

## Volatility and portfolio construction

Volatility markets are well suited to provide investors with both **attractive returns** and **cost-effective protection**. We believe volatility strategies are valuable tools investors can use as part of their portfolio construction to **increase returns and reduce risk**.

### The investment challenge

Many investors hold a large portion of their assets in equities. Two key challenges for portfolios dominated by equities are how to manage the risk of large losses associated with equity crashes (especially for investors close to, or in, retirement) and how to earn additional returns on top of the base asset class returns.

Investors often use a range of defensive assets (such as cash and bonds) to address the former challenge and look to active equity managers to address the latter challenge (often through stock-picking and/or style tilts).

One problem with the first approach is that defensive assets are expected to earn lower returns over the long-term compared to growth assets. In addition, unstable correlation between equities and bonds may make bonds unreliable diversifiers going forward.

Challenges with the second approach include that it is very difficult to consistently add positive returns over a long time period through stock-picking or style tilts.

### Benefits of volatility\*

Volatility strategies can help address both these challenges by providing defensive alpha and cost-effective protection.

Volatility alpha strategies are driven by a genuine risk-transfer risk premium that we believe is clear, logical and sustainable. The aim of defensive volatility alpha strategies is to harvest this risk premium to provide consistent, reliable, predictable returns.

As investors know too well, market volatility tends to increase when markets fall. The aim of cost-effective protection strategies is to use this relationship to provide positive returns in large equity falls while limiting the cost at other times.

Volatility strategies can be combined with cash to create an investment that aims to earn returns in line with growth assets while providing the type of diversification benefits associated with defensive assets. Including some of this investment in their defensive portfolio can help investors improve long-term returns.

Volatility strategies can also be combined with equities to create an investment that aims to reduce losses in large equity falls while providing additional returns at other times.

### Key findings

In this paper we examine portfolios of Australian equities, Australian bonds, Australian cash and volatility strategies over the past 18.5 years.

Our analysis shows that compared to a 70/30 balanced portfolio, a 50/50 defensive portfolio would have reduced risk with only a 0.5% p.a. reduction in returns (from 6.1% to 5.6%). These results were driven by the power of diversification and the relatively strong bond returns during this period.

**However, a balanced portfolio that incorporated volatility strategies to provide both returns and diversification could have achieved a greater risk reduction with significantly higher returns of 9.6% p.a..**

**This portfolio would have benefited more from the only other free lunch in investing: compounding.**

*\* For an introduction to options see our paper 'Using options to improve risk and return'.*

*For a discussion of how volatility can be used to create defensive alpha and cost-effective protection see our paper 'Volatility for alpha and protection'.*

***for investors close to, or in, retirement that want to reduce risk, rather than selling equities and investing in lower returning defensive assets, retaining their asset mix and incorporating volatility strategies may provide the ability to reduce portfolio risk while increasing expected returns***



## Adding volatility strategies to defensive or growth assets

The aim of adding volatility strategies to defensive assets is to create a diversifying investment with low correlation to equities, but higher returns than traditional defensive investments.

To illustrate, Figure 1 compares a traditional 70/30 balanced portfolio of Australian equities and bonds to a portfolio that moves half of its defensive assets from bonds to an investment that combines cash with volatility strategies.

Over the period examined the simulated portfolio with volatility strategies would have had lower losses in the two largest equity losses (2008 and 1Q2020) while earning an additional 1.2% p.a..

The aim of adding volatility strategies to equities is to create an investment that should outperform equities in 'normal' markets and outperform by more in large equity falls.

To illustrate, Figure 2 compares a traditional 70/30 balanced portfolio of Australian equities and bonds to a portfolio that moves half of its growth assets from equities to an investment that combines equities with volatility strategies.

Over the period examined the simulated portfolio with volatility strategies would have had lower losses in the two largest equity losses (2008 and 1Q2020) while earning an additional 2.3% p.a..

Figure 1: Adding volatility strategies to defensive assets

SIMULATION

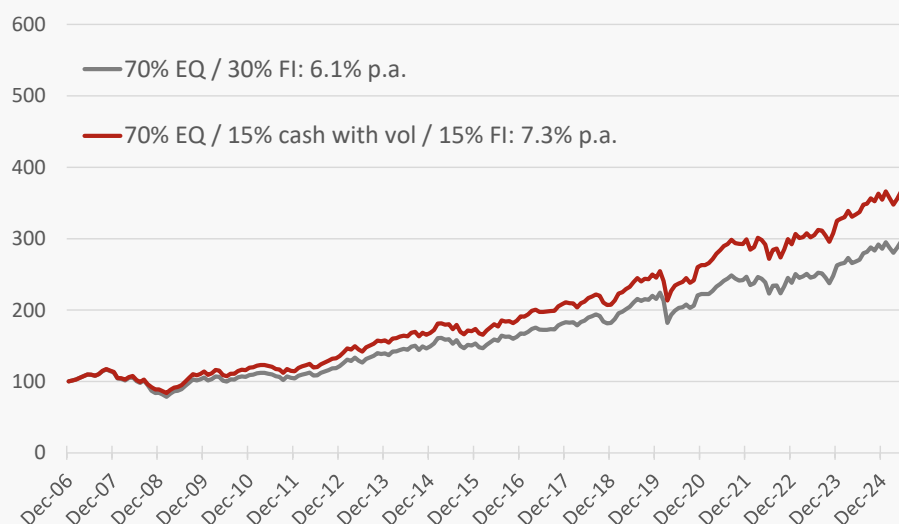
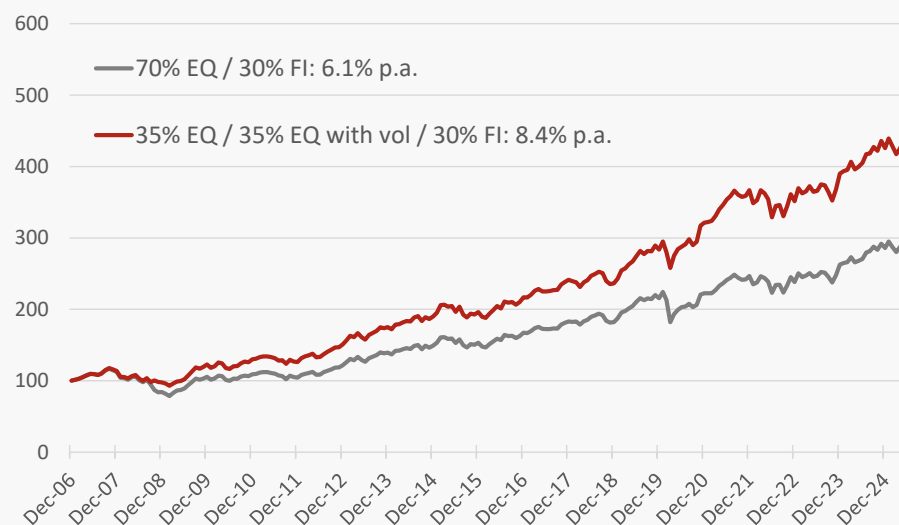


Figure 2: Adding volatility strategies to growth assets



*Simulations have been created using models with assumptions and may have the benefit of hindsight. No actual investments were made. There can be sharp differences between simulated and actual results for many reasons. The simulations are net of estimated transaction costs but gross of management fees. Equity returns are the S&P/ASX 200 Total Return Index, AS51T Index. Bond returns are Bloomberg AusBond Composite 0+ Yr Index, BACMO Index. Cash returns are RBA cash, RBACTRD Index. Past performance is not an indicator of future performance. See important information on the last page. Source: Bloomberg, SouthPeak.*



## Using volatility strategies to improve expected portfolio risk and return

Over the past 18.5 years Australian bonds have only underperformed Australian equities by 2.3% p.a.. Bonds would have also provided significant diversification benefits, with a maximum loss of only 13% (compared to 47% for equities) and positive returns in the two largest equity losses (2008 and 1Q2020).

It is therefore not surprising that a 50/50 defensive portfolio would have underperformed a 70/30 balanced portfolio by only 0.5% p.a., while reducing the size of the largest portfolio losses by 12% and 6% (see Table 1 on the next page).

However, interest rates started this period much higher than where they are now, so bonds may not be able to provide similar returns and diversification benefits going forward.

Instead of moving from a balanced to a defensive portfolio to reduce risk, we next look at the benefits of maintaining a balanced portfolio and adding volatility strategies to half of the defensive and growth assets to improve their returns and diversification. Compared to the defensive portfolio, this simulated portfolio would have had better performance in the two largest equity losses and would have increased returns over the whole period by 4.0% p.a. (see Table 1 on the next page).

Importantly, as Figure 4 shows, the additional returns earned by the balanced portfolio with volatility strategies would have been spread relatively evenly over the 18.5 years.

**Adding volatility strategies to portfolios can potentially provide investors with better long-term returns by aiming to add alpha and reduce losses, which helps compounding and reduces sequencing risk.**

Figure 3: Adding volatility strategies to a balanced portfolio

SIMULATION

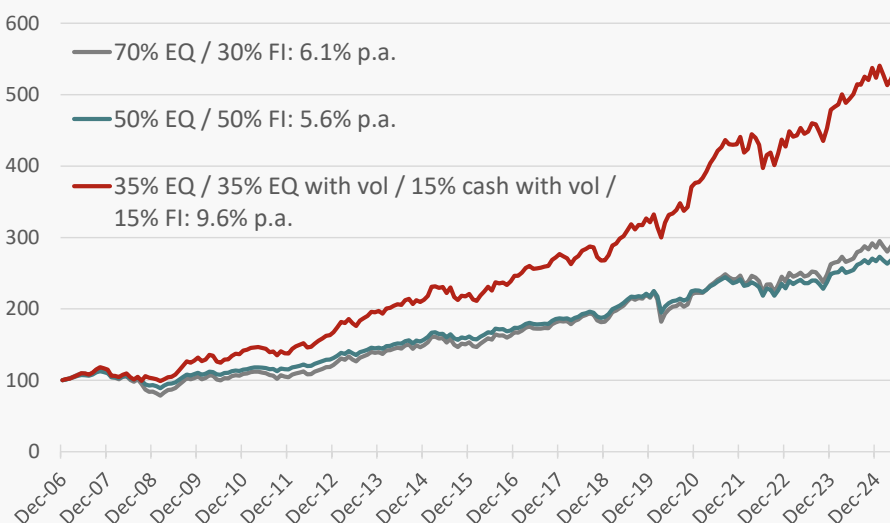
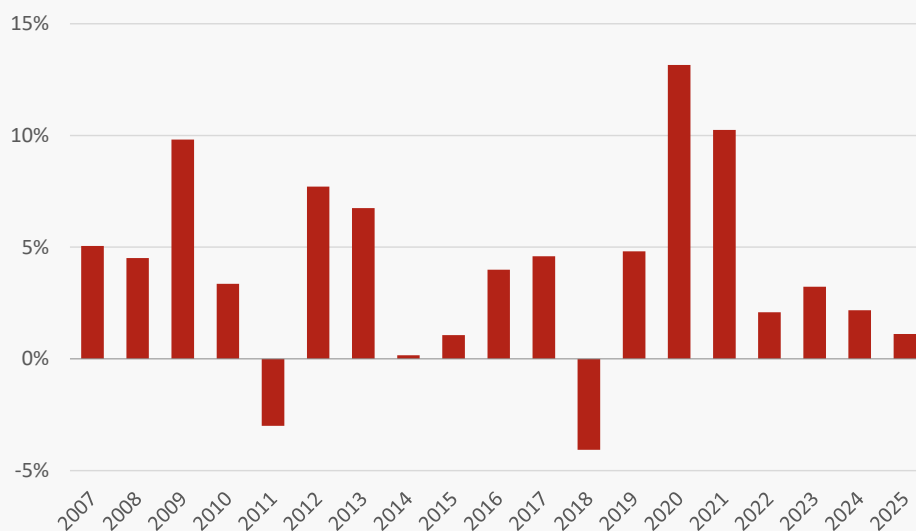


Figure 4: Annual outperformance of a balanced portfolio with volatility strategies compared to a defensive portfolio



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## Portfolio analysis results

Table1: Portfolio analysis	Growth assets		Defensive assets		Simulated performance summary			
	Equities	Equities + Vol Strategies	Bonds	Cash + Vol Strategies	Annualised return	Annualised volatility	31 Oct 07 to 28 Feb 09	31 Jan 20 to 31 Mar 20
Traditional Portfolios								
- Equities	100%				6.6%	14.4%	-47%	-27%
- Bonds			100%		4.1%	3.8%	+15%	+1%
- Balanced	70%		30%		6.1%	10.1%	-33%	-19%
- Defensive	50%		50%		5.6%	7.4%	-21%	-13%
Balanced Portfolio with Volatility Strategies added to the:								
- Defensive Assets	70%		15%	15%	7.3%	9.7%	-29%	-16%
- Growth Assets	35%	35%	30%		8.4%	9.4%	-21%	-12%
- Defensive & Growth Assets	35%	35%	15%	15%	9.6%	9.5%	-17%	-10%
<p><i>Simulations have been created using models with assumptions and may have the benefit of hindsight. No actual investments were made. There can be sharp differences between simulated and actual results for many reasons. The simulations are net of estimated transaction costs but gross of management fees. Equity returns are the S&amp;P/ASX 200 Total Return Index, AS51T Index. Bond returns are Bloomberg AusBond Composite 0+ Yr Index, BACMO Index. Cash returns are RBA cash, RBACTRD Index. Past performance is not an indicator of future performance. See important information on the last page. Source: Bloomberg, SouthPeak.</i></p>								

## Important information

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## About SouthPeak

SouthPeak is a specialist volatility manager providing alpha and protection.

We aim to deliver attractive outperformance with low correlation to bonds and equities.