

understanding volatility

WHAT IS VOLATILITY?

Volatility is a measure of the dispersion of a series of returns from an investment around its long term mean, or average, return. While there are several ways to measure volatility, the most common is a statistical measure called standard deviation, which is usually expressed as a percentage. The higher the standard deviation, the greater the dispersion of returns and the higher the uncertainty associated with that investment. A small standard deviation on the other hand means the returns from that investment are tightly bunched together and that the uncertainty of the returns is smaller. Standard deviations range from a high 25%pa for asset classes such as commodities, around 12%pa for share funds, down to a low 4.0%pa for fixed interest funds. Cash has the lowest standard deviation of returns at 0.3%pa.

WHAT CAUSES VOLATILITY?

Why are stocks and other investments volatile to start with? Why don't they follow a smooth path in line, say, with inflation or interest rates, or net earnings?

Volatility is a form of market inefficiency. Market or stock volatility is a factor of supply and demand, which in turn reflects underlying uncertainty, either with the economy as a whole or with new corporate information. This uncertainty is a reaction to issues such as expected changes in inflation and interest rates, unexpectedly good or poor profits, concerns about high debt levels or default rates, the probability of some external shock and many other factors. This uncertainty can be seen in the daily fluctuations in a share price, or the market as a whole, or your investment portfolio.

Volatility is also a factor of the frequency of the pricing of an asset. Listed securities such as stocks and property trusts are revalued and priced continuously, whilst unlisted assets such as unlisted property are only revalued infrequently - annually in most cases. When an asset isn't valued continuously, by definition its current price will not

change much and hence it will appear to have low volatility. Property is a good example. Listed property trusts (REITs) and unlisted property funds essentially invest in exactly the same thing - buildings and land. Yet the volatility of each is very different, as shown in the chart over the page.

Some volatility may have nothing to do with economic circumstances and company fundamentals, but may have a lot to do with mass psychology. The confluence of greed, fear and disagree-

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ment on the interpretation of new information can give rise to extreme price fluctuations. During the global financial crisis, for example, the market prices of commodities, stocks, derivatives, property, bonds and currency all gyrated wildly. No one seemed to know what the "right" price for anything was. This high level of uncertainty and fear regarding the "right" prices was so profound that volatility in most asset classes was driven to an all time high.

VOLATILITY CHANGES OVER TIME

The chart (over) also shows that volatility is not a static thing. The listed property sector, for example, has had periods of extremely high volatility, (1989-1990 and 2007-2009), along with periods when volatility appeared relatively benign (1990-2007). Investors should be very wary when volatility is averaged out over a number of years and presented as a single number, because this will be totally misleading. It is better to look at a chart like the one over which gives a far better understanding of how an investment can bounce around in value over time.

THE LIMITATIONS OF VOLATILITY AS A MEASURE OF RISK

Because standard deviation is easy to calculate, the finance industry has tended to use it as a proxy for risk. However, volatility only measures the variation of returns around the average long term return. Volatility does not indicate how much money an investor might lose, or



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how long it will take to get your money back. Nor does it measure how frequently periods of negative returns might come along.

Low volatility does not mean low risk. In fact, low volatility can obscure the fact that risks are building up in an investment. Recent history shows us that low volatility can coexist with very high inherent risk. The Basis Capital Yield Fund is a good example. This now notorious investment was marketed as a low volatility fund with risk akin to a “normal” fixed interest investment. However, a closer look would have revealed that the fund was highly leveraged and substantially invested in illiquid securities such as CDOs, which comprised assets of highly dubious quality. In the period leading up to the GFC, these securities happened to have very low volatility, precisely because they

weren't being traded often and could not be valued accurately. When the market for these securities collapsed during the GFC, the real risk became all too evident and the value of the assets in the Fund fell to virtually zero. In the same vein, investors should not be lulled into thinking that unlisted property is low risk, just because its volatility is low. You can lose money in unlisted property too!

Volatility isn't forward-looking and does not predict returns. The volatility of the Australian share market was at historic lows immediately before it crashed 40% during the GFC. It would have been a mistake to have put more money into to Australian shares in late 2007, in the belief that the prevailing low volatility indicated the share market was “safer” and this situation would continue indefinitely. To complicate things further, it is not unusual to get mixed signals.

Good returns can be made in periods of both high and low volatility. Similarly, big losses can be made when volatility is both high and low.

FINAL THOUGHTS

The past few years have been unusual, but not unprecedented. A historical perspective shows that periods of high volatility are normal and can extend for some time.

Many investors who had assumed the previous years of extreme low volatility were the normal condition and indicated a less risky environment were surprised by the change and the impact it had on their wealth.

A true understanding of volatility and its limitations as a measure of risk provides a more rational perspective and can help investors make better decisions about their investments.



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