

A trend factor in commodity futures markets: Any economic gains from using information over investment horizons ?

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Research Questions

- Can the trend factor generate significant returns and outperform the momentum factor?
- Can the trend factor be priced cross-sectionally?
- What explains the trend factor returns?

Methodology

Han, Zhu, and Zhou (2016):

- Lag lengths: 3-, 5-, 10-, 20-, 50-, 100-, 200, 400-, and 600 days
- Normalized moving average
- Expected trend return

$$E_t \left[R_{j,t+1} \right] = \sum_i E_t \left[\beta_{i,t+1} \right] \tilde{A}_{jt-1, L_i},$$

The trend factor before and after 2004

	Mean	Tstat
Before 2004	1.33	(0.32)
After 2004	17.19***	(3.2)
Difference	15.85***	(2.68)

Main Results- comparison of trend and momentum

Portfolio	Mean (%)	Std (%)	Skew	Kurtosis	Differ (%)
Trend long	13.34** (2.44)	22.55	0.59	0.41	10.5*** (2.36)
Momentum long	2.84 (0.56)	21.00	0.14	-0.31	
Trend short	-3.84 (-0.87)	18.30	-0.21	-0.16	-4.79 (-1.06)
Momentum short	0.95 (0.18)	21.82	0.04	0.86	
Trend	17.19*** (3.2)	-0.01	0.00	22.27	15.29** (1.99)
MOM	1.9 (0.32)	9.68	2.00	19.90	

Robustness Check

- Transaction cost ✓
- Alternative price windows ✓
- Alternative roll-over method ✓
- Use the 2nd nearby settlement prices ✓

Conclusion

- The trend factor outperforms the momentum factor significantly during the financialization era 2004-2020.
- The trend factor can potentially be a new factor in commodity futures markets.
- The trend factor can be explained by behavioral stories as evidenced by no excess return before 2004.