

Fundamental Asset Allocation Model

Introduction

- Centaur's quantitative research has uncovered a new product which uses fundamental indicators to determine asset allocation.
- These indicators are long-term indicators and are concerned with catching the big swings in the market, rather than short term trading.
- The historical results have been extremely positive as the following results will show.
- Centaur will utilise these fundamental indicators to assist with asset allocation decision making.

The basics of the Model

Centaur looked at various asset classes and performed over 100 tests to determine fundamental indicators which consistently predicted asset class returns.

The Asset Classes

- Using correlation between asset classes we determined 4 asset classes and 6 investable asset categories:
 1. Equities: Fin&Industrials(Findi30); Resources(Resi20)
 2. Property: Property (Property Index); Bonds (All bond Index)
 3. Dollars: USD cash deposits (or Bonds)
 4. Cash: Repo rate
- Using correlation the following characteristics were found:
 - a) The Findi & Resi are 51% correlated –there is some diversification benefit in splitting these classes, in addition they behave differently to different fundamental indicators
 - b) Bonds and property are 57% correlated – but property is also 42% correlated to the Findi (indicating it does have some equity characteristics); whilst showing no correlation to resources.
 - c) The ZAR generally has low correlations to all asset classes except a -35% correlation to Fixed interest assets. It is a useful diversification instrument.

The indicators

1. Monetary Indicators
2. Commodity price indices
3. Currency
4. EMBI (emerging bond index) spread and VIX (volatility) index.

Historic Returns and Volatility of Asset Classes:

- The following table give historic returns of being 100% in each strategy over the last 14 ¼ years since 1 July 1995:

	Simple Return	Compound Ann. Return	St dev	Sharp Ratio
Property Index	343%	27%	17%	0.85
Resi	326%	26%	33%	0.40
Findi30	206%	16%	22%	0.14
Cash	168%	13%	0.5%	0.00
USD cash in R	131%	9%	16%	-0.25

Constrained Balanced Model

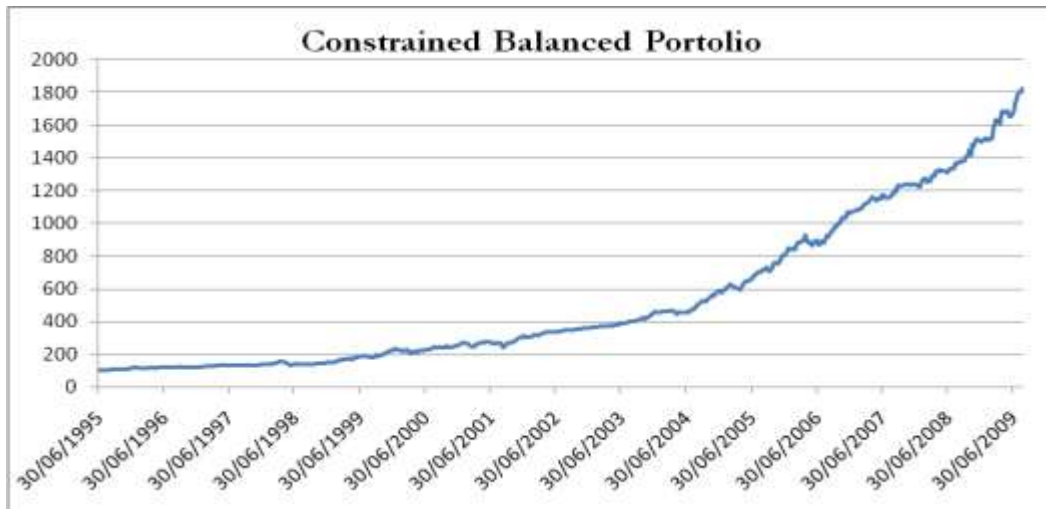
- The equity combination which maximizes return per unit of risk is: 25% Resi; 75% Findi.
- We put constraints on exposure limits to construct a balanced portfolio which can be reasonably duplicated in reality. The constraints are as follows:

Constraints	Max	Min
Property	14%	7%
Resources	16%	8%
Findi	48%	24%
USD cash	16%	0%
Resources+Findi	64%	32%
Bonds & Cash	None	None
Priorities:	1.Property ; 2. Resources; 3. ZAR; 4.Findi ZAR gets priority over Findi due to: diversification: and similar strategy returns.	

Constrained Strategy Results:

	Compound Ann. Return	St dev	Sharp Ratio
Portfolio	23%	9.2%	1.09
Findi30	16%	22%	0.14
Resi	26%	33%	0.40
Property Index	27%	17%	0.85
Total Weeks in	740		
Compound growth	1,801		

- This strategy performed exceptionally over the period producing consistently high returns with a low standard deviation. A buy and hold strategy (with allocations mid-way between my constraints) would have generated 17% per annum returns – thus this strategy would have outperformed by 6% per annum.



Constrained Balanced Portfolio Asset Allocation



- Higher returns can be generated with 100% equity and property allocations and no minimums. Returns on such a strategy have been 28% per annum with a 11% std.

Conclusion

- This is a very powerful (and objective) basis to allocate investment assets between different asset classes which should increase returns and lower risk over time.
- The risk profile (i.e. investment allocations) can be altered according to your individual risk tolerance.

Roger Williams