

Discussion of 'Long Run Asset Allocation' by Ravi Bansal and Dana Kiku

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- Estimate a co-integration restriction on the joint dynamics of dividends and consumption
- Use co-integration residuals to forecast returns of value and growth stocks
- Results
 - higher average R^2 in predictive regressions
 - allocation tilted toward value-stocks at longer maturities



In a nutshell

Assumptions

- 1 CRRRA preferences
- 2 log-normally distributed returns at any horizon

... a mean variance setup!



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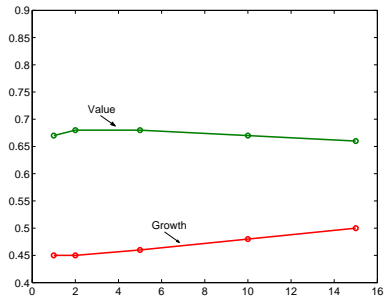
Agents care about

- 1 Sharpe ratios
- 2 correlations

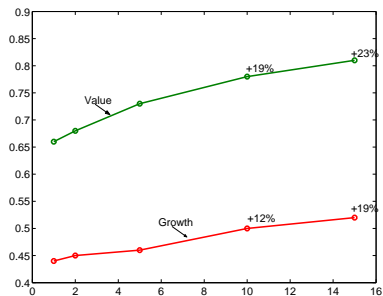


In a nutshell

Sharpe ratios



Plain Vanilla Forecasts

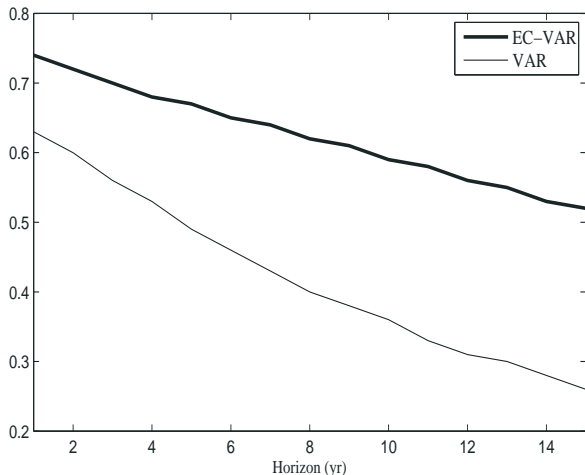


EC Forecasts



In a nutshell (cont'd)

Correlations



Some thoughts



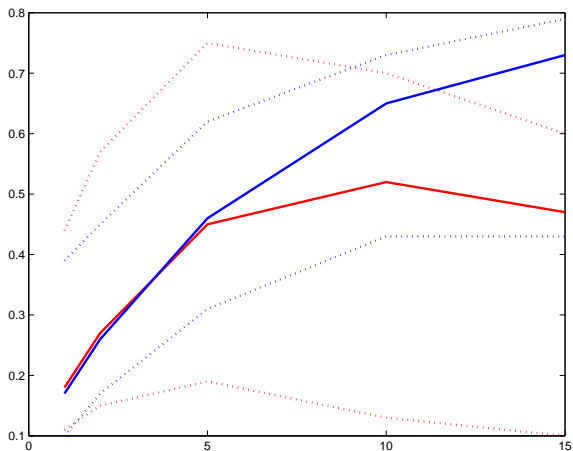
- Statistical significance?
- **Looser** Priors?
- Can we quantify the benefits?
- Time varying volatility?

Statistical Significance?



- A test a la Diebold and Mariano would help shed light about significance of results
- Let \hat{e}_t^{ec-var} and \hat{e}_t^{var} be regressions residuals
- Regress $(\hat{e}_t^{ec-var})^2 - (\hat{e}_t^{var})^2$ on a constant and use HAC residuals
- Check whether the intercept is statistically smaller than zero
- Encompassing tests

Statistical significance: a preview



R^2 for value stocks with confidence intervals

Co-integration vector



- How stable is the co-integrating relationship?

	54-03	54-06	29-06	29-53
Growth	-4.82 (0.86)	-5.28 (0.84)	-2.71 (0.57)	-1.03 (0.67)
Value	1.09 (2.30)	3.11 (2.29)	14.17 (2.42)	21.21 (4.30)

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- Which co-integrating vector should we use?
- How loose should the priors be?



Looser Priors...

...are likely to matter for the whole distribution of allocations

Horizon	Growth	Value	Bond	Growth	Value	Bond
	RA = 5, Tight Prior			RA = 5, Loose Prior		
1	-0.23	0.47	0.75	-0.14	0.46	0.68
2	-0.21	0.50	0.71	-0.11	0.47	0.64
5	-0.19	0.57	0.62	-0.05	0.49	0.56
10	-0.14	0.64	0.50	0.04	0.49	0.47
15	-0.10	0.69	0.41	0.11	0.50	0.39
	RA = 10, Tight Prior			RA = 10, Loose Prior		
1	-0.11	0.22	0.88	-0.08	0.23	0.86
2	-0.10	0.25	0.85	-0.07	0.24	0.83
5	-0.09	0.32	0.77	-0.05	0.25	0.79
10	-0.06	0.37	0.69	0.00	0.25	0.75
15	-0.01	0.37	0.64	0.03	0.24	0.73

Benefits of 'long-run asset allocation'?



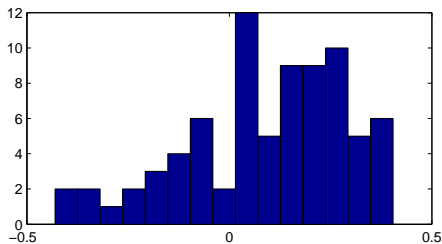
- A summary statistic to quantify the benefits of the procedure
- Some suggestions
 - Certainty equivalent
 - Sharpe Ratios
 - Jensen's α
- Is this strategy significantly profitable?

Time varying uncertainty

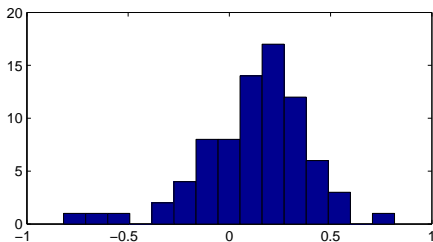


- Is likely to be very important
- In the presence of time varying variances and correlations, multi-period returns are likely not be normally distributed
- An agent with CRRA preferences would care about moments higher than second
 - Aversion to negative skewness
 - Aversion to kurtosis
- Term structure of risk literature
 - Guidolin and Timmermann (2004)
 - Diebold, Gunther and Tay (1998)
 - Christoffersen, Diebold and Schuerman (1998)
 - Colacito and Engle (2007)

Skewness and Kurtosis



Growth stock
Skewness: -0.62
Kurtosis: 2.82



Value stock
Skewness: -0.90
Kurtosis: 4.86

Concluding remarks



- Exploiting long run relationship between consumption and dividends for asset allocation purposes may be important
- Significance of results may be an issue
- Benefits must be assessed