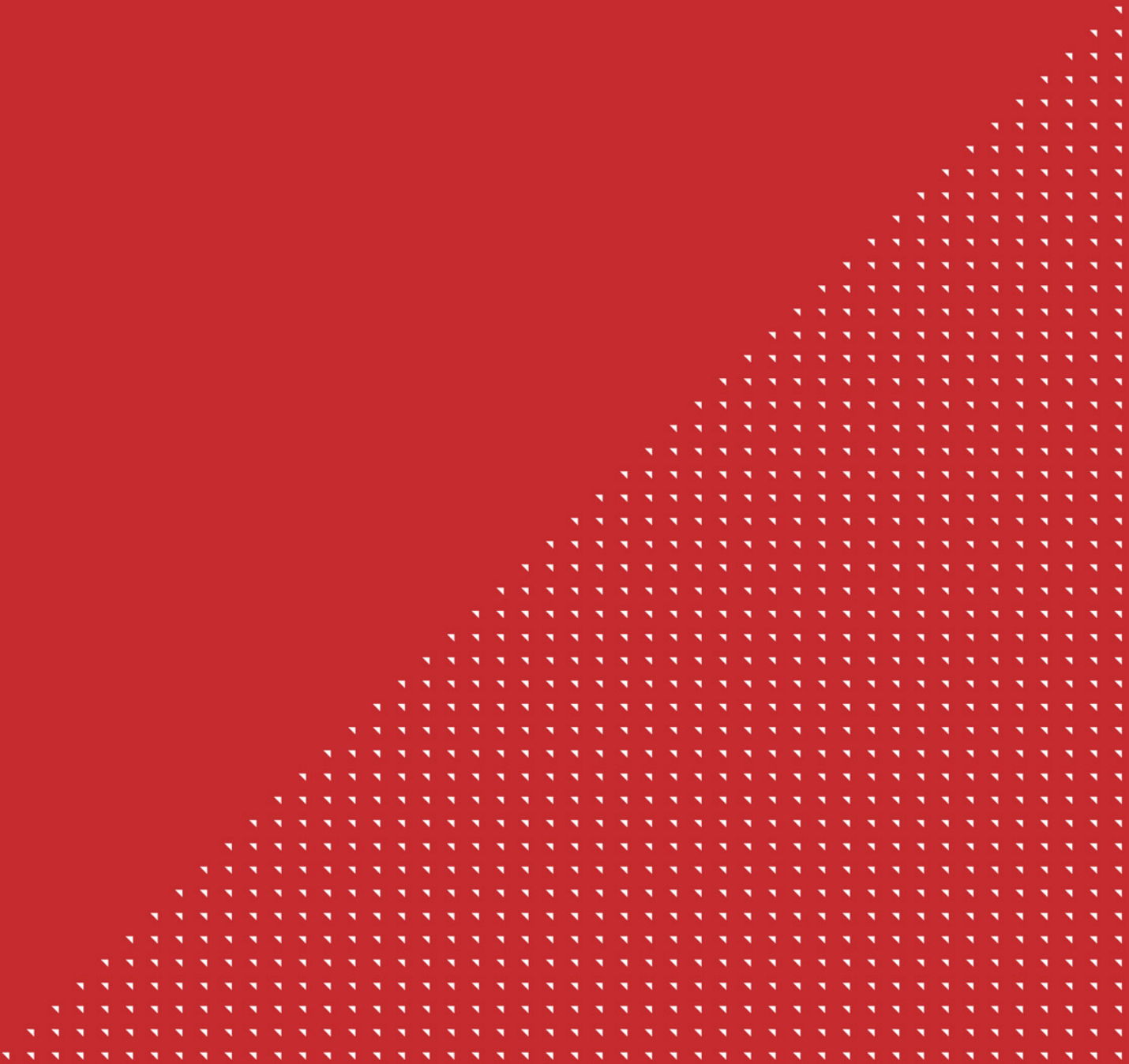


# Red Paper – The value of investing in managed futures

## Diversification when you need it most

June 2008



## Snapshot

- An investment allocation to managed futures strategies can add effective portfolio diversification and produce positive active returns when it's needed most – when the average balanced portfolio is performing poorly which is typically in equity bear markets
- Most managed futures managers are indifferent to fundamental economic data and profits can be generated whether markets are rising or falling using long and short positioning.
- When market volatility is high, equities tend to perform poorly, while managed futures outperform.
- The better managers employ trading algorithms that are not easily replicated.
- Good manager selection is critical - appointing the “right” managed futures manager requires intensive research and specialist knowledge in this area.
- An appropriate small allocation to managed futures managers can assist in achieving better total risk adjusted returns.

## Background

As part of our multi-manager absolute return program, QIC conducts research to find additional sources of active return lowly correlated to beta or market returns. One recent research project focused on finding strategies capable of producing positive returns when equity market returns fall (and volatility rises) and where groups of other active strategies had the potential to perform poorly.

An investment allocation to a managed futures manager (commonly referred to as a Commodity Trading Adviser – CTA) can add effective portfolio diversification to the typical active return program and perhaps more importantly, can produce positive active returns when it's needed most – when the average balanced portfolio is performing poorly due to a large and prolonged fall in equity market returns. Producing alpha in this type of environment is highly desired by both plan sponsors and fund managers. This issue is highly topical at present, as both global credit and equity market returns have been poor. In addition, many active management styles have also performed poorly during this period.

Market downturns are nearly always accompanied by increased market volatility. This creates an opportunity for managers able to produce active returns in this type of environment. Managed futures managers are one such example that have yet to be effectively and widely utilized by superannuation and other funds in Australia and Asia. QIC has been an early adopter of managed futures strategies on behalf of its clients and this decision has benefited our clients' portfolios.

## What are managed futures (CTA) managers?

Managed futures or CTA managers can be characterised by the following main features.

- In general these managers are 100% systematic in their trading approach. A proprietary model or models are employed to detect and profit from trends or momentum in security market prices.
- Typically assets are traded within equity, bond, currency and commodity markets. Positions are generally implemented via derivative contracts (futures) and currency forwards.
- Some models are quite simple and can be easily replicated while the better managers employ algorithms that are not easily replicated. These often rely on complex mathematical formulas to identify and exploit price trends.

- Depending on the manager, these models capture trends lasting from a few hours to several months. The approach is highly quantitative and typically only price based inputs are used in the investment models.
- Most CTA managers do not use human discretion in the investment process or use fundamental economic information to determine whether to buy or sell a security. Typically many small positions are taken across a large universe of securities in equity, bond, commodity, single stock and currency markets. The number of securities traded often exceeds one hundred and is not biased to any one sector.
- As most CTA managers are indifferent to fundamental economic data, profits can be generated whether markets are rising or falling, whether against or in the direction of underlying economic fundamentals. Typically these managers will produce positive returns when there are sustained price trends in several markets and generally perform well when market volatility rises, and equities tend to perform poorly.
- CTA managers may not be compelling in their own right, but as many plan sponsors and fund managers use fundamental based active strategies, the addition of a managed futures manager has a powerful diversification benefit and can produce positive return when it's needed most – when equities and typical balanced portfolios perform worse.

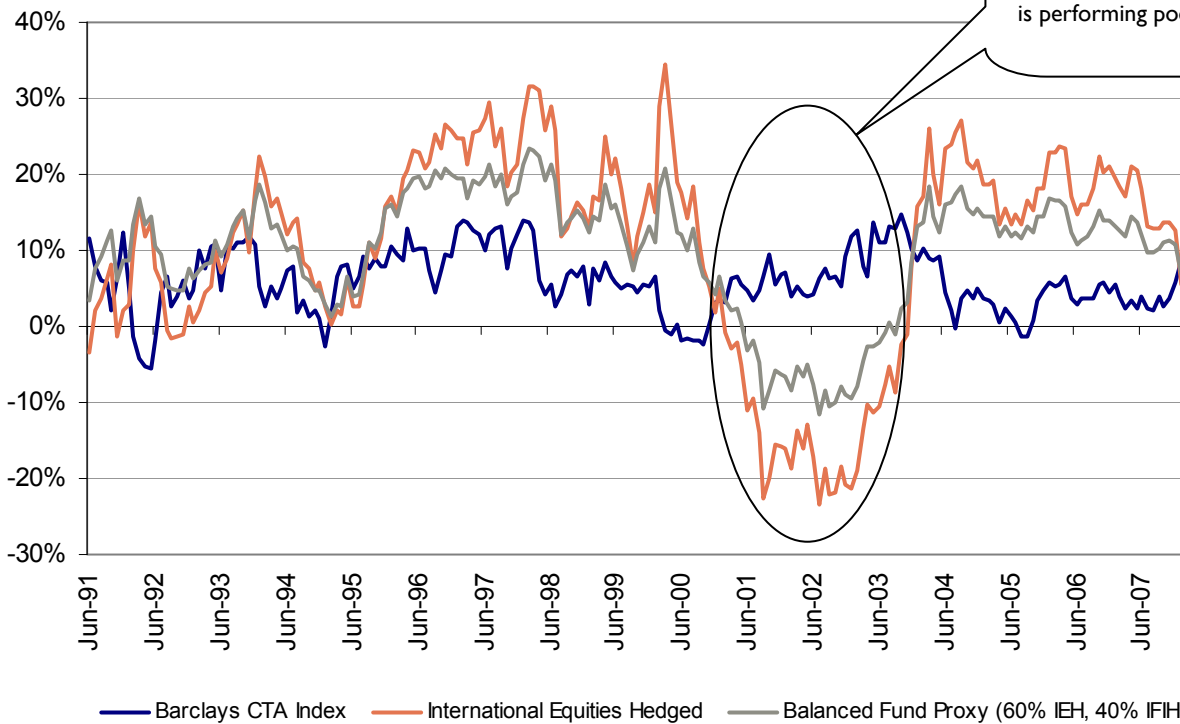
## Practical benefits

The Barclay CTA Index published by BarclayHedge, is the key benchmark for assessing aggregate performance for managed futures managers. As at March 2008 there were 492 manager programs included in the index. Historically this index has exhibited a number of practical benefits in relation to equities and the typical balanced portfolio. These benefits include:

- Positive return produced over time
- Low correlation to traditional asset classes
- Good performance in periods of rising volatility and falling equity and balanced fund returns.

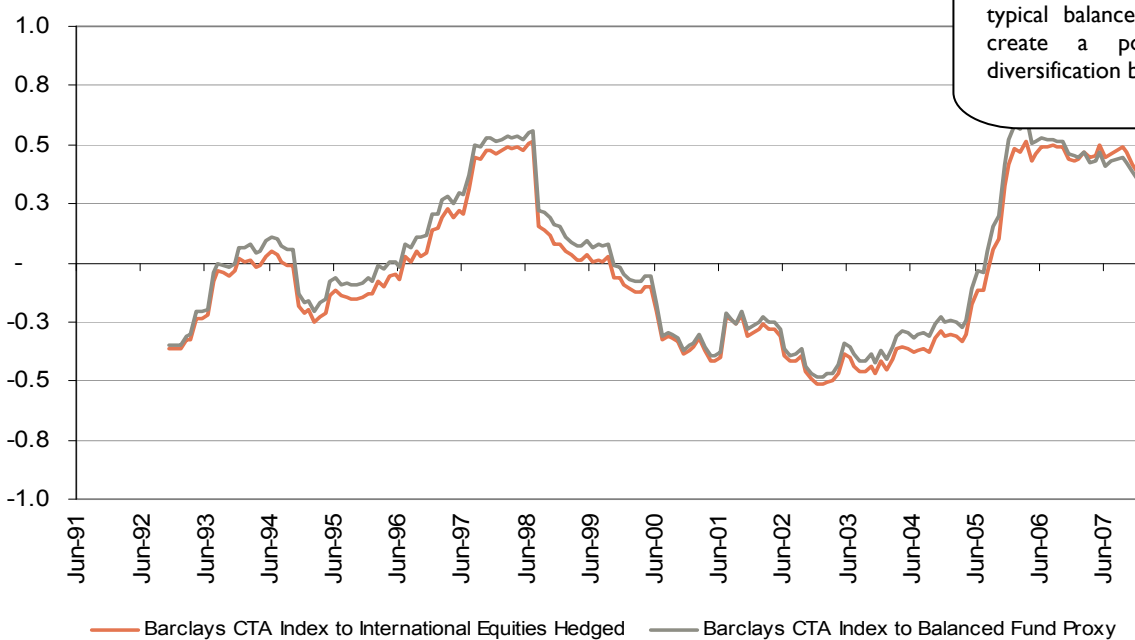
Most portfolios are dominated by equities risk, so in the following analysis we use international equities (100% hedged into Australian dollars) and a simple approximation for a balanced portfolio (60% international equities hedged and 40% international fixed interest hedged). The key conclusions remain the same across other main asset classes and portfolio configurations. First and foremost the Barclay CTA Index has produced positive total returns over time. In the last difficult period for equities and balanced funds prior to mid 2007 (the early 2000's), managed futures managers produced consistent positive returns.

## Rolling 18 Month Annualised Returns (Jan 90 - Feb 08)



The Barclay CTA Index has historically exhibited a low correlation with traditional asset classes. In addition, the historical long-term realised return from the average managed futures manager is positive. This indicates that adding a managed futures manager to a portfolio can add to total return and improve the total risk adjusted return. The low correlation reflects managed futures managers tend to have positive returns in months where equity markets (and other assets) have negative returns.

## Rolling 3 Year Correlations (Monthly Returns Jan 90 - Feb 08)

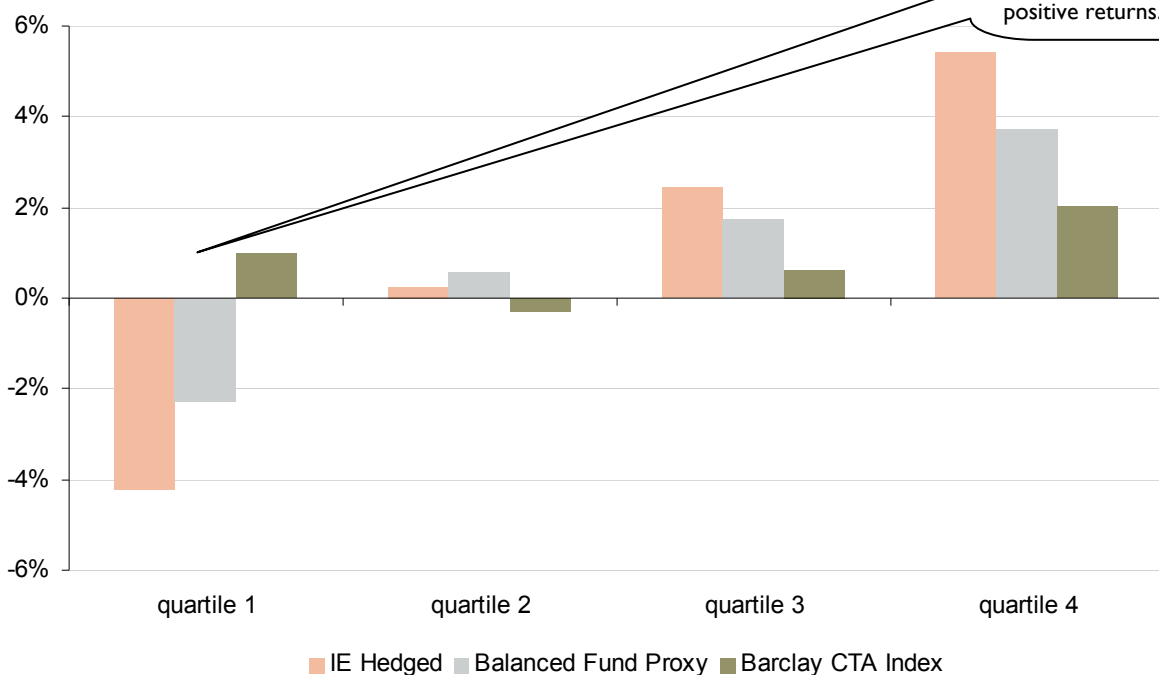


More importantly, managed futures managers tend to perform well in months where equities perform poorly and market volatility has risen. This is when diversification is needed most, offering downside

protection and total portfolio return enhancement when traditional assets are performing poorly. The following chart displays the performance of the Barclay CTA index in different market environments for equities and balanced funds. Monthly returns are sorted from lowest to highest over the period from January 1990 to February 2008, and divided into four equal buckets of 25%. The average monthly return of each bucket is calculated and shown in the chart below.

When equities perform particularly poorly (quartile 1), managed futures managers have produced positive returns. In the better equity environments (quartile 3 and 4), equity market returns tend to outperform managed futures managers. It is the performance of managed futures managers in quartile 1 that should be of great interest to fund managers and plan sponsors. This is the environment where diversification is most needed.

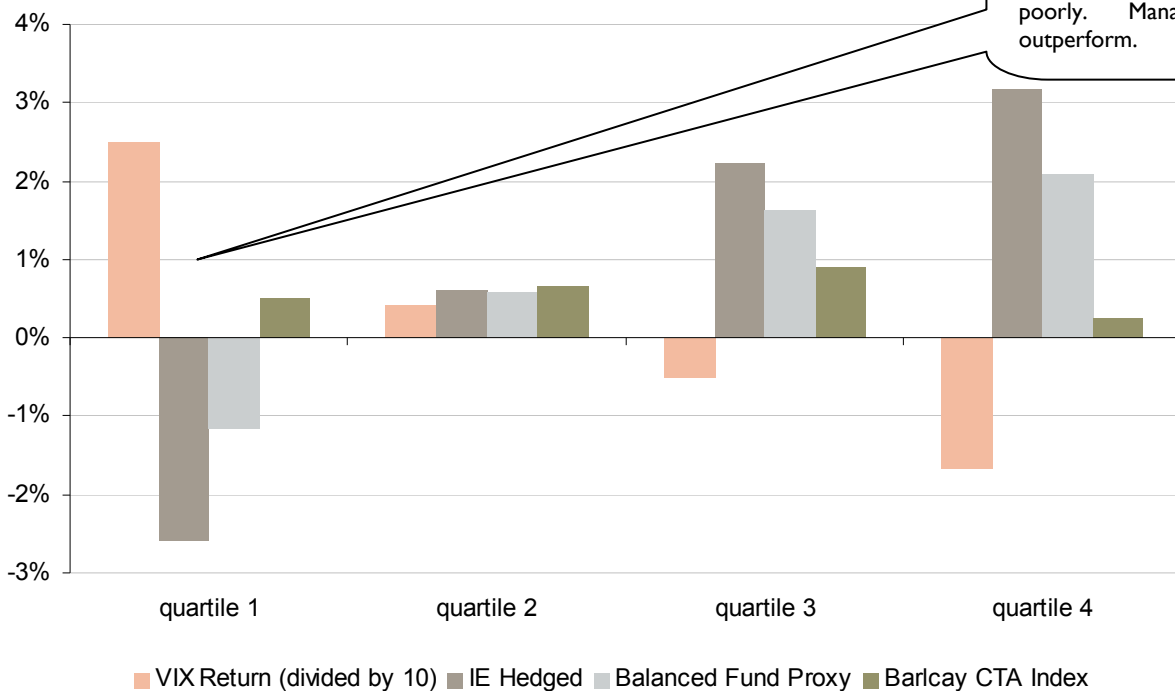
**Average Monthly Returns in Different Market Environments**



It is commonly known that equities tend to perform worse in periods of rising market volatility. The following chart displays the performance of the Barclay CTA index in different market environments for market volatility. Market volatility is proxied by the VIX Index, a measure of the market's expectation of 30 day forward volatility for the S&P500 equity index. As before, monthly returns are sorted from lowest to highest over the period January 1994 to February 2008, and divided into four equal buckets of 25%. The average monthly return of each bucket is calculated and shown in the chart below.

When market volatility is at its highest (quartile 1), equities performed poorly and managed futures managers have produced positive returns. In the lower volatility environments (quartile 3 and 4), equity market returns tend to outperform managed futures managers. The ability of managed futures managers to add positive return when market volatility is rising has practical benefits in improving risk adjusted returns in periods of market stress.

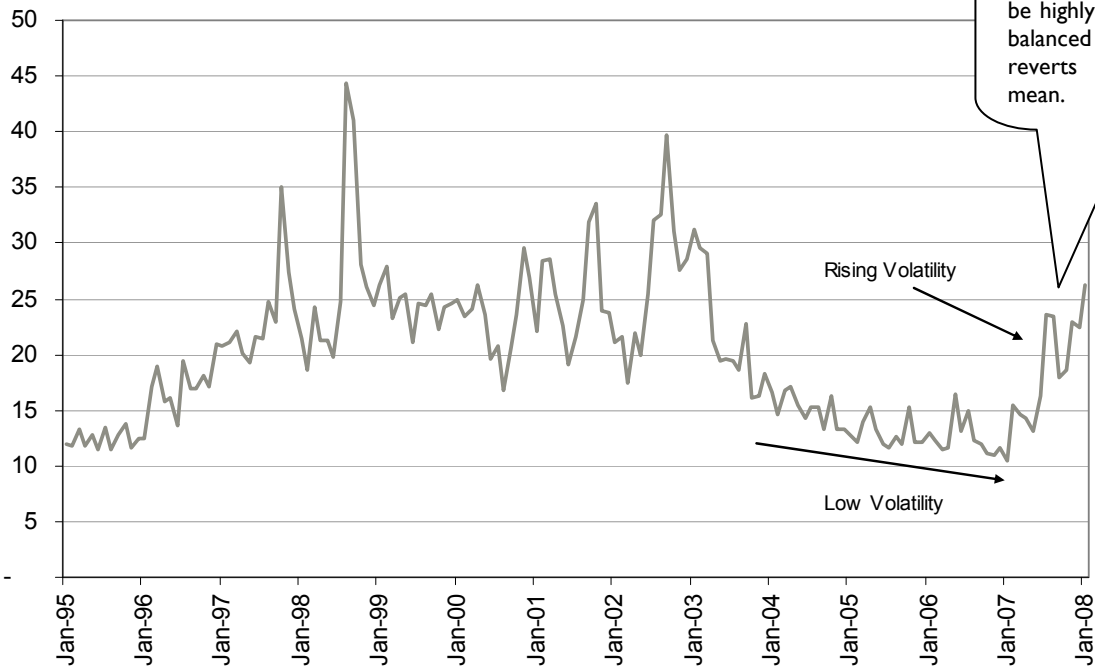
## Average Monthly Returns in Different Volatility Environments



Increasing market volatility leads to greater price movement in securities often leading to new security price trends. This allows additional trading opportunities for managed futures managers. As these managers often rely on price based data only, when equities consistently decline in price, the manager will implement a short position in the security and profit from falling prices. This is why these types of managers have the ability to perform well in bear markets where equities and typical balanced funds perform poorly. The most recent period of increased market volatility and falling equity prices occurred in mid 2007, prompted initially by the US sub-prime crisis.

Managers who can produce positive returns when market volatility is rising have been overlooked in recent years due to historically low levels of market volatility. Indeed many investment strategies which are performing poorly are really just strategies employing short market volatility. The best known of these are currency and bond carry strategies. We believe the current market dislocation will force plan sponsors and fund managers to reassess portfolio construction and exposure to different strategies in different market environments. Managers who can produce positive returns when market volatility is rising, and equities are falling, should be highly prized. A small allocation to a managed futures manager can assist in achieving better total risk adjusted returns.

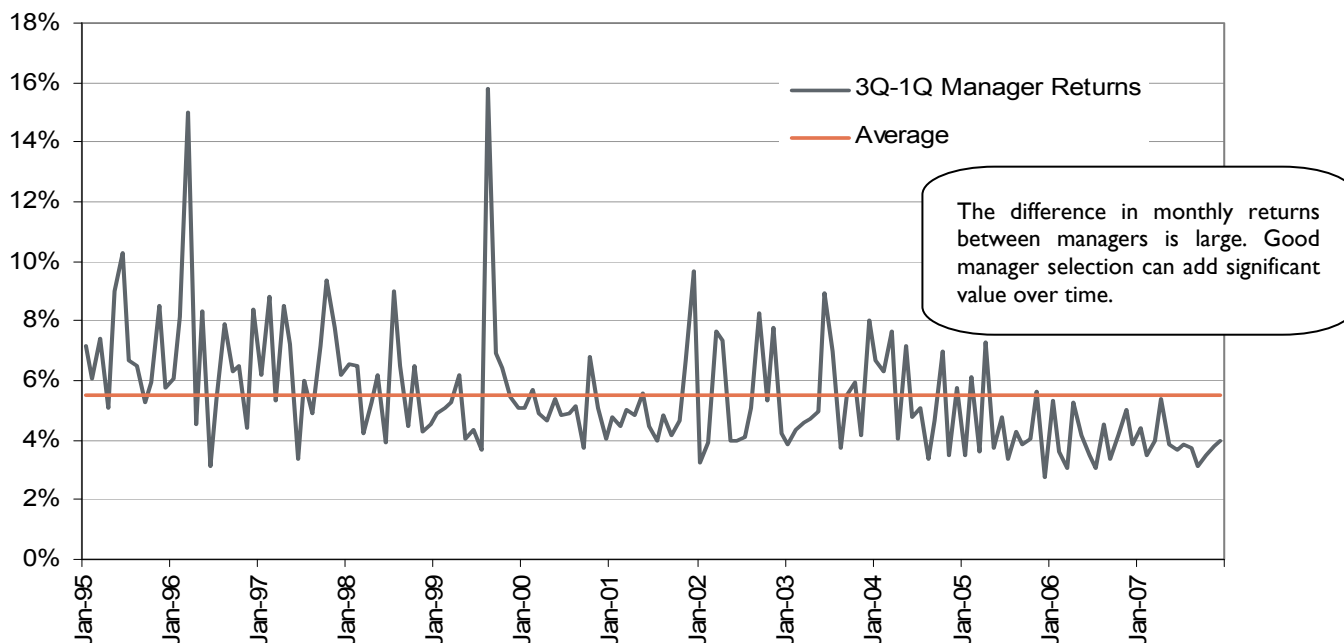
VIX Index Monthly (S&P500 30 day implied volatility)



## Manager Selection Critical

While there are strong practical portfolio benefits in adding managed futures strategies, we do not advocate hiring the average manager or seek the Barclay CTA Index return. Good manager selection is critical. The current size of the Barclay CTA Index is over 400 manager programs, representing a number of different investment styles, differing proprietary trading algorithms, portfolio construction, risk and trading approaches. There has been large dispersion in monthly returns between the best and worst managers. The following chart displays the monthly return difference between the 75<sup>th</sup> and 25<sup>th</sup> percentile ranked manager within the Barclay CTA database (inter-quartile range). From January 1995 to December 2007, the average difference between the 3<sup>rd</sup> and 1<sup>st</sup> quartile managers is 5.5% per month.

## Barclay CTA Database - Return Dispersion (Monthly - Jan 95 to Dec 07)



### QIC's Experience

Appointing the “right” managed futures manager requires intensive research and specialist knowledge in this area. Through dedicated research, QIC has identified a small subset of managers in the managed futures universe who possess the benefits described in this article, but also possess a number of unique benefits important for an active return program. These managers possess an investment strategy that adds value, is not easily replicated and has high barriers to entry.

We have appointed managers in this area for our various client portfolios and this has proved successful in the current market environment. Please contact us to learn more about using managed futures strategies in your portfolio.

### Like to see a Red Paper on a particular topic or issue?

Send your suggestion to Peter Duyvestyn, Corporate Communications Manager  
 ph: 61 7 3360 3813 email: [p.duyvestyn@qic.com](mailto:p.duyvestyn@qic.com).

QIC Limited ACN 130 539123 (“QIC”) is a wholesale funds manager and its products and services are not directly available to retail investors. QIC is a company government owned corporation constituted under the Queensland Investment Corporation Act 1991 (Qld). QIC is regulated by State Government legislation pertaining to government owned corporations in addition to the Corporations Act 2001 (“Corporations Act”). QIC does not hold an Australian financial services (“AFS”) licence and certain provisions (including the financial product disclosure provisions) of the Corporations Act do not apply to QIC. Please note however that some wholly owned subsidiaries of QIC have been issued with an AFS licence and are required to comply with the Corporations Act. QIC, its subsidiaries, associated entities, their directors, employees and representatives (“the QIC Parties”) do not warrant the accuracy or completeness of the information contained in this document (“the Information”). To the extent permitted by law, the QIC Parties disclaim all responsibility and liability for any loss or damage of any nature whatsoever which may be suffered by any person directly or indirectly through relying on the Information, whether that loss or damage is caused by any fault or negligence of the QIC Parties or otherwise. The Information is not intended to constitute advice and persons should seek professional advice before relying on the Information. QIC owns the copyright in all Information, or has a licence or agreement to use that copyright where it is owned by someone else. You may only reproduce the Information for personal or non-commercial use, and it must not be distributed or transmitted to any other person, or used in any other way (except to the extent permitted by law).