Portfolio construction in the real world

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Part of BNY MELLON

Insight INVESTMENT

Agenda

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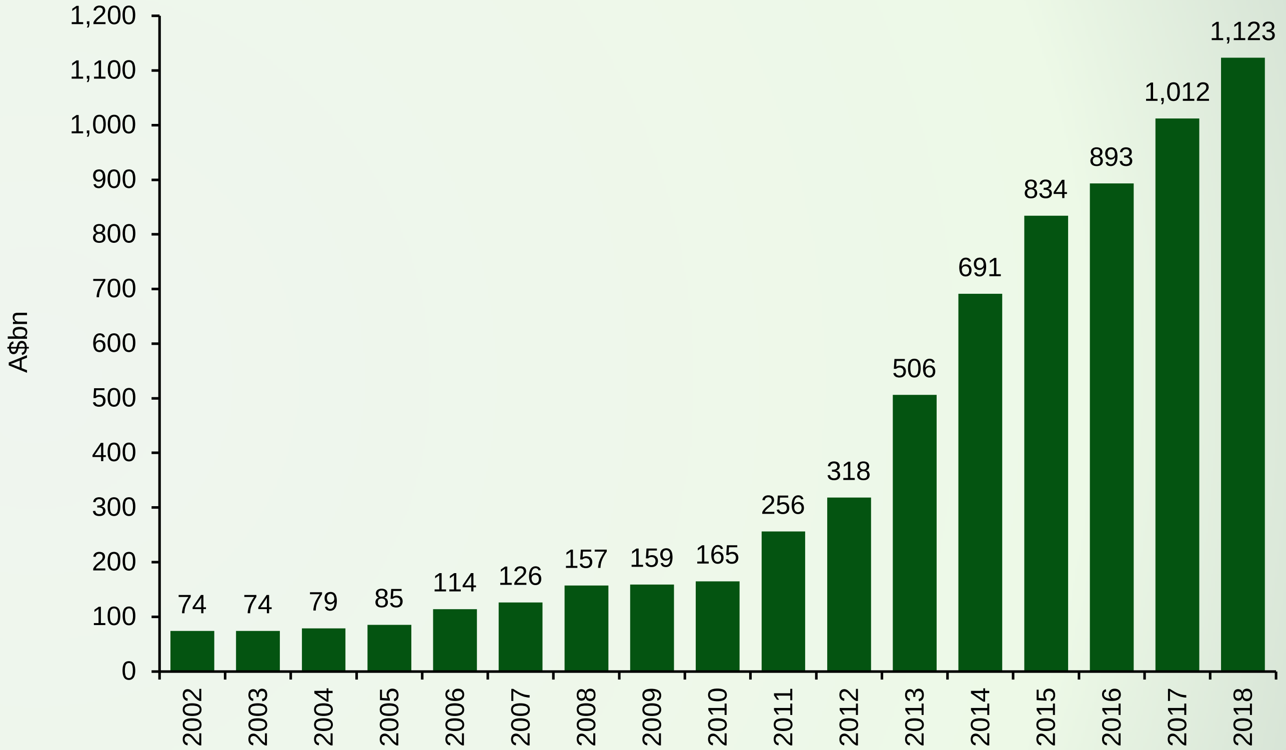
- Insight Investment overview
- Equities… are our expectations realistic?
- Common assumptions in asset allocation
- Portfolio construction: 3 guiding principles
- Summary

Our credentials

- Asset manager owned by BNY Mellon:
  - based in London, Frankfurt, New York, Sydney and Tokyo
  - over A$1trn in assets under management
  - 229 investment professionals, 858 total staff
- Key ingredients of our success:
  - differentiated investment proposition
  - focusing on our strengths
  - partnering with our clients
  - a culture of ownership
- Key areas of specialisation:
  - risk management solutions
  - fixed income
  - absolute return

Assets under management[1]

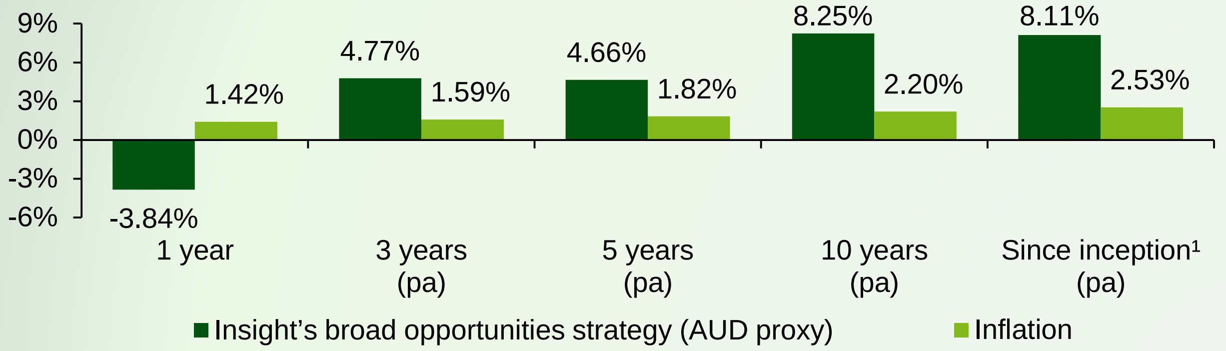


As at 31 December 2018. Assets under management (AUM) are represented by the value of cash securities and other economic exposure managed for clients. Figures shown in AUD. FX rates as per WM Reuters 4pm spot rates. Reflects the AUM of Insight, the corporate brand for certain companies operated by Insight Investment Management Limited (IIML). Insight includes, among others, Insight Investment Management (Global) Limited (IIMG), Insight Investment International Limited (IIIL) and Insight North America LLC (INA), each of which provides asset management services. [1] Excludes previous parent introduced assets prior to 2009.

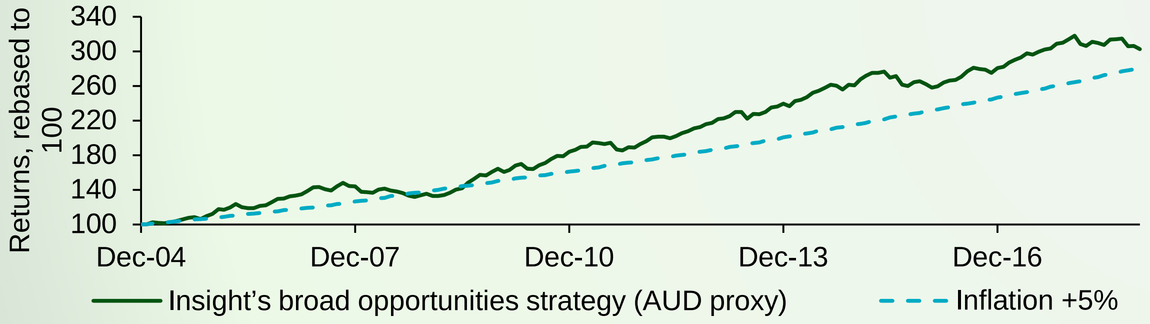
Insight's broad opportunities strategy

Long performance track record

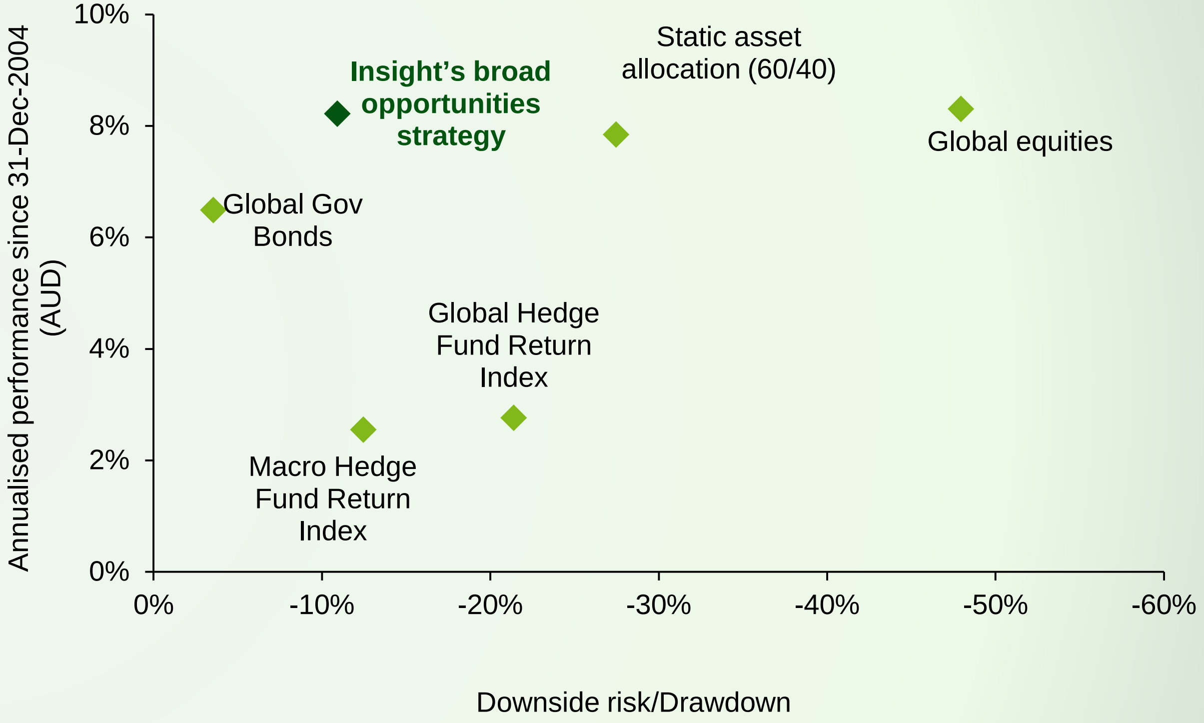
Strategy performance against benchmark since inception



Strategy performance against target since inception

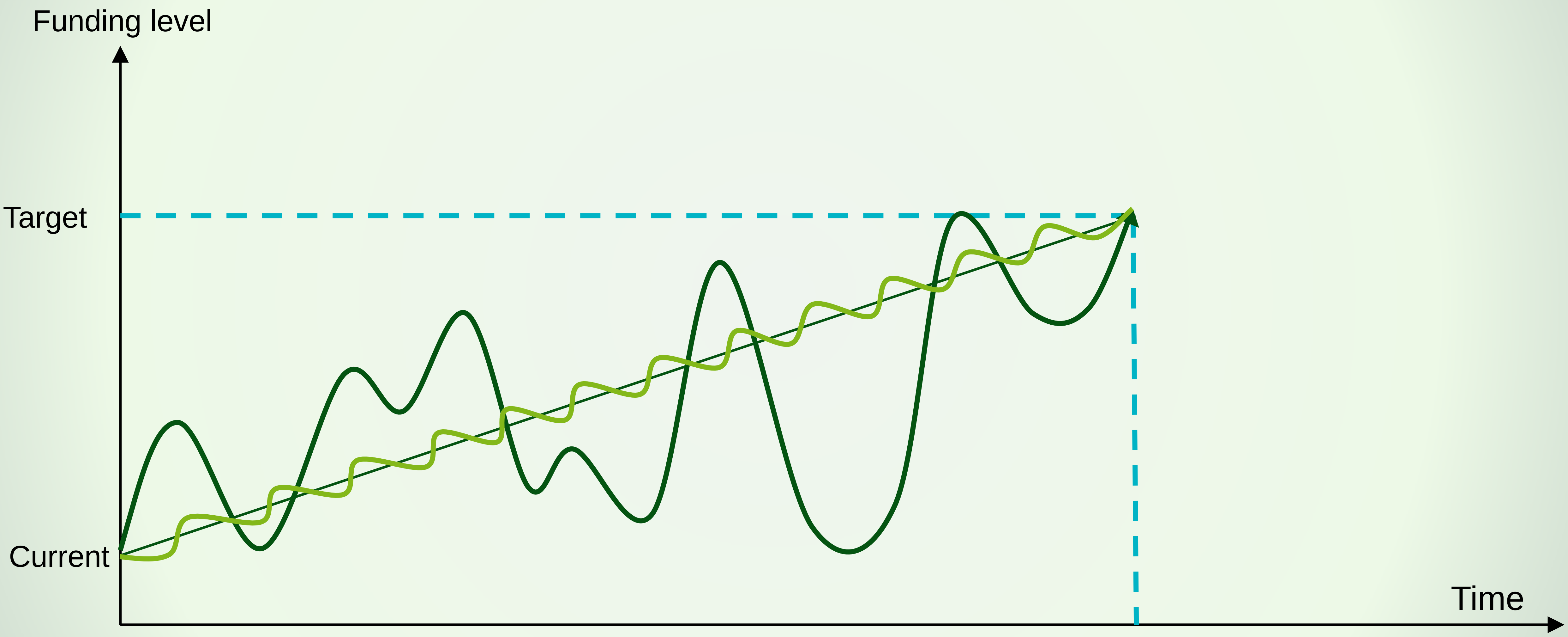


Drawdown risk/return comparison



Please refer to the risk disclosures at the back of this document. As at 31 December 2018. Gross returns. [1] Strategy initiated 31 December 2004. The long-term track record of Insight's broad opportunities strategy has a base currency of USD. This performance record has been adjusted by interest rate differentials to derive an AUD proxy. No currency adjustments have been made to the underlying investments. Inflation represents RBA CPI (trimmed mean). Static asset allocation is based on a 60% global equities (MSCI World Index, net of withholding taxes, hedged into AUD) and 40% bonds (JP Morgan GBI index hedged into AUD) allocation. Global equity is based on the MSCI World Index, net of withholding taxes, hedged into AUD. Global government bonds represents JP Morgan GBI index hedged into AUD. Hedge Fund Return Index represents HFRX Global Hedge Fund (AUD) index. Macro Hedge Fund Return Index represents HFRX Macro/CTA (AUD) index. Indices shown as Total Return. The global equities index is shown to illustrate the strategy's volatility against equities. Drawdown is calculated as the largest peak-to-trough change in the period, based on monthly data.

What are we trying to achieve?



Source: Insight Investment, for illustrative purposes only.

Understanding equities

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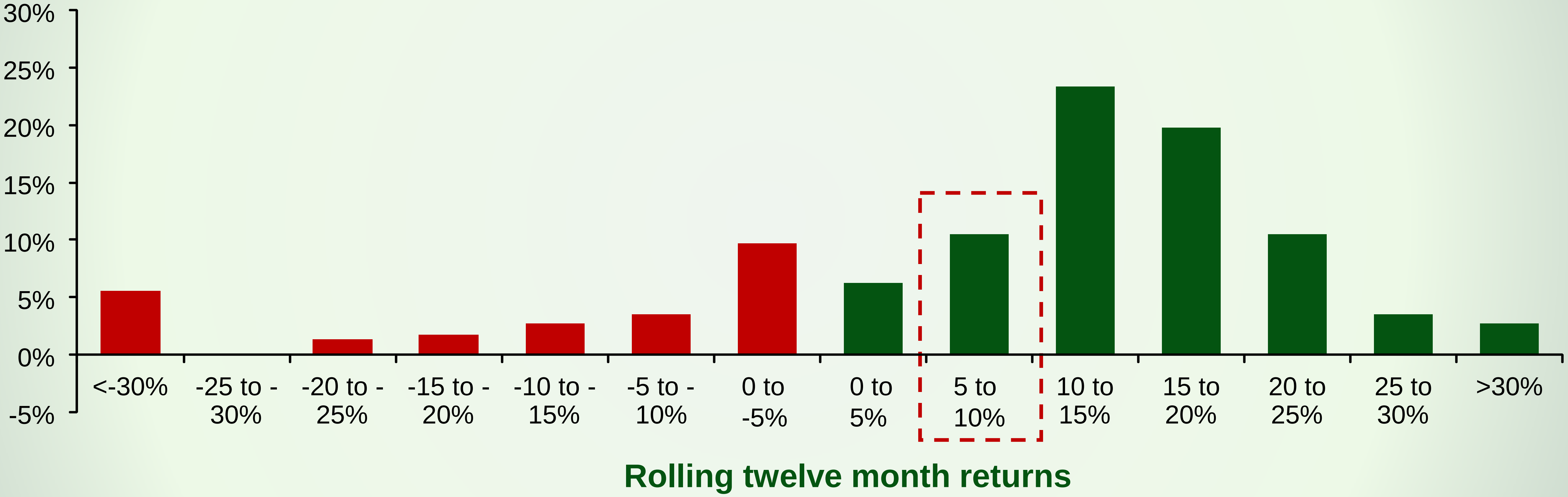
% of time observed since 31 December, 2004



Source: Insight Investment as at 31 December 2018. Chart shows distribution of global equity returns since 31 December 2004. Global equities represents MSCI World (Total Return, GBP).

Generating returns

Implications of volatile asset prices

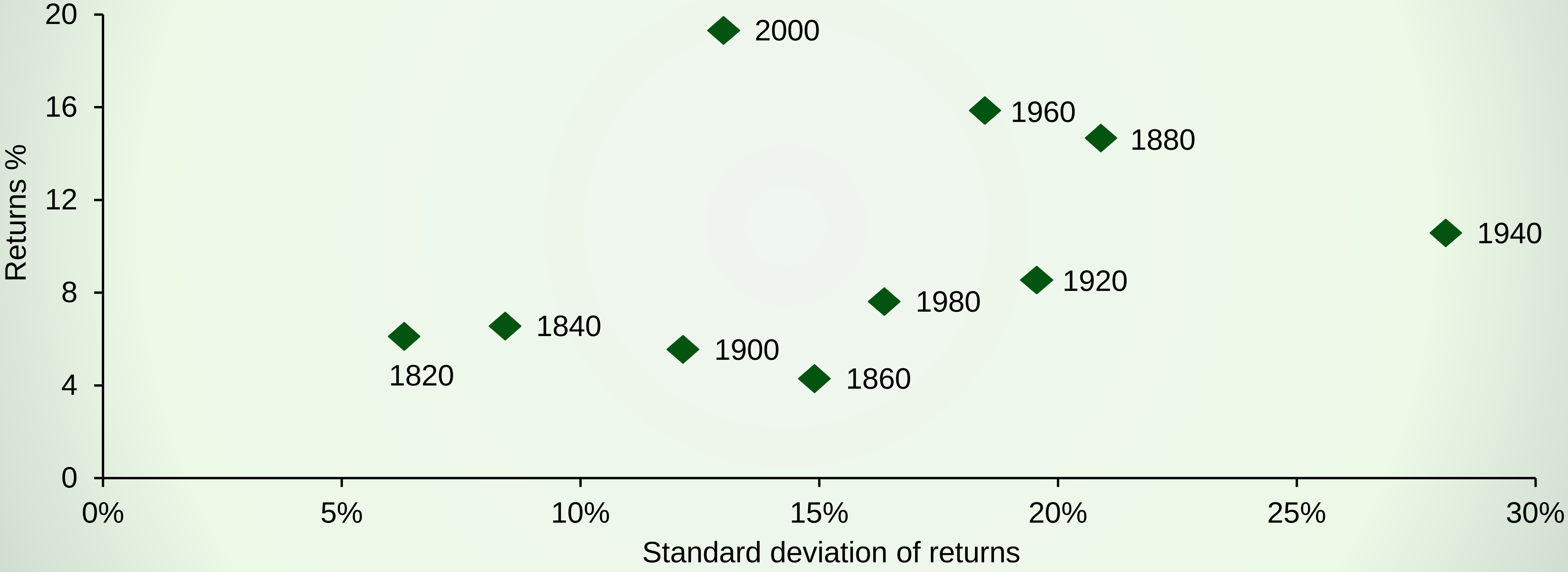
A traditional approach to asset allocation

- An elegant framework that requires few inputs
- However, in reality the inputs cannot be forecast with the degree of accuracy required by the approach
  - output highly sensitive to inputs
  - unintuitive portfolio swings
  - in some senses, 'garbage in, garbage out'

Source: Insight Investment.

Implications of using equities: which expected returns?

US equity returns (20 year average)



Source: Insight Investment, US equity market returns 1801–2011.

Diversification in practice

The UK stock market over 216 years

Observations

- Number of years in which the stock market went down = 47 (22% of the time)
- Number of years in which the bond market went down = 54 (25% of the time)
- What was the number of years in which both the equity and bond markets went down?
- theory: 22% x 25% = 5.5% (twelve times)
  - reality: 13% of the time (twenty eight times)

Conclusions

- In reality diversification is not perfect
- To some degree, equity and bond markets are correlated (which means that some things influence them both)
- Nevertheless, even in this simple example, by investing in both equities and bonds we improve the balance of risk and return
- Broadening the investment universe further improves the benefits of diversification

Source: Insight Investment, Datastream, Rimes. Data from December 1801 to December 2018.

Portfolio construction: 3 guiding principles

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3Ds

- **Diversification**
- **Dynamism**
- **Downside protection**

Diversification: some considerations

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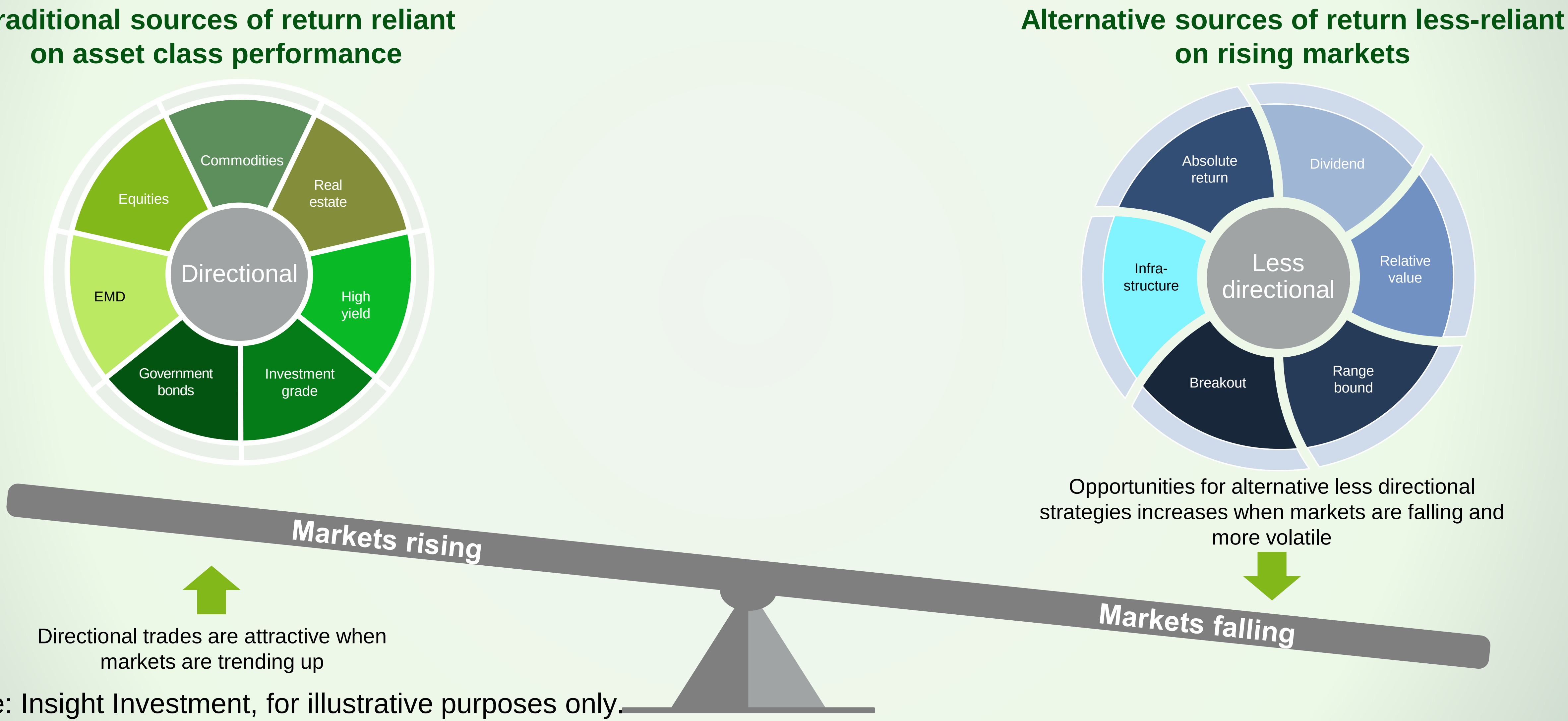
Sources of return	**Spreading risk**
'Beta' or market driven: Price performance Income/yield	**Risk reduction… a free lunch?** Investing across a range of different assets normally lowers risk of portfolio
'Alpha' driven: Function of manager decisions Can be isolated from market based returns	**… sometimes there can be a charge** ***Beware***: correlation, or the interaction, between asset classes changes over time

Source: Insight Investment, for illustrative purposes only.

Flexibility to navigate a range of market conditions

Accessing a broad opportunity set



Source: Insight Investment, for illustrative purposes only.

Investing across a range of assets can lower portfolio risk

Example: risk profile of an insight diversified growth fund

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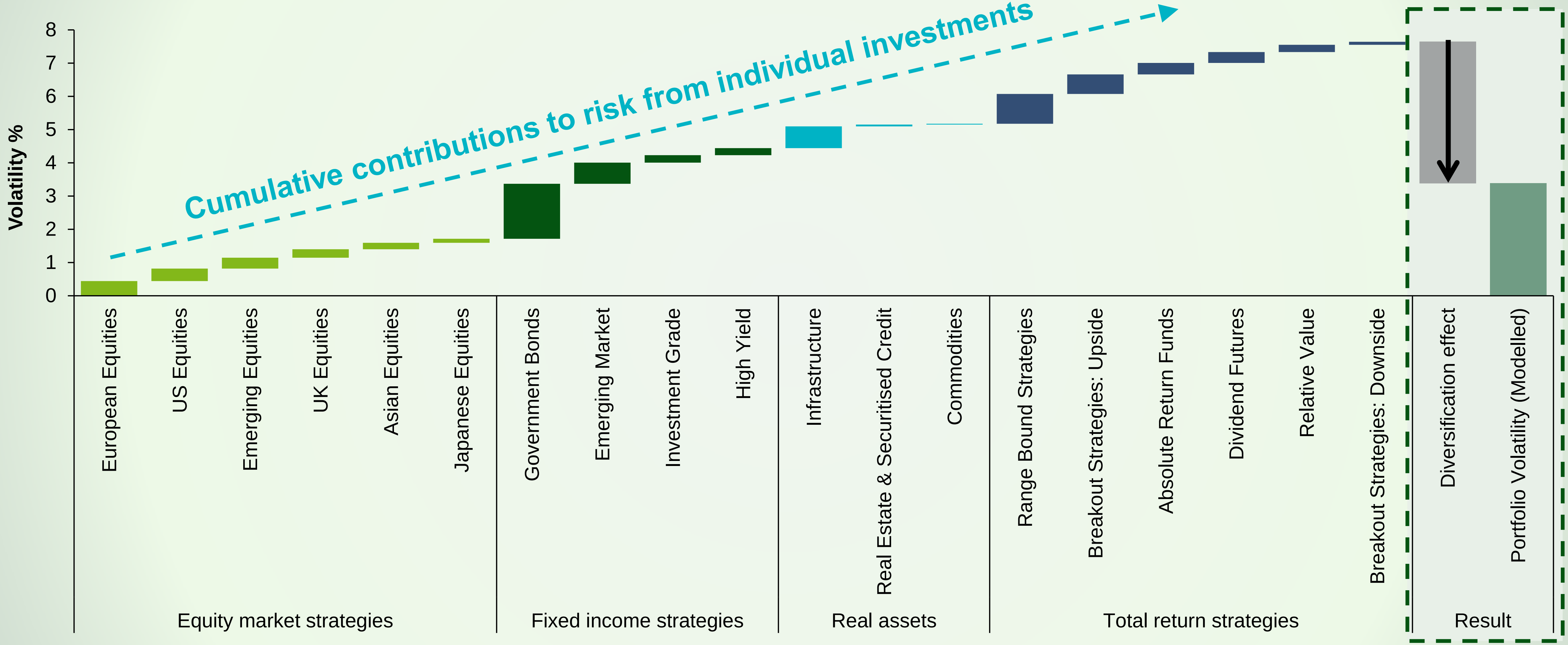

Source: Insight Investment data as at 31 December 2018. 3-years of daily data for realised annualised volatility of current individual positions compared to the strategy's expected annualised volatility.

Dynamism: return opportunity and risks across asset classes vary over time

What should drive dynamic management of investments?

Valuation	Macro environment	Market positioning
Cheap valuations: Provide a cushion against uncertainty Prospect for future returns is greater	**What's happening around the world?** Economic environment materially affects how assets perform	**Being aware of investor psychology can help:** Avoid ‘crowded trades’ Take advantage of reversal opportunities

Source: Insight Investment, for illustrative purposes only.

Dynamic asset allocation in practice

Example: Insight's diversified growth strategy

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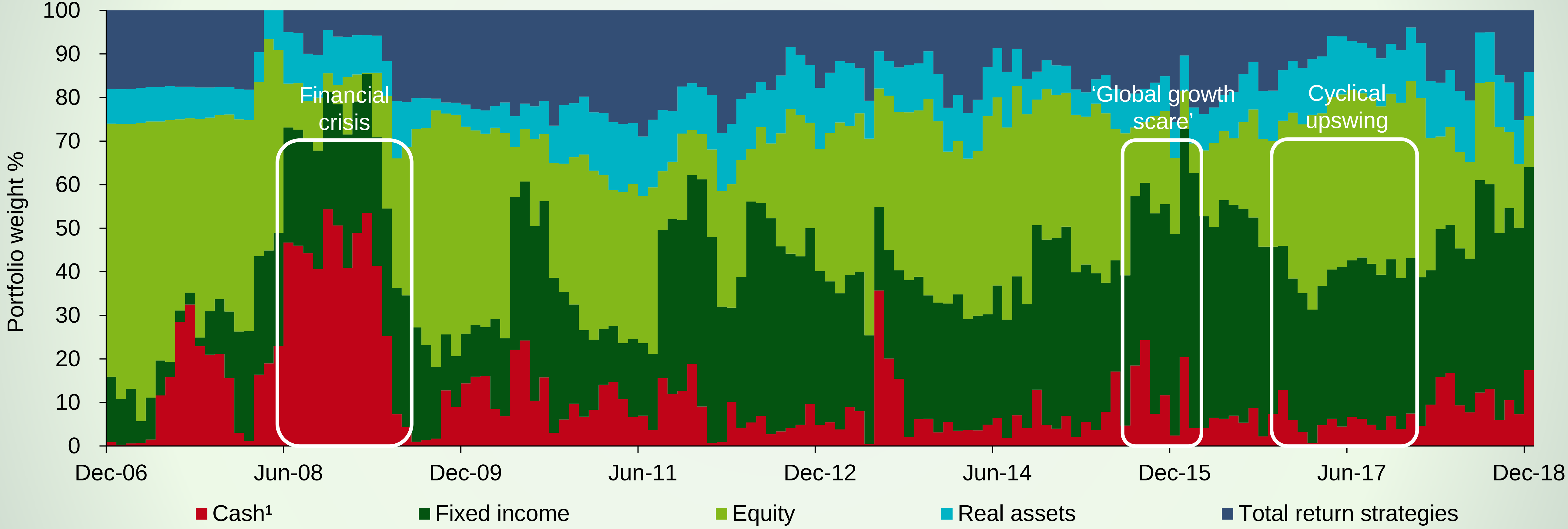
Asset allocation over time



Data as at 31 December 2018. Positions are shown on a net basis. [1] Cash: Includes cash at bank, FX forwards and money market instruments. Allocations are subject to review and may change without notice. Past performance is not a guide to future performance.

Downside risk management: equity beta (for illustrative purposes only)

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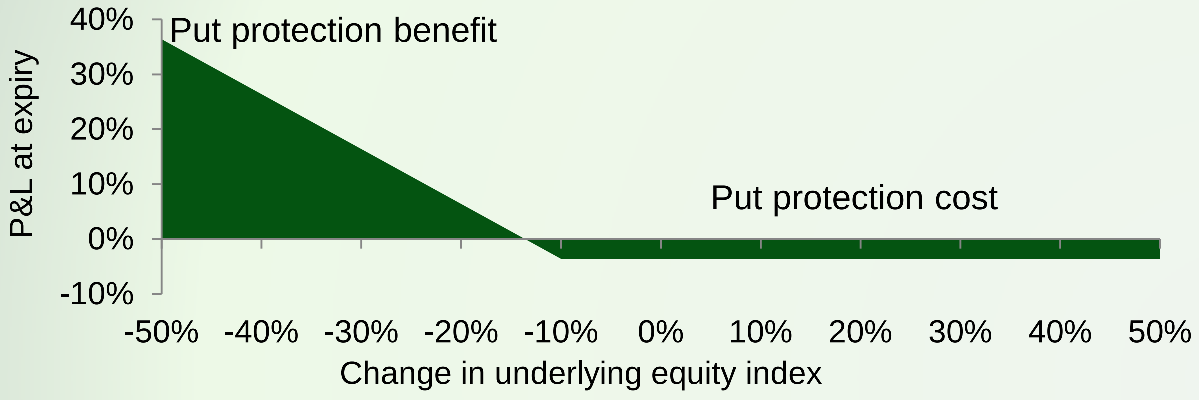
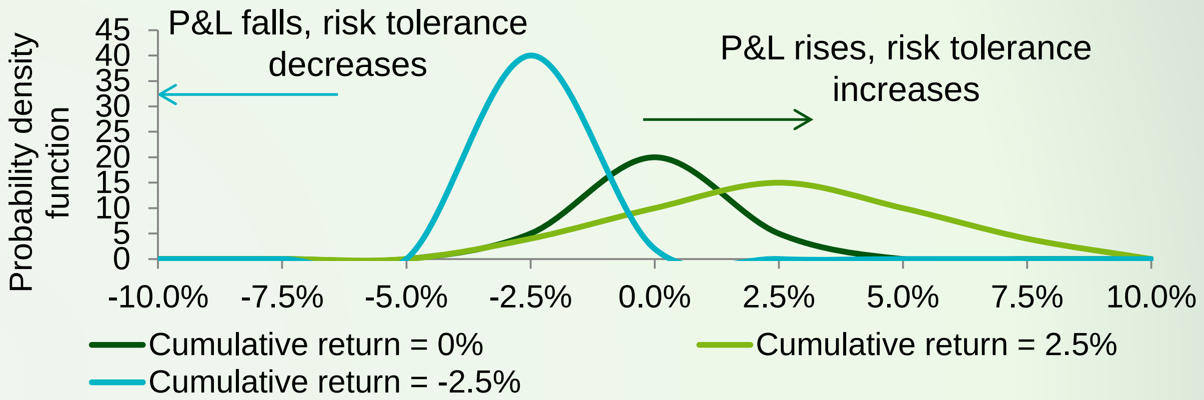
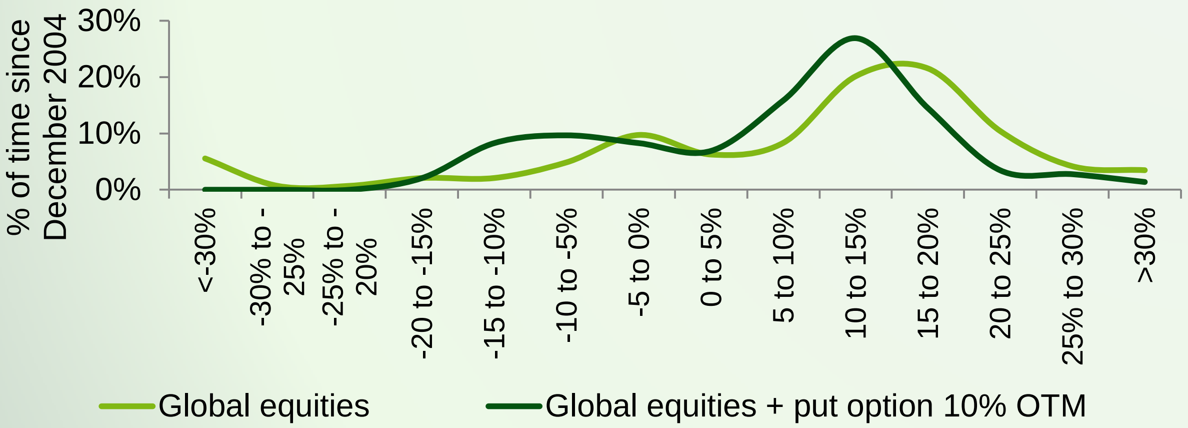
Simple put protection: 10% OTM put option



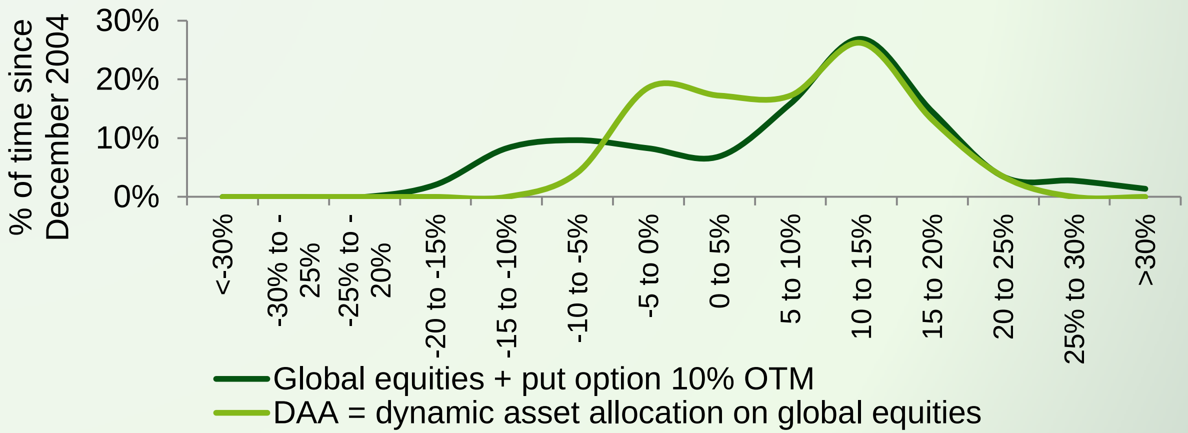
Dynamic approach to risk budgeting for cyclical assets



Simple put protection: benefits versus costs



Dynamic risk management versus simple put protection



Source: Insight Investment. For illustrative purposes only.

Downside risk management: equity alpha example

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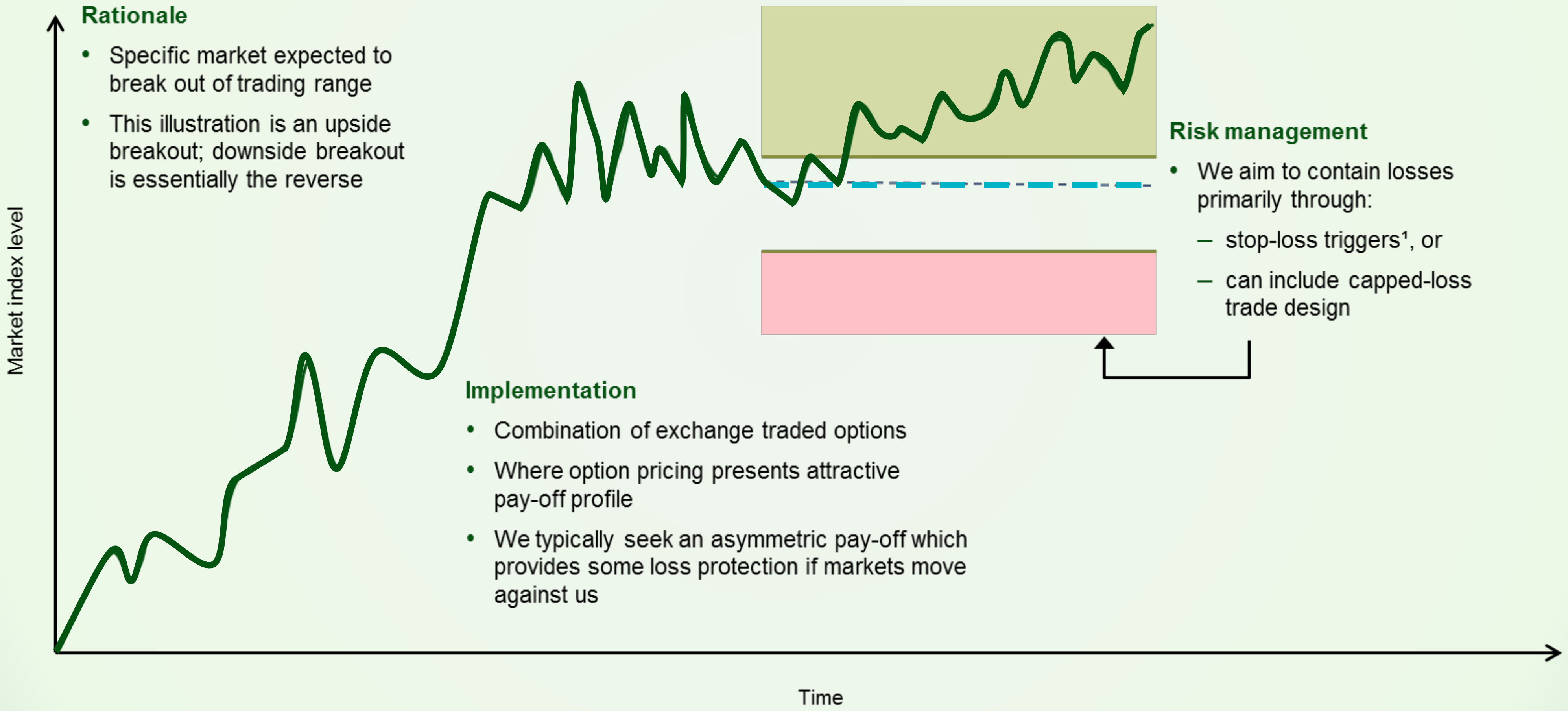
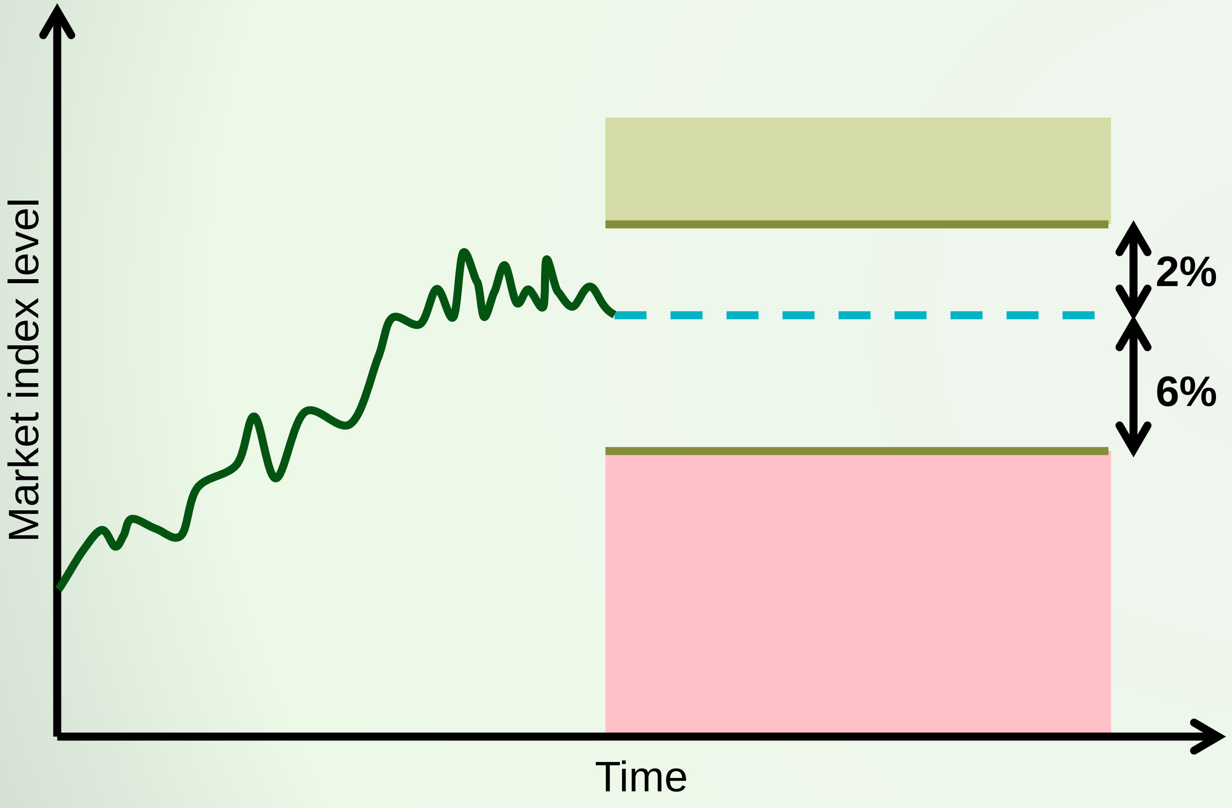
How it works in practice



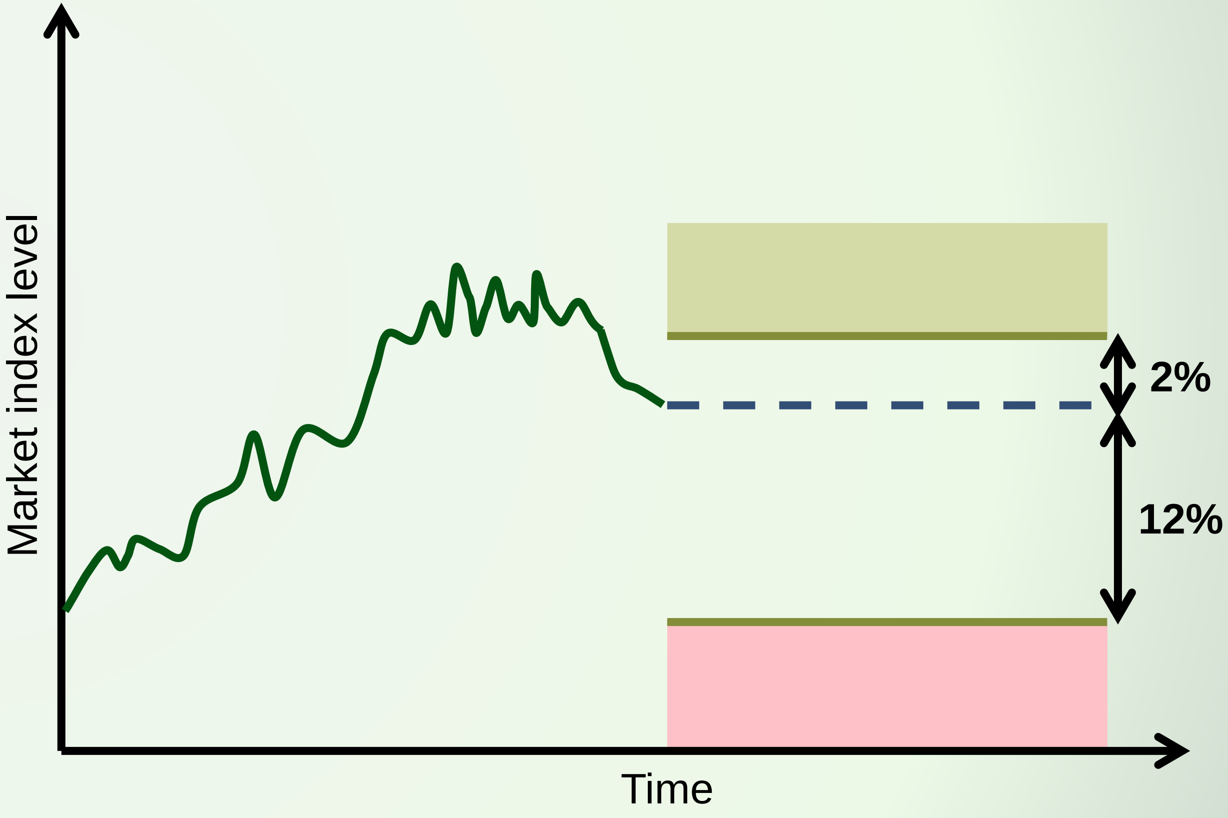
Source: Insight Investment. For illustrative purposes only. [1] A stop-loss mechanism is not a guarantee to limit losses at any given level.

Downside risk management: equity alpha example

Pre volatility spike



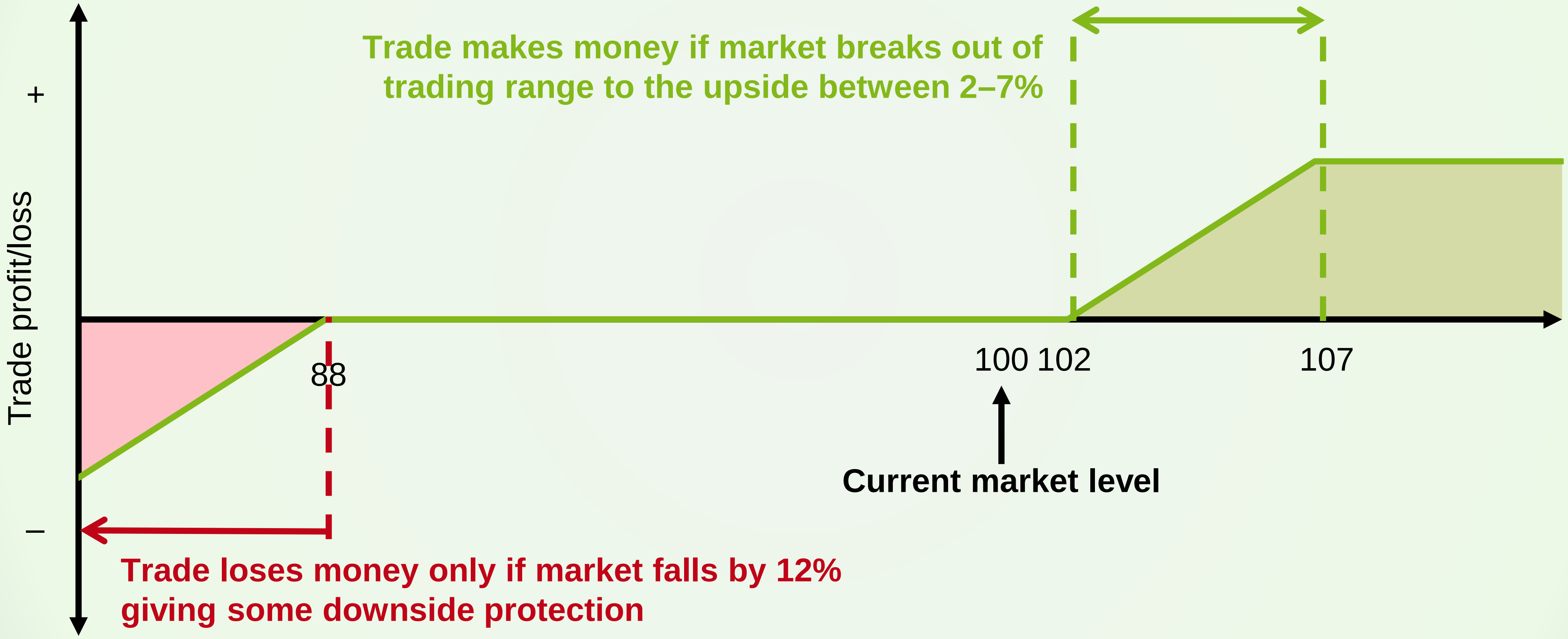
Post volatility spike



Source: Insight Investment. For illustrative purposes only. [1] A stop-loss mechanism is not a guarantee to limit losses at any given level.

Downside risk management: equity alpha example

Likely structure



Source: Insight Investment. For illustrative purposes only. [1] A stop-loss mechanism is not a guarantee to limit losses at any given level.

Portfolio construction: 3 guiding principles

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3Ds

- **Diversification**
- **Dynamism**
- **Downside protection**

Availability and research ratings

Insight Diversified Inflation Plus Fund available on:

- Macquarie Wrap
- BT Wrap/Panorama
- Netwealth
- HUB24
- Onevue
- Wholesale PDS (min $20k)

Insight Diversified Inflation Plus Fund research ratings:

- Zenith Investment Partners – Recommended (issued 12 November 2018)
- Lonsec Research – Recommended (issued 22 January 2019)

Please refer to Lonsec and Zenith Disclaimers at the back of this document.

Summary

- Portfolio construction continues to evolve and whilst traditional approaches have merit, greater client expectations and changing market conditions require an adaptive approach.

- Equities provide the greatest potential for return, but they may also present the greatest risk to portfolios.

- Diversification using only traditional sources of returns, provides an element of risk management…but may be less effective than anticipated from time to time.

- The 3 D's – all 3 are required!
  - diversification should be sought from a broad range of return sources including less directional sources.
  - dynamic asset allocation is an important risk management tool enabling the portfolio to be adjusted for various environments.
  - downside risk management should be undertaken at the specific investment level. Knowing "tolerable bounds of loss" is critical when managing to a real return target. Having "stop-loss" triggers or at least an opportunity to re-assess a losing position is equally important.

Important disclosures

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Risk disclosures

- **Past performance is not indicative of future results. Investment in any strategy involves a risk of loss which may partly be due to exchange rate fluctuations.**
- The performance results shown, whether net or gross of investment management fees, reflect the reinvestment of dividends and/or income and other earnings. Any gross of fees performance does not include fees and charges and these can have a material detrimental effect on the performance of an investment.
- Any target performance aims are not a guarantee, may not be achieved and a capital loss may occur. Strategies which have a higher performance aim generally take more risk to achieve this and so have a greater potential for the returns to be significantly different than expected.
- Portfolio holdings are subject to change, for information only and are not investment recommendations.

Supporting notes and index definitions

- The long-term track record of Insight's broad opportunities strategy has a base currency of USD. This performance record has been adjusted by interest rate differentials to derive an AUD proxy. No currency adjustments have been made to the underlying investments.

Index definitions

- Information about the indices shown here is provided to allow for comparison of the performance of the strategy to that of certain well-known and widely recognised indices. There is no representation that such index is an appropriate benchmark for such comparison. You cannot invest directly in an index and no account has been taken of charges. The volatility of the indices may be materially different from that of the strategy. In addition, the strategy's holdings may differ substantially from the securities that comprise the indices shown.
- Indices shown as Total Return.

Index	Description
Cash	Bloomberg AusBond Bank Bill Index
Inflation	RBA CPI (trimmed mean)
Static asset allocation (60/40)	Static asset allocation is based on a 60% global equities (MSCI World Index, net of withholding taxes, hedged into AUD) and 40% bonds (JP Morgan GBI index hedged into AUD) allocation.
Global equity	MSCI World TR index in local currency terms. The global equities index is shown to illustrate the strategy's performance relationship with equities during certain windows to illustrate how it changes.
Global government bonds	JP Morgan GBI index hedged into AUD
Hedge Fund Return Index	HFRX Global Hedge Fund (AUD) index
Macro Hedge Fund Return Index	HFRX Macro/CTA (AUD) index.

Source: Insight as at 31 December 2018.

Associated investment risks

Multi-asset

- Derivatives may be used to generate returns as well as to reduce costs and/or the overall risk of the portfolio. Using derivatives can involve a higher level of risk. A small movement in the price of an underlying investment may result in a disproportionately large movement in the price of the derivative investment.
- Investments in bonds are affected by interest rates and inflation trends which may affect the value of the portfolio.
- The investment manager may invest in instruments which can be difficult to sell when markets are stressed.
- Property assets are inherently less liquid and more difficult to sell than other assets. The valuation of physical property is a matter of the valuer's judgement rather than fact.

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