

Volatility

Helping to Smooth Out Returns and Preserve Capital

from 36 South Capital Advisors LLP

Richard (Jerry) Haworth
Co-founder, CIO

1. What is volatility & why is it important?
2. Types and nature of volatility
3. Volatility as a proxy for risk?
4. The two “regimes” of risk
5. Hedging techniques – Level One
6. Hedging techniques – Level Two
7. Long volatility – how? And example
8. Summary

What is Volatility?

- Asset return dispersion around the mean



Why is it important?

- Famine, disease, war – the quest for stability
- Need for certainty – planning, complex societies
- Emotions
- Price discovery
- Risk discovery

What does it mean to you?



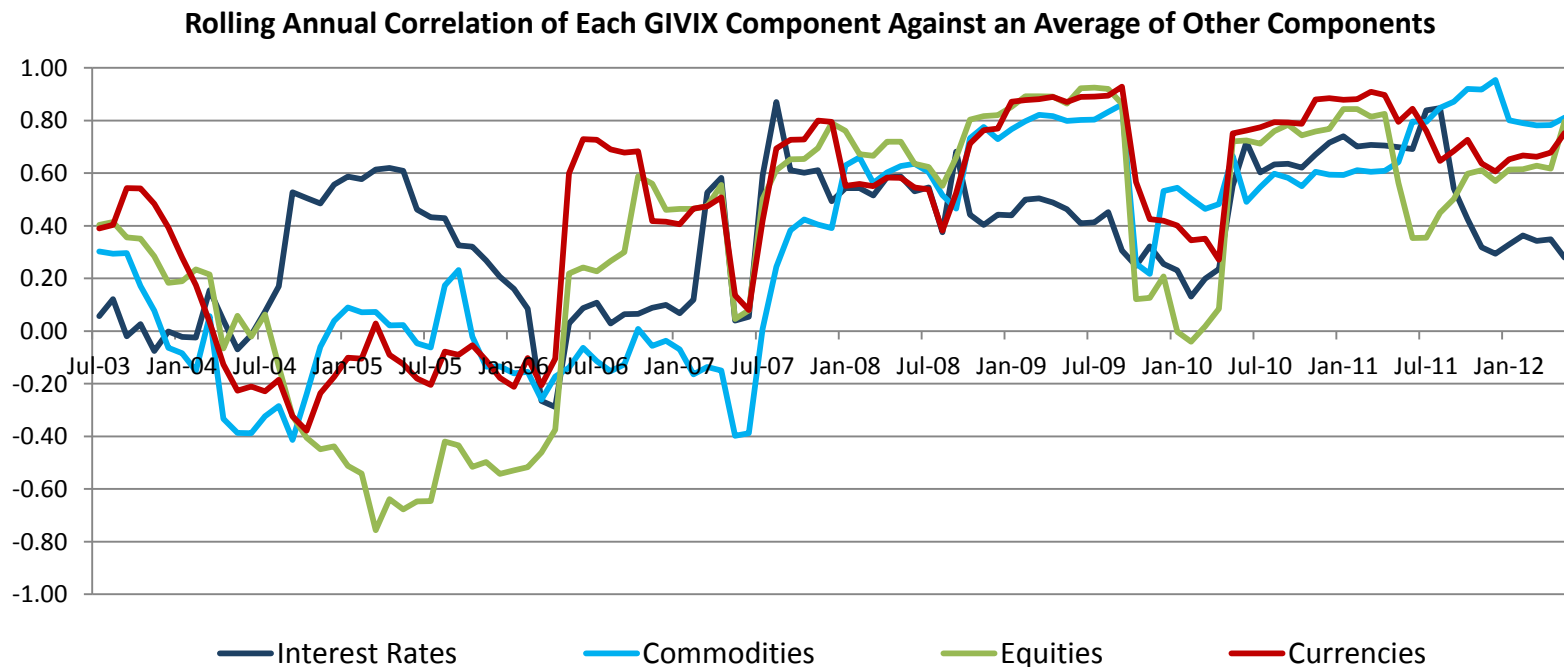
Nature of volatility

1. Cyclical and mean reverting
2. Counter-intuitive
3. Negative correlation to the underlying asset's price



Volatility is cyclical

- Volatility has approximately a 5-year cycle
- Different asset classes move in their own cycles and only correlate in times of crises



Source: 36 South Capital Advisors LLP.

- Investing across asset classes allows to find good value opportunities throughout the cycle

Types of volatility

- Drift vs non drift



- Upside vs downside



- Low vs. high



Volatility as a proxy for risk

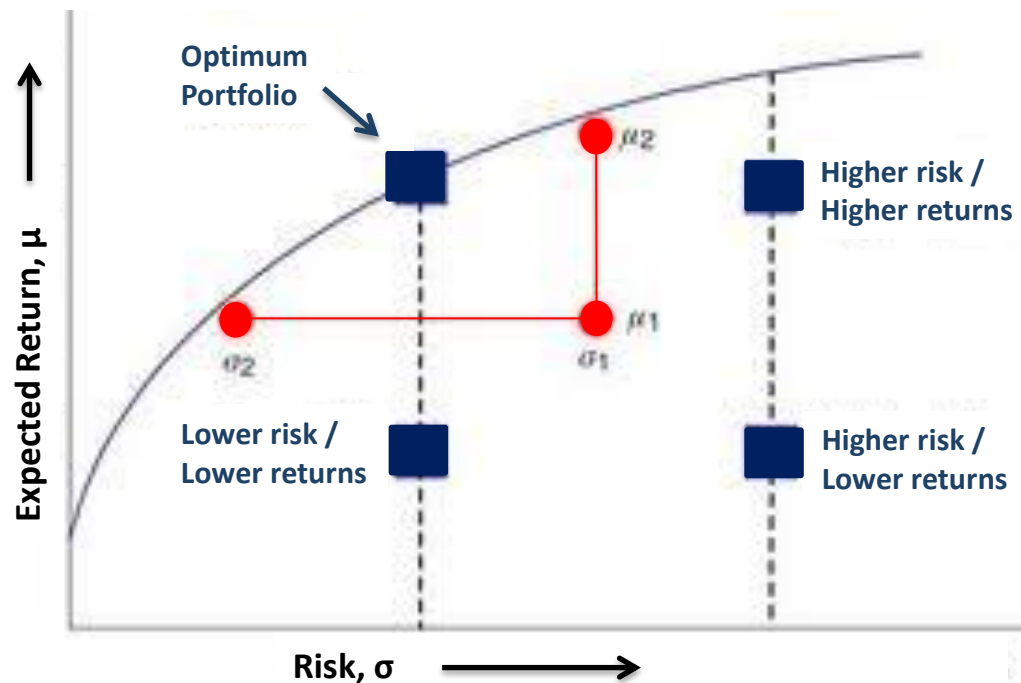
- Why?
- What else is there?
 - Maximum downside



What about Modern Portfolio Theory?

Main assumptions:

1. Asset returns are (jointly) normally distributed random variables
2. Correlations between assets are fixed and constant forever
3. Volatility is constant!



Source: 36 South

History has shown these assumptions cannot be relied on so why do we still rely on MPT?

The exceptions prove the rule: 1987, 1994, 1997, 1998, 2000, 2001, 2008, 20???



Main assumptions destroyed:

1. Asset returns are **NOT normally distributed** random variables
2. Correlations tend to **1**
3. Volatility is **HIGH** and **RISING**

We call these scenarios Level Two Risk Scenarios.

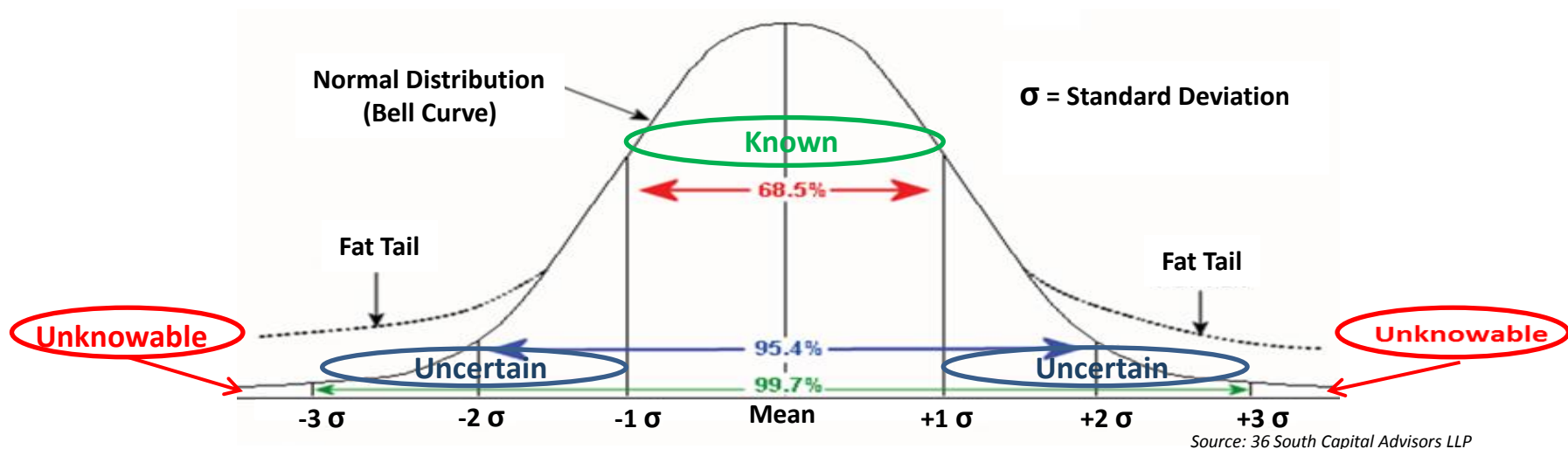
Fairly uncommon but high consequence portfolio events.

What tools do we have in the toolbox for these scenarios?

Known, uncertain and unknowable risks



Known, uncertain and unknowable risks



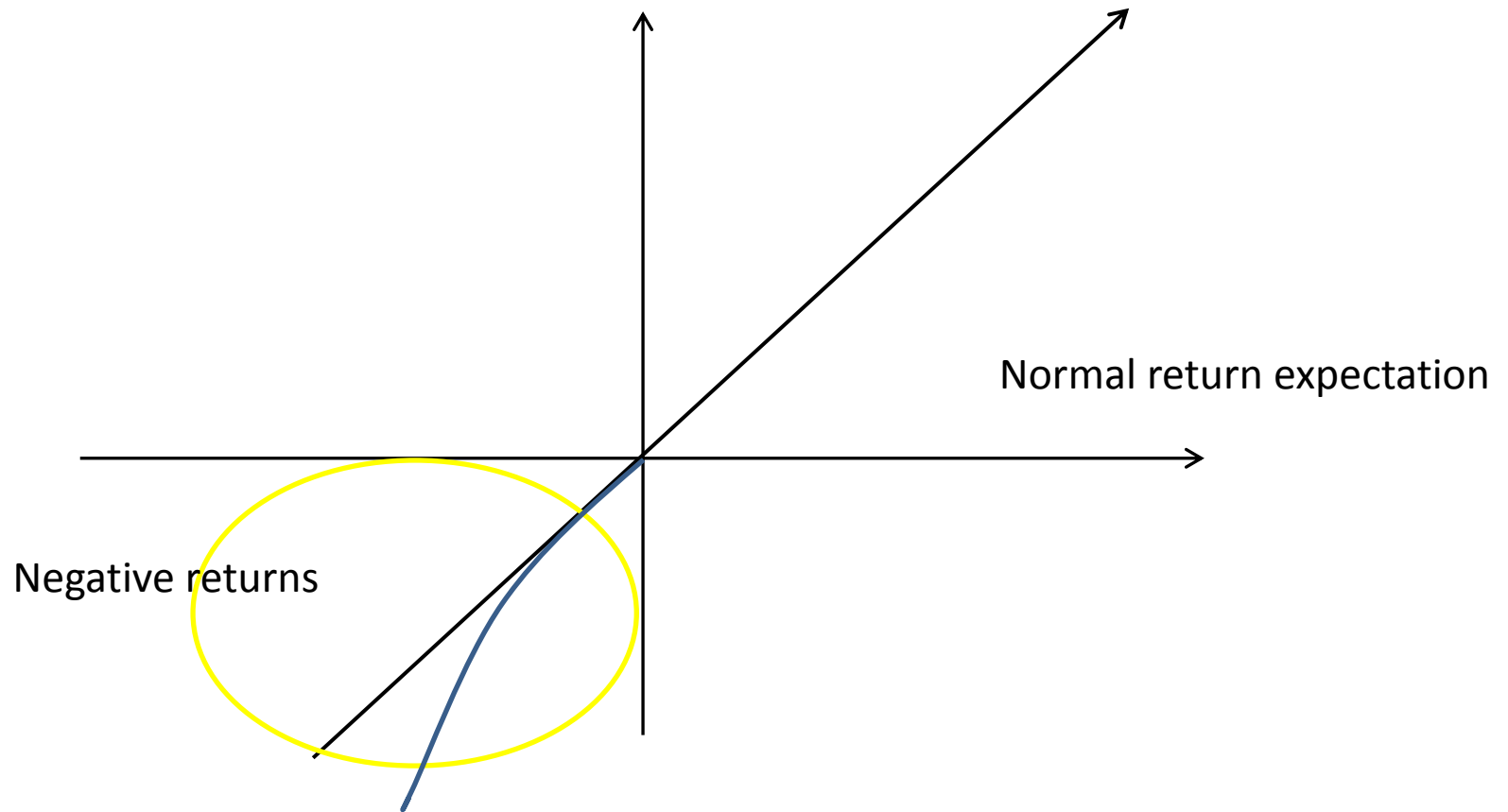
Type of risk	Event probability	How to hedge risk
Level 1 - Known	Event and probability of occurrence known	Traditional diversification e.g. bonds, multi-asset etc.
Level 2 - Uncertain (Grey Swan)	Event known but not probability of occurrence e.g. 2008	Non traditional investments with non-correlated returns and convexity e.g. volatility funds or catastrophe bonds
Level 2 - Unknowable (Black Swan)	Neither event nor probability of occurrence known e.g. 9/11	Tail risk hedges

Hedging techniques – known risk - Level One



1. Diversification – the only free lunch in finance.
2. MPT – only takes into account Level One risk.
 - assumption of constant volatility and correlation!

Normal return expectations



Hedging techniques – Level Two

Uncertain and unknown risk



1. Transition to Level Two – what happens?
 2. Characteristics of level two risk – the evil twins:
 - High unstable correlation
 - High volatility
 3. The problem is the answer!
 4. Probability matching – convexity.
- “Require assets whose returns go up in times of high volatility and high correlation and ... whose returns display high convexity in those times.”

Hedging techniques – Level Two

Uncertain and unknown risk



Question – What asset's returns go up when volatility spikes and correlations between traditional asset correlations tend to ONE?

Answer –

CTA's

Short bias Funds

Long volatility Funds

Hedging techniques – Level Two

Uncertain and unknown risk



CTA's –

Advantages – no theta or premium decay

Disadvantages – might be positioned the wrong way

- no convexity

Short bias Funds

- no convexity

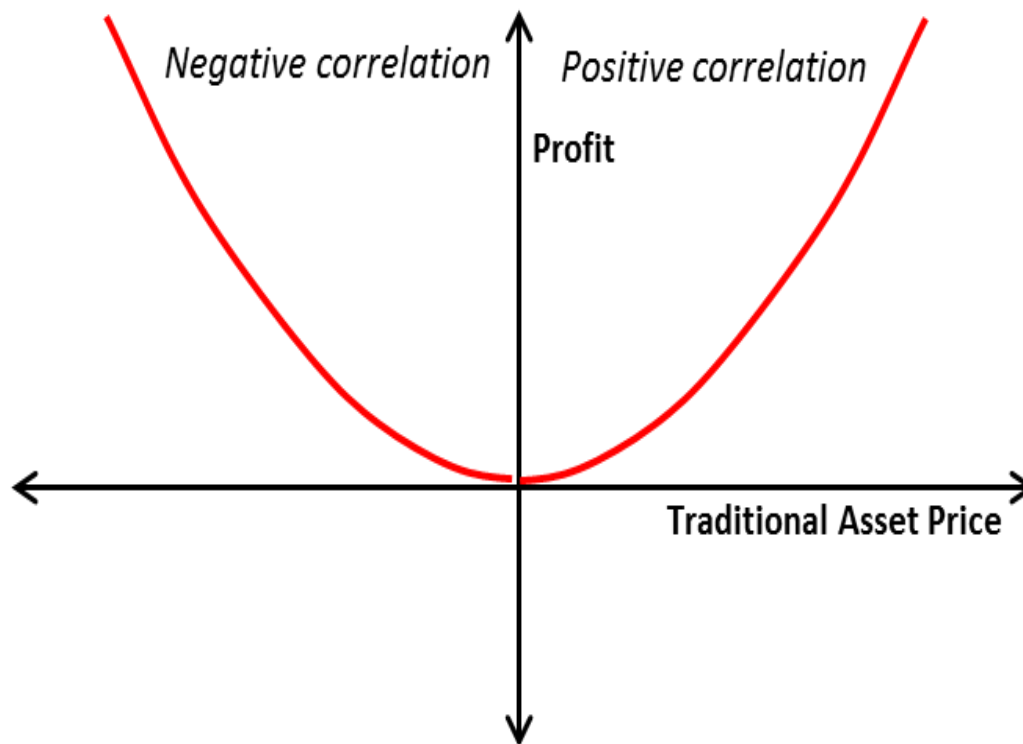
Long volatility strategies

“further into the machine ...”

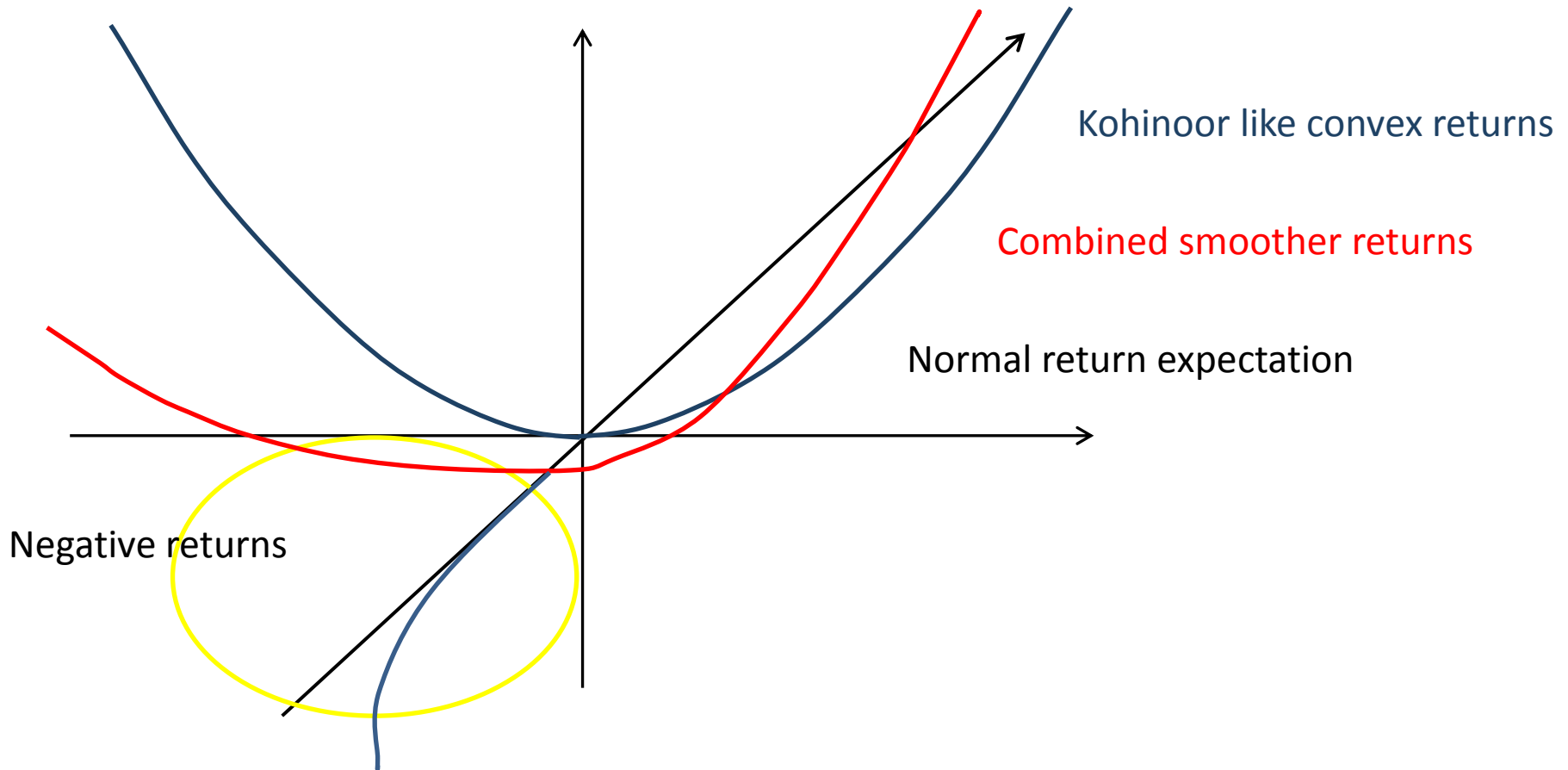


1. Relative vs. absolute value funds
2. Long vs. short dated
3. Long dated absolute value funds give the most returns and convexity for the lowest cost if bought correctly.

The perfect investment?



Return expectations when adding long volatility



The convex returns and dynamic correlation delivered by a smart long dated options strategy provides capital protection as well as benefiting from upmarket trends and therefore smooth out the portfolio returns.

Long volatility funds – an example



1. 36 South Kohinoor Series Three Fund

Buys long dated, absolute value, OTM options

Across all asset classes

10 year return =13%

2008 = 73%

Downside deviation = 4%

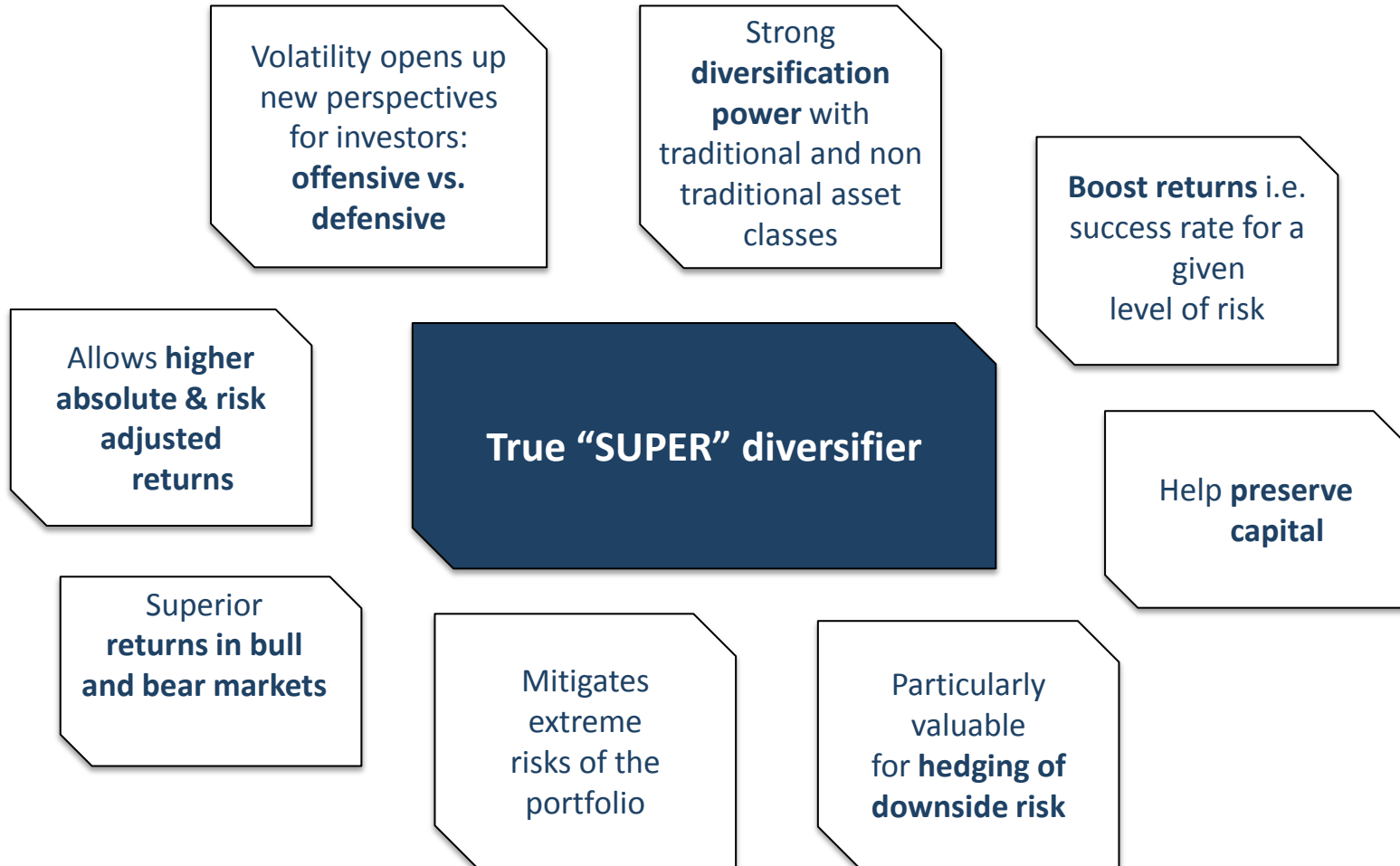
Summary and conclusion

1. Volatility is misunderstood.
2. MPT is seriously flawed.
3. Level 2 risk is more common than we think and has serious consequences.
4. There are ways to hedge Level 2 risk.
5. Most traditional investors ignore Level 2 risk
 - ignorance, homeostasis
6. Long volatility funds are the best hedge for Level 2 risk.
7. Absolute value, long dated volatility funds are the best of the best hedge!

Thank-you for your time!



Why invest in volatility?



Appendix

Hedging uncertain risk and unknown risks

Uncertain events

Hedge using assets with non-correlated assets with convex returns such as a volatility fund. Convexity is the snowball effect, the non-linear returns which multiplies the value of the initial investment.

Think of a volatility fund as a counterweight in a cruise ship, it'll stop you getting seasick.

Unknown events

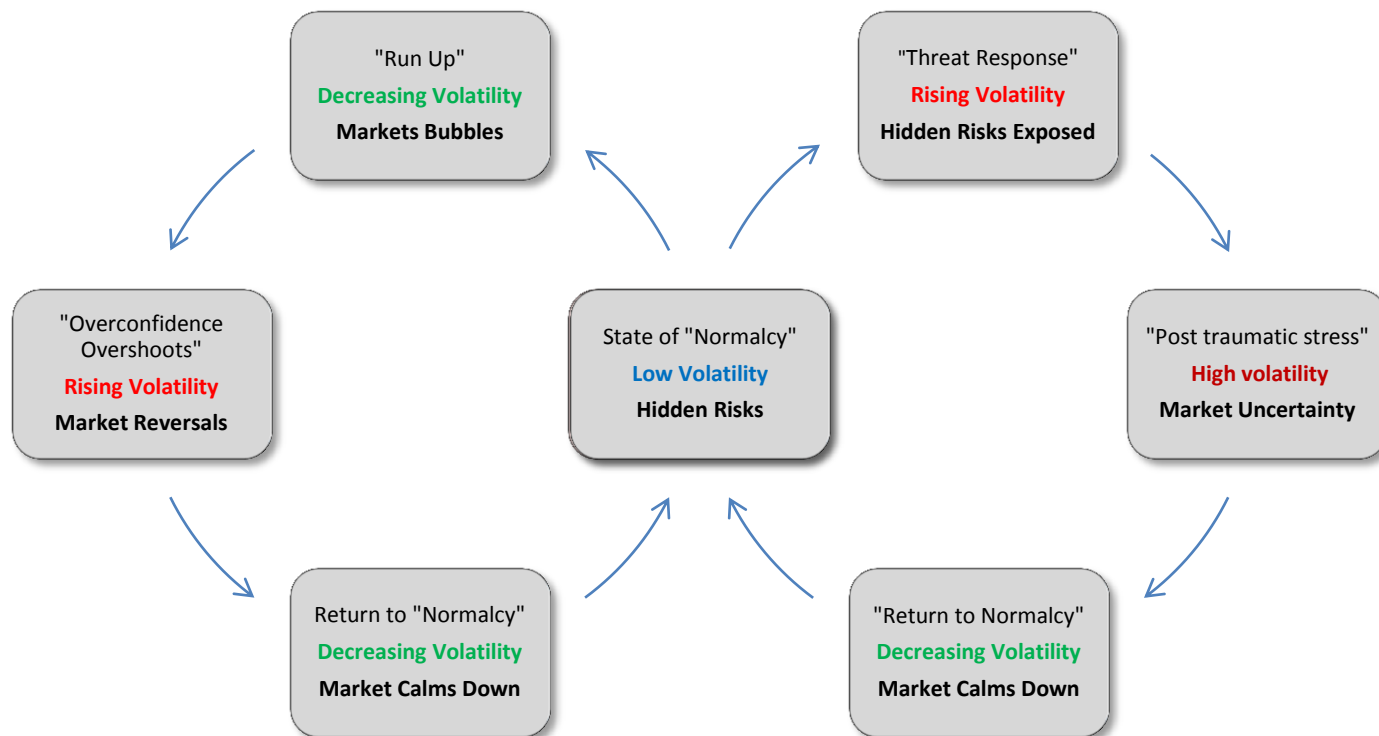
To hedge unknown risk use specific tail risk strategies.

Tail risk hedges can be considered the life rafts on a cruise ship. Rarely needed but very high potential cost if they are not in place.



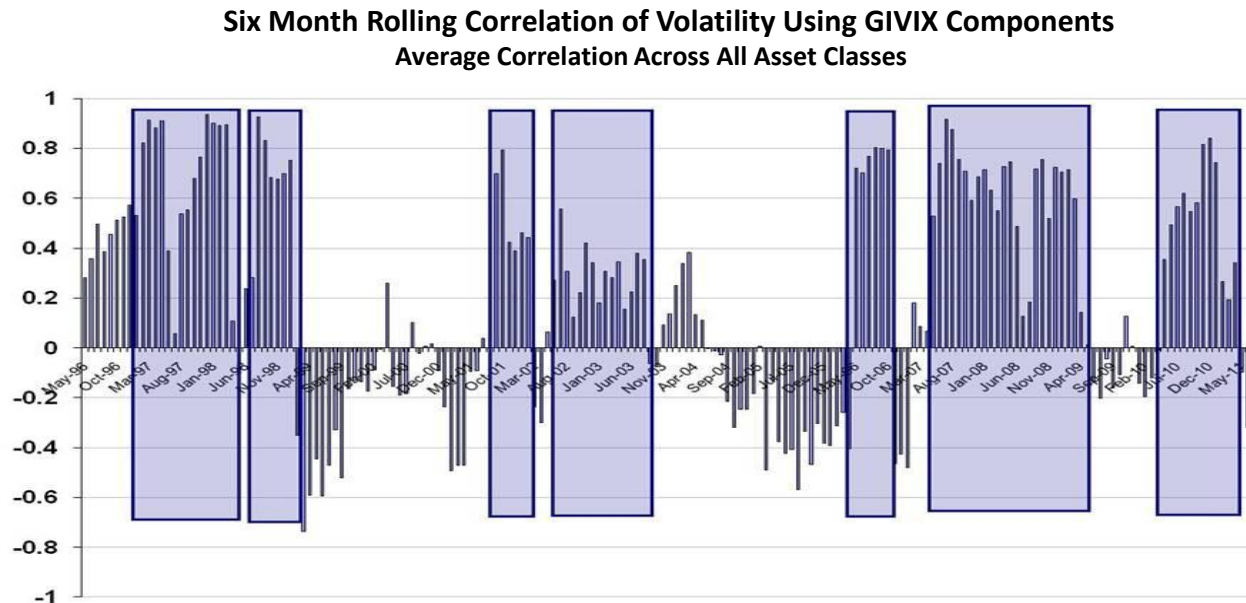
Volatility cycles

- Negative volatility cycles are driven by fear, anxiety, and distress.
- + Positive cycles are driven by greed, exuberance, and overconfidence. Risk preferences are conditional on past experience.



Source: Kathryn Kaminski, Alpha K capital. Coates, Gurnell, and Sarneyai (2010) and Coates and Herbert (2008) examine the role of steroids hormones and their role in financial risk taking using physiological data as well as performance data from real traders on a London trading floor. They show that testosterone is directly linked to return while cortisol (the stress hormone) is directly linked to uncertainty (as measured by implied volatility) and risk taking (variance in the P&L of market participants). Their research may help provide the link between economics and neuroscience. Cycles in hormone production have often been used by biologists to explain animal behavior in competitive settings.

- Volatility strategies benefit from convexity of returns in good volatility and from correlation turning to -1 in bad volatility. Hence bring asymmetric returns with limited downside



Source: 36 South

- Correlation of volatility between asset classes becomes strongly positively correlated in risk aversion periods so the diversification benefits of most alternatives disappears when they were needed the most

Investment Committee



Richard (Jerry) Haworth – Principal, CIO

Jerry has a 25 year career in the financial markets. He was instrumental in the establishment of the futures and options market in South Africa. He served as an Executive Member of the South African Futures Exchange. He also traded government bonds for a large discount house before being appointed Head of Equity Derivatives for one of South Africa's largest and most successful merchant banks, Investec Ltd. In 1996, Jerry founded Peregrine Holdings Ltd. The company offered a range of services including stock-broking, futures and options broking, pension fund structuring and financial software development to South Africa's large financial institutions but its main niche was designing derivative strategies for institutional clients normally packaged as a structured note. Peregrine enjoyed phenomenal early success under his management culminating in a stock exchange listing in 1998 in which the value of the company soared over 400% on IPO. In March 2001, Jerry founded 36 South Investment Managers Ltd.



Richard Hollington – Principal, Portfolio Manager

Richard has 24 years experience in the financial markets specifically in derivatives. He established the foreign exchange options desk at First National Bank in South Africa (the country's second largest bank) and became the country's first market maker in rand/dollar options. Richard extended the foreign exchange business to incorporate gold hedging for the South African mining houses and "market making" long dated currency options for corporate hedging. He was also instrumental in establishing a Rand interest rate swaps desk and a commodity desk providing rand hedges to South African corporates. Upon deciding to emigrate to Australia he joined Commonwealth Bank of Australia in Sydney where he assisted in establishing a gold derivatives desk. In 1999 he relocated to New Zealand where he began trading for his own account with Jerry and founded 36 South Investment Managers in 2001.

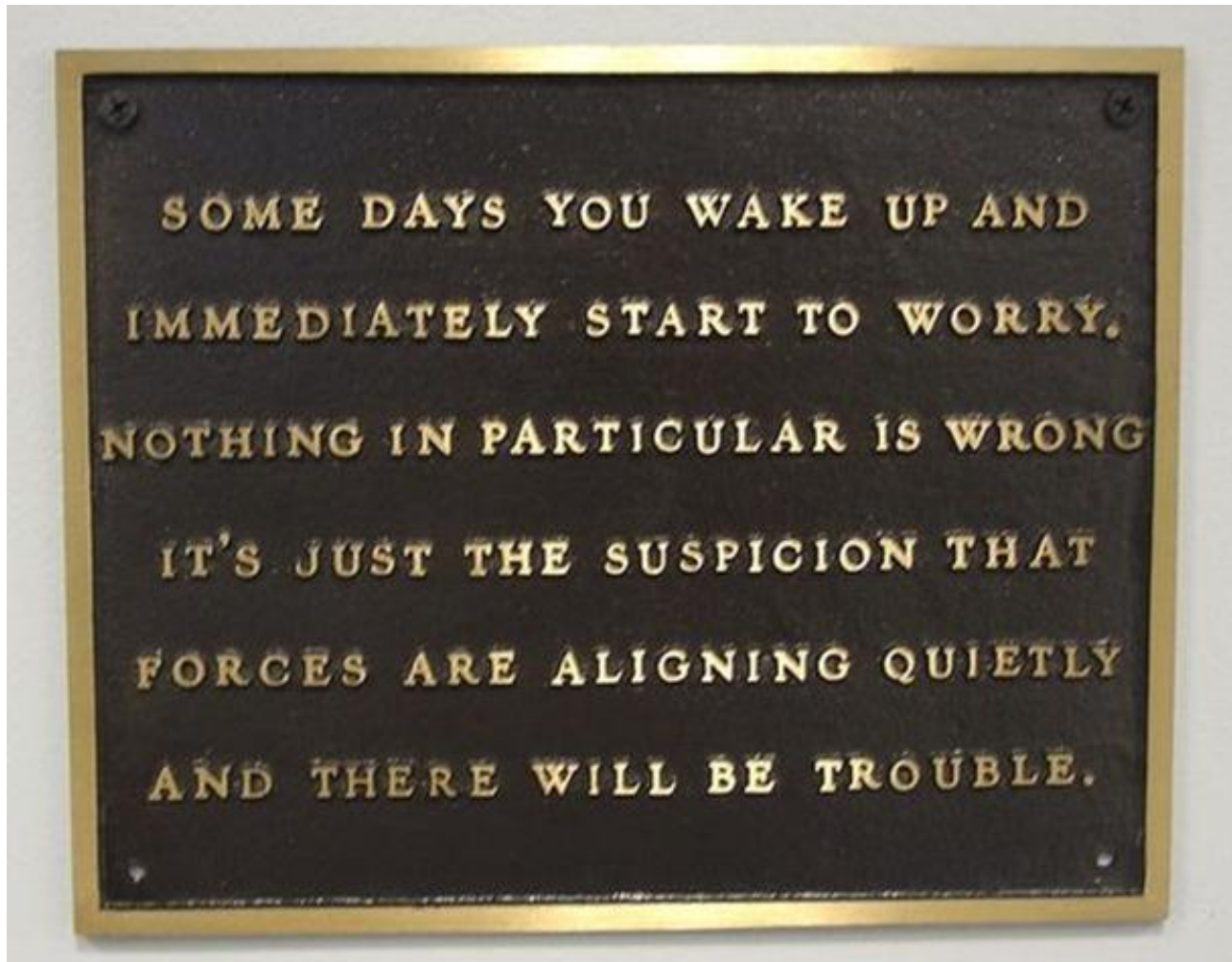


Anthony Limbrick – Principal, Portfolio Manager

Joining 36 South in March 2006 as a member of the Investment Committee, Anthony has 22 years experience in the financial markets working for a variety of global financial organisations including Deutsche Bank (formerly Bain & Co.) and HSBC in Sydney, Credit Lyonnais in Tokyo, and Bank of New Zealand in Wellington as well as his own firm specialising in uncorrelated investment strategies. His experience lies across directional and relative value trading, fixed income and credit, foreign exchange, commodities, derivatives and quantitative analytical research. Anthony is currently Chairman of the New Zealand Absolute Return Association (NZARA), the organisation representing the alternative investment management industry in New Zealand. Anthony holds a Master of Applied Finance degree from Sydney's Macquarie University as well as the Chartered Alternative Investment Analyst certification.

Investor Relations

3rd Floor, Berkeley Square House Tel: +44 (0) 20 3205 3004
Berkeley Square, London W1J 6BU Investor_relations@36south.com



Volatility of volatility

- Volatility of downside volatility

Volatility that becomes unstable when asset returns are decreasing. I.e. The higher the volatility the worse the asset performance.

Causes investors multiple problems

1. Higher volatility means a greater chance of a shortfall
2. Higher volatility creates higher uncertainty of final portfolio values, e.g. pension
3. As volatility increases it is harder to adjust portfolios timeously
4. Large volatility movements cause irrational fears and biases to emerge which can lead to irrational actions in our portfolio
5. As volatility rises the ability to adopt leverage diminishes

- Volatility of upside volatility.

Volatility increases as asset returns increase, so the higher the volatility the better the performance. A very beneficial trait!

Long dated, out of the money options also display volatility of upside volatility

Regulatory Information



36 South Capital Advisors LLP, which is authorised and regulated by the Financial Services Authority ('FSA'), has issued this document for access by Professional Clients in the UK only and no other person should rely upon the information contained within it.

This document is for discussion purposes only and is not an advertisement and does not constitute an offer to sell or a solicitation of an offer to buy shares in any fund. This document has been provided to you in a private and confidential manner and may not be reproduced or disseminated to third parties without 36 South Capital Advisors LLP 's prior written consent.

This document concerns certain investment strategies and does not purport to disclose details about any particular existing funds. This document is accordingly provided for informational purposes only and does not constitute investment advice. This document does not give exhaustive details about the parties, structures or investment processes. The information herein is not intended to provide, and should not be relied upon for, accounting, legal or tax advice or investment recommendations. Please consult independent tax, legal, accounting or other advisors in the course of assessing any strategies mentioned in this document.

Restricted Investors

This document is not, and under no circumstances is to be construed as, an advertisement, or any other step in furtherance of a public offering of shares in the United States or Canada. This document is not aimed at persons who are resident in the United States, Canada or any province or territory thereof, where the Companies are not authorised or registered for distribution and where no prospectus for the Companies has been filed with any securities commission or regulatory authority. The Companies may not be acquired or owned by, or acquired with the assets of, an ERISA Plan.

Risk Warnings

Shares in the Companies may or may not be suitable for all investors. 36 South Capital Advisors LLP does not guarantee the performance of the shares or funds. The price of the investments (which may trade in limited markets) may go up or down and the investor may not get back the amount invested. Your income is not fixed and may fluctuate. Past performance is not a reliable indicator of future results. The value of the investment involving exposure to foreign currencies can be affected by exchange rate movements. We remind you that the levels and bases of, and reliefs from, taxation can change. Further, 36 South Capital Advisors LLP and/or its affiliated companies and/or their employees from time to time may hold shares or holdings in the underlying shares of, or options on, any security included in this document and may as principal or agent buy or sell securities.

© 2012 36 South Capital Advisors LLP. Registered Company No. 477881. All rights reserved.