading CFDs and stocks with SPA3CFD – see the SPA3CFD Reference Manual):

**Rule 1:**

The Capital Allocation position sizes are valid when the market risk is Low. When the market risk is High, position sizing is reduced according to the rules in section 7.5, which would not be relevant for using Risk Profile 1.

**Rule 2:**

The maximum initial position size at time of entry should be set for any portfolio. It is recommended that no single trade be allocated > 15% of total portfolio capital and at time of entry that the maximum position a trade is permitted to reach is 20% of portfolio value. With the Revised SPA3 position sizing rules it is very unlikely that this will occur.

> Expectancy of a trading system being realised over the long term relies on the allocation of capital per trade being at a level that does not take the active investor out of the game over a large number of trades. Position sizes must, at the time of entry, not be too large relative to the amount of capital. This will prevent large loss trades from destroying the capital base.
>
> What then is the maximum percentage of the total portfolio that a single trade can rise to? There is a school of thought that if a single position rises to >= 25% of the entire portfolio, then the portfolio is carrying undue high risk. This is especially valid for portfolios that use a short-term trading strategy, do not use a consistent method for stock selection, or portfolios that do not have a finite, well-defined exit strategy based on price action. However even for SPA3 portfolios this extent of risk is considered to be too high. As discussed earlier there is little protection from shock announcements about a particular stock other than ensuring that your portfolio does not carry too high an exposure to any single stock.
>
> When using SPA3CFD with a low starting capital (e.g. less than A$25,000) to trade CFDs and stocks you will most likely need to increase the maximum position for an open trade to 25% otherwise, with CFD leverage applied, trades may be larger than 20%.

The Maximum Initial Position Size is set in SPA3 TradeMaster by selecting **Portfolio, Profile, Money Management,** Position Sizing sub-section. See in section 7.5.

**Rule 3:**

An active investment portfolio following a consistent methodology should be “fully” invested in the market according to the rules of the methodology and

personal risk profile. In other words a portfolio is “fully” invested if only 50% or 0% of the trading capital is invested during periods of High market and sector risk providing that is consistent with the trading plan. However portfolio performance will be significantly inferior if the portfolio is not “fully” invested when it should be and when available trades and pyramids are ignored or arbitrary position sizes are taken, i.e. follow the rules to achieve optimum portfolio performance.

**Question:** What then is the optimum number of open positions and optimum position size?

**Answer:** The theoretical answer would be based on being able to have as many open positions as presented by the trading system. This is how an active investor can be assured of achieving the SPA3 expectancy. However, as SPA3 generates more signals than most people would have sufficient capital to invest in, this is of academic interest only. The solution is also not to reduce your position sizes to be able to take a position in every SPA3 opportunity as:

- Transaction costs measured as a percentage of the purchase price becomes too large. Too large is < 1% of the position size for a trade depending on which SIROC settings are being used.
- Most people would not have the time to manage a portfolio with too many open trades.

This results in seeking a balance of all these factors. The key point is that only with a structured trading system with integrated Risk Management and Money Management is it possible to get this balance.

The fewer opportunities presented by the trading system the fewer opportunities for profit. Similarly, the less time that capital is invested in the market when it should be the less opportunity there is for profit at rates that are possible in the market. A lower return would be expected. Of course people without a trading system can run the risk of overtrading which can be dangerous although, with SPA3, the number of SPA3 trades presented and the available trading capital will determine the rate of trading by the SPA3 active investor and thus, overtrading would be avoided.

Active investors can only maximise their chances of achieving the Expectancy of the System and the historically simulated results if:

- They are fully invested according to their chosen SPA3 Risk Profile, i.e. the capital allocation model is fully exploited as explained earlier in this chapter and as detailed in the September 2012 White Paper for the ASX entitled "Revised SPA3 Risk Management and Money Management Rules".
- The Trading System and Risk Management exit strategies are followed to manage risk, to achieve the System's relative size of profit trades to loss trades and to make capital available for subsequent trades.
- They exploit the SPA3 opportunities whenever trading capital is freed up.

This is why active investors must learn to "pull the trigger" when opportunities arise and accept that there will be losses. Get into the game and get on with the game. Not taking opportunities due to fear of having a loss trade merely reduces the chances of realising the expectancy of the system and of investing profitably.

## 7.5 Market and Sector Risk Position Sizing

In Chapter 6 different strategies were discussed when the Market Risk or Sector Risks are classified as High, along with brief mention of possible choices when market or sector risk return to Low. These topics are expanded on in this chapter under the headings of Lightening and Pyramiding.

Lightening is the act of reducing already existing open positions or planned position sizes, and is triggered by:

- a change to High in either Market Risk and/or Sector Risk.

Pyramiding is the act of adding to already existing open positions and may be triggered by either one of two circumstances, namely:

- a change to Low in either Market Risk and/or Sector Risk

OR

- a relevant SPA3 signal being generated primarily as a result of a share's price action, when both Market Risk and Sector Risk are Low.

### 7.5.1 Lightening Strategy

A strategy of position lightening is required during periods of High market and/or sector risk. Position sizing is recommended according to Table.7.1 when opening a new trade. You may decide to use slightly different fractions of a unit. This must be decided and documented in your Trading Plan before trading commences. This is set in SPA3 TradeMaster as shown in for Risk Profile 1 by selecting **Portfolio, Profile, Money Management, Position Sizing** sub-section.

| Position Sizing Matrix | | | | |
|---|---|---|---|---|
| | | Market | | |
| | | Low | High | |
| | | | Risk Profile 1 | Risk Profile 2 |
| Sector | Low | 1 | 0 | 2/3 |
| | High | 2/3 | 0 | 1/2 |

Table.7.1

When market and/or sector risk turns High then you need to have a strategy to manage currently open positions according to whether Risk Profile 1 or 2 is being used. If Risk Profile 1 then all positions can either closed immediately. If Risk Profile 2 then positions must be lightened according to your Trading Plan choice. SPA3 handles this by using the Risk Management technique of reducing exposure to the market by lightening open positions.

It is important that you choose which you will do, commit them to your Trading Plan and then adhere to your chosen strategy when Market and/or sector risk does turn to **High.**

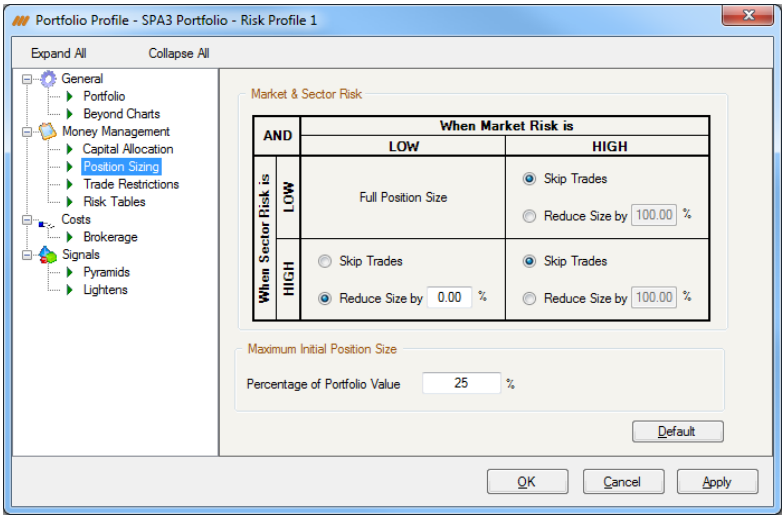


Fig.7.2

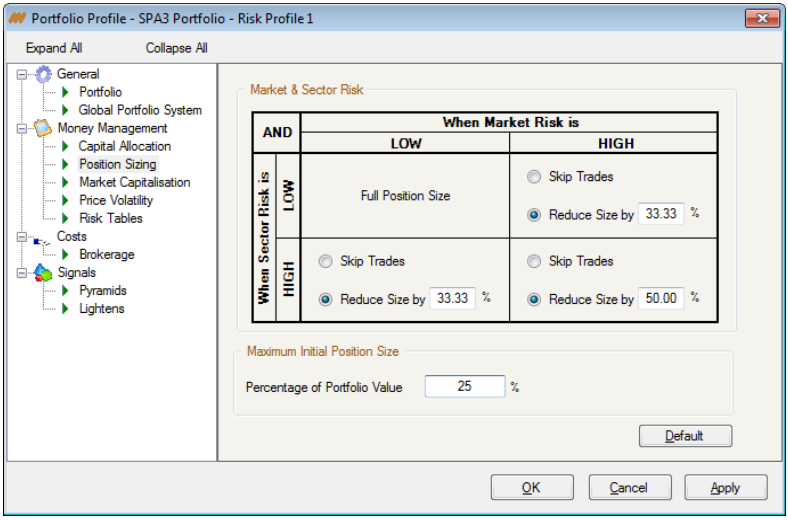



Fig.7.3

**Brokerage rule for lightening of pyramiding:** When reducing exposure or increasing exposure to the market by lightening or pyramiding ensure that the transaction size for the lighten or pyramid is not so small that the brokerage is greater than 1% of the transaction size.

**Lighten once rule:** SPA3 traders can choose to only lighten once. This means that if a position was opened during a **High** risk market with a reduced position size then, if a SPA3 lighten signal occurs, no further lightening of the position is permitted.

The 'lighten once' rule is aimed at smaller SPA3 portfolios. Large portfolios can continue to lighten until their brokerage approaches the 1% level of transaction value.

As a rule of thumb, brokerage should average less than 0.35% per transaction and therefore less than 0.7% per trade (buy and sell).

Once the market risk returns to **Low,** the initial position sizes for new trades can be returned to 'standard'. For Risk Profile 1 this is not relevant as for most High Risk periods, there will not be any open trades but there could be for a short High Risk period.

For currently open trades, a 'standard' position size is at least the current Portfolio Risk % and can be achieved by increasing the open position size either:

1. after the next DB occurs for the stock, a SPA3 pyramid signal, provided a SPA3 exit signal has not occurred and the market/sector risk remains Low, or
2. immediately upon market risk turning Low, provided sector risk is also Low. If sector risk is High then increase the current position size to a maximum of ⅔ of the current Portfolio Risk %.

Choose which strategy you will deploy in live trading and commit it to your Trading Plan before commencing trading.

## 7.6 Pyramiding Strategy

This is a Money Management technique. It is based on adding capital to an open position that has "caught a big trend". It can also about restoring a previously lightened position to a near full position size because of a transition in the Market Risk or Sector Risk from high to low.

Pyramiding is about improving returns within the robustness and consistency of the SPA3 Trading System. Pyramiding is a strategy that adds further capital to an open position as the trend continues and increases in strength. As the share becomes more overbought less capital is added to the position. Eventually a time (a SPA3 "confirmed" sell signal) will come when the total position is sold.

The SPA3 pyramiding signals were modified in December 2011 when the SPA3 Revised Edge was released. A DB Pyramid signal is now only displayed on charts when a DB signal occurs that is less than one third of the Profit Stop for that trade.

The research of including pyramiding in portfolio simulations was not completed in time for the September 2012 White Paper or the December 2012 White Paper and hence is not included therein.

SPA3 traders need not include pyramiding in their Trading Plan if they wish to emulate the simulation results detailed in the White Paper.

At some stage SWS will also simulate the SPA3 pyramiding signals.

### 7.6.1 Pyramiding Rules

As a stock that is trending upwards becomes more overbought, the Pyramiding Rules allow capital to be added to the trade in diminishing amounts.

Assume that the amount of capital that an active investor invests per trade is a unit of 1 (one). For one active investor this could be $5,000 for another this could be $30,000. In the text below, when ½ a unit or ¼ of a unit is mentioned it will be a relative amount to each active investor depending on the value of the unit for a particular Entry Risk.

**Rules**

1. Pyramiding is allowed only if the Weekly SIROC of the stock is rising, one of the RSC criterion is met and the previous weekly SPA3 signal is NOT a WONS1. The only exception to this rule is if a WCB1+RSC+DB signal follows a WCB1+RSC(1-4) and the Weekly SIROC is not rising at the time of the WCB1+RSC+DB. In such a situation that second entry signal can also be treated as a pyramid signal.
2. Using the Volatility and Risk Management rules in Chapter 9, trades may only be pyramided if the ATRVE < 5%. That is, do not pyramid the high volatility stocks. It goes against the principle of taking profits into the trend and using the Volatility TTM Profit Stop or Profit Stop.
3. Never pyramid when the market or sector risk for the stock is high.

4. A SPA3 pyramid signal is only displayed if the DB pyramid signal occurs < 33.33% to the applicable Profile Stop level.
5. No single trade should be pyramided to more than the maximum allowable position size for the overall portfolio which is recommended as 20% of the current portfolio value.

The SPA3 Module in Beyond Charts+ will only display a pyramid signal SPA3 Alert on a chart if rules 1, 2, 3 and 4 are met.

6. Never use a SPA3 DB pyramiding signal to enter a trade. With the exception of a WCB1, WCB1+RSC+DB (following a WCB1+RSC(1-4)) and a WCB3, all pyramiding signals are not opportunities to take a new position in the stock, i.e. if you missed the original entry signal then wait for other new entry signals and ignore the DB pyramid signal to enter a new trade.

SPA3 TradeMaster will assist with the pyramid position size calculation. As a rule of thumb only pyramid a trade when the brokerage due on the trade is less than 1% of the total trade size. SPA3 TradeMaster can alert you to this if you select the **Enable Brokerage check** in **Portfolio, Profile, Costs, Brokerage** subsection.

## 7.7 Reviewing Portfolio Capital

Modifying your individual position sizes as your overall portfolio capital increases/decreases is on-going part Money Management rules.

The September 2012 White Paper for the ASX entitled "Revision of SPA3 Risk Management and Money Management Rules" provides portfolio simulations of different Portfolio Risk % settings. A range of Risk % settings is provided depending on portfolio size and brokerage rates paid.

The December 2012 White Paper for the NASDAQ entitled "SPA3 NASDAQ Release White Paper" provides portfolio simulations of different Portfolio Risk % settings specifically for trading the NASDAQ.

Both White Papers are accessible from the Help Menu from within the Beyond Charts+ charting software.

Using a Risk % at the bottom of the range will typically lead to less drawdown but also less portfolio growth. Using a Risk % near the top of the range will typically lead to more portfolio growth. There will be market periods where using a larger position size, but not too large, will be better than using a smaller one.

All the simulations in the White Papers have used one Risk % through each simulation. However, a SPA3 active investor can decide to alter their Risk % if they discern that SPA3 portfolios will thrive in a particular market period with larger positions sizes.

Using SPA3 TradeMaster will greatly assist in simplifying your ongoing portfolio management according to the SPA3 Risk Management and Money Management rules. In fact, without SPA3 TradeMaster there is a high probability that you will break most of the SPA3 Money Management rules.

# 8

# SPA3 Market Risk Strategies

This chapter talks about how SPA3 enters the market and exits the market through the calculation of Low or High Market Risk signals on the NASDAQ and ASX exchanges.

The following topics are covered in this Chapter:

- Why Market Risk rules are important to trading a successful share portfolio.
- The technical indicators used and the definitions of the entry and exit signals for Market Conditions in SPA3.
- How to differentiate between SPA3 Market Risk Entry and Exit signals for Low and High Risk periods.

## 8.1 Introduction to Market Risk Timing

Recent research demonstrated a significant improvement in historical portfolio simulations using SPA3 Market Risk timing compared to the previous Market Risk timing techniques and other potential Market Risk timing mechanisms that have been suggested and researched in the past. We also noted a significant improvement to the equity return over the life of a portfolio compared to staying invested throughout all market conditions.

Whilst the concepts used in the Revised SPA3 Market Risk timing are, in our opinion, the best that we have seen so far for market timing of indices and sectors for medium term active investment, it does not necessarily follow that this will be the case for using these concepts for timing of stocks. This is because indices and stocks have quite different price movement characteristics.

From inception until 2015, SPA3 ASX and SPA3 NASDAQ have used the SIROC indicator to determine the Market Risk and Sector Risk for the SPA3 Methodology. SPA3 Market Risk timing determines the Low Market Risk and High Market Risk medium-term timing.

This is important to determine when, respectively, to be 100% invested in stocks and when to be 100% in cash, when using Risk Profile 1. With Risk Profile 2, SPA3 Market Risk determines when to be 100% invested and when to reduce exposure to a maximum of 50%.

SWS research has conclusively demonstrated that Market Risk is the **biggest risk** that equities investors face, and managing this successfully has a profound positive effect on long term outcomes.

Before and since inception of SPA3, many different technical concepts have been researched and tested to be used for SPA3 Market Risk. These concepts emanated from customer suggestions and internal projects initiated to improve this area of SPA3, taking into consideration many different statistical metrics, Share Wealth Systems had been unable to find a better medium term Market Risk timing mechanism until researched completed at the start of 2015. See the

exploratory research results in Appendix B this chapter for detailed research information.

The discovery of the Revised SPA3 Market Risk timing concepts came about from SWS researching a mechanical system for active investment of ETFs (Exchange Traded Funds). Being index and sector focused, the research of discovering a timing mechanism for ETFs closely lends itself to using a similar mechanism for SPA3 Market and Sector Risk timing. When the ETF system timing was nearing acceptance, the same rules were tested as a SPA3 MR mechanism by running historical portfolio simulations. The outcomes immediately showed promise.

## 8.2 Indicators used in Market and Sector Risk Timing

The SPA3 Market Risk and Sector Risk rules use two technical analysis techniques:

1. Swing charts with a three day period setting.
2. A customised ATR Trailing Stop.

The Swing Charts used in SPA3 Market Risk look similar to percent based zig-zag charts but are not. The swing is determined by a new low or new high being achieved over the selected period. For example, for a 7-day swing peak to be achieved requires that a new 7-day low occur from the last high, that is, a low that is lower than the lowest low over the last 7 trading days.
The Swing Charts are used to determine exits that can occur before an Average True Range (ATR) Trailing Stop exit occurs. Patterns are programmed into SPA3 Market Risk rules to determine an exit for the All Ordinaries ($XAO) and NASDAQ Composite ($COMP) Indices which are used for deciding SPA3 Market Risk. These patterns are:

- an Initial Stop Loss (ISL) based on the first trough after entry being violated,
- a precisely defined Head & Shoulders pattern.

Average True Range, which measures the range of a trading day from High to Low but also includes gaps from one trading day to the next if one exists. It is a measure of price volatility. This can then be averaged over a number of trading days. 21 days is used for SPA3 Market Risk.

The ATR Trailing Stop applies a multiplier to ATR based on the current level of volatility meaning that the higher the volatility, the more room the price is given to move. However, the ATR Trailing Stop can never be lowered when Market Risk is Low or raised when Market Risk is High.

Both the Swing Charts and ATR Trailing Stop work far better on data where a High, Low and Close prices are present because the High and Low prices are a necessary part of the ATR and Swing Chart calculations.

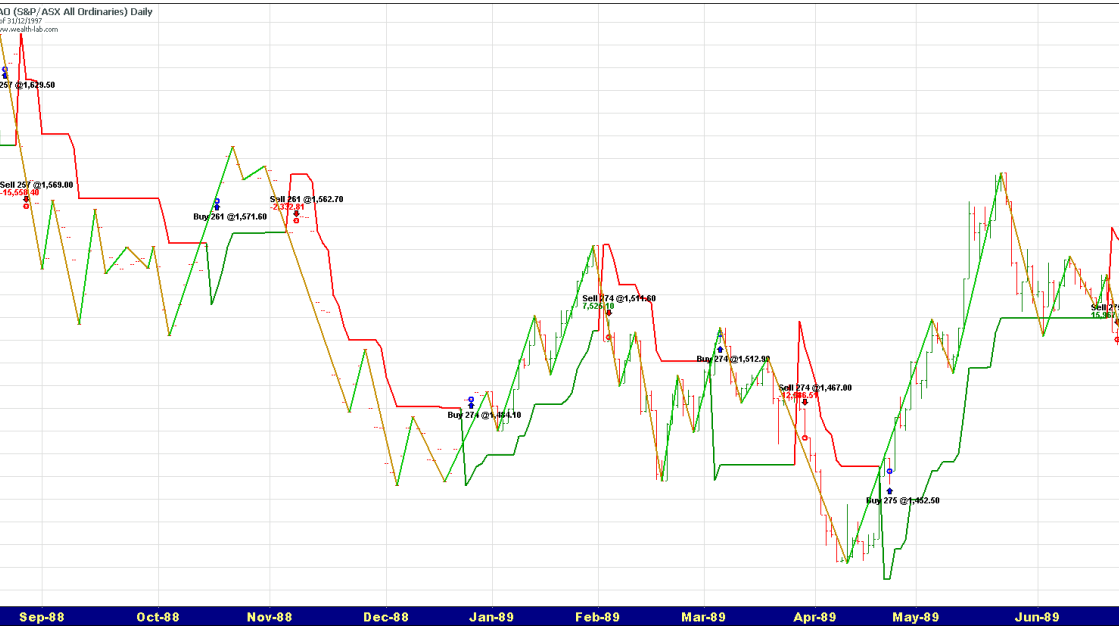
The chart below shows data on the left where only the Close price is available (i.e. Open, High, Low, Close are all recorded as the same price), and on the right where the Open, High, Low and Close prices are available.

The ATR Trailing Stop indicator is not displayed on charts in Beyond Charts for SPA3 Market Risk and Sector Risk signals. The charts below are used for illustrative purposes to show the effect that no high and low data has on the SPA3 MR & SR indicators.


The Swing Chart uses High prices for determining a peak and Low prices for determining a trough. The ATR Trailing Stop uses the Average True Range, which uses both the High and Low prices in determining the ATR.

The following chart shows the same period for the same data where the Swing Chart and ATR Trailing Stop are overlayed.

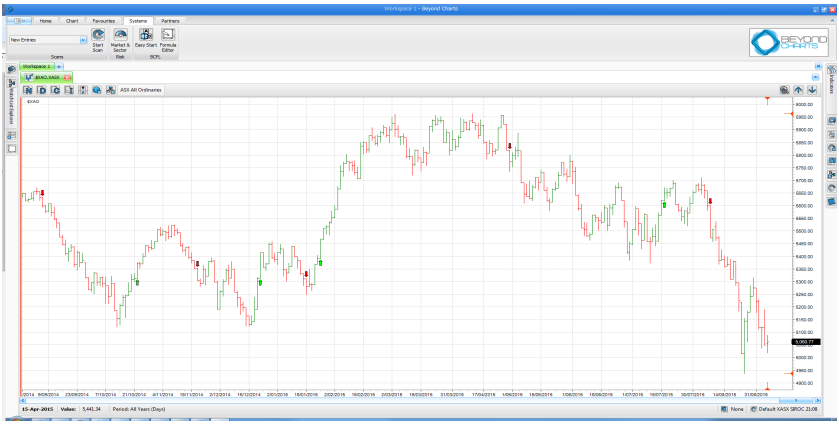
The left part of the chart shows that without the Highs and Lows, how much closer the ATR Trailing Stop tracks the price action and much less volatile the peaks and troughs are. This doesn't invalidate the Swing Chart and ATR Trailing Stop concepts but it does increase the frequency of signals.




The research for the Market and Sector Risk Timing can be found in Appendix B for those who have particular interest in the statistics and history of the market risk section of the SPA3 methodology.

## 8.3 Identifying SPA3 Market and Sector Risk

Within Beyond Charts, users can easily distinguish a Market state based on the SPA3 methodology via the signals which appear on the charts for the All Ordinaries or the NASDAQ Composite. Changes in Market and Sector risk can occur on any given trading day and should be viewed on a chart with a Daily time period.



As can be seen through the image above of the $XAO, there are 2 types of signals that can be viewed on a chart to indicate the start of a Low or High Market Risk period, as indicated by the green and red arrows. These signals are to be acted upon during the next trading day (a signal on a Friday will be executed on the following Monday, or Tuesday if Monday is a non-trading day).

A green arrow indicates the status of the Market is **Low** which by Risk Profile 1 indicates for followers of SPA3 to engage the market on the following trading day. In reverse, a red arrow indicates a status of **High** risk, in Risk Profile 1 you would exit your positions the following trading day even if no specific SPA3 exit signal is given on that following day. The management strategy here is to be in cash and out of the market in particularly unfavourable conditions.

# 9

# SPA3 SIGNALS AND RULES

This Chapter introduces the main indicators used in SPA3 and gives a detailed description of every SPA3 entry and exit signal.

The following topics are covered in this Chapter:

- Introduction to SPA3 Concepts
- SPA3 Entry and Exit Signals
- Relative Strength Comparison
- The SPA3 Module in Beyond Charts+

## 9.1 Introduction to SPA3 Concepts

The SPA3 Trading System contains very precise entry and exit rules that are unambiguous and mechanical and hence can be programmed into a computer. The rules are explained in detail in this chapter however, as they are programmed into Beyond Charts+, the SPA3 module will display every SPA3 signal when the criteria explained below actually occur in any stock or index.

### 9.1.1 Harnessing the trend

The SPA3 rules have been designed to provide entry points into stocks that are:

- oversold as a result of a medium-term down trend and have confirmed a medium-term change in trend upwards; or
- trending upwards and have broken out on the upside into a continued and possibly stronger up trend.

One of the golden rules in short-term and medium-term trading is to “Never trade against the trend”. SPA3 has been designed primarily to ensure that all stocks selected for consideration have a positive market sentiment, i.e. an up-trend has already commenced and the stock is out-performing the market. This feature substantially improves the probability of a profitable trade.

SPA3 has been designed to provide an exit signal should the trend not develop or, indeed, the share price turns and changes direction to trend in the opposite direction. This means that the active investor will be provided with a mechanical exit signal that should either protect an existing profit or limit a loss to a relatively small one.

If a trend does not develop after a SPA3 entry signal has occurred, this does not necessarily mean that the SPA3 Trading System does not work. No system can provide profitable entry signals 100% of the time. Markets are allowed to change their minds. Markets reflect the ebb and flow of market sentiment, i.e. people deciding their view on a share. People change their minds, hence, so do markets. The important issue here is that the SPA3 Trading System will give you an exit signal when this occurs. The capital can then be re-invested in another higher probability trade.

Without an extensively tested trading system most traders/investors hold onto losing trades because they do not have a finite exit strategy and then, when they do eventually exit, do not have a structured process to find a high probability trade in which to invest the capital that has become available.

SPA3 provides the active investor with confidence to be armed with an advantage over other market participants by knowing in advance how to act in any circumstance based on predetermined and tested rules.
While there is always great attention placed on the entry signals and prices, the exit is without doubt the most crucial aspect. Using SPA3 the active investor will know precisely under what conditions to exit the position before even taking a position in a particular stock.

### 9.1.2 The key indicators used in SPA3

SPA3 uses the SIROC indicator, Relative Strength Comparison (RSC), Exponential Moving Averages (EMA), Average True Range Volatility Exponential (ATRVE), the Volatility Stop indicator (VS) and (in the case of the WCB4 signal) a “higher close” price breakout as the basis for its unambiguous, well-defined and inter-related signals and rules.

SPA3 also uses other exit concepts that don’t use any indicators for the Profit Stop, Trailing Stop Loss and Time Stop. These are explained later in this text.

To simplify the explanation of the SPA3 signals and rules, the first part of this chapter deals with SPA3 signal definition without explaining the role of Relative Strength Comparison (RSC) in the criteria for entering a position in the market. The role of the RSC is explained thereafter. However, in practice the first filter SPA3 will use when trading is to seek out those stocks that meet the SPA3 RSC criteria. It is crucial, therefore, that the SPA3 user understands the RSC rules before attempting to trade based on the SPA3 signals.

The Volatility Stop indicator is explained later in this chapter. While the entry signals are the same for all stocks irrespective of volatility there are specific exit signals for trading high volatility stocks.

The SIROC indicator, which forms the foundation of SPA3 signals, stands for Smoothed Indexed Rate Of Change. In essence, the SIROC is a momentum indicator that, through its indexing and smoothing algorithm, has a cyclic element to its movements. It can work well in both trending and range trading markets. It is relatively simple to interpret its signals, as there is very little "noise" in its movements compared to other momentum indicators, such as Rate Of Change (ROC), Momentum, RSI, and Stochastic etc. Due to the smoothness (i.e. lack of noise) of the SIROC indicator, its signals are far clearer and, hence, more unambiguous.

Many other indicators are too subjective leaving analysts with many interpretations as to what action to take, e.g. where the consistent overbought and oversold zones occur, whether to act on a crossover or not, where to draw the support and resistance trend lines and where resistance has been broken.

**Furthermore, the signals generated by SIROC have demonstrated to be generic to different types of stocks and to be sufficiently accurate for mechanical trading. This is why it is the backbone of the Share Profit Advantage Trading System.**

When the SIROC indicator is near the bottom of its indexed range it is oversold. It is overbought when it is near the top of its indexed range. These two limit lines are set mechanically at 10 and 90, respectively.

The SIROC works best when combined with an exponential moving average producing crossovers, which together with the limit lines incorporate the ideal attributes that are required in a mechanical trading system.

The SIROC indicator requires two settings. The first defines the rate of change period and the second defines the smoothing factor.

After much research and development, the period settings of 21 8 were chosen for the SIROC and 5 and 8 for the Exponential Moving Averages as the 'standard' settings. SPA3 uses the SIROC 21 8 indicator on both weekly and daily data. The EMA 5 is used ONLY on weekly data and the EMA 8 is used ONLY on daily data.

Ongoing SPA3 research has lead to there being four settings that are recommended for consideration: SIROC 13 5, SIROC 17 7, SIROC 19 7 and SIROC 21 8. The SIROC 21 8 will be used as the 'default' in this text.

SPA3 uses both the limits and crossover methods to signal an entry or exit point. The crossover method is used for the SIROC crossing over the EMA, not the EMA crossing over the close price of the stock being analysed.

The weekly SIROC 21 8 chart is used as the “big picture” barometer to show the medium-term direction of the trend and is the first chart to be analysed. The daily SIROC 21 8 chart is used to potentially fine tune entry and exit points where required. Many beginner technical analysts make the mistake of only analysing daily charts. SPA3 uses the weekly SIROC as the “controlling” signal.

The main reason to know what the “big picture” view is from the weekly chart is to determine the direction of the medium-term trend. Once this is known, one of the golden rules of active investment in the market is to always trade with the trend. If the medium-term “big picture” view shows a down trend for a stock, then medium-term “long” positions should NOT be sought.

### 9.1.3 Acting on breakouts using the WCB4 signal

In the initial research for SPA3 during the 1990’s, many indicators were tested before it was decided to use a momentum indicator as the key indicator. The primary reason for the choice was that momentum indicators are generally more suitable for medium-term trading, which was one of the basic design criteria for SPA3.

The drawbacks with most momentum indicators were overcome by using the one that was indexed, combining various settings for weekly and daily analysis and finally using the RSC filter. Experienced SPA3 traders would know that while the SIROC indicator has been a brilliant indicator there were occasions where the SIROC would give a later than desired entry or in some cases no entry at all.

All momentum-based indicators (e.g. MACD, ROC, RSI, etc) suffer the same symptom of lag. For example when the daily cycle is particularly long and the start of that cycle, i.e. the DB signal, occurred just before the criteria for the weekly SPA3 setup was met. Typical of this situation is a WONB4 signal which is not followed by a DB but instead a much later WCB2 entry signal.

The WCB4 signal was designed to capture these types of situations. Further details on this signal, and others, can be found under the "SPA3 Entry Signals" heading below.

### 9.1.4 Types of Signals

There are 2 kinds of weekly signals that are provided by the SPA3 Trading System namely, **"confirmed"** and **"on notice"** signals.

- A weekly **"confirmed"** signal is one that demands action to enter or exit the market on the next trading day, i.e. no daily signal is required.
- A weekly **"on notice"** signal is one that puts the active investor "on notice" to seek the next buy or sell signal on the daily chart.

The weekly signals are "controlling" signals and the daily signals are "supporting" signals that are dependent on a "controlling" weekly "on notice" signal occurring before the daily signal becomes relevant. This is what is meant when referring to the SPA3 Trading System having "inter-related" signals and rules. During periods of high volatility the daily exit signals for such stocks do not have any weekly pre-requisite.

Each SPA3 signal has been assigned a code. This code is used to easily identify each signal so that it can then be used in the SPA3 TradeMaster software, back-testing track records, on the SPA3 Email Forum and elsewhere to communicate signal occurrences. The following logic was used in determining the SPA3 signal codes:

- W = Weekly
- D = Daily
- C = "Confirmed"

- ON = “On Notice”
- B = Buy
- S = Sell
- The signal numbers have been allocated in the sequential order that the signals occur in the ideal life cycle of the SIROC indicator, as shown later in this Chapter.
- VS = Volatility Stop
- TTM = Take-The-Money (Profit Stop)

Additional rules were introduced to the SPA3 system during a research review that completed in December 2011. During this review a Profit Stop was introduced. The profit objective used in individual trades is different depending on the volatility of the stock as measured by the ATRVE. The Profit Stop, Trailing Stop and Time Stop and other exit rule additions are discussed in more detail below and in a White Paper that was published in December 2011, which is available in the Members Zone.

### 9.1.5 SIROC Lifecycle

Fig.8.1 depicts, in a perfect world, how one would like to see the SIROC indicator behave in reaction to the price movement of a stock. This would be the ideal life cycle of the SIROC indicator.

Under such ideal circumstances, the stock price would increase in price causing the SIROC to increase in value as shown by “A” in Fig.8.1 . The price would reach an overbought level in the Overbought Zone and then either retrace or consolidate for a period of time. During the retracement or consolidation period of the share price, the SIROC indicator would fall in value, as shown by “B” in Fig.8.1 , until the SIROC reaches the Oversold Zone.

The share price would then move to a higher level causing the SIROC to move out of the Oversold Zone and rise again in value.

Such rhythmic movement of the share price would cause a nice even sine wave-like movement in the SIROC indicator allowing active investors to enter trades when the SIROC rose from the Oversold Zone and to exit the trades when the SIROC fell from the Overbought Zone. The SPA3 Signals would be Weekly Confirmed Buy 1 (WCB1) and Weekly Confirmed Sell 1.2 (WCS1.2), respectively.

Ideal Lifecycle of SIROC

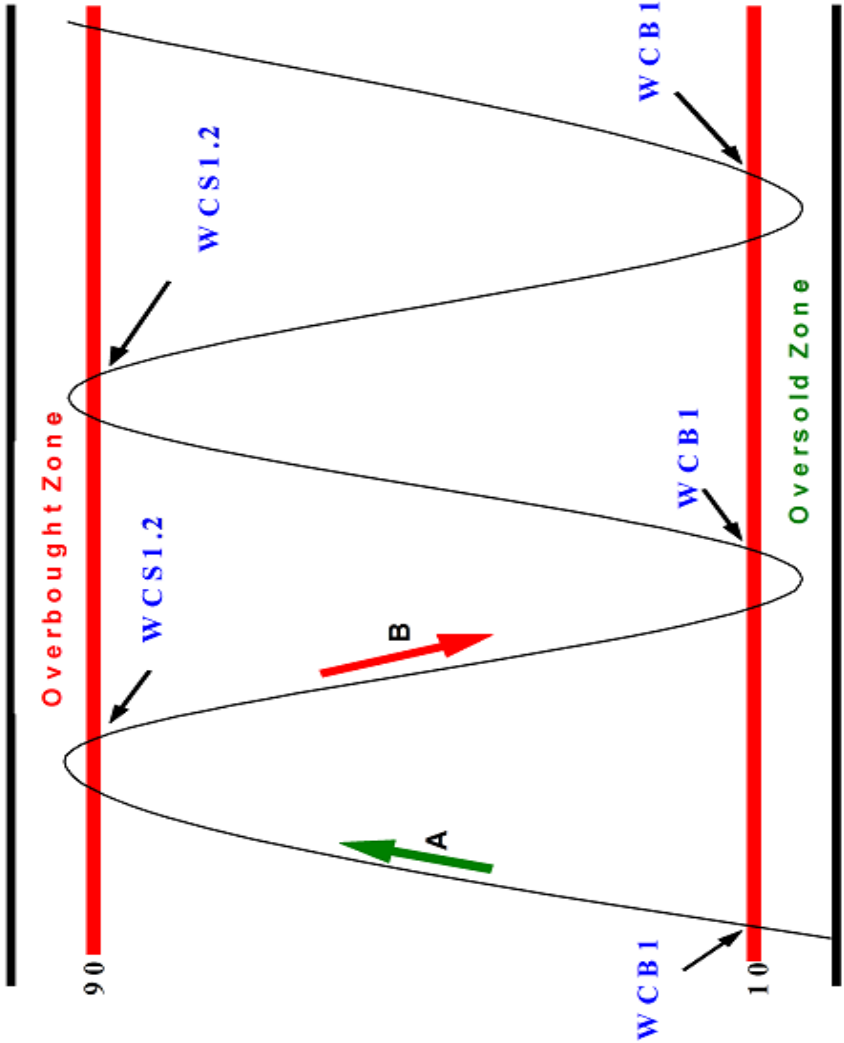



Fig.8.1

The SIROC is a Rate of Change indicator, which means that its values will change according to the rate of change of the stock's price on which it is based. This means that if a stock price is declining rapidly and then slows its rate of decline, the SIROC could start basing and even rising indicating the slowing of the rate of change. This behaviour is typical of all ROC and Momentum indicators (MACD, RSI, Momentum, KST and SIROC).

In 2008, following further extensive research, the formula for the SIROC indicator used in the Beyond Charts+ software for SPA3 was modified to remove most of the 'rate of change effect'. This means that the revised SIROC used in Beyond Charts+ does not suffer the same effect of rising when rate of decline slows meaning that the revised SIROC indicator used by SPA3 will only start rising in reaction to a price rise. There are other variations of the SIROC indicator available in other software packages that do suffer from the 'rate of change effect'.

However, in the real world, share prices do not move in such a rhythmic manner. If they did, why is an indicator needed to assist with entry and exits? One would be able to make decisions from viewing the price graph on its own, knowing when price changes were imminent.

A SIROC graph might look more similar to the one constructed in Fig.8.2 to depict all the SPA3 weekly signals. The chart in Fig.8.2 can be used as a quick reference to understand where in the life cycle of the SIROC indicator all the weekly SPA3 signals occur. The blue line is the SIROC and the red line the 5-week exponential moving average. Be sure to refer to this figure especially after studying the definitions of the SPA3 signals. It is recommended that you are able to visualise each signal as this will greatly enhance your understanding when using SPA3.

However, it is not mandatory to be able to recognise SPA3 signals to start trading with SPA3, as the SPA3 Module in Beyond Charts+ displays symbols on the charts to identify the SPA3 entry and exit signals.

Weekly SPA3 Signals

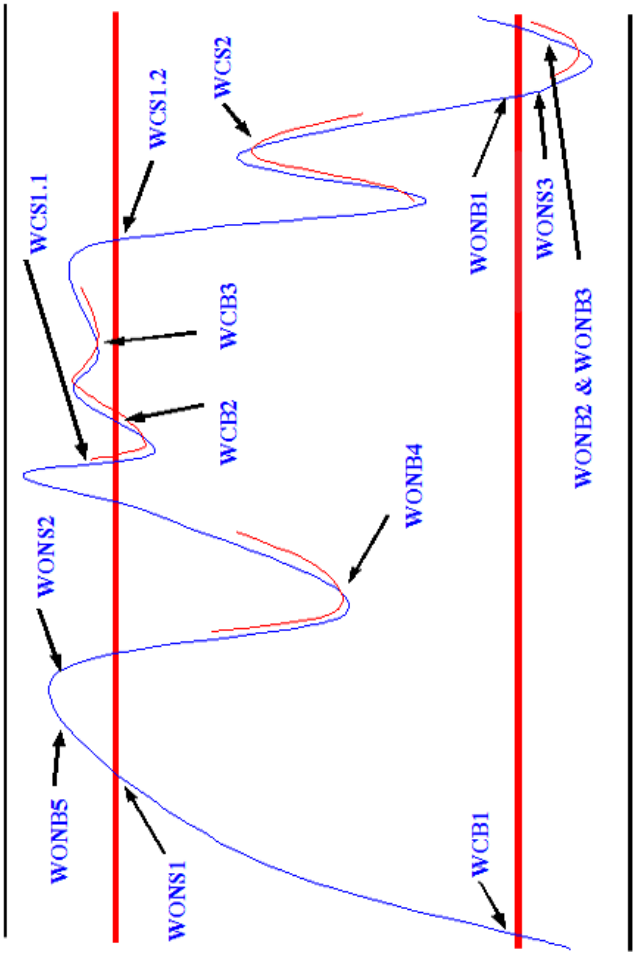



Fig.8.2

## 9.2 The SPA3 Module in Beyond Charts+

The SPA3 Module in Beyond Charts+ has been designed to recognise and show every SPA3 entry and exit signal. It is important to understand that this functionality is designed to improve the productivity and ease of use for customers using the trading system. SPA3 traders should still put effort into understanding the definition and logic of the SPA3 signals.

SPA3 users should study these rules and definitions as that understanding plays an important role in having the necessary psychology required to be an active investor. At the time of execution of a trade, be it opening or closing a position, it is important that this task be undertaken with confidence and without delay. A consistent trading approach can only be achieved with a high level of confidence in the methodology being used. An important part of the methodology is the trading system being used and it is therefore good practice that all SPA3 users have a good understanding of why an entry or exit signal has occurred.

The SPA3 Module will accurately highlight all the entry and exit signals but SPA3 traders should be able to visualize the movement of the SIROC and the other indicators that have generated the signal. Initially this may be challenging however some perseverance over time will result in positive results. SPA3 traders can be assured that relative to the myriad of other technical techniques and the subjective nature that characterizes the vast majority of them, the SPA3 signals are logical, mechanical and ultimately easier to master.

## 9.3 SPA3 Parameters in Beyond Charts+

### 9.3.1 General

Within the SPA3 Module in Beyond Charts+, customers can select options regarding:

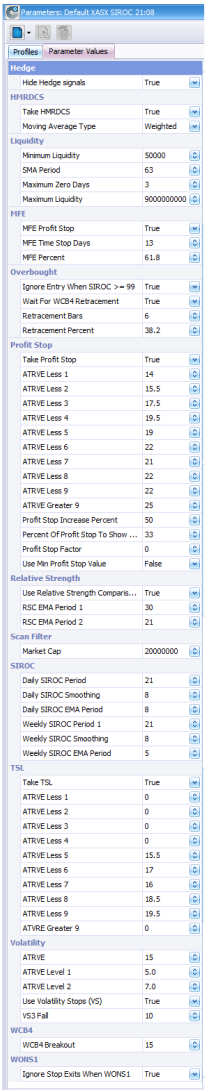
- volatility,
- using the RSC filter,

- changing settings for SIROC,
- Profit Stop levels,
- Trailing Stop levels
- turning the MFE Time Stop on or off,
- Liquidity, and
- WCB4

All these parameters will influence the range of signals that are generated.

In Beyond Charts+ select the **[SPA3 Parameters]** tab to view the current settings of all your SPA3 Parameters.

Multiple sets of SPA3 Parameters, each with different settings, can be created and saved. These are called Profiles. See the Beyond Charts+ documentation for further information on saving additional SPA3 Parameter profiles.



Parameters: Default XASX SIROC 21:08

Profiles | Parameter Values

| | |
|---|---|
| **Hedge** | |
| Hide Hedge signals | True |
| **HMRDCS** | |
| Take HMRDCS | True |
| Moving Average Type | Weighted |
| **Liquidity** | |
| Minimum Liquidity | 50000 |
| SMA Period | 63 |
| Maximum Zero Days | 3 |
| Maximum Liquidity | 9000000000 |
| **MFE** | |
| MFE Profit Stop | True |
| MFE Time Stop Days | 13 |
| MFE Percent | 61.8 |
| **Overbought** | |
| Ignore Entry When SIROC >= 99 | True |
| Wait For WCB4 Retracement | True |
| Retracement Bars | 6 |
| Retracement Percent | 38.2 |
| **Profit Stop** | |
| Take Profit Stop | True |
| ATRVE Less 1 | 14 |
| ATRVE Less 2 | 15.5 |
| ATRVE Less 3 | 17.5 |
| ATRVE Less 4 | 19.5 |
| ATRVE Less 5 | 19 |
| ATRVE Less 6 | 22 |
| ATRVE Less 7 | 21 |
| ATRVE Less 8 | 22 |
| ATRVE Less 9 | 22 |
| ATRVE Greater 9 | 25 |
| Profit Stop Increase Percent | 50 |
| Percent Of Profit Stop To Show ... | 33 |
| Profit Stop Factor | 0 |
| Use Min Profit Stop Value | False |
| **Relative Strength** | |
| Use Relative Strength Comparis... | True |
| RSC EMA Period 1 | 30 |
| RSC EMA Period 2 | 21 |
| **Scan Filter** | |
| Market Cap | 20000000 |
| **SIROC** | |
| Daily SIROC Period | 21 |
| Daily SIROC Smoothing | 8 |
| Daily SIROC EMA Period | 8 |
| Weekly SIROC Period 1 | 21 |
| Weekly SIROC Smoothing | 8 |
| Weekly SIROC EMA Period | 5 |
| **TSL** | |
| Take TSL | True |
| ATRVE Less 1 | 0 |
| ATRVE Less 2 | 0 |
| ATRVE Less 3 | 0 |
| ATRVE Less 4 | 0 |
| ATRVE Less 5 | 15.5 |
| ATRVE Less 6 | 17 |
| ATRVE Less 7 | 16 |
| ATRVE Less 8 | 18.5 |
| ATRVE Less 9 | 19.5 |
| ATVRE Greater 9 | 0 |
| **Volatility** | |
| ATRVE | 15 |
| ATRVE Level 1 | 5.0 |
| ATRVE Level 2 | 7.0 |
| Use Volatility Stops (VS) | True |
| VS3 Fall | 10 |
| **WCB4** | |
| WCB4 Breakout | 15 |
| **WONS1** | |
| Ignore Stop Exits When WONS1 | True |

ASE DEFAULTS

Parameters: Default XJSE SIROC 21:08

Profiles | Parameter Values

| | |
|---|---|
| **Hedge** | |
| Hide Hedge signals | True |
| **HMRDCS** | |
| Take HMRDCS | True |
| Moving Average Type | Weighted |
| **Liquidity** | |
| Minimum Liquidity | 20000000 |
| SMA Period | 63 |
| Maximum Zero Days | 5 |
| Maximum Liquidity | 99900000... |
| **MFE** | |
| MFE Profit Stop | True |
| MFE Time Stop Days | 13 |
| MFE Percent | 61.8 |
| **Overbought** | |
| Ignore Entry When SIROC >= 99 | True |
| Wait For WCB4 Retracement | True |
| Retracement Bars | 6 |
| Retracement Percent | 38.2 |
| **Profit Stop** | |
| Take Profit Stop | True |
| ATRVE Less 1 | 14 |
| ATRVE Less 2 | 15.5 |
| ATRVE Less 3 | 17.5 |
| ATRVE Less 4 | 19.5 |
| ATRVE Less 5 | 19 |
| ATRVE Less 6 | 22 |
| ATRVE Less 7 | 21 |
| ATRVE Less 8 | 22 |
| ATRVE Less 9 | 22 |
| ATRVE Greater 9 | 25 |
| Profit Stop Increase Percent | 50 |
| Percent Of Profit Stop To Show ... | 33 |
| Profit Stop Factor | 0 |
| Use Min Profit Stop Value | False |
| **Relative Strength** | |
| Use Relative Strength Comparis... | True |
| RSC EMA Period 1 | 30 |
| RSC EMA Period 2 | 21 |
| **Scan Filter** | |
| Market Cap | 200000000 |
| **SIROC** | |
| Daily SIROC Period | 21 |
| Daily SIROC Smoothing | 8 |
| Daily SIROC EMA Period | 8 |
| Weekly SIROC Period 1 | 21 |
| Weekly SIROC Smoothing | 8 |
| Weekly SIROC EMA Period | 5 |
| **TSL** | |
| Take TSL | True |
| ATRVE Less 1 | 0 |
| ATRVE Less 2 | 0 |
| ATRVE Less 3 | 0 |
| ATRVE Less 4 | 0 |
| ATRVE Less 5 | 15.5 |
| ATRVE Less 6 | 17 |
| ATRVE Less 7 | 16 |
| ATRVE Less 8 | 18.5 |
| ATRVE Less 9 | 19.5 |
| ATVRE Greater 9 | 0 |
| **Volatility** | |
| ATRVE | 15 |
| ATRVE Level 1 | 4.0 |
| ATRVE Level 2 | 6.0 |
| Use Volatility Stops (VS) | True |
| VS3 Fall | 10 |
| **WCB4** | |
| WCB4 Breakout | 15 |
| **WONS1** | |
| Ignore Stop Exits When WONS1 | True |

JSE DEFAULTS

Fig.8.3

It is important for you to be aware of the settings in **[SPA3 Parameters]** that you are using (as indicated above) because these settings determine the signals that will be displayed in SPA3 Alerts and in SPA3 Scans. It is very easy to change the parameters while doing some research and then to forget to change the parameters back to your production settings. The consequences of such a mistake could be severe.

Develop a routine whereby you always check the SPA3 Parameters in Beyond Charts+ before using SPA3 Scans or SPA3 Alerts. It may be useful to have a printed copy of the settings you use near your computer for quick reference when required.

Remember the “golden rule”, i.e. if you can see the SPA3 entry signal displayed using SPA3 Alerts then the SPA3 Module will display the subsequent SPA3 exit signal. If a SPA3 entry signal was displayed (and perhaps acted on) but after changing SPA3 Parameters it is no longer displayed, the “subsequent” SPA3 exit signal will not be displayed either! You have been warned!

Default Overlays are provided in Beyond Charts+ for the four SIROC settings of 21 8, 19 7, 17 7 and 13 5, and for each of the NASDAQ and ASX exchanges. You may create your own user Overlays if desired.

Before changing any SPA3 Parameters for research purposes it is a good idea to change your Overlay settings to the proposed new values so that you can see the impact on a particular stock (or preferably number of stocks) e.g., what happens when you change the Weekly SIROC setting from 21 8 to 34 13. This will give you a good idea of what to expect when you do a full research cycle. In this example you will expect to see fewer signals with longer durations. If the research period was predominantly a bullish period the average percentage return per trade would be higher as well.

In the following sections we will discuss each parameter setting in turn.

### 9.3.2 Using the RSC filter

#### 9.3.2.1 Selecting “Use Relative Strength Comparison (RSC)”

In the Relative Strength section, by selecting ‘True’ alongside the “Use Relative Strength Comparison (RSC)” box of the Parameter Values tab in the Parameters panel, SPA3 users would be utilising all RSC rules as specified later in section 9.5.3. It is recommended that this setting remain set to ‘True’ unless you have conducted your own SPA3 research that requires it to be set to ‘False’. Note that the "Default....." Parameters cannot be changed.

When set to ‘True’, SPA3 uses the RSC filter Rules 1, 2 and 3 (see section 9.5.3). Rules 1 and 3 require the RSC to be above the 30 week Exponential Moving Average for 5 weeks and, in the case of the “WCB1+RSC(1-4)” signal, 1 week.

Rule 2 states that the EMA for the second RSC setting is greater than the EMA for the first setting. The standard Overlay setting (normally F9) will display the RSC with both standard moving averages of EMA30 and EMA21, as shown in the example in Fig.8.4 .

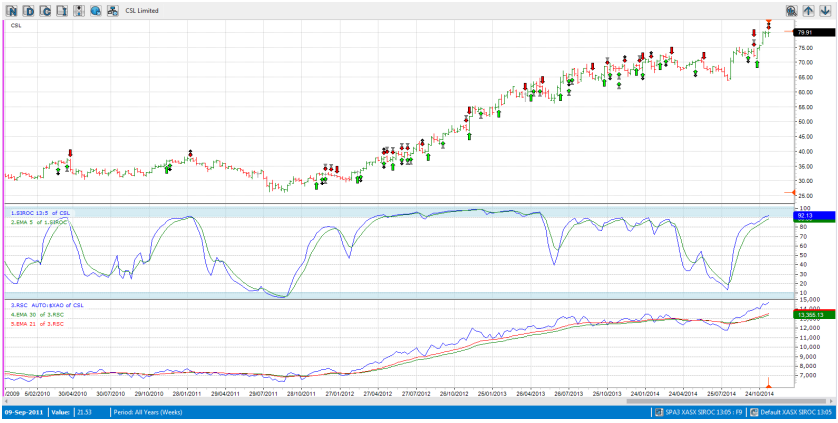


Fig.8.4

#### 9.3.2.2 Changing RSC settings

The standard settings for the RSC EMA Periods box (located in the Relative Strength box of the “SPA Parameters” panel) are 30 for the first EMA and 21 for the second EMA. Whatever settings you decide to research, the second EMA parameter should be less than the first and not substantially less!

The standard and default setting for the “Weeks Above RSC” is 5.

### 9.3.3 Changing SIROC Settings

#### 9.3.3.1 Weekly settings

In the SIROC section, the standard settings for the Weekly SIROC are 21 8. Changing these settings will have a major impact on when the SPA3 signals are generated within the SPA3 Module.

The general rules you should apply to SIROC settings are as follows:

- The first period defines the rate of change. Use lower values for shorter term trading and higher values for longer term trading. Values of 21 or 34 are recommended.
- The second period defines the amount of smoothing to be used. Usually the second parameter is a smaller value or equal to the first period. Values of 5, 8 and 13 are recommended.

The standard setting for the Weekly SIROC EMA is 5. The crossing of the EMA is very significant in the SPA3 signal logic. As you change this setting you will see that the “ideal” setting is a compromise between smoothing the SIROC value while not to the extent that it has too much inbuilt delay.

#### 9.3.3.2 Daily settings

The same comments that are made for Weekly SIROC settings apply to the Daily SIROC. However remember that these settings impact on the DB and DS signals. Also, stating the obvious, the period is DAYS. Lower settings may have

the impact of cutting down the time for an entry following a WONBx however it will also increase the level of whip-sawing.

The standard Daily SIROC settings are 21 8.

The standard Daily SIROC EMA setting is 8.

### 9.3.4 Changing Volatility Settings

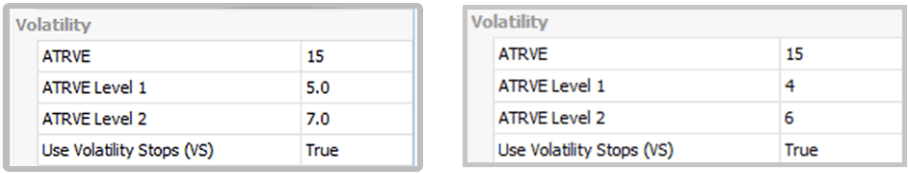
#### 9.3.4.1 Selecting "Use Volatility Stops (VS)"

In the Volatility Stops section, setting the "Use Volatility Stops (VS)" to 'True' will ensure that Volatility Exits and the Volatility Re-entry signals are shown in SPA3 Alerts and SPA3 Scans.

Setting "Use Volatility Stops (VS)" to 'False' results in removing volatility based signals from the charts and SPA3 Scan.

#### 9.3.4.2 Changing Volatility Settings

Obviously the "Use Volatility Stops (VS)" box needs to be 'True' for the settings to have any impact on the SPA3 signals generated by the SPA3 Module in Beyond Charts+.




**NASDAQ** **JSE**

Fig.8.5

The standard ATRVE period is 15 days. The levels define the thresholds for low and high volatility as well as VS1 and VS2 thresholds. In other words the standard settings which are shown reflect the rule that an ATRVE value of less than 5 is regarded as LOW volatility. An ATRVE value >= 5 and <7 is regarded as the first level of HIGH volatility (VS1 or TTM1.x) while a value >=7 is the second level of HIGH volatility (VS2 or TTM2.x).

### 9.3.5 Changing WCB4 settings

In the WCB4 section, the standard breakout period for the WCB4 parameter is 15 weeks. This period has been researched as the optimum period for medium-term trading with the SPA3 Trading System.

However, if you wish to conduct further research, users are encouraged to research different settings but remember to consider the relative settings of the RSC at the same time. See Chapter 11 for more details.

The 15 week breakout has also been researched with different filter and exit criteria however the results were inferior to those achieved within the SPA3 environment. Specifically the combination of the RSC filter criteria, the SPA3 volatility exit signals and the non-volatility SPA3 exit signals turn the breakout entry concept into a very profitable edge.

### 9.3.6 Changing the period for liquidity calculation

The standard setting for the period to be used for the liquidity calculation is 63 days which is approximately 3 months. When a SPA3 signal is displayed on a chart or a SPA3 Scan is run, the average price for this period (SMA 63 of price) is multiplied by the average volume for this period (SMA 63 of volume), resulting in an average daily traded value in $.

This liquidity calculation (SMA 63 price * SMA 63 volume) is compared with the Minimum Liquidity setting in the SPA3 Parameters (50,000) to determine

whether or not the SPA3 entry signal is displayed on the chart or in the SPA3 Scan, i.e. must be greater than the Minimum Liquidity setting.

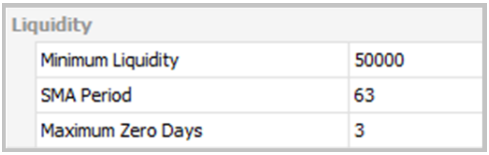



Fig.8.6

If you wish to increase or decrease the period used for the liquidity calculation you need to change the SMA Period.

If you wish to trade stocks with greater liquidity than the default setting of 50,000 then increase this setting accordingly.

## 9.4 SPA3 Entry and Exit Signals

The complete list of SPA3 Entry signals is as follows:

| SPA3 ENTRY SIGNALS |
|---|
| WCB1 |
| WCB2 |
| WCB3 |
| WCB4 |
| WONB1+DB1 / DB2 |
| WONB2+DB1 / DB2 |
| WONB3+DB1 / DB2 |
| WONB4+DB1 / DB2 |
| WONB5+DB1 / DB2 |
| WCB1+RSC(1-4) |
| WCB1+RSC+NEXT DB1 / DB2 |
| WCB2+RSC+NEXT DB1 / DB2 |
| WCB3+RSC+NEXT DB1 / DB2 |
| WONB4+RSC+NEXT DB1 / DB2 |
| WONB5+RSC+NEXT DB1 / DB2 |
| VS+DB1 / 2 |

Table.8.7

Note that if the term “RSC” is not specifically included in the name of the signal then one of the RSC criteria would have been met at the time the specific signal occurred, e.g. WCB2 assumes the RSC has been above its 30 week EMA for >= 5 weeks or the 21 week EMA of the RSC > the 30 week EMA of the RSC.

The VS+DB1/2 signal is a re-entry signal that follows a VS1 or VS2 exit signal.

The complete list of SPA3 Exit signals is as follows:

| SPA3 EXIT SIGNALS |
|---|
| WCS1.1 |
| WCS1.2 |
| WCS2 |
| WONS1+DS1.1/DS1.2/DS2 |
| WONS2+DS1.1/DS1.2/DS2 |
| WONS3+DS1.1/DS1.2/DS2 |
| TTM1.1 - 1.3 |
| TTM2.1 - 2.3 |
| VS1 |
| VS2 |
| Profit Stop |
| TSL |
| HMRDCS |
| MFE Time Stop |

Table.8.8

For stocks with a high volatility, the SPA3 Volatility Stop (VS) and Take-The-Money (TTM) signals are used in place of the WCS/WONS sell signals listed above which are suitable for low volatility.

Since SPA3 was first released in October 1998, ongoing research has been conducted on a regular basis. Following a review of the SPA3 rules during yet another extensive round of research during 2011, the Profit Stop, TSL (Trailing Stop Loss), HMRDCS (High Market Risk Daily Confirmed Sell) and MFE Time Stop were added as SPA3 exit signals.

Diagrams have been used in the following two sections to facilitate the learning of the signals. In all cases the diagram is a graph of the SIROC indicator, which is represented by a blue line. The values of the limit lines are also shown. Where the EMA is part of the definition, it is represented by a black line with a period of 5 for weekly graphs and 8 for daily graphs. You will find the words “crosses above” and

"crosses below" used frequently in the description of the SPA3 signals. As SPA3 is a mechanical trading system, the rule is that "equals" does not qualify as a "crossing above or below".

Following the definition of every signal, there is a specific action. The words "at market" have been used with the buy and sell actions. In this context, "at market" simply defines the recommended approach to be used when medium-term active investors are executing a trade. Generally there is little to gain in trying to finesse the best price on the day when buying or selling for medium-term investing unless market depth is a little sparse in which case "at limit" orders should be used. Often prices rise rapidly when you are buying (as the stocks are enjoying positive market sentiment). When you are selling, the stock may have started a downtrend so prices can fall away quickly.

Often the early morning trading is not a good reflection of overall sentiment that emerges for the trading day so be careful of major early moves. An often-quoted saying is "the amateurs open the market while the professionals close the market". Whether this is factually true or not, it is important that you complete your buying or selling actions on the day following the SPA3 entry or exit signal.

The term "at market" generally has a different meaning to full service brokers than it does to online discount brokers. If you are using an online discount broker you will need to check your trade to ensure that you have received, or sold, your full allocation of shares and decide also whether it is better to use an "at limit" order instead of an "at market" order.

### 9.4.1 SPA3 Entry Signals

**Weekly Chart**

1. A Weekly Confirmed Buy (WCB) entry signal occurs as follows:

   a. **WCB1** - The weekly SIROC first crosses above 10.

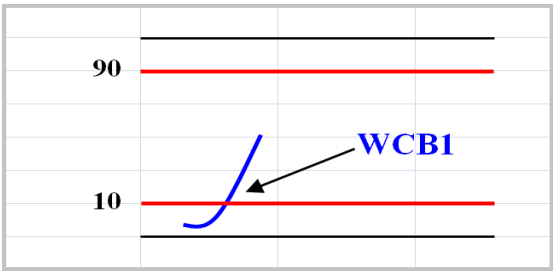



Fig.8.9

Enter at market on the following trading day and ignore all daily exit signals. The low volatility exit signals that follow a WCB1 are a WCS2 or a WONS1+DS. Occasionally a WCS1.1 or WCS1.2 exit signal will follow a WCB1 entry signal.

A WCB1 can occur without crossing above the EMA5. In the unlikely event the weekly SIROC drops below 10, after the WCB1 occurs and before it crosses the EMA5, a WONS3 state commences.

When the formula for the SIROC was revised, improved and released in October 2009, far fewer WCB1 signals occurred to the point that the edge was deemed insufficient for medium term trading hence the WCB1 signal was “turned off” and is no longer displayed in Beyond Charts+.

b. **WCB2** - The weekly SIROC crosses above 90 following a WCS1.2, WCS2 or a WONB4 (but before the next DB1 or DB2 occurs).

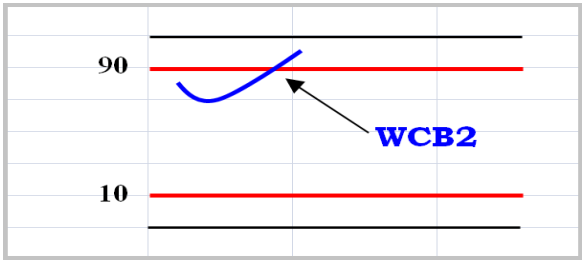



Fig.8.10

Enter at market on the following trading day and ignore all daily exit signals until a weekly SPA3 exit signal occurs. The exit signal that follows a WCB2 is a WONS2+DS, a WCS1.1 or a WCS1.2.

If, following a WONB4, the next DB1 or DB2 occurs in the same week that the weekly SIROC first crosses above 90, the crossing above 90 is treated as a WCB2, i.e. the crossing is NOT a WONS1 which could result in a very quick exit! The exit signals for the earlier WONB4+DB entry become the same as those for a WCB2.

The logic behind the WCB2 signal is that the stock has possibly just started a new medium-term trend or has continued an existing trend following a period of consolidation.

When the WCB2 signal follows a WONB4 signal, often the trend has moved too quickly for a DB to occur after the WONB4.

The WCB2 can also occur following a WCS1.2 or WCS2 and BEFORE the weekly SIROC crosses above the EMA 5, i.e. before the WONB4 occurs.

c. **WCB3** - The weekly SIROC remains above 90 and crosses above the EMA 5.

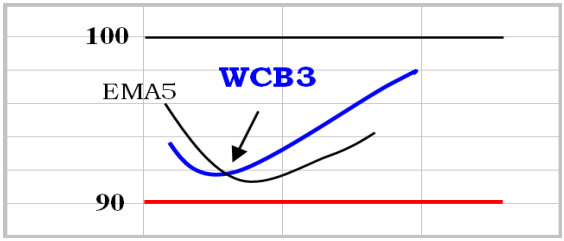



Fig.8.11

This signal follows a WCS1.1, a WONS1+DS, a WONS2+DS or a WONS2 without the DS signal. If the WCB3 follows a WONS1 without a subsequent DS, the WCB3 signal must be ignored.

The WCB3 can also occur after a WCB2 or WONB5+DB entry. On such occasions it presents active investors with a new entry signal. Active

investors who did enter on a WCB2 or WONB5+DB signal can use the WCB3 as a pyramiding signal (see section on pyramiding in Chapter 7).

Enter at market on the following trading day and ignore all daily exit signals until a SPA3 weekly exit signal occurs. The exit signal that follows a WCB3 is a WONS2+DS or a WCS1.1 or a WCS1.2.

d. **WCB4** - As indicated earlier, the WCB4 is a breakout, rather than momentum (or trend), signal. The key elements are as follows:

The signal occurs when the weekly price establishes a higher close (i.e. the breakout). The standard period is 15 weeks.

It cannot occur after any other SPA3 entry signal.

It can only occur if one of the RSC criteria has been met.

It cannot occur in a WONS1 state because a WONS1 state is awaiting an exit signal.

It cannot occur when the weekly SIROC is >= 99.0 as this is deemed an overbought zone for a breakout signal.

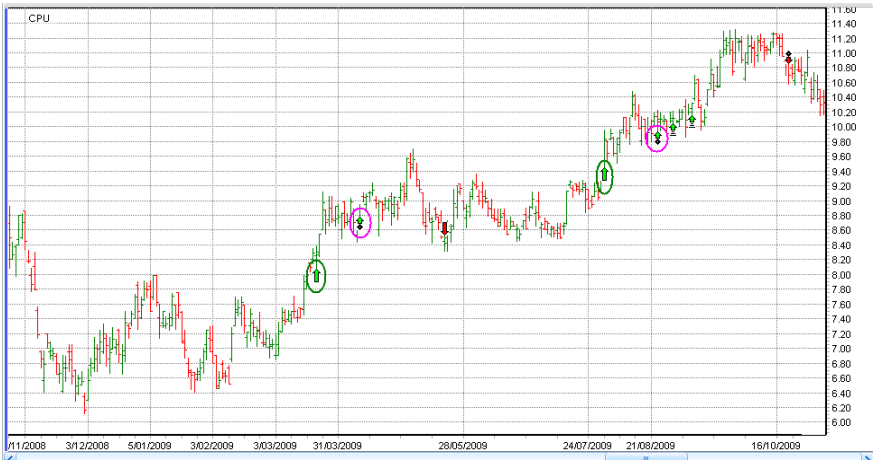
It can only occur if the weekly SIROC is greater than the 5-week exponential moving average (EMA 5) and is not in a WONS1 state and is < 99.0.

It can occur prior to any other SPA3 entry signal apart from a WONB1+DB.

The possible exit signals for a WCB4 are any of the SIROC or Volatility based SPA3 Exit Signals.

Generally WCB4 signals will get you into a trade sooner and produce a larger profit, or smaller loss, than the following SIROC based entry. However you will also find examples of the price dropping after the WCB4 and before the SIROC based SPA3 entry signal!

The ASX stock CPU (Computershare) shows two typical examples of the WCB4 signal (highlighted with green ellipses) occurring before the WONB4+DB signal (highlighted with magenta ellipses). In this example the breakout precedes the start of a new DB cycle following the WONB4.




JB HiFi (JBH on the ASX) is an example of the WCB4 occurring some 7 weeks before the WCB2 (and at a price 44c or 8.47% lower), note that the Profit Stop and MFE Time Stop are turned off:

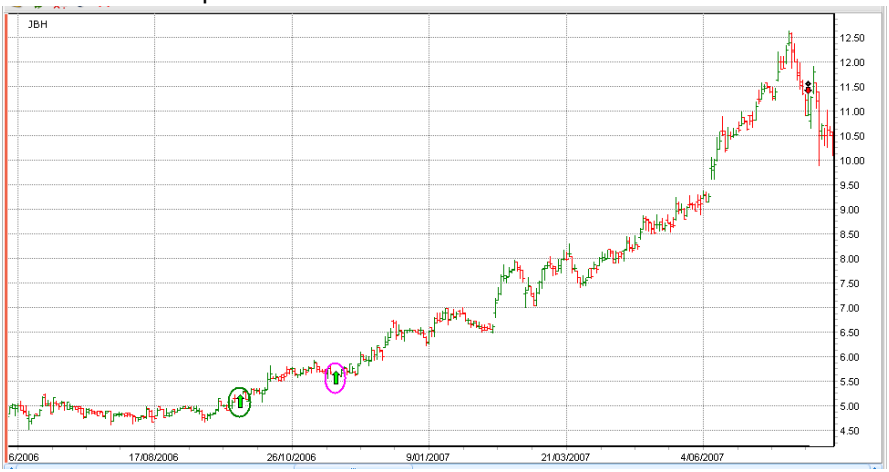



Fig.8.12

A complete list of the Weekly Confirmed Buy signals with their relevant Low Volatility Sell signals are as follows:

| ENTRY | LOW VOLATILITY EXIT |
|---|---|
| WCB1 | WCS2, WCS1.1/2 or WONS1/3+DS |
| WCB2 | WCS1.1, WCS1.2 or WONS2+DS |
| WCB3 | WCS1.1, WCS1.2 or WONS2+DS |
| WCB4 | WCS2, WCS1.1/2 or WONS1/3+DS |

Table.8.13

A Profit Stop, Trailing Stop Loss (TSL), HMRDCS or MFE Time Stop can also follow these entries. If any of these Stop exits occur, the only entry signals following them are the WCB2, WCB3 or WCB4, depending on where the SIROC is in its cycle.

2. A Weekly On Notice Buy (WONB) signal puts the stock “on notice” to buy after the next Daily Buy (DB) signal.

The SPA3 entry signal is a WONBx + DB.

a. **WONB1** – The weekly SIROC first falls below 10.

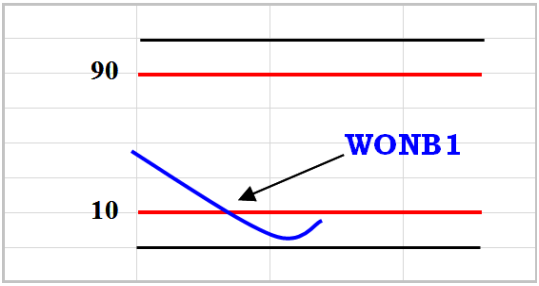



Fig.8.14

Enter at market on the following trading day AFTER the NEXT DB has completed the SPA3 entry signal.

b. **WONB2** – The weekly SIROC is between 5 and 10 and changes direction upwards **OR** maintains the same value as the previous week.

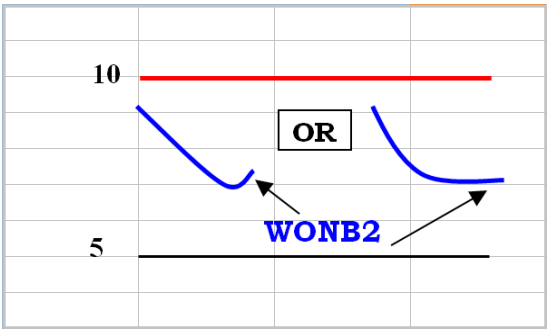



Fig.8.15

If the previous signal was a WONB3 or a WONS3 without a following DS, then the WONB2 is ignored.

Enter at market on the following trading day AFTER the NEXT DB has completed the SPA3 entry signal.

If the weekly SIROC falls from one week to the next, this will signal a WONS3. Hence, the weekly SIROC must be rising during the week that the DB occurs.

c. **WONB3** – The weekly SIROC first crosses above 5 after crossing above the EMA 5.

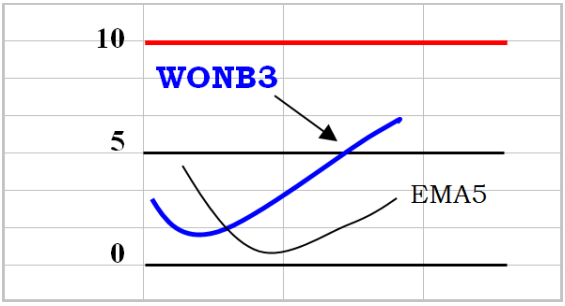


Fig.8.16

If the previous weekly signal was a WONS3 without a following DS, then the WONB3 is ignored.

Enter at market on the following trading day AFTER the NEXT DB has completed the SPA3 entry signal.

This means that the weekly SIROC must be rising the week before the DB occurs.

d. **WONB4** – The weekly SIROC is between 10 and 90 and the weekly SIROC crosses above the EMA 5 in an upward direction.

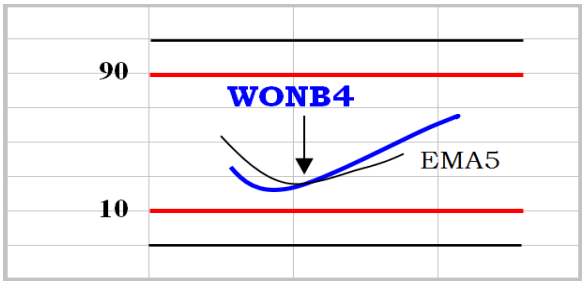



Fig.8.17

Enter at market on the following trading day AFTER the NEXT DB has completed the SPA3 entry signal. Note the weekly SIROC does not need to be rising at the time of the NEXT DB.

e. **WONB5** – This **state** starts immediately following a WONS1+DS. It also follows a WONS2+DS or a WCS1.1 providing the weekly SIROC remains above 90 and is still rising, or is at 100. The WONB5 state remains while the weekly SIROC continues to rise or is at 100. It is re-instated following a WONS2 and no DS occurs before the weekly SIROC rises again. A WONB5 can occur when the weekly SIROC is >= 99.0.

Enter at market on the following trading day AFTER the NEXT DB has completed the SPA3 entry signal.

Once the conditions for any of the above five Weekly On Notice Buy (WONB) signals have occurred, the stock is then “on notice” to enter awaiting the NEXT Daily Buy signal, i.e. a DB1 or DB2.

**Daily Chart**

The weekly chart provides the medium-term trend of the share. The SPA3 system does not rely on the daily chart for its primary signals. The daily charts are used after a Weekly On Notice Buy (WONB) signal has occurred requiring you to look for a Daily Buy (DB) signal.

The Daily Buy (DB) signal that completes the SPA3 entry signal is always the first signal AFTER or ON THE SAME DAY that the Weekly On Notice Buy (WONB) signal occurs. For simplicity this is always described as the NEXT DB. A DB that occurs on the same day as a WONB signal is treated as the NEXT buy signal.

When awaiting a Daily Buy signal, ignore any Daily Sell signal that may occur in the meanwhile.

1. **DB1** - The daily SIROC crosses above 10 and has already crossed above the EMA 8.

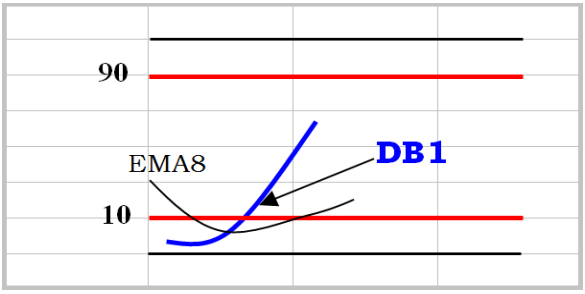



Fig.8.18

If the daily SIROC has not crossed above the EMA when the SIROC

crosses above 10, then do not enter until the EMA 8 has been crossed. This will then become a **DB2** signal.

2. **DB2** - The SIROC crosses above the EMA 8 in an upward direction when the daily SIROC is above 10.

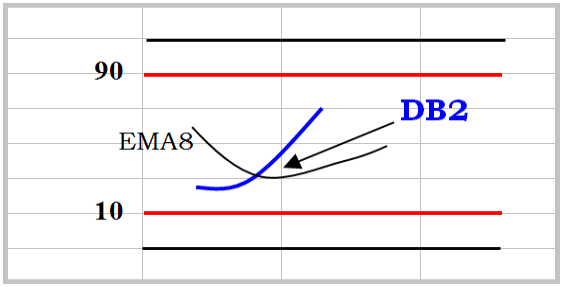



Fig.8.19

Note: A DB2 can also occur when the daily SIROC is above 90.

The complete list for the Weekly On Notice Signals with their subsequent low volatility exit signals is as follows:

| ENTRY | LOW VOLATILITY EXIT |
|---|---|
| WONB1+DB | WONS3+DS or WCS2 |
| WONB2+DB | WONS1+DS, WONS3+DS or WCS2 |
| WONB3+DB | WONS1+DS, WONS3+DS or WCS2 |
| WONB4+DB | WONS1+DS, WCS2 or WCS1.1/2 |
| WONB5+DB | WONS2+DS or WCS1.1 or WCS1.2 |

Table.8.20

A Profit Stop, Trailing Stop Loss (TSL), HMRDCS or MFE Time Stop can also follow these entries. If any of these Stop exits occur, the only entry signals following them are the WCB2, WCB3 or WCB4, depending on where the SIROC is in its cycle.

WONB2 and WONB3 signals occur very seldom.

### 9.4.2 SPA3 Exit Signals

Weekly Chart

1. A Weekly Confirmed Sell (WCS) exit signal occurs as follows. Ignore exit signals at your own peril!

   a. When the weekly SIROC is above 90 **and**

      i. **WCS1.1** - the weekly SIROC falls in value by >= 6 from one week to the next and remains above 90.

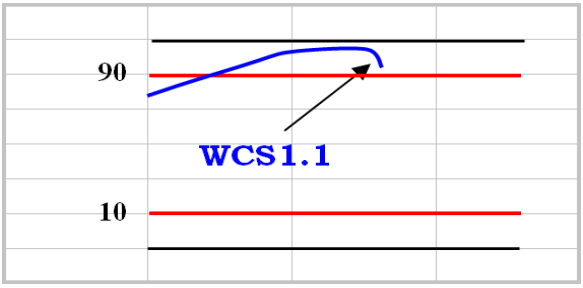



Fig.8.21

      ii. **WCS1.2** - the weekly SIROC falls below 90.

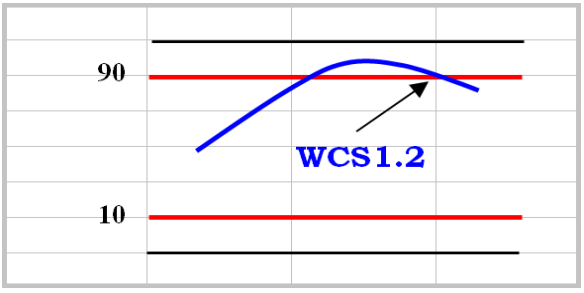



Fig.8.22

Exit the trade at market on the following trading day.

b. **WCS2** - The weekly SIROC is below 90 and the SIROC crosses below the EMA 5 in a downward direction.

Exit the trade at market on the following trading day.

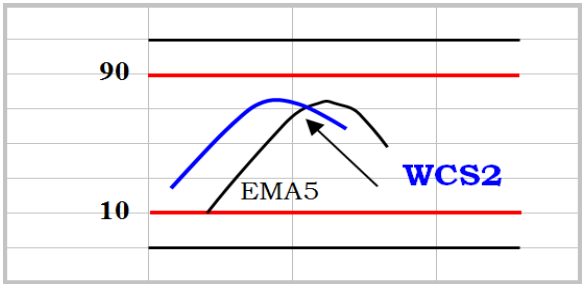



Fig.8.23

2. A Weekly On Notice Sell (WONS) signal puts the stock on notice to exit the trade after the NEXT Daily Sell (DS) occurs.

The SPA3 exit signal is a WONSx + DS.

a. **WONS1** – The weekly SIROC first rises above 90 when the previous weekly signal was EITHER a WCB1 OR a WONB4 followed by a DB signal (prior to the week that the weekly SIROC crosses above 90).

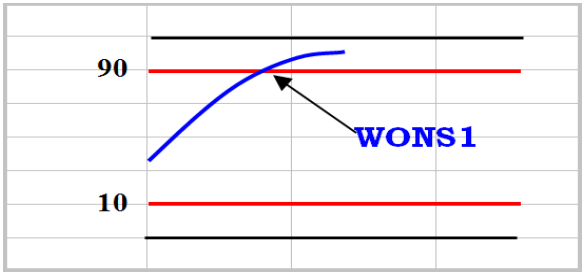



Fig.8.24

Exit the trade at market on the following trading day after the NEXT DS completes the SPA3 exit signal.

Following a WONS1, ignore all DB, WCB3, WONB5 and WONS2 signals that might occur after the WONS1 while awaiting the DS. The only signal that can be acted on following a WONS1 and while awaiting a DS signal, is a weekly “confirmed” exit signal (either a WCS1.1 or WCS1.2).

The criterion for a WONS1 is the same as that for a WCB2, i.e. the weekly SIROC crossing above 90. The preceding SPA3 signals leading up to the weekly SIROC crossing above 90 will determine whether the signal is a WONS1 or WCB2, e.g. if the previous signal was a SPA3 entry signal (WCB1 or WONB4+DB) the crossing above 90 is a WONS1.

Note that immediately following a WONS1+DS exit signal the stock enters a WONB5 state.

b. **WONS2** - The weekly SIROC is above 90 and changes direction downwards or maintains the same value as the previous week, except when the weekly SIROC = 100.

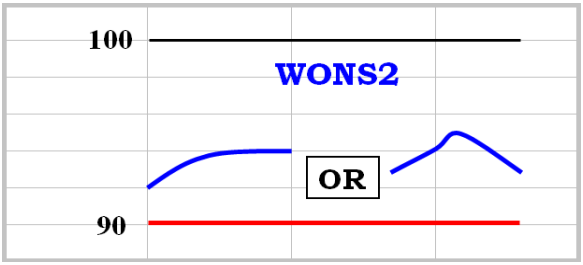



Fig.8.25

Exit the trade at market on the following day after the NEXT DS completes the SPA3 exit signal.

Ignore the WONS2 if the previous weekly signal was a WONS1.

If the weekly SIROC does rise before the NEXT Daily Sell signal completes, then the WONS2 is over-ridden. If the previous signal was a WONB5 without a DB, the WONB5 state is re-instated. Otherwise you wait for a WCB3, WCS1.1, WCS1.2, or a new WONS2.

c. **WONS3** – This **state** starts immediately following a WONB1+DB and continues until a DS signal or WCB1 entry signal occurs.

Exit the trade at market on the following day after the NEXT DS completes the SPA3 exit signal.

If the previous entry signal was a WONB1+DB followed by a WONS3, which was then over-ridden by a WCB1 entry signal, the exit signals for the WONB1+DB are the same as those for a WCB1.

A WONS3 state can also occur following a WCB1 or WCB1+RSC(1-4) (see section 9.4.2 SPA3 Exit Signals9.4.2 SPA3 Exit Signals) where the weekly SIROC has not crossed the EMA5. In such rare cases, the WONS3 state commences when the weekly SIROC crosses below 10.

Once the conditions for any of the above 3 Weekly On Notice Sell signals have occurred, the stock is then “on notice” to exit awaiting the NEXT Daily Sell signal, i.e. a DS1.1/DS1.2 or a DS2.

Daily Chart

The weekly chart provides the medium-term trend of the share. The SPA3 system does not rely on the daily chart for its primary signals. The daily charts are used after a Weekly On Notice Sell (WONS) signal has occurred requiring you to look for a Daily Sell (DS) signal.

The Daily Sell signal (DS) which completes the SPA3 exit signal is always the NEXT signal AFTER or on the SAME day the weekly “on notice” signal has occurred. For simplicity this is always called the NEXT DS.

When awaiting a daily exit signal ignore any Daily Buy signal (i.e. DB1 or DB2) that may occur in the meanwhile.

1. DS1.x

   When the daily SIROC is above 90 the sell signal begins when the daily SIROC crosses below 90 (call this the “trigger”)

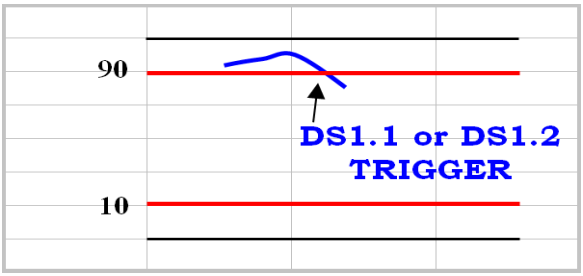



Fig.8.26

AND

a. **DS1.1** - the daily SIROC falls in value on two occasions

OR

b. **DS1.2** - the share price drops in value on two occasions.

The two occasions are not necessarily consecutive trading days but can be. The DS signal is completed when the necessary conditions have occurred.

If a DB occurs or the daily SIROC crosses above 90, before the DS completes, the DS trigger is over-ridden and a new DS trigger is required to start another DS.

2. DS2

When the daily SIROC is below 90, the exit signal occurs when the SIROC crosses below the EMA 8 (call this the “trigger”) in a downward direction is then followed by the share price and the daily SIROC falling together on the same day.

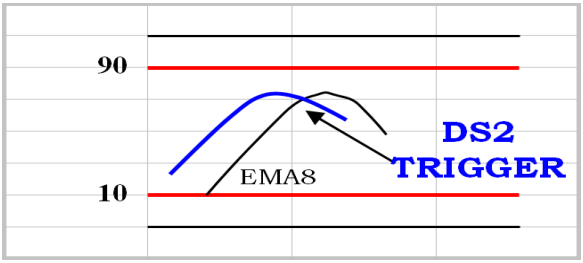



Fig.8.27

AND

Stay in the trade until BOTH the price and the SIROC drop on the same day.

If a DB occurs or the daily SIROC crosses above 90, before the DS completes, the DS trigger is over-ridden and a new DS trigger is required to start another DS.

**Date of Completion of a Daily Sell Signal**

From the above definitions of the Daily Sell signals it should be clear that these signals have a start date (the “trigger”) and a completed date that can extend from a period of 2 days to, in some cases, more than 5 days. While the trigger date is important, it is the date of completion of the Daily Sell Signal that is used to determine whether it is the NEXT signal following a WONS. The date of a DS is the date the DS completes.

If a WONS occurs and an incomplete DS (that started BEFORE the WONS) completes AFTER or on the SAME day as the WONS, then sell when the DS completes, i.e. this Daily Sell Signal is the NEXT signal. For example:

**Assume that:**
A WONS occurs on Friday 5th March and the DS trigger occurs on Monday 1st March, i.e. 4 days prior to the WONS.

**Possible scenarios:**

1. If the DS completes before Friday 5th (i.e. the day the WONS started), then that DS has no impact and you wait for the NEXT DS trigger. This will require a DB to occur first.
2. If the DS completes on the Friday or on any day in the following week, this is the NEXT DS signal and you exit the trade the following day.
3. If, at the end of the next week, i.e. Friday 12th March, a DS has not completed, check the weekly signal to see if the WONS signal is still the latest weekly signal.

Remember that if a DB occurs before the completion of any of the above DS signals, then that incomplete DS trigger is over-ridden. You then need to wait for a new DS cycle to start and complete, i.e. a DS "trigger" needs to occur followed by the necessary SIROC and/or price movements.

**Non SIROC based SPA3 Exit Signals**

During the SPA3 research review conducted during 2011, four new exit signals were added to the trading system. These signals were added to achieve the objective of reducing the variation of outcomes of individual trades. Following an extensive >24 'man month' research exercise it was shown that the addition of these exit signals had the following effect:

1. Greatly reduced the variation of outcomes of trades.
2. Greatly reduced the End of Trade Drawdown (ETD) for individual trades.
3. Reduced the average size of loss trades.
4. Increased the Win Rate for the overall system.

5. Reduced the average hold period for winning and loss trades thereby potentially improving the compounding effect of the system.
6. Increased the t-score (t-test, or System Quality Number as Van Tharp calls it).

These are all positive effects, especially points 1, 2, 4 and 6. However, when researching trading systems, whenever improvements are achieved in some areas of the system there is a cost somewhere else in the system. This is fine provided there is a quantum improvement in the overall system as measured by t-score, expectancy, win rate, standard deviation of trade outcomes, average loss trade and average profit per trade, over a large sample. Ultimately, portfolio equity curve exploratory simulation will show the improvements in the overall edge of the system.

The addition of these exit signals also had the following effects:

7. Reduced the average size of winning trades.
8. Reduced the average profit for all trades (over a shorter holding period).
9. Reduced the expectancy of the system but this is expected when the win rate increases and the hold period is reduced.

Detailed statistics and exploratory simulations of the 2011 SPA3 research outcomes are published in a December 2011 White Paper in the Share Wealth Systems Education Centre on our website. Share Wealth Systems has called the version of the SPA3 that uses these exits the SPA3 Revised Edge.

All four of these exits are used in the same manner as the SIROC and Volatility based exit signals, that is, the trade must be exited on the trading day following the stop level being reached. The Profit Stop and Trailing Stop exit price, being percentage based exits, can be calculated in advance and hence could be exited intraday when the price level is reached. However, the research has been conducted using the closing price of the day after the occurrence of the exit signal and this is how it is suggested that the exits are executed.

**Profit Stop:**

The Profit Stop is a percentage profit target which differs depending on the volatility of the stock at the time of entry. The volatility is measured by the ATRVE. The lower the ATRVE the lower the profit target.

Different Profit Stop methods were researched and simple percentage targets based on price volatility were decided upon. Varying percentage targets were researched via a process of optimisation over a large sample of trades and the following defaults were selected for the ASX by volatility level:

| ATRVE % | Profit Stop % |
|---|---|
| 0 to < 1 | 14 |
| 1 to < 2 | 15.5 |
| 2 to < 3 | 17.5 |
| 3 to < 4 | 19.5 |
| 4 to < 5 | 19 |
| 5 to < 6 | 22 |
| 6 to < 7 | 21 |
| 7 to < 8 | 22 |
| 8 to < 9 | 22 |
| ≥ 9 | 25 |

If a Profit Stop target is reached on the same day that a WCB2, WCB3 or WCB4 occurs then the Profit Target is extended by 50% of the Profit Stop % specified by the current ATRVE value, from the current close price.
The Profit Stop extension will occur for a WCB4 if the weekly SIROC is < 99.0.

The Profit Stop percentage targets and the Profit Stop percentage extension are parameters that can be modified by the SPA3 user. Also, Profit Stop targets can be turned off altogether in the SPA3 Parameters Profile panel.

**Trailing Stop Loss (TSL):**
Various TSL's were researched to override the SPA3 low and high volatility exit signals. The objective of using a TSL as an override is to reduce the size of the average loss trade, reduce the variation of trade outcomes and to improve the t-

score of the overall system and for each volatility level. However, when a TSL is introduced, the average profit per trade, the win rate and the expectancy are negatively affected. Therefore it becomes a trade-off between allowing some relatively larger loss trades through to allow winning trades to continue without exiting them prematurely.

Research demonstrated that a TSL does not have a positive effect on all types of trades. Lower volatility trades are affected negatively by a TSL while more volatile trades can benefit from a TSL, but not too close a TSL.

As with the Profit Stop, research showed that a percentage TSL based on stock volatility was as good an option as any other researched and is far simpler to understand and implement. Varying percentage TSLs were researched via a process of optimisation over a large sample of trades and the following defaults were selected for the ASX by volatility level:

| ATRVE % | TSL % |
|---|---|
| 0 to < 1 | None |
| 1 to < 2 | None |
| 2 to < 3 | None |
| 3 to < 4 | None |
| 4 to < 5 | 15.5 |
| 5 to < 6 | 17 |
| 6 to < 7 | 16 |
| 7 to <8 | 18.5 |
| 8 to < 9 | 19.5 |
| ≥ 9 | None |

As with the Profit Stop, TSL percentage levels can be modified and also turned off altogether in the SPA3 Parameters Profile panel.

**HMRDCS:**
The HMRDCS (High Market Risk Daily Confirmed Sell) is a filter and exit signal that is only used when the Market Risk status is High.

It is designed to filter out trades that are signalled during a High Market Risk period by a SPA3 entry signal that has potentially occurred too early. In so doing it will also filter out trades that would have gone on to be a juicy winner. However, these trades are typically signalled by another signal a little later in the price discovery cycle. Overall, more loss trades are filtered out than winning trades and as such this filter improves the edge.

The HMRDCS is also an exit signal. It will typically exit a trade sooner than a SIROC WCSx signal during a High Market Risk period.

The combination of the HMRDCS filter and exit signal provided sufficient improvement on the edge to include it in the SPA3 trading system.

The HMRDCS uses a 63 day Weighted Moving Average. It occurs when the close price crosses below the 63 day WMA and the Market Risk is High. If the close price is below the WMA 63 and the overall Market Risk is High then no SPA3 entry signal can occur. If a SPA3 entry signal has occurred, i.e. a stock is an open trade, then the HMRDCS will occur if the close price crosses below the WMA 63 AND Market Risk is HIGH.

This filter and exit signal can be deselected in the SPA3 Parameters Profile panel and the moving average can be changed to either a simple or an exponential moving average.

**MFE Time Stop:**
The MFE Time Stop is an exit signal that is used to hold onto the profit for trades that become profitable but don't quite reach their Profit Stop target.

This exit signal will typically exit a trade sooner than a SPA3 WCSx exit signal and hence reduce the End of Trade Drawdown for profit trades and reduce the probability of a profit trade turning into a loss trade.

An MFE Time Stop is only applicable to trades that reach a minimum 61.8% of their Profit Stop objective. Once the minimum 61.8% is achieved a time stop is turned on and counts every trading bar where the close price is below the MFE for the trade **AND** the daily SIROC is in decline. If the daily SIROC rises then

the count is not increased. If the close price rises above the current MFE then the count is reset to 0 and then starts again once the close price is less than the new MFE.

Once the MFE Time Stop parameter is reached, 13 is the default, an exit signal will be displayed.

The default parameters of 61.8% and count of 13 can be changed by the SPA3 user in the SPA3 Parameter Profile Panel where the MFE Time Stop can also be turned off altogether.

MFE stands for Maximum Favourable Excursion.

### 9.4.3 Notes on the SPA3 rules and signals

1. When a SPA3 entry or exit signal occurs, ignore all subsequent daily signals and stay with the trade until the next weekly “on notice” or “confirmed” entry or exit signal occurs, e.g. if a WCB2 occurs, ignore all DS signals until either a WONS1 or a WCS2 occurs.
2. The weekly signals (“confirmed” and “on notice” signals) overrule the daily signals and, hence, are “controlling” signals.

   This means that if a Daily Buy signal is being awaited after a weekly “on notice” signal has occurred and then a “confirmed” weekly sell occurs before the daily signal occurs, the weekly “confirmed” sell signal is adhered to, i.e. don’t do the trade.

   Likewise, if a weekly “on notice” buy signal occurs followed by a weekly “confirmed” buy signal BEFORE the awaited Daily Buy signal, then act on the weekly “confirmed” buy signal.
3. When awaiting the daily SIROC buy or sell signal after an “on notice” weekly signal has occurred, it is always important to go back to the weekly chart at the end of each week to check whether the weekly chart has not provided another “confirmed” or “on notice” signal. If it has, then ignore the original signal and take heed of the opposite “confirmed” or “on notice” weekly signal. The exception to this rule is the **WONS1** signal, which can only be over-ridden by a WCS1.1 or WCS1.2.

4. When stocks cross into the overbought zone (WONS1) there is an increased risk that the trend may be ending. Sometimes the stock simply consolidates and then continues its upward trend.

   SPA3 caters for the continuation of the trend enabling you to exit with a WONS+DS signal and re-enter with a WONB5+DB.

   Clearly the more speculative and volatile the under-lying share the greater the risk of a sudden retracement. SPA3 therefore provides you with the protection of the WONS1+DS signal or even the WCS1.2 signal to exit the trade should the trend end or reverse suddenly. However, many stocks, especially those with excellent fundamentals, do not behave in this manner. It can, therefore, be a low risk choice to ignore the WONS1+DS and give the stock a chance to continue the trend without the need to sell and re-enter. Therefore, SPA3 users may choose to sell a percentage of their holding when a WONS1+DS occurs, although this is not recommended.

   Whichever option you decide to adopt it is important that it must be written into your Trading Plan so that at the time you enter the trade you know exactly under what criteria you will exit the trade.

   These optional rules do **not** apply to a **WONS2** signal irrespective of the fundamental strength of the held share. Always exit when a WONS2+DS occurs as this signal, compared with a WONS1, occurs at a different point in the cycle of a trend, typically near the end of the SIROC cycle and near or at the end of a trend.

5. The weekly SIROC requires approximately 6 - 7 months of data. Occasionally you will find a stock where the first weekly SIROC value shown is in the high 90's. You may be tempted to buy this stock if a DB occurs after the high weekly SIROC value starts showing on the chart, but this is NOT a SPA3 entry signal. Why not? You may think that it is a WONB5+DB entry signal, however, remember that a WONB5 follows a WONS or WCS. As there is no evidence that either of these sell signals occurred the WONB5 state is not certain. Hence avoid the trade.
6. After a Weekly On Notice (WON) signal has occurred, the Daily Buy or Sell can often take many days or even weeks to complete. This is normal.

Wait for the daily signal unless it is over-ridden by a Weekly Confirmed signal.

7. The WCB4 and VS+DB signals are not displayed when the weekly SIROC is >= 99.0. The WCB3 and WONB5+DB signals are displayed when the weekly SIROC is >= 99.0
8. Act on all SPA3 entry and exit signals the following trading day, generally at market price or at limit if the bid – ask spread is wide for any reason.

If an exit signal is missed, sell the stock as soon as the exit signal is discovered.

Generally if you miss an entry signal you should wait for the next SPA3 entry signal. However, if the current price of the stock is less than or equal to the close price on the trading day after the SPA3 entry signal and a short period, i.e. a few days, has passed, you may consider taking a position in the stock. Never chase it if the price has risen substantially.

## 9.5 Relative Strength Comparison

### 9.5.1 Introduction

As described earlier in this Chapter, SPA3 signals are based on a combination of the SIROC (which does not apply to the WCB4 signal), moving averages and daily and weekly charts. The main indicator, the SIROC, is a measure of changes in the internal momentum of a stock. If the price has fallen rapidly and then slows down, the improvement in the rate of price decline could result in an increase in the SIROC value although since the revised formula of the SIROC in Beyond Charts+ in 2009 this hardly occurs any longer.

SPA3 signals based on the SIROC require a filter to ensure that the improvement in the internal movements of the stock are reflected in an improvement of the performance of the share price relative to the overall market index. That filter is Relative Strength Comparison (RSC).

Also, a filter is required to only select stocks that are outperforming the overall market. That filter is Relative Strength Comparison (RSC).

In this section you are introduced to the RSC indicator and the role it plays in filtering those stocks you can consider buying when a SPA3 signal occurs.

### 9.5.2 RSC Definition

The formula for calculating the Relative Strength Comparison (RSC) is very simple; you merely divide the price of one share/index by another.

For example, if you are comparing whether the strength of the ASX listed NAB share price relative to the Australian Overall Market Index (ASX All Ordinaries ($XAO)) is stronger than the Australian Overall Market Index or not, you divide the share price of NAB by the Australian Overall Market Index on a particular trading day, obtaining a ratio. Then plot the result over a number of trading periods. See graph 2 in Fig.8.28 .

Customers trading the NASDAQ will need to use the NASDAQ Composite ($COMP) for the RSC and customers trading the JSE will need to use the JSE-ALSH ($J203) for the RSC graph.

This is **not** the RSI (Relative Strength Index) indicator; the two are very different.

Don't let the simplicity of the RSC formula mislead you into discounting this powerful tool.

Overlays with pre-programmed RSC charts for all researched exchanges are provided in Beyond Charts+.

### 9.5.3 How to interpret RSC

If you calculate the RSC formula for a number of trading periods in a row, the resulting plot line will either rise or fall. The line will rise if NAB is rising quicker than (i.e. outperforming) the Overall Australian Market Index on a relative basis, and fall if the Overall Australian Market Index is rising quicker than NAB (i.e. NAB underperforming the Overall Australian Market Index).

In the example of NAB, when the RSC is plotted over a number of years (or days or months) it is fairly simple to recognise when the one entity is out/underperforming the other. See the chart in Fig.8.28 .

It is important to understand that the RSC for NAB could rise even if the share price for NAB were falling. In such an instance, the Overall Australian Market Index would be falling at a greater rate than NAB. It is important, therefore, to always confirm a rising RSC with positive price action.

A moving average can also be plotted on the RSC to smooth the RSC and to provide an insight into when the RSC is rising strongly. The RSC line being positioned above the moving average will indicate strength.

SPA3 uses the 30 week EMA and 21 week EMA. Weekly RSC charts must be used to provide a "big picture" view of a stock's relative strength compared to the overall market.

While the All Ordinaries has been used in the example, the Banking and Finance Index could be used to determine the relative strength of NAB compared with its sector. This would provide increased probability.

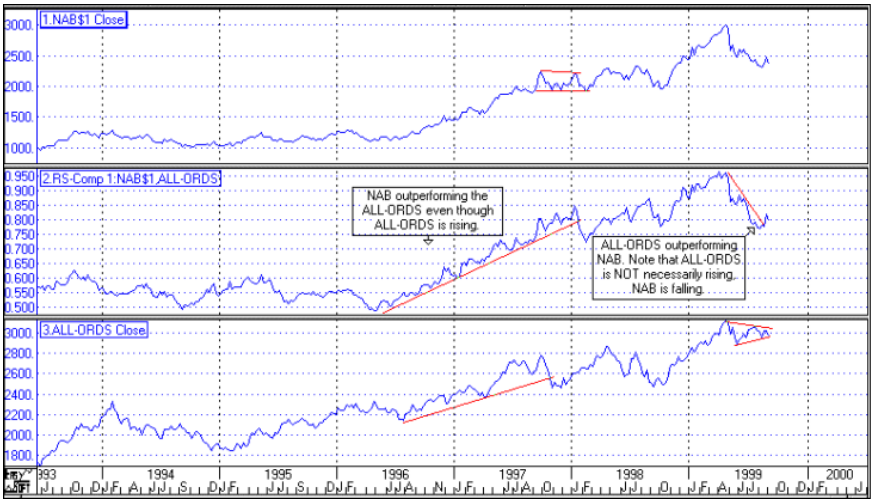


Fig.8.28

The actual value of the RSC does not have much relevance; it is merely a relative calculation or a ratio between the two entities that are being compared. The actual RSC value (and plotted scale) will, therefore, change depending on the prices of the two entities being compared.

Many approaches using the RSC indicator have been back-tested including direction changes, crossings and periods above the 30-week EMA. Prior to the introduction of the WCB4 entry signal in May 2005, only one RSC rule was utilised for most signals.

However, when the WCB4 was introduced, SPA3 traders were given the option of using a new RSC filter which resulted in an "either/or" test. In other words, if the requirement for either test was satisfied the SPA3 entry signal was legitimised.

The three rules are as follows:

**Rule 1:**

The stock's RSC must be positioned above its 30-week EMA for at least 5 consecutive weeks;

OR

**Rule 2:**

The second RSC setting (default EMA21) must be greater than the first RSC setting (default EMA30) at the time of the signal. (Refer to the section on SPA3 parameters for details.);

OR

**Rule 3**

In respect of the "WCB1 + RSC(1-4)" signal only, the stock's RSC must have been positioned above its 30-week EMA for 1 to 4 consecutive weeks.

Since the revised formula for the SIROC was introduced in Beyond Charts+ the WCB1 and WCB1+RSC(1-4) signals have been turned off in SPA3 due to the low occurrence of these signals and hence a reduced edge.

### 9.5.4 RSC as a Stock Selection Tool

It is widely accepted that fundamental analysis is a filtering method used to determine which stocks to invest in. We suggest that using RSC, which is based solely on price action, is a superior method to use to determine which stocks should be focused on for short and medium-term active investment. While RSC analysis may be used as an alternative to fundamental analysis, it may, if desired, be used in conjunction with fundamental analysis.

The benefits of using RSC include:

- It is quick to find the performing stocks that have current increased sentiment, compared to fundamental analysis.
- The RSC performing stocks may not meet fundamental criteria due to a very high PE Ratio, low (or no) dividend yield or negative EPS and hence be omitted as a result of fundamental research.
- The converse also applies, stocks that meet fundamental criteria such as low PE Ratio's, high dividend yields, low gearing may remain laggards for many months, even years while the investor awaits the tide to turn. RSC Analysis would exclude these types of stocks for selection.
- It is based on a share's price action relative to the price action of the overall market and sector averages, which means that it is an **external measurement, right now, of relative sentiment compared to the rest of the market**. Sentiment is what drives the market. Known (and unknown) fundamentals are discounted into the share price.

A big tip for all active investors, including those who do not have the benefit of using SPA3, is to determine the RSC of the stock against the Overall Market Index before any stock is purchased. Always avoid stocks whose RSC is declining and is below its 30-week EMA when compared to the Overall Market Index. Furthermore, the RSC of the stock against its Sector and the stock's Sector against the Overall Market Index can also be analysed as explained earlier.

As technical analysis processes become more and more accepted, it is becoming acknowledged that the price action of a share discounts everything known and unknown in the market about the company. Typical momentum, volume and/or cycle indicators assist the active investor to determine when the best time is to enter and exit their trades. However, these indicators do not provide any insight into whether the share that is being analysed for timing purposes is a better stock or, more importantly, a higher probability trade, than any other stock at that time.

For any particular trade the investor may time their entry and exit perfectly for a profitable trade, yet there were probably 10's, if not 100's, of other stocks that over the same hold period as the profitable trade, returned much more profit with similar or lower risk. It is these trades that medium-term active investors should seek. Relative Strength Comparison Analysis is the way to find them.

After all, why invest your money into a trade that could potentially be a lower probability trade (and lower profitability trade) over others that have market sentiment in their favour and are probably lower risk and offering higher potential profits?

Having provided an insight into how to interpret the RSC and how RSC can be used as a stock selection tool, it is extremely important to note that the RSC should NOT be used on its own as an entry signal. Price action is the most important indication of a potential change in trend. RSC should, therefore, be used as a method of filtering the higher probability trades where a price action entry signal may be imminent.

### 9.5.5 Using the SPA3 Trading System and RSC

So far the SIROC and RSC indicators and the benefits of each have been explained. However, it is the combination of both that makes the SPA3 Trading System so powerful, increasing the probability of every signal to give you the confidence to act.

In order to achieve the expectancy that SPA3 has been designed to deliver, every SPA3 entry signal MUST first be qualified so as to comply with one of the RSC rules.

It is important to understand that a SPA3 signal can be generated without satisfying any of the RSC rules. For example, when the weekly SIROC crosses the EMA 5 it is a WONB4 irrespective of the status of the RSC indicator for that share. The difference is that you do not act on a SPA3 entry signal unless the stock satisfies the relevant RSC criterion.

### 9.5.6 Additional SPA3 Entry Signals

The requirement for the RSC criterion to be satisfied before entering a trade means that on occasions there is a long wait for the entry/exit cycle to complete allowing for an entry once the RSC criterion is met. For example, if a WCB1 signal occurs and the 5-week RSC criterion has not been met then the next opportunity to enter the trade, should the trend continue, would be a WONB5+DB provided the 5-week RSC criterion is met at the time of the DB. Additional entry signals have, therefore, been defined to allow for earlier entry while maintaining the overall SPA3 philosophy.

The following additional signals have been defined in the SPA3 Trading System:

**WCB1 + RSC(1-4)**

The WCB1 + RSC (1-4) entry signal occurs when the weekly SIROC first crosses 10 and the weekly RSC versus the Overall Market Index has been positioned above the EMA30 for 1 to 4 weeks. (This signal has been turned off since the SIROC formula was revised in 2009 in Beyond Charts+ and hence is not displayed.)

**WCB1 + RSC + DB**

The WCB1 + RSC + DB signal differs from the standard WCB1 in that the entry signal occurs on the next DB after the 5-week RSC criterion is met.

For a WCB1 + RSC + DB to occur the weekly SIROC must be above the 5-week EMA, however, it doesn't necessarily need to be rising, i.e. the WCB1 + RSC + DB signal must occur before any SPA3 exit signal occurs following the initial WCB1 (without 5 weeks RSC). A WCB1+RSC+DB signal can follow a WCB1+RSC(1-4) signal. In such situations it can be used as a pyramid or a second chance to enter the trade.

**WCB2 + RSC + DB and WCB3 + RSC + DB**

The WCB2 + RSC and WCB3 + RSC signals differ from the standard WCB2 and WCB3, in that the entry signal occurs on the next DB after the 5-week RSC criterion is met and the weekly SIROC is still rising. The WCB2 (or WCB3) + RSC + DB signal must occur before any SPA3 exit signal occurs following the initial WCB2 or WCB3 (without 5 weeks RSC).

**WONB4 + RSC + DB**

The WONB4 + RSC signal differs from the standard WONB4 in that the entry signal occurs on the next DB after the 5-week RSC criterion is met.

For a WONB4 + RSC + DB to occur the weekly SIROC must be above the 5-week EMA, however, it doesn't necessarily need to be rising, i.e. the WONB4 + RSC + DB signal must occur before any SPA3 exit signal occurs following the initial WONB4+DB (without 5 weeks RSC).

**WONB5 + RSC + DB**

The WONB5 + RSC signal differs from the standard WONB5 in that the entry signal occurs on the next DB after the 5-week RSC criterion is met, provided the weekly SIROC is still above the 5-week EMA and the weekly SIROC is still rising, i.e. the WONB5 + RSC + DB signal must occur before any SPA3 exit signal occurs following the initial WONB5+DB (without 5 weeks RSC) and the weekly SIROC must still be rising.

These signals will increase the number of opportunities to enter trades. The SPA3 Trading System will therefore present sufficient opportunities to keep active investors fully invested thereby increasing the probability of achieving the expectancy level for SPA3.

| ENTRY | LOW VOLATILITY EXIT |
|---|---|
| WCB1 + RSC(1-4) | WCS2, WCS1.1/2 or WONS1/3+DS |
| WCB1 + RSC + DB | WCS2, WCS1.1/2 or WONS1+DS |
| WCB2 + RSC + DB | WCS1.1, WCS1.2 or WONS2+DS |
| WCB3 + RSC + DB | WCS1.1, WCS1.2 or WONS2+DS |
| WONB4 + RSC + DB | WONS1+DS, WCS2 or WCS1.1/2 |
| WONB5 + RSC + DB | WONS2+DS or WCS1.1/2 |

A Profit Stop, Trailing Stop Loss (TSL), HMRDCS or MFE Time Stop can also follow these entries. If any of these Stop exits occur, the only entry signals following them are the WCB2, WCB3 or WCB4, depending on where the SIROC is in its cycle.

## 9.6 SPA3 Volatility Stop Exits and Re-entry

### 9.6.1 Low and High Volatility Signals

The SPA3 exit signals that have been explained so far in this manual ensure that an exit signal is provided when the end of a medium-term trend is detected. Back-testing thousands of trades has shown that in certain cases these exit signals have not produced the optimum result, i.e. the SPA3 exit signal has occurred too late or too early. The analysis of these stocks showed that in many cases these stocks had a common feature, viz. high volatility.

As a result, a suite of SPA3 high volatility exit signals have been developed that are more appropriate to deal with the larger fluctuations in prices that are typical of high volatility stocks. In addition a SPA3 re-entry signal has also been developed.

It is important to understand that these signals do not change the flow or logic of the signals covered so far (in the same way that the RSC does not change the flow or logic of the SPA3 signals). In fact it is possible to use the SPA3 signals for entry and exit, viz. Weekly Confirmed and Weekly On-Notice plus the relevant Daily Signal, without concerning yourself about the volatility rules.

For example, if a position is opened as a result of a WONB4+DB, a low volatility SPA3 exit signal (in this case a WCS2 or a WONS1+DS) will always follow irrespective of a potential SPA3 Volatility Exit Signal occurring before or after the WCS2/WONS1+DS. The only issue for a SPA3 active investor is which to act on.

SPA3 traders are encouraged to use the SPA3 High Volatility Exit Signals as over time your returns will be superior to those you may achieve using the SPA3 Low Volatility Exit Signals only.

The high level rules to follow are therefore:

- While the volatility of a stock is high, follow the SPA3 High Volatility Exit Signals. Should a Low Volatility Signal occur during this period, it is regarded as “in suspense”.

- If the volatility of a stock changes to low, follow the SPA3 Low Volatility Exit Signals. If a SPA3 Low Volatility Exit signal was put “in suspense” while the volatility was high, that signal is re-instated and the position should be closed immediately.

### 9.6.2 Introduction to Average True Range

The Volatility Stop system is based on Average True Range (ATR). Welles Wilder originally designed ATR using simple smoothing. In Beyond Charts+ the ATR has been taken a step further with the ATRE that uses exponential smoothing in its calculations. The ATR and ATRE both measure the average over the last ‘x’ days of ‘true range’. ‘True range’ is the largest of the following:

- today’s high minus today’s low,
- today’s high minus yesterday’s close,
- today’s low minus yesterday’s close.

The ATRVE is an indicator in Beyond Charts+ that expresses the ATRE as a percentage of the stock’s price on any given day. If the ATRE 15 (which is the

chosen period) of a 57 cent stock is 3.1 cents, then the ATRVE = 5.43% (3.1 divided by 57). The 3.1 means that the daily average true range exponentially smoothed over the last 15 trading days is 3.1 cents.

### 9.6.3 SPA3 Volatility Stop Signal

This section explains how the Volatility Stop signal works. It may seem quite complicated as some detail follows. Remember that the signal is calculated for the SPA3 users and will be displayed on the chart whenever the necessary criteria are met so there is no need to learn the technicalities behind the signal unless you wish to understand what is happening "under the bonnet".

The Volatility Stop exit signal is designed to **exit volatile trades** that have a level of volatility >= 5%, i.e. these are regarded as stocks with high volatility. The 5% is determined by the value of the ATRVE indicator in Beyond Charts+, i.e. the ATRVE >= 5%.

While the volatility of the stock is high, i.e. ATRVE >= 5%, SPA3 Volatility Stop Exit Signals should be followed. Any Low Volatility SPA3 signal that occurs while ATRVE >= 5% is put into suspense, except for the WONS1+DS which is always followed regardless of the volatility level.

The Volatility Stop exit signal is not suitable for stocks with a low volatility and should never be used in place of the SPA3 low volatility exit signals.

Before explaining how to use the Volatility Stop, some definitions are required.

Definition of Volatility Stop signals:

A **Volatility Stop 1 (VS1)** occurs when the ATRVE >= 5% but < 7% and the close price drops by greater than 3 x ATRE from the "last high".

A **Volatility Stop 2 (VS2)** occurs when the ATRVE >= 7% and the close price drops by greater than 3.5 x ATRE from the "last high".

The **entire position** in the trade is exited when a VS1 or VS2 occurs.

**Definition of Last High:**

The “last high” is the highest close price before a price retracement, even if the retracement lasts 1 trading day. If a lower high than the prevailing "last high" is reached, then the prevailing "last high" remains the "last high". If a new high, which is higher than the prevailing “last high”, is reached, then the new high becomes the “last high”.

See examples of both of these signals in section 9.6.5.

**Notes on VS1 and VS2:**

- The logic behind increasing the VS from 3x to 3.5x, when ATRVE >= 7%, is that as the share price becomes more volatile more leeway in the share price movement is required to allow the trend to continue.
- Use daily charts for determining the **Volatility Stop**. The **close** price on the daily chart is used to calculate the **Volatility Stop**, not the high or low for that day.
- If the volatility level drops below 5% (i.e. ATRVE < 5%) in an open trade, then the SPA3 Low Volatility Exit Signals must be followed.
  - If the previous SPA3 signal was a low volatility exit signal that was placed “in suspense”, then that signal is re-instated and the position must be closed on the next trading day.
  - Otherwise wait for the next SPA3 low volatility exit signal.

The action is to hold when the ATRVE drops below 5%.

- If you have an open position in a trade and the ATRVE rises above 5% and the share price is BELOW the VS line then sell on the next trading day.

- The logic for the above 2 bullet points is to ensure that you always have a well defined and finite exit strategy aligned with the risk that currently exists with the open position.

If you find yourself in a scenario where the ATRVE changes and there is no defined exit signal to act on then you must act immediately. You must always be consistent with the sentiment risk status (ATRVE either < or >= 5%) that the trade is currently in to determine the exit strategy. If ATRVE < 5% then there must be a defined SPA3 exit signal that you can exit on, likewise when ATRVE >= 5%.

The key is to think in terms of potential downside not the possible upside. A trade can always be re-entered. It doesn't matter in which trade you make your profit! But is does matter that you do not allow large loss trades to occur.

- The period setting for both the ATRE and ATRVE is 15 days. This period was chosen after researching a number of periods.

### 9.6.4 SPA3 Volatility TTM Profit Stop

This Take-The-Money Profit Stop exit signal is designed to partially exit volatile trades into the trend of the trade. The share must have reached a level of volatility >= 5%, that is, the ATRVE indicator in Beyond Charts+ is reading >= 5.0%.

The logic behind taking profits into the trend is that by recognising the high sentiment risk, it is acknowledged that the price could vary down very rapidly so profits are locked in while the close price is rising in the extreme.

**Definition of TTM Profit Stops:**

A **Volatility TTM Profit Stop (TTM1)** occurs when the ATRVE >= 5% but < 7% and the **close price** exceeds **4 x ATRE** from the last high in the close price. See Fig.8.29 in section 9.6.5.

A **Volatility TTM Profit Stop (TTM2)** occurs when the ATRVE >= 7% and the close price exceeds **4.5 x ATRE** from the **last high** in the close price. See Fig.8.31 in section 9.6.5.

One third of the open position in a trade is closed out on the NEXT trading day when the first Volatility TTM Profit Stop (TTM1.1 or TTM2.1) is reached. The next one third of the original position (that is, half of the remaining quantity of shares on hand) of the open position in a trade is closed out when the second Volatility TTM Profit Stop (TTM1.2 or TTM2.2) is reached. The remaining one third of the original open position in a trade is closed out when the third Volatility TTM Profit Stop (TTM1.3 or TTM2.3) is reached. TTM1.3 and TTM2.3 are therefore SPA3 exit signals.

**Notes on TTM1 and TTM2:**

- Use daily charts for determining the **Volatility TTM Profit Stop**. The **close** price on the daily chart is used to calculate the **Volatility TTM Profit Stop**, not the high or low for that day.
- If a SPA3 entry signal occurs for a high volatile stock on the same day that a **TTM Profit Stop** occurs then the position size for the trade must be

reduced by one third. This is more a Money Management rule than a Volatility TTM Profit Stop rule.

- If the volatility level drops below 5% (i.e. ATRVE < 5%) in an open trade, then the SPA3 Low Volatility Exit Signals must be followed.
  - If the previous SPA3 signal was a low volatility exit signal that was placed “in suspense”, then that signal is re-instated and the position must be closed on the next trading day.
  - Otherwise wait for the next SPA3 low volatility exit signal.
  - If you have an open position in a trade and the ATRVE rises above 5% and the share price is BELOW the VS line then sell on the next trading day.

### 9.6.5 Volatility Stop Indicator

An indicator has been especially created in Beyond Charts+ to calculate the lower (Volatility Stop) and upper (TTM Profit Stop) volatility channel lines. It uses the ATRE as the basis for its calculations. Whilst called an ‘indicator’ it is a mini-system in its own right because it has rules programmed into it depending on the ATRE value, the ATRVE movement and price action.

The "last high", the TTM Profit Stop line and the Volatility Stop line are all automatically calculated for you according to the definitions explained above. When the stock price closes above the top of the VS range (coloured purple), this is a TTM Profit Stop exit signal and when it closes below the bottom of the VS this is a Volatility Stop exit signal. Whether it is a VS1, VS2, TTM1 or TTM2 will depend on the value of the ATRVE value at the time of the signal.

The Volatility Stop indicator in Beyond Charts+ will automatically adjust the ATRVE multiplier relative to the current ATRVE value.

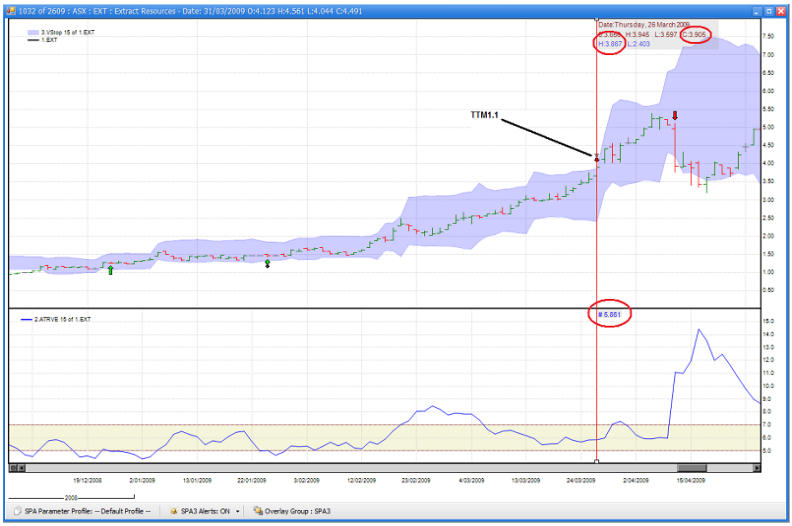



Fig.8.29

When a TTM1 occurs 1/3 of the open position is closed on the next trading day.

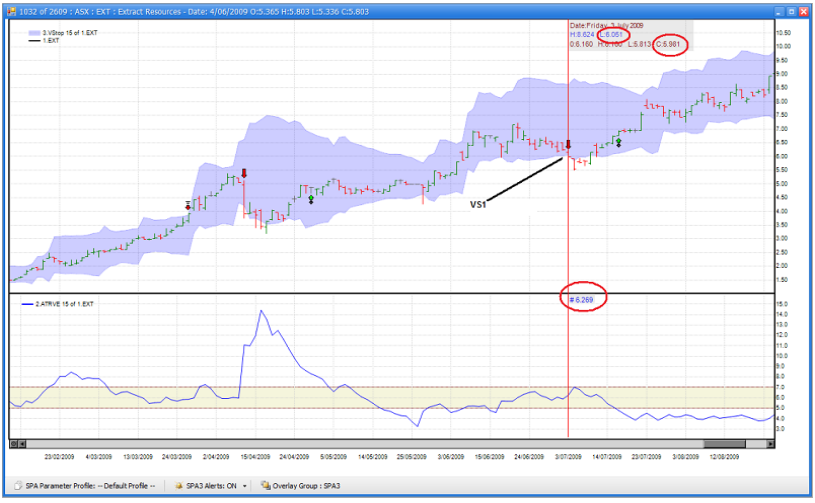



Fig.8.30

Note in Fig.8.30 that the Close price is below the Volatility Stop lower limit and the ATRVE is between 5 and 7.

When the VS1 occurs the entire trade is closed on the next trading day.

Fig.8.31 and Fig.8.32 demonstrate a TTM2.1 and VS, respectively when the ATRVE >= 7%.

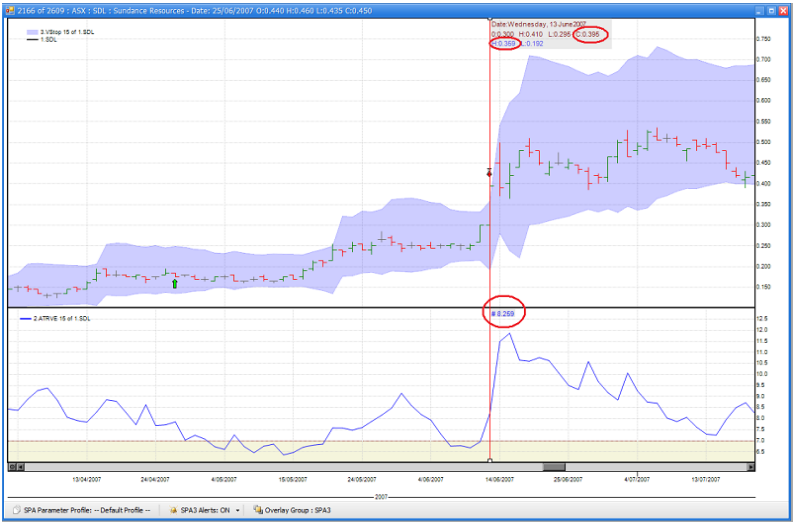


Fig.8.31

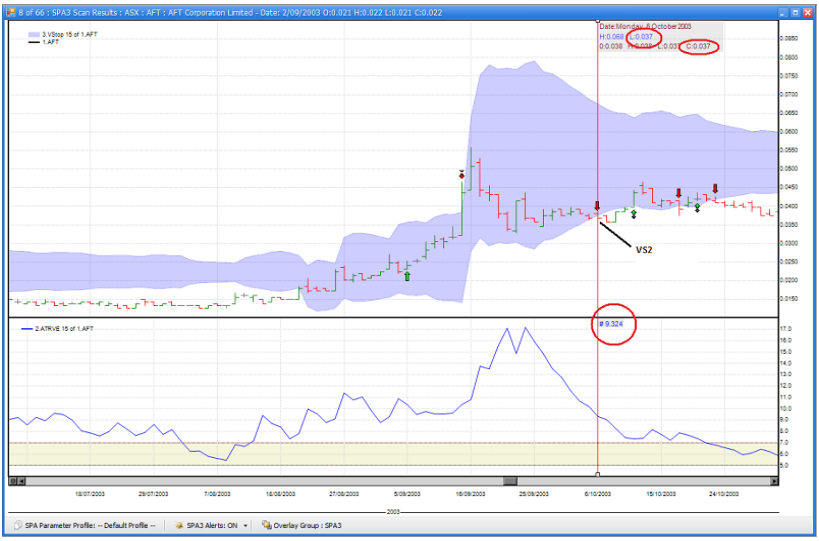



Fig.8.32

### 9.6.6 SPA3 Volatility entry signal

Occasionally a High Volatility Exit Signal occurs while the medium-term trend is still in place, i.e. before a low volatility exit signal occurs. A SPA3 entry signal has been developed to follow a High Volatility Exit Signal and to capture the potential profits from the remaining portion of the medium-term trend which otherwise may have been missed.

SPA3 VS+DB entry signal rules:

- ▪ If a SPA3 high volatility signal (VS1, VS2, TTM1.3 or TTM2.3) occurs before the trend has ended, i.e. before a low volatility signal (WONSx+DSx or a WCSx) occurs, the trade can be entered.

- The entry signal (VS+DB) occurs on the next DB signal while the weekly SIROC 21 8 is still rising and < 99.0 and provided the previous weekly

SPA3 signal was not a WONS1 (without a completed DS). The latter criterion is included to ensure that there is not an entry at the same time an on-notice to sell signal is in place.

- The VS+DB can occur when the ATRVE < 5% or >= 5%. For a VS+DB to occur the previous exit signal must have been a VS1, VS2, TTM1.3 or TTM2.3 (these exit signals only occur when the ATRVE >= 5%, however, the volatility of the stock can then decline after the VS exit signal and as a result the ATRVE value is not relevant at the time of entry).

- If the ATRVE > 5% at the time of the VS+DB, the share price must be above the VS line (otherwise you would need to immediately close the position as per the VS exit signal rules).

It should be noted that entering on the next DB signal might be a lower probability and higher risk trade compared to a fresh SPA3 setup signal elsewhere in the market. However, continuation of strong trends can yield good returns provided the sentiment risk is managed using the Volatility Stop Risk Management exits.

It is possible for a VS+DB signal to occur on the same day as a WCB3 as the latter signal does not require a SPA3 Low Volatility Exit signal to precede it. While both are 'legitimate' entry signals, the WCB3 entry should be treated as a VS+DB for risk categorisation.

Fig.8.33 shows an example of a VS1 that occurred to close a trade. Soon after a VS+DB2 re-entry signal occurred. The weekly SIROC value was 93.7 and rising. Note that the ATRVE ≤ 5% but this is not a pre-condition for entry.

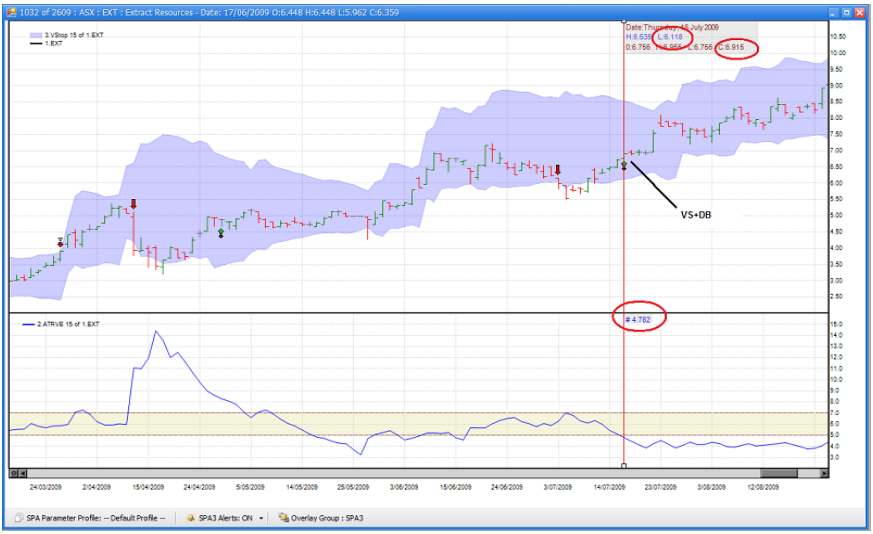



Fig.8.33

# 10

# Psychology of Active Investment

The importance of psychology in successful active investment cannot be over-stated. Once you have acquired a sound Trading Methodology this aspect will be the biggest challenge you face in becoming a successful active investor.

Don't be fooled by where this Chapter is situated in the Manual. Of all the variables in the market that can affect traders' outcomes, their mindset is the biggest variable in determining any trader's performance in live trading.

The following topics are covered in this Chapter:

- The Psychology Challenge
- Re-training your mind for Active Investment

## 10.1 Introduction

Active investing is very different from passive investing and hence requires a different mindset for decision-making. Indeed, active investing requires a completely different mindset to any other kind of buying and selling that you have done in the past, e.g. household appliances, motor cars, clothes, etc. All your life you have probably been taught to buy at a discount and sell at a premium. "Don't make decisions in the heat of the moment, take your time and buy and sell on your terms, not the other persons."

This will not work in the market. Decisions have to be made quickly and on the terms that the market dictates. Buying low and selling high breeds a mindset of trying to "bottom-pick" stocks, which is a market loser's mentality. High probability stock selection often requires that an all-time high price be paid to take a position in a market winner. Buy high and sell higher.

Whilst it is not written down anywhere, you more than likely have a process for buying household appliances and other commodities. You also need a process for buying and selling stocks. You should know by now that this is SPA3 when it comes to medium-term trading of equities and combined equities and CFDs with SPA3CFD.

## 10.2 The Psychology Challenge

The reason that you need a Trading Methodology is to protect you from yourself. You need rules to determine when you should buy, hold, sell and how much capital to commit to a trade. If you don't believe that human beings need rules to protect themselves then explain why rules exist everywhere: in schools, countries, companies, on the roads, in the workplace. Despite all these rules, people are still injured, expelled, sacked and killed. "Rules are there to be broken" I hear you say. Everyday people die because rules are broken. In the market it is not so bad, you merely lose all or a lot of your money.

Having rules allows the active investor to build confidence in a consistent method. With an inconsistent approach it is impossible to build any confidence because it is impossible to measure or repeat an inconsistent approach. Over time you will be able to measure your results which will build confidence and faith in the rules and processes which you can then repeat in the future. These very rules are what you will trust when the going gets tough.

It is important that you do not become overconfident in your own ability as this will lead to you breaking the rules. Successful active investors know that their confidence is primarily in the method that they use, rather than themselves, as they remain detached, merely focused on their processes, which are the execution of their edge in the market. The confidence they have in themselves is in their ability to execute.

Without confidence and faith in your method you will not "pull the trigger" to take positions in the market. To make profits in the market you must put your money at risk in the market. If you leave your investment capital in your trading account then you risk making cash interest rate returns on your money rather than medium-term active investment returns from the stock market.

**100% of trades that you do not do will not make you a profit.**

When you get your money into the market then get all of the capital that you have allocated for medium-term active investment into the market, become "100% invested" according to your Risk Management and Money Management rules. The “100%” changes depending on your risk profile regarding market and sector risk.

Overcome the fear of experiencing losing trades otherwise you will not "pull the trigger" to enter trades or you will only commit small portions of your active investment capital.

**The cost to you for your fear will be the loss of profits which will be far larger than the losses you fear.**

Once you are "100% invested" you will only need to monitor the open positions that you have. This removes the ongoing psychological pressure to keep looking for a "good" trade to enter because all of your cash is in the market at risk of making profits! If you are investing according to a consistent method then all trades are potentially "good" trades. Don't fret about which one is the best of the "good" trades or which one will be a loss trade. Just do the trade according to the rules of the methodology! The rules are your edge in the market with loss trades built into the edge.

It is a known fact that there will be loss trades. No method or portfolio has ever selected stocks that are always profitable. In fact, it is known that when using SPA3 40% - 65% of the trades will be loss trades, depending on the market performance over the period being measured. It is also known that a SPA3 portfolio should deliver a return of around 10 – 15 compounded percentage points per annum better than the overall market over a 5 year period, with the loss trades and brokerage **included** in that result.

The detailed simulated historical portfolio research provided in the September 2012 (ASX) and December 2012 (NASDAQ) White Papers provide plenty of evidence of the robustness of SPA3. Even the most skeptical should draw confidence from this research material to follow the rules as they were designed to be followed.

In a public trading contest in Australia in 2001, the **SPA3 Portfolio 1**, as audited by Personal Investor magazine, returned 32.5% over 52 weeks. Over the same period the All Ordinaries Accumulation Index rose by 6.3%. The SPA3 profit return was 5.1 times better than the overall market index, dividends included.

49% of the 70 trades over the year were loss trades. The profit trades were twice as big as the loss trades, on average, and they returned larger absolute dollars to the portfolio than the loss trades took out. Despite these statistics being below the long term researched averages for SPA3, which is to be expected due to the

nature of the market during 2001, the portfolio still returned 32.5% in a year when the market offered 6.5%.

**Successful active investment is about making profits, not about being right.**

It doesn't matter which trade delivers you a profit. Active investment using technical analysis is about finding high probability trends. This is why it must become easy to exit trades according to the rules whether they are in profit or in loss at the time. Don't hold onto a trade because you want to make more profit or less loss in that particular trade. It doesn't matter; the next trade may deliver more profit. Detach yourself from your prejudices about past profitable or loss trades. You do not know what will happen next nor do you need to know to be successful in the markets.

Follow your exit signals without any expectation of what might happen after you exit. Don't hold on to sell at the original entry price when facing a small loss after an exit signal occurs. There is a very good chance that the entry price will not be achieved again for a long time, maybe years, if ever.

A good example is Telstra, a “Blue-chip” stock on the ASX which has remained in drawdown from its high of $8.80 for more than 13 years as at January 2013. “Sound” companies with Australian household names such as HIH Insurance, One-Tel, Bond and Quintex went into liquidation where their stock prices went to zero let alone regaining their old highs!! There are countless examples of such stocks around the world.

In the sub-prime bear market of 2007 / 2008 many “blue chip” stocks lost 50% - 90% of their value in a matter of a few months, some even in a few weeks. No, they don’t all come back! Nobody knows what is going to happen in the future.

Ignoring exit signals merely puts you under undue psychological stress because you enter a zone where there is NO signal to bring you to action. You must have known that the price would go higher! The net result is that you take no action and hold onto a losing trade, hoping that one day you will get your money back and avoid the pain that comes with closing out a loss trade.

This mentality will cause large loss trades to occur, the ones that wipe out all your profits for the year, or longer. Always ensure that your active investment capital is in high probability trades. Note there is no such thing as a guaranteed profit trade, just a high probability one. High probability trades are those whose previous SPA3 signal was an entry signal, not an exit signal!!!!!

Take responsibility for your actions and results. If you do not there will always be someone or something else, i.e. not you, causing you not to perform. This mindset allows you to continue repeating your mistakes……..because it is not you making the mistakes! This means that you will never need to address anything to improve your performance because it will always be beyond your control.

Learn to take responsibility for your actions so you can address any shortcomings and move on to grow and improve.

To complete this section we will use a scenario used by Dr Van K. Tharp to illustrate a case in point on actively investing with a Trading Methodology. This material can be found in Jack D. Schwager's book, "Market Wizards". If you are trading with a methodology such as SPA3 then you can choose one of the following two ways of trading.

Thought pattern one:

- See the Trading Methodology signal.
- Recognise that it is a valid signal according to the rules.
- Tell yourself what might go wrong if you take the signal.
- Feel bad about it.
- Do not do the trade.

Or you could follow this second thought pattern:

- See the Trading Methodology signal.
- Recognise that it is a valid signal according to the rules.
- Feel good about it.

- Do the trade.

Or put another way: confidence is thinking about what you want to happen and lack of confidence is thinking about what you do not want to happen. Whilst your confidence will not affect the outcome of the opportunity, it will affect whether you partake in the opportunity or not.

Note this applies to both opening and closing a position!

It is your choice. It is the same Trading Methodology being used by many active investors yet the results can be very different from one active investor to the next because of the different trading mindset that different people have. The first mindset will not make money in the market. It may not lose money either on each particular opportunity but it definitely will NOT make money over a large sample. Why then do people have such mindsets when investing in the market? If you are using a Trading Methodology surely it makes sense to adopt the second mindset? This is the challenge of getting your psychology right for active investment in the market.

Feel good about it and do the trade. Trading with an edge is, after all, a numbers game. Our challenge is to let the numbers play themselves out in the market….it is just our minds that complicate the game.

## 10.3 Re-training your mind

Being aware of how you need to think and feel and how you should act is simple and logical enough, however, actually practicing it in the heat of market conditions is very difficult to accomplish for the great majority of active investors. Understanding why it is difficult requires some knowledge of how your mind works. Changing the way you think to that of a consistently successful trader requires effort. In fact, it requires that you re-train your mind to think in terms of how the market conducts itself rather than the way it is currently trained to think in terms of how your world around your chosen lifestyle and profession operates.

We all have beliefs. Our beliefs are time grown and programmed into our subconscious minds through our past and ongoing experiences, thoughts, actions, emotions, sayings and inputs from what we see, hear, touch, taste and smell.

Our beliefs automatically and constantly do our bidding for us. They determine our perceptions and interpretations. They create our expectations, dictate our behaviour, talk and actions and shape our feelings and emotions.

To be successful in the market over the long term you need to add new beliefs into your subconscious mind, beliefs that automatically determine your perceptions, expectations, behaviour and emotions with respect to engaging the markets. You also need to "turn off" beliefs that sabotage your endeavours in the markets.

The wonderful thing about the human mind is that we all have the mechanisms within us to change our beliefs. It is just a matter of having the willingness, desire and purpose to put in the effort to change by stepping into a process that is different to what you currently do. Putting in no effort and expecting a different outcome is senseless.

This means that you need to:

- acknowledge that your current beliefs do not suit engaging the market in an ongoing profitable manner, and
- energise new beliefs specifically designed for engaging the market.

In the previous section and in Chapter 5 we have discussed such things as:

- overcoming the hesitation of entering a trade for fear of it being a loss trade,
- overcoming the stock picking mindset,
- thinking at the portfolio level,

- following the rules of your methodology rather than trying to it control it and other market variables,
- feeling good about the trade that your methodology has signaled,
- being consistent,
- following your exit signals especially when it is to exit a loss trade,
- having no expectations of a profit trade by having neutral thoughts about what might happen,
- trading all the opportunities that your methodology provides with the capital that you have allocated,
- accepting drawdown will happen,
- accepting loss trades will happen,
- understanding that profit trades will happen as will new equity peaks,
- knowing that trading through drawdown is difficult for the great majority of active investors,
- accepting that future directions of the market are unknown,
- being confident that your methodology is your edge which is rule based and guides your behaviour in the market,
- having faith and trust in your edge,
- surrendering to your edge.

Being aware of these aspects and actually doing them are two very different things. It is not until you have re-trained your mind to think like a consistently successful trader that you will be able to consistently engage the market in an ongoing profitable way.

**You have to transition from knowing what to do, to doing what you know.**

To achieve this you have to understand that your fear of experiencing a loss trade is driven by an automatic pain avoidance mechanism that is programmed into

your subconscious mind. We are programmed to avoid physical and emotional pain. This is not how we choose to be – it is hard wired into our very being.

In the markets emotional pain results from loss trades, missing out on trades that you know you should have taken or from leaving profit in a trade. These equate at our subconscious level to being proven wrong, failing, not belonging, missing out, making a mistake, being found lacking, not being good enough or losing to an opponent, all causing emotional pain to some degree.

Our pain avoidance mechanism that automatically kicks in before doing the trade is to not do the trade for fear of experiencing the emotional pain, i.e. avoid the event that can potentially cause emotional pain.

Once a loss trade occurs and emotional pain results, the following mechanisms kick in after the event in an attempt to avoid or obliterate the emotional pain: denial, justification, rationalisation, ignoring, hating, revenge, self-criticism, distortion and exclusion.

You will never be able to turn off your automatic emotional pain avoidance mechanisms in your subconscious mind but you can de-energise them with respect to trading and energise new trading beliefs which will become your new subconscious trading paradigm.

You do this by redefining to your subconscious what events do and do not cause emotional pain to you.

Until you have gone through this de-energising and energising process you will continue to make trading errors in the market such as:

- freezing on entering trades,
- chasing trades after the entry signal,
- doing other trades that do not meet your rules,
- exiting trades before the exit signal,
- not exiting a trade when your exit rules are met,
- putting too much capital into certain trades at certain times,

- putting too little capital into certain trades,
- having too much capital in the markets according to your Trading Plan,
- having too little capital in the markets according to your Trading Plan.

Trading errors such as these are the manifestation of poor trading psychology. After making such errors, a trader with poor trading psychology would typically blame a third party for their trading errors such as a broker, a newsletter, the market, their software, their job because they were too busy at the time, their rules, the internet, their computer, etc. That is, they will not take responsibility for their trading execution rather justifying the loss or distorting why they had the loss. Because it was not their fault and it was therefore out of their control, their view is they need take no further action to improve for the next time this occurs!

Our innate emotional pain avoidance mechanisms cause us to focus too much on individual events and the outcome of each individual event. These events in the market are individual trades. This intense focus on each trade causes undue significance to be put on the outcome of each trade because it is measured in terms of whether we were right or wrong, succeeded or failed, won or lost to an opponent being the market or some other market participant.

The resulting emotional pain from being proven wrong invokes our defence mechanisms such as self criticism, justification, rationalisation, hate or revenge, which will:

- obstruct our ability to follow rules that might cause a similar occurrence of emotional pain,
- cause us to make excuses and point blame for the outcome which means that we need not look to ourselves to improve,
- make us view the pain deliverer as the opponent that we need to conquer and take out revenge on,
- blind us to objectively see any other information that might cause the emotional pain to return,
- cause us to see information that might prevent the emotional pain occurring again.

This causes traders to analyse their edge, that is, analyse their entry signals generated by their methodology. They look at reams of further information outside of their researched edge such as other technical indicators, company information, newsletters, and chat forums seeking non painful information that might justify them not doing the trade thereby avoiding potential emotional pain.

This further analysis, if driven by revenge, makes the market your enemy or opponent thereby preventing the trader being in sync or empathetic with the market as it moves to communicate opportunities to the trader in the form of their edge's entry and exit signals.

The process through which you energise new trading beliefs is called auto-suggestion. Napoleon Hill used this term in his book "Think And Grow Rich", published in 1937. Modern terminology might call it self-talk conducted aloud.

The way that new beliefs become energised is by repeating aloud a set of trading truths to yourself every time that you engage the market. At the same time you carry out certain actions which re-enforce your new beliefs. Every time that you carry out actions that re-enforce you new beliefs you energise the new beliefs and de-energise your old trading beliefs. Every time you carry out actions, make statements or think thoughts aligned with your old pain avoidance trading beliefs you de-energise your new trading beliefs and energise and re-enforce your old beliefs.

We cannot expect perfection which means that we must accept that loss trades will occur and are a natural part of engaging the market. This means that we win less than 100% of the time. When we accept in trading that winning 55% of the time is a high winning rate and that 40% will be sufficient to outperform the market, we start on the road to re-training our minds.

It is at this stage that we can start thinking in terms of probabilities rather than certainties. When we start thinking in terms of probabilities we start realising that each trade has an uncertain outcome which we have no control over but that over a large sample of trades there is a statistically reliable outcome that can result in large portfolio profits. This is the stage that we start overcoming the stock picking

mindset and start thinking in terms of the equity curve and accept that drawdown and loss trades are part of the game. We no longer put undue significance on individual trades and hence follow our rules which provide us with our edge in the market.

Our aim, therefore, is not perfection or being right or avoiding being wrong or avoiding missing out. Our aim is to be consistent.

So what are the new beliefs that we must energise to operate in a consistent manner in the market?

Achieve:

- trust,
- surrender by following, rather than trying to control by leading,
- neutrality,
- consistency,
- confidence,
- commitment,
- process focus,
- objectivity.

# 11

# Rules, Rules and More Rules

In this Chapter you are introduced to our Golden Rules. These rules are more generic and complement the specific rules that apply to the SPA3 Methodology.

The following topic is covered in this Chapter:

- Golden Rules for Active Investors

By now all readers should understand our approach for successful medium-term investment in the stock market is rules based and mechanical. This is the highest probability way you will be able to enjoy sustainable profits from your active investment.

Whilst the necessary rules have already been covered in this manual, we thought it would assist our customers to have a summarised list of our “Golden Rules” for successful medium-term active investment.

The list is not meant to be exhaustive and it does not replace or over-ride any SPA3 rule. The rules are based on our face-to-face experiences with multiple hundreds of customers as they have worked their way from the “unconsciously incompetent” stage to the “consciously competent” stage of active investment.

- Do not start trading unless you accept that everything about successful active investment is rules-based. You must create an environment of total consistency especially as far as the mental approach is concerned.
- Do not start trading until you have developed and committed your own Trading Plan on paper.
- Do not start trading until you have devised or obtained a Trading Methodology to determine your entry and exit price.
- Do not start trading until you have gained a full understanding of the processes that are required to execute the SPA3 Trading Methodology.
- Do not start trading until you have confidence in the Trading Methodology and are prepared to commit yourself to the role of active investor. SPA3 is a mechanical methodology that has a risk reward ratio of greater than 2 to 1 AND a positive expectancy. Along with the money management and risk management rules this means that for the mechanical active investor it is simply a numbers game! That is, execute trades according to the rules!
- If you apply inconsistent and subjective criteria to your list of potential stocks to purchase…stop!
- Do not start trading until you are prepared to take responsibility for all your actions as an active investor.

- Commit yourself to running an active portfolio and get your money into the market, i.e. be fully invested according to the Risk Profile you have formalised.
- Overcome the fear of experiencing loss trades and accept them as part of the business of an active investor.
- Understand that if you have followed the rules, there is no such thing as a "wrong" trade even if it turns out to be a loss trade. At worst it is confirmation of your ability to trade mechanically and one more trade that will bring you closer to achieving consistency and the expectancy of the methodology.
- Understand if you have **not** followed the rules, there is no such thing as a "good trade". While you may have made a profit in the short-term you may have started along the road of subjective and ad-hoc trading which will have an unhappy ending.
- Never fool yourself that you know what the market is going to do. No one does! Always accept whatever the market does and know what you are going to do in response.
- Detach yourself from all subjectivity, noise, emotions and other distractions and trade in the "now moment".
- Do not try to beat, fight or take revenge on the market. The market does not care!
- Detach yourself from the money, which is merely a by-product of the process.
- Never ignore a sell signal – you have to avoid the large loss trades from which it is so difficult to recover.
- Always assess the current direction of the market.
- Avoid "analysis paralysis" and avoid "let's find a reason why we should not buy this stock"! Do the analysis as per your Trading Methodology and Trading Plan and then "pull the trigger".
- Always trade the "strong stocks", i.e. those that are outperforming the market and leave the "dogs" to others.

- Remember successful active investment is not an ego trip. You have nothing to prove.
- Always know your term and make sure your actions are always consistent with that term.
- If you happen to lose, do not miss the lesson.
- You cannot expect a different outcome by continuing to do the same things.
- It does not matter what happens, it is how you take it and what you do about it that counts.
- Remember the three R's of active investment: Respect your method, Respect the market and be Responsible for all of your actions.

We wish you consistent and objective active investment! Achieve this and you will be profitable.

# 12

# Appendix A

| SPA3 ENTRY SIGNALS |
| --- |
| WCB1 |
| WCB2 |
| WCB3 |
| WCB4 |
| WONB1+DB1 / DB2 |
| WONB2+DB1 / DB2 |
| WONB3+DB1 / DB2 |
| WONB4+DB1 / DB2 |
| WONB5+DB1 / DB2 |
| WCB1+RSC(1-4) |
| WCB1+RSC+NEXT DB1 / DB2 |
| WCB2+RSC+NEXT DB1 / DB2 |
| WCB3+RSC+NEXT DB1 / DB2 |
| WONB4+RSC+NEXT DB1 / DB2 |
| WONB5+RSC+NEXT DB1 / DB2 |
| VS+DB1 / 2 |

| SPA3 EXIT SIGNALS |
|---|
| WCS1.1 |
| WCS1.2 |
| WCS2 |
| WONS1+DS1.1/DS1.2/DS2 |
| WONS2+DS1.1/DS1.2/DS2 |
| WONS3+DS1.1/DS1.2/DS2 |
| TTM1.1 - 1.3 |
| TTM2.1 - 2.3 |
| VS1 |
| VS2 |
| Profit Stop |
| TSL |
| HMRDCS |
| MFE Time Stop |

| Exit Signals | |
|---|---|
| WCS / VSx |  |
| WONSx+DS |  |
| Lighten / TTM |  |

| Entry Signals | |
|---|---|
| WCBx |  |
| WONBx / VSx+DB |  |
| All +RSC Signals |  |
| Pyramid |  |

# 13

# Appendix B

## SPA3 Market Risk and Sector Risk Timing Research

The most graphical and obvious way of showing the improvement due to Market Risk timing modifications is through the simulation of simultaneously managed historical SPA3 portfolios using random SPA3 trade selection.

This section of the Reference Manual shows the research outcomes of running historical portfolio exploratory simulations with each of the SPA3 Market Risk rules, the original and the revised rules introduced in April 2015 to all SPA3 users, as a demonstration of the research.

This has been done for both SPA3 ASX and SPA3 NASDAQ.

The exploratory simulation process is described in detail in the Sept 2012 White Paper accessible from within Beyond Charts on the HOME Tab Help icon. A brief overview is provided here:

1. 1000 portfolios are simulated as being traded simultaneously starting from the same starting date with the same starting capital.
2. Each portfolio's stock selection is conducted randomly at the outset.
3. Each stock in a portfolio is traded exactly according to the SPA3 rules.
4. When an exit signal occurs for any stock in a portfolio the next trade is randomly selected from all the available valid SPA3 trades provided there is sufficient liquidity for the trade according to the SPA3 liquidity rules until all portfolio capital is invested.
5. Risk Profile 1 is used for the exploratory simulation, meaning that when a SPA3 High Market Risk signal occurs all open trades are closed on the following trading day and no new trades are opened. (The horizontal lines in Charts 5 – 8 below are Risk Profile 1 periods.).
6. Each of the 1000 simultaneously run portfolios is comprised of a unique set of trades during each portfolio's lifetime.

Charts 1 to 4 below show the 'straw broom' equity curves of 1000 unique historically simulated SPA3 portfolios all plotted together.
Risk Profile 1 has been used for SPA3 Risk Management. 0.8% risk per trade was used for position sizing and $9.95 or 0.11%, whichever is larger, was used for brokerage per transaction for the ASX and $9.95 flat rate per transaction for the NASDAQ.

## Simulated SPA3 Portfolios on the ASX

Chart 1 shows the exploratory simulation results for 1000 unique SPA3 ASX historical portfolios using the SIROC 21 8 8 for SPA3 Market Risk and for stock timing. Refer to the Sept 2012 White Paper for more detailed research on the exploratory simulation that was conducted up to the end of January 2012.

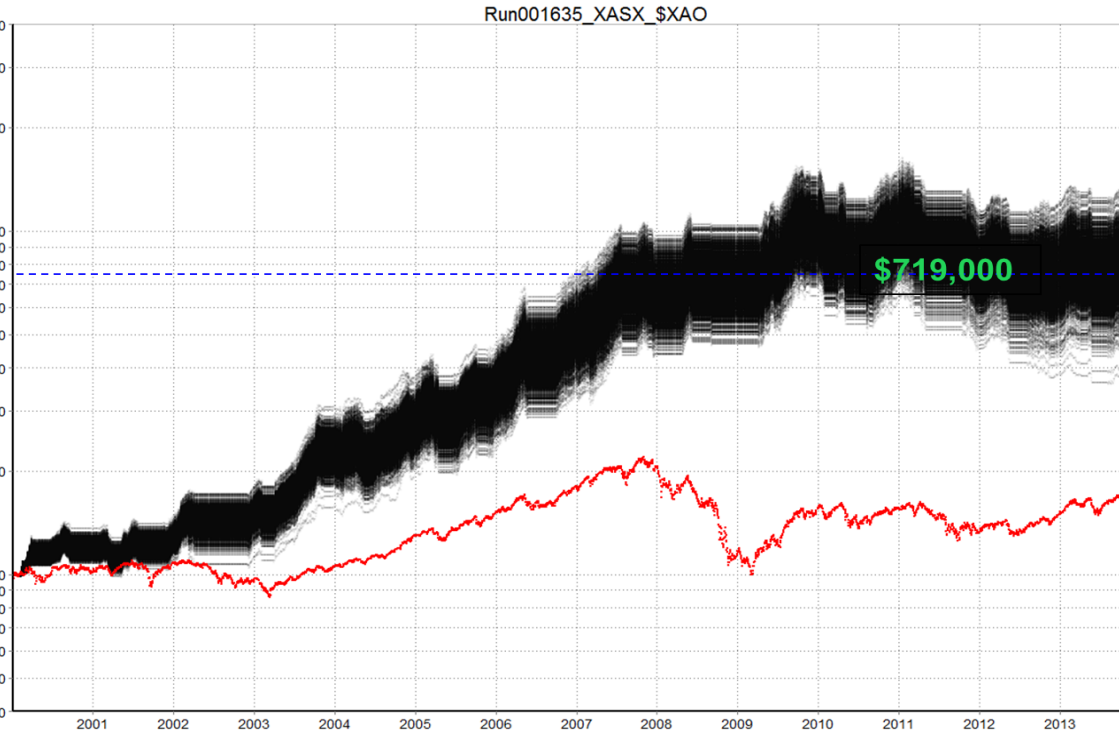



Chart 1

The exploratory simulation in Chart 1 starts on 1 January 2000 but concludes at the end of April 2014. Charts 1 – 4 are logarithmically scaled.

The continued down trend of the simulated SPA3 ASX portfolios from 2010 onwards is a concern and demonstrates the difficult medium term equities trading conditions over the period from late 2009 to current which the SIROC MR timing had some difficulty with.

The median portfolio ended with a value of $719,000 having started at $100,000. This was far better than the All Ordinaries, which ended the research period at around $180,000.

Chart 2 shows the exploratory simulation of 1000 historical SPA3 ASX portfolios using the Revised SPA3 Market Risk timing and the SIROC 21 8 8 SPA3 rules for stock timing. The exact same universe of trades was used for the simulation outcomes shown in Chart 2 below. The only difference from Chart 1 was the change in Market Risk timing.

The blue dotted line in each of Charts 1 & 2 provides a reference point for the duration of the simulation period and also the median ending portfolio from Chart 1. The purple parentheses mark the range from the best to the worst of the simulated portfolios from Chart 1.

Note where the blue dotted line and purple parentheses are shown in Chart 2 to see the difference and huge improvement delivered from the change to the Revised SPA3 Market Risk timing.

Of particular note is the improved outcome over the difficult trading period of late 2009 to April 2014. Note that not only does the direction and shape of the trend over the period improve but also the range of the simulated portfolios remains narrow in Chart 2 compared to Chart 1 where the range starts broadening.

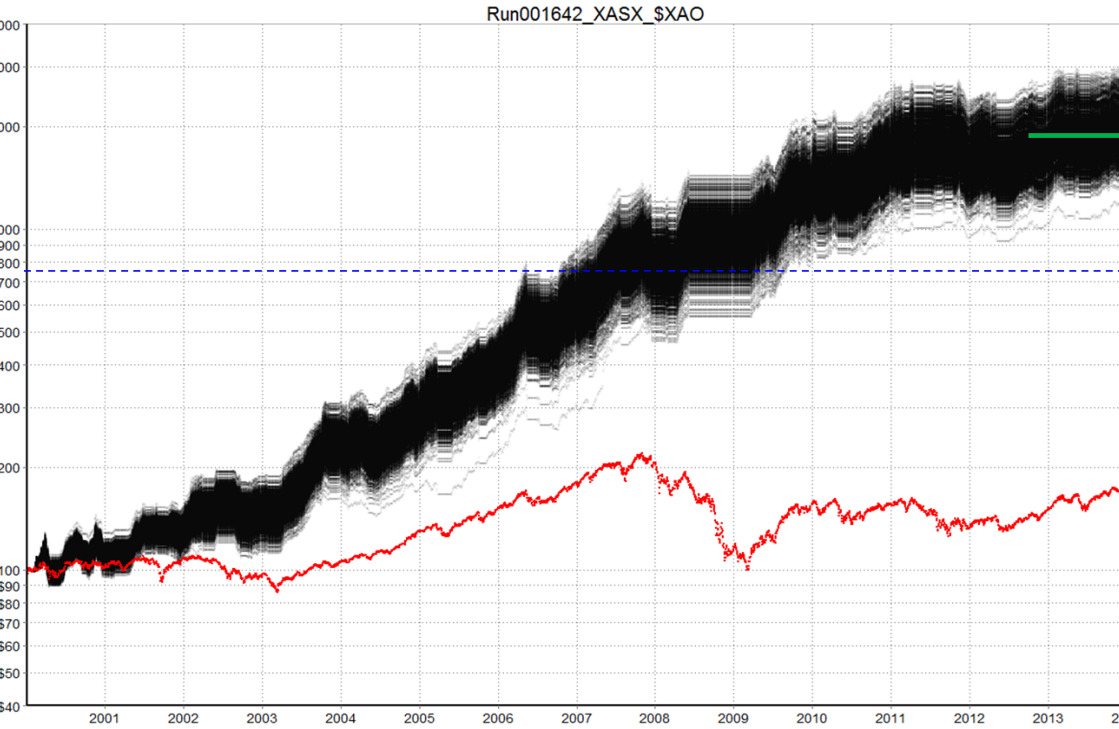



Chart 2

This simulation outcome also highlights the fact that an unleveraged portfolio of stocks managed correctly should always outperform the unleveraged trading of an index in the same trading timeframe, i.e. short, medium or long-term. This can be determined by comparing the results of trading the All Ordinaries (practically achieved by trading an ETF that tracks the ASX200) in Table 7 with the simulated outcomes shown in Chart 2.

The reason for this is that stocks are more volatile than indices and hence offer more growth potential but also offer more drawdown potential if not managed appropriately.

The median portfolio in Chart 2 is now more than double than in Chart 1 and the end position of every simulated portfolio in Chart 2 is better than those simulated portfolios in Chart 1, as shown by the purple squiggly parentheses.

These simulated outcomes demonstrate that the Revised SPA3 Market Risk timing for the ASX is superior to the SIROC based Market Risk timing for the ASX.

## Simulated SPA3 Portfolios on the NASDAQ

However, that is just a sample of one exchange. The same exploratory simulation exercise had to also be conducted with SPA3 NASDAQ to confirm the concept. This was conducted on data from January 2000 to the end of August 2014.

Chart 3 shows the simulated historical portfolios using the SIROC 21 8 8 for SPA3 Market Risk timing.

The median SPA3 NASDAQ portfolio in Chart 3 was $920,000 compared to the NASDAQ Composite being just $110,000 and the S&P500 (not shown) being just $143,000 over the research period.

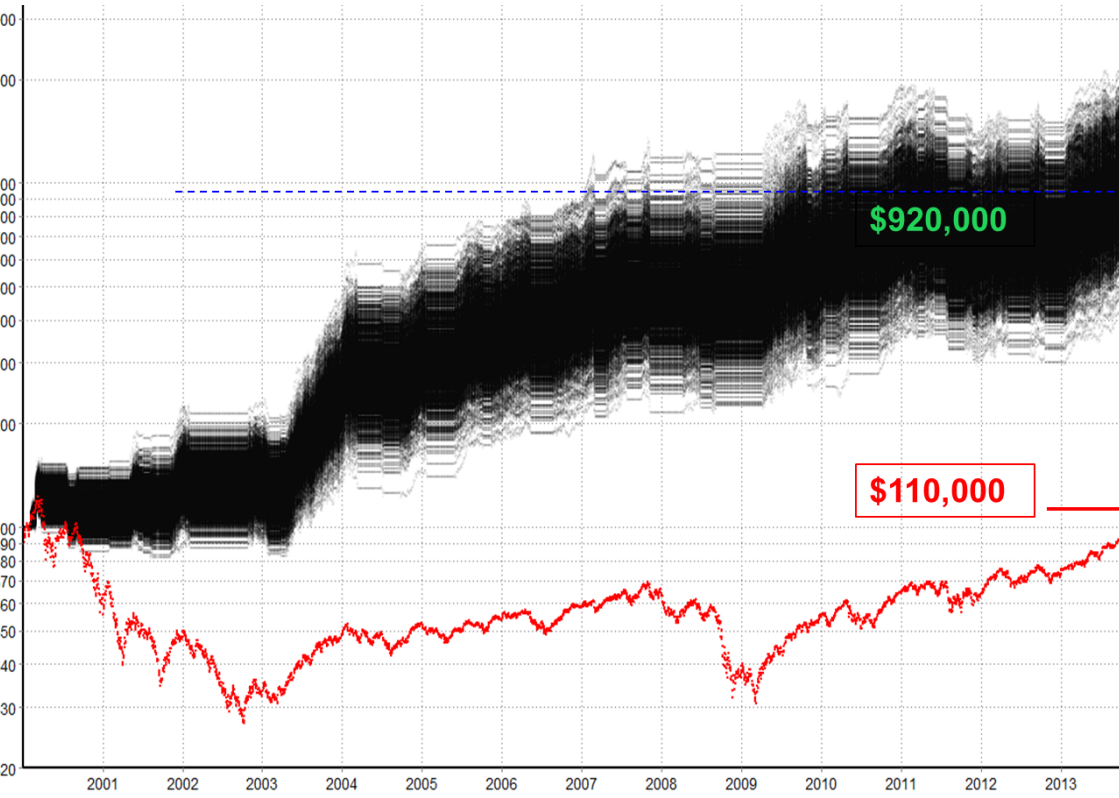



Chart 3

Chart 4 shows the improvements in performance from making just ONE change, that or Market Risk from the SIROC 21 8 8 to the Revised SPA3 Market Risk using Swing Charts and SWS's modified ATR Trailing Stop.

In both Charts 3 and 4 EXACTLY THE SAME universe of SPA3 NASDAQ trades were used. Effectively, each of the simulated portfolios would have been comprised of different sets of SPA3 trades due to the change in the SPA3 Market Risk timing.

Whilst there is not much improvement in the best performing simulated portfolios, there is a vast improvement in the median simulated portfolio and the

worst simulated portfolios, which have doubled in value over the research period compared to those in Chart 3.

Note, too, where the dotted blue line is positioned in each of Charts 3 and 4.

This demonstrates that using the Revised SPA3 Market Risk rules improves SPA3 NASDAQ performance compared to using the SIROC-based SPA3 Market Risk timing.

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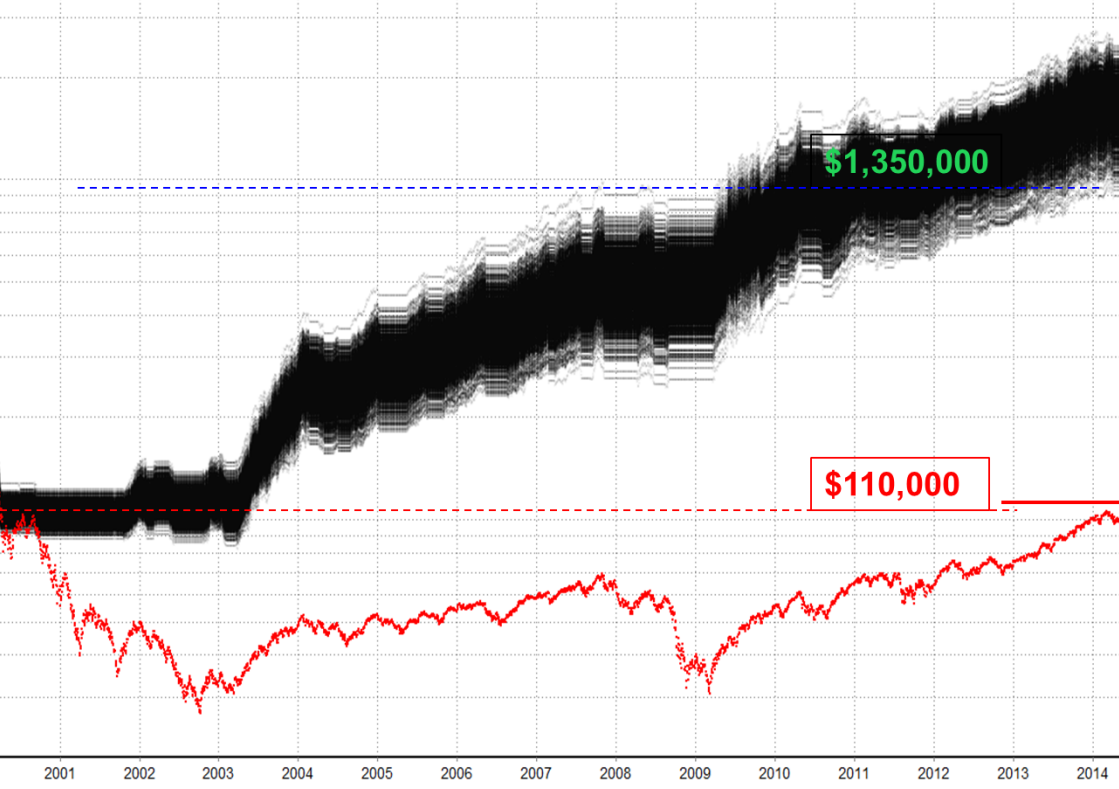


Chart 4

For more information on the SPA3 Market Risk and Sector Risk Timing Research Research including comparisons to the SIROC indicator please refer

to the ‘Revised SPA3 Market Risk and Sector Risk Timing’ document in the Members Zone.

# 13 Appendix B

# 18

# ADDITIONAL READING

# 18 ADDITIONAL READING

**Mandatory reading:**

SPA3 Getting Started Manual.

SPA3 Reference Manual.

SPA3CFD Manual (if you have purchased SPA3CFD).

Douglas, Mark. Trading in the Zone. Prentice Hall, 2000.

**Optional additional reading:**

**Technical Analysis**

Murphy, John J. Technical Analysis of the Financial Markets. NYIF, 1999.

Murphy, John J. The Visual Investor, Wiley. 1996.

Pring, Martin. Technical Analysis Explained Edition 3. McGraw Hill, 1991.

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Douglas, Mark. Trading in the Zone. Prentice Hall, 2000.

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**Money Management**

Jones Ryan. The Trading Game. John Wiley & Sons, 1999.

Tharp, K. Van, Trade Your Way to Financial Freedom, McGraw Hill, 1999.

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**Trading System Development**

Kaufman, Perry. Smarter Trading – Improving Performance in Changing Markets. McGraw Hill 1995.

Stridsman, Thomas. Trading Systems that Work. McGraw Hill 2000.

Krutzinger Joe. Trading Systems – Secrets of the Masters. McGraw Hill 1997.

DeMark, Thomas. New Market Timing Techniques. Wiley, 1997

**General**

Schwager, Jack. Market Wizards, NYIF, 1989.

Schwager, Jack. New Market Wizards, Harper Business, 1992.

Bedford, Louise. Trading Secrets. Wrightbooks, 2001.

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# INDEX

**W**