Risk and Position Sizing for DAA

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INTRODUCTION

Today's presentation explores three key ideas about Dynamic Asset Allocation (DAA):

1. DAA tilts should be sized to reflect both the volatility of the asset class and conviction levels

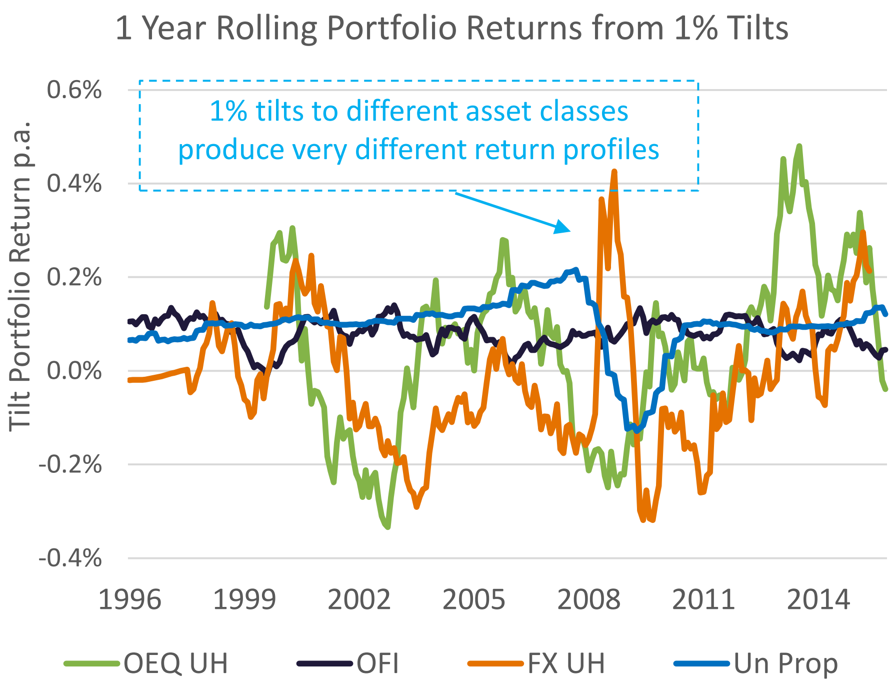
2. Multiple DAA tilts should be analysed as a portfolio of tilts

3. DAA tilts should ideally be consistently reflected across different growth portfolios

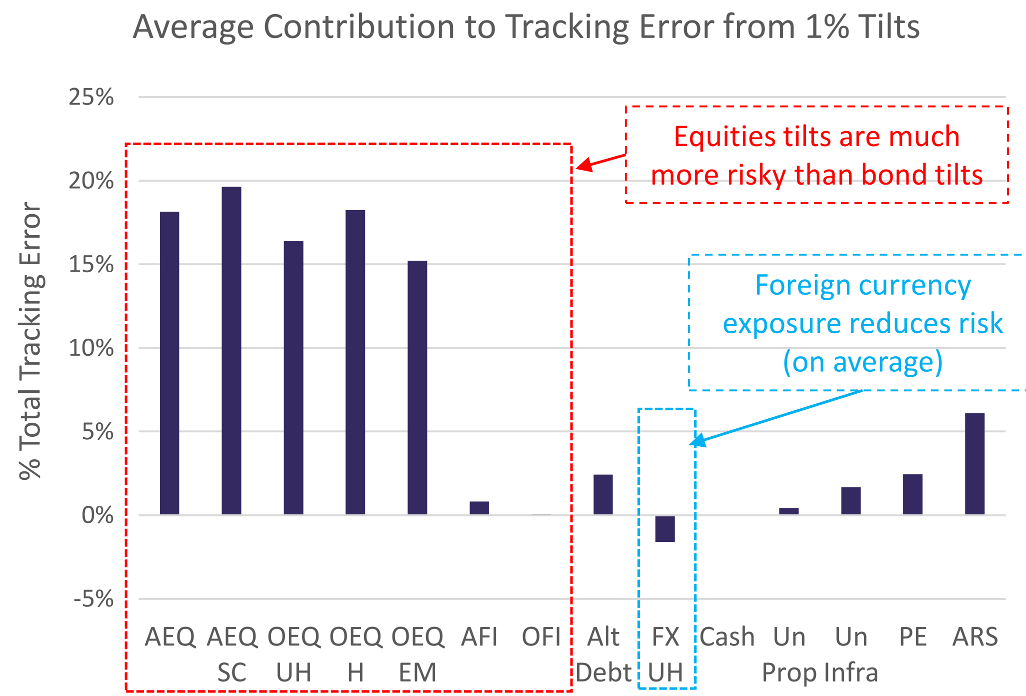
1. SIZING DAA TILTS: CONVICTION vs VOLATILITY

Q. Given equal conviction in two tilts, should both have an equal weight/size?

A. Generally no. The volatility of the asset class will influence potential excess returns



Source: Bloomberg, Datastream, Frontier

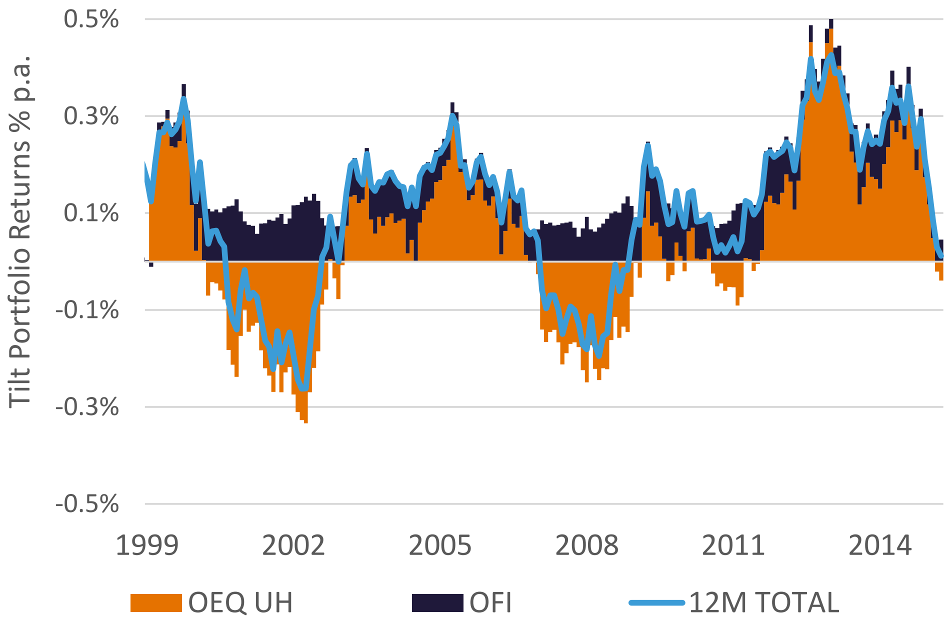


Source: Bloomberg, Datastream, Frontier

1. WHAT IF WE IGNORE AN ASSET'S VOLATILITY?

The left hand chart shows that pairing a 1% underweight to bonds with a 1% overweight to equities results in a DAA tilt portfolio that is dominated by equity risk

1 Year Rolling Portfolio Returns from 1% Tilts to Equities and Bonds



Source: Bloomberg, Datastream, Frontier

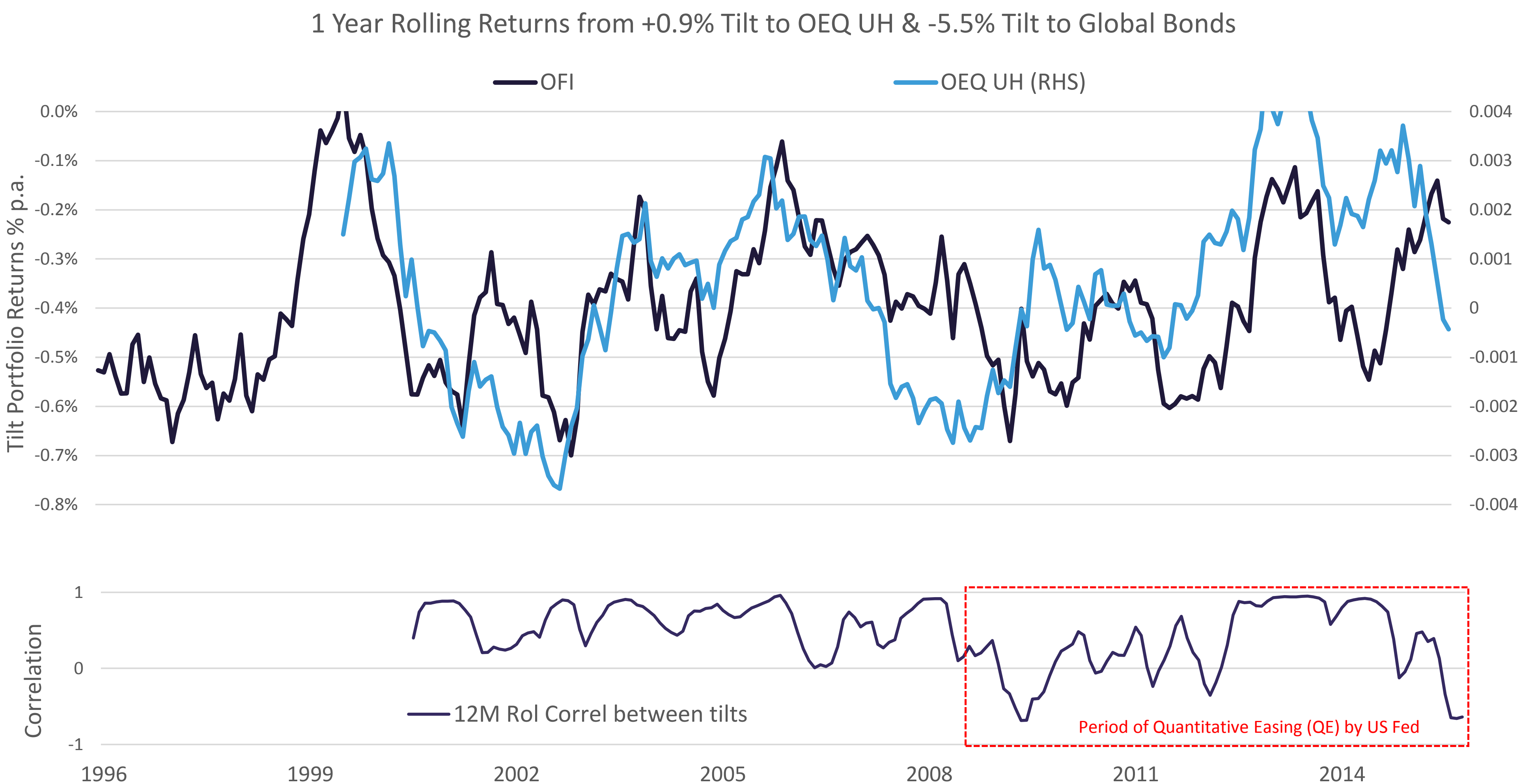
Approx. Historical Risk Equivalent Tilts by Asset Class

Sector	DAA Tilt	Tracking Error p.a.
Australian broad caps	+/- 1%	0.13%
Australian small caps	+/- 0.8%	0.13%
Overseas equities (UH)	+/- 1.1%	0.13%
Emerging market equities	+/- 0.8%	0.13%
Australian Fixed Interest	+/-4.5%	0.13%
International Fixed Interest	+/- 5.0%	0.14%
Unlisted Property	+/- 3.5%	0.13%
Unlisted Infrastructure	+/- 2.5%	0.13%
Cash	+/- 31%	0.13%

More volatile assets require smaller tilts for the same return impact

Source: Bloomberg, Datastream, Frontier

1. EXAMPLE



Source: Bloomberg, Datastream, Frontier

2. BRINGING IT ALL TOGETHER: A PORTFOLIO OF DAA TILTS

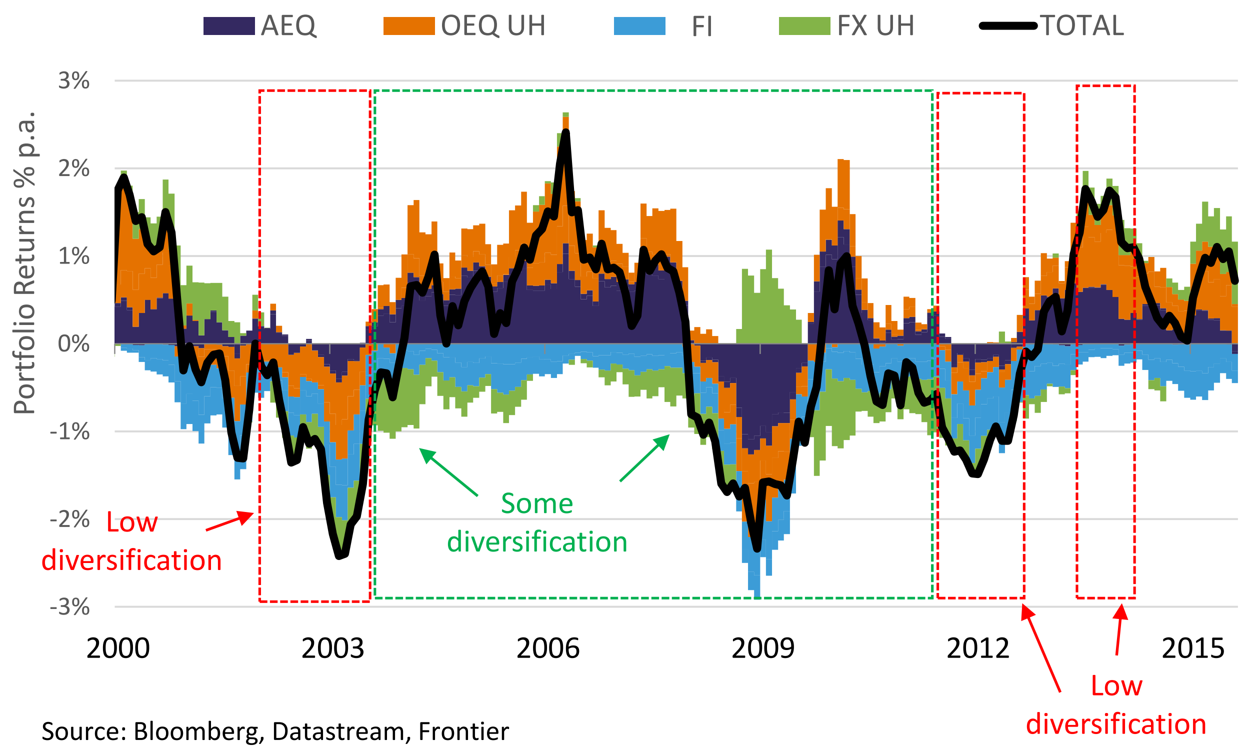
Multiple DAA tilts combine to form a DAA tilt portfolio, which has its own risk and return characteristics. This is analogous to a standard portfolio of risky assets

Example DAA Tilt Portfolio

Sector	DAA Tilt
Australian broad caps	+2.7%
Australian small caps	+0.3%
Overseas equities (UH)	+1.5%
Emerging market equities	+1.5%
Australian Fixed Interest	-3.0%
International Fixed Interest	-3.0%
Currency	+2.5%

Source: Frontier

1 Year Rolling Returns (Example DAA Tilt Portfolio)



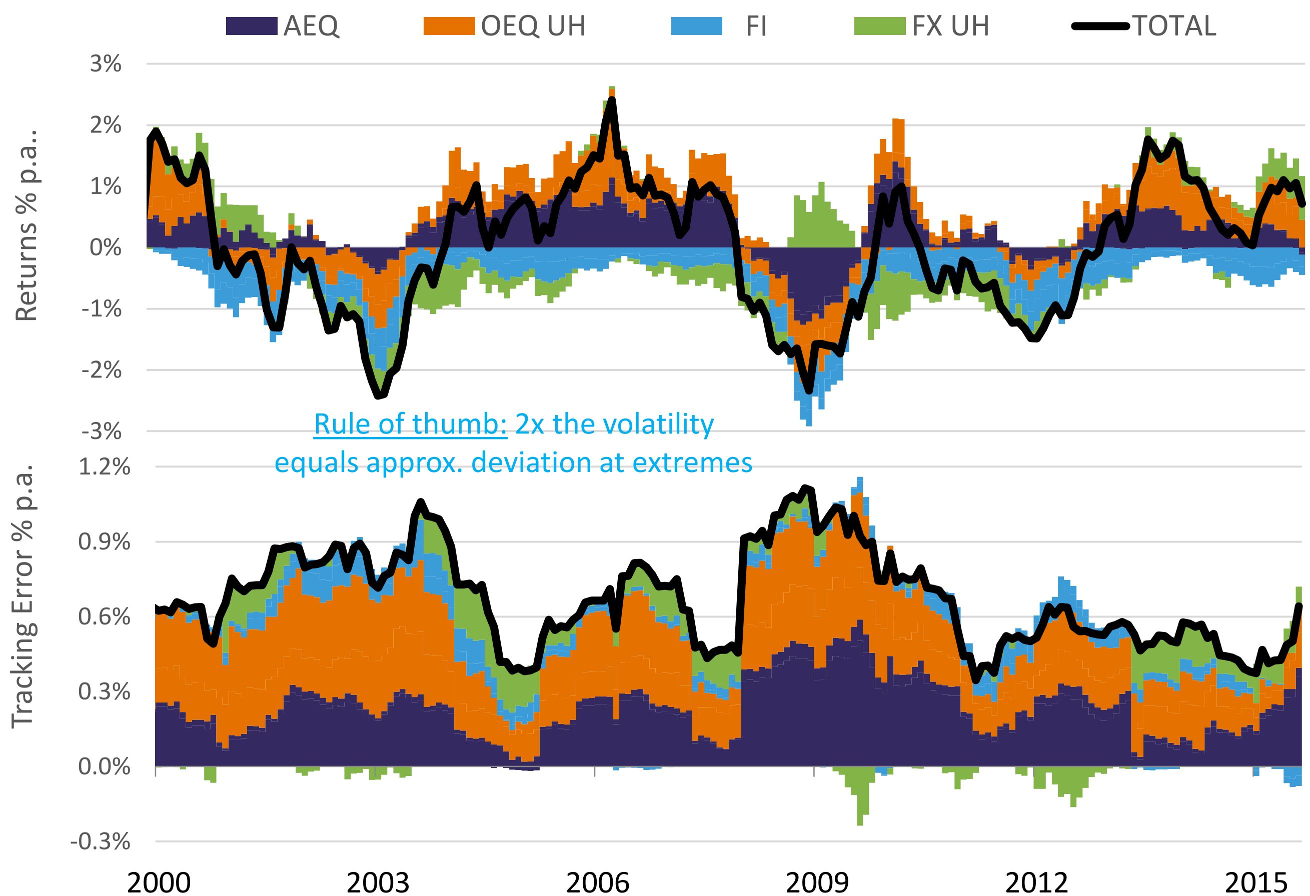
Source: Bloomberg, Datastream, Frontier

2. RISK BUDGETING WITH TRACKING ERROR

Tracking error can be a potentially useful way of thinking about DAA portfolios

Without the ability to perfectly predict markets, diversification between DAA tilts can partially reduce the impact of incorrect tilts

1 Year Rolling Risk & Return (Example DAA Tilt Portfolio)



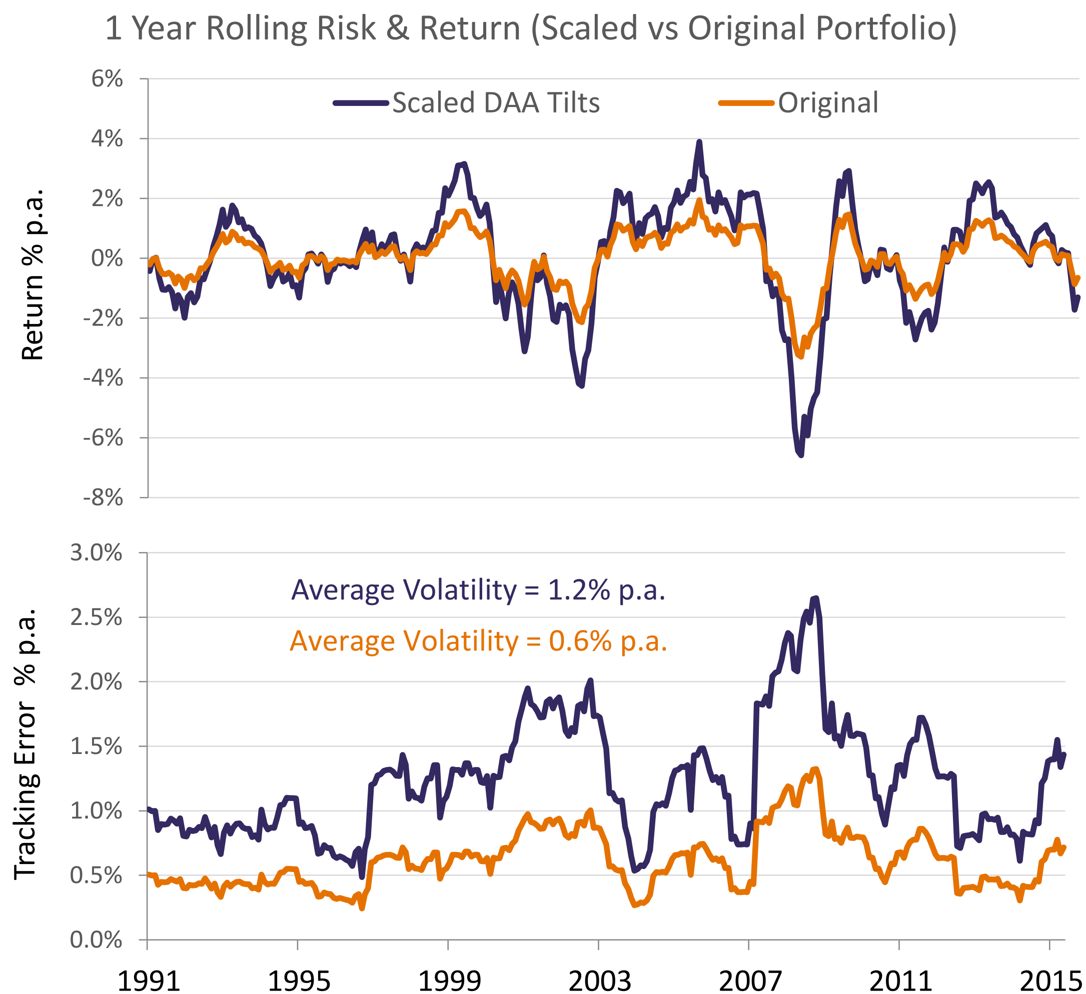
Source: Bloomberg, Datastream, Frontier

3. SCALING DAA TILTS

Problem: Faced with a variety of portfolios, each with different growth allocations, we want to apply a single set of market views consistently across each

Scaling DAA tilts by a constant multiplier will achieve the desire result

Scaling becomes more challenging when one portfolio lacks an asset class to tilt



Source: Bloomberg, Datastream, Frontier

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3. SCALING DAA TILTS

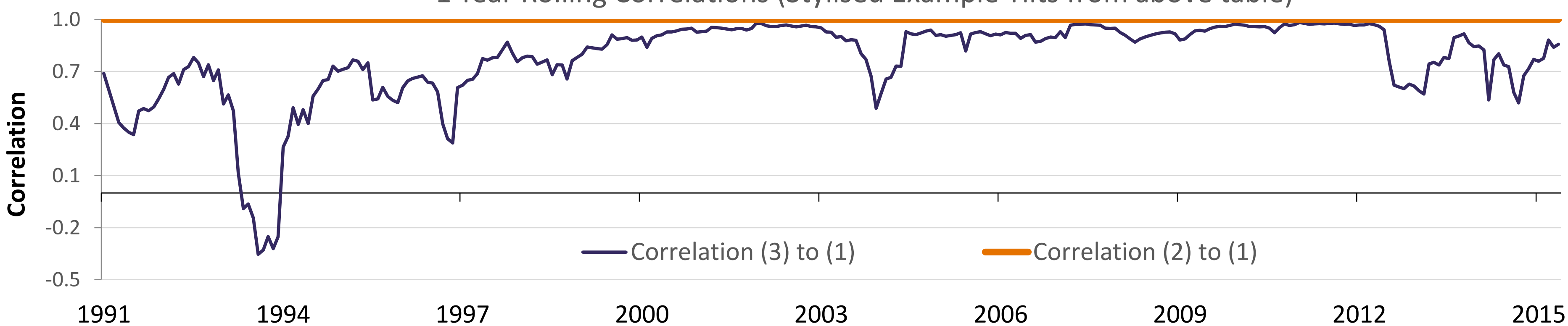
In such instances, market views become more difficult to express in a consistent way

This analysis shows that a portfolio of the same directional views can perform very differently depending on the allocations

Stylised Example Tilts

Sector	DAA Tilt (1)	DAA Tilt (2)	DAA Tilt (3)
Australian broad caps	+2.7%	+5.4%	+1.4%
Australian small caps	+0.3%	+0.6%	+0.2%
Overseas equities (UH)	+1.5%	+3.0%	+0.8%
Emerging market equities	+1.5%	+3.0%	+0.8%
Australian Fixed Interest	-3.0%	-6.0%	-6.0%
International Fixed Interest	-3.0%	-6.0%	-6.0%
Cash	-	-	+9.0%

1 Year Rolling Correlations (Stylised Example Tilts from above table)



Source: Bloomberg, Datastream, Frontier

SUMMARY OF IDEAS

1. Both an asset's volatility, its relationship with other asset classes, and the conviction in your market view interact when sizing DAA tilts

2. The tools and techniques used to analyse regular portfolios can readily be applied to DAA tilt portfolios

3. Both the sizes and sign of DAA tilts impact how consistently market views are applied from one portfolio to another, higher or lower growth portfolio

Important Information

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