

Discussion: “Can Investor Heterogeneity be Useful in Explaining the Cross-Section of Average Stock Returns in Emerging Markets?”

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Theme

The paper

Investor heterogeneity helps explain the cross section of average stock returns in emerging markets

Theme

My discussion

Solid work, but with some complaints about interpretation and empirics

Outline

1 Summary

2 Interpretation

3 Empirics

Summary

FOF: Low-minus-high foreign ownership quintile

Factor	N	Min	Q1	Median	Q3	Max	Mean	Std
MKTrf	174	-0.283	-0.059	-0.006	0.055	0.495	0.003 (0.355)	0.096
SMB	174	-0.296	-0.044	0.000	0.043	0.259	-0.001 (-0.098)	0.076
HML	174	-0.164	-0.022	0.003	0.032	0.329	0.007 (1.744)	0.054
FOF	174	-0.243	-0.034	0.006	0.042	0.317	0.009 (1.682)	0.071

Correlations coefficient between factor-mimicking portfolios

	MKTrf	SMB	HML	FOF
MKTrf	1.0000			
SMB	-0.201 (0.008)	1.0000		
HML	0.054 (0.476)	0.201 (0.008)	1.0000	
FOF	-0.111 (0.146)	0.714 (0.000)	0.090 (0.237)	1.0000

Summary

Factor regressions for size deciles

One-Factor: MKTrf				Two-Factor: MKTrf, FOF				
Size-Sorted Portfolio	intercept	beta(MKTrf)	adj-R ²	Size-Sorted Portfolio	intercept	beta(MKTrf)	beta(FOF)	adj-R ²
smallest	0.035 (3.576)	0.803 (7.912)	0.263	smallest	0.022 (3.519)	0.919 (14.307)	1.417 (16.247)	0.708
pf 2	0.019 (2.474)	0.777 (9.942)	0.361	pf 2	0.009 (1.763)	0.863 (16.597)	1.052 (14.916)	0.721
pf 3	0.011 (1.688)	0.864 (12.855)	0.487	pf 3	0.003 (0.636)	0.935 (19.833)	0.866 (13.533)	0.751
pf 4	0.006 (0.941)	0.860 (13.203)	0.500	pf 4	-0.001 (-0.304)	0.925 (19.095)	0.790 (12.009)	0.727
pf 5	0.006 (1.068)	0.918 (16.166)	0.601	pf 5	0.000 (0.095)	0.965 (20.556)	0.582 (9.137)	0.730
pf 6	0.005 (0.842)	0.929 (15.091)	0.567	pf 6	-0.000 (-0.096)	0.978 (18.627)	0.591 (8.293)	0.690
pf 7	-0.001 (-0.190)	0.873 (18.777)	0.670	pf 7	-0.005 (-1.150)	0.906 (22.012)	0.401 (7.170)	0.745
pf 8	-0.001 (-0.157)	0.950 (21.353)	0.724	pf 8	-0.004 (-0.904)	0.976 (23.665)	0.315 (5.633)	0.766
pf 9	0.002 (0.591)	0.987 (29.302)	0.832	pf 9	0.001 (0.189)	0.999 (30.219)	0.142 (3.156)	0.840
largest	0.004 (1.261)	1.030 (28.278)	0.822	largest	0.006 (1.646)	1.018 (28.358)	-0.138 (-2.840)	0.829

Wald-Statistic=38.96 (p-val: 0.000) Wald-Statistic=36.87 (p-val: 0.000) GRS F=3.433 (

Summary

Factor regressions for book-to-market deciles

One-Factor: MKTrf				Two-Factor: MKTrf, FOF				
BM-Sorted Portfolio	intercept	beta(MKTrf)	adj-R ²	BM-Sorted Portfolio	intercept	beta(MKTrf)	beta(FOF)	adj-R ²
growth	-0.001 (-0.300)	0.920 (18.970)	0.675	growth	-0.006 (-1.512)	0.960 (23.691)	0.487 (8.858)	0.776
pf 2	0.002 (0.439)	0.802 (14.225)	0.538	pf 2	-0.002 (-0.480)	0.843 (17.100)	0.503 (7.522)	0.651
pf 3	0.006 (1.100)	0.953 (18.092)	0.654	pf 3	0.001 (0.145)	0.997 (22.793)	0.536 (9.029)	0.764
pf 4	0.005 (1.120)	0.919 (18.159)	0.655	pf 4	0.000 (0.041)	0.965 (24.392)	0.572 (10.648)	0.791
pf 5	0.009 (1.633)	0.901 (16.363)	0.607	pf 5	0.003 (0.731)	0.950 (21.505)	0.598 (9.976)	0.750
pf 6	0.006 (1.160)	0.893 (16.625)	0.614	pf 6	0.001 (0.283)	0.935 (20.381)	0.512 (8.227)	0.722
pf 7	0.010 (1.769)	0.891 (15.693)	0.586	pf 7	0.004 (0.908)	0.942 (20.544)	0.611 (9.824)	0.734
pf 8	0.013 (2.401)	0.877 (15.483)	0.580	pf 8	0.007 (1.660)	0.933 (21.897)	0.677 (11.710)	0.765
pf 9	0.013 (2.123)	0.880 (13.582)	0.515	pf 9	0.007 (1.369)	0.934 (17.452)	0.665 (9.159)	0.672
value	0.023 (3.088)	0.951 (12.325)	0.466	value	0.015 (2.544)	1.021 (16.678)	0.854 (10.281)	0.668

Wald-Statistic=24.86 (p-val: 0.006)

Wald-Statistic=21.48 (p-val: 0.018) GRS F=2.000 (p-

Interpretation

Why does investor heterogeneity relate to average stock returns?

Interpretation based on imperfect risk sharing à la Merton (1987):

- Heterogeneity causes a subgroup of investors to demand stocks in different proportions than in the tangency portfolio
- Other investors demand risk premium/discount to hold the corresponding proportions to clear the markets

Caveat: This story doesn't distinguish institutional from individual investors. Silent on the sign of the FOF portfolio

Interpretation

Partial financial markets integration

- Price assets with domestic market portfolio if segmented
- Price assets with world market portfolio if fully integrated
- Use both domestic and foreign risk factors if partially integrated
- FOF serves as a foreign factor

Intuitive.

Again, why do low-FOF stocks earn higher returns than high-FOF stocks?

Interpretation

Real options

Johnson (2004, *JF*):

- For a levered firm, high idiosyncratic volatility means high equity value, which in turn means low expected stock returns
- Analyst forecast dispersion proxies for idiosyncratic volatility

Hunch: Investor heterogeneity closely related to forecast dispersion, also reflect the idiosyncratic volatility effect?

Predicts the sign of the average FOF return

Empirics

“The Bucket List”

- 1 Korea as an example of emerging markets. What about China?
- 2 Japan as an example of developed markets. What about the U.S.?
- 3 Using the cross section to expand the sample helps significance
- 4 All results are equal-weighted. What about value-weighted results?
- 5 More details on the FOF portfolios, market cap, market-to-book, investment-to-capital, new stock issues
- 6 Size and book-to-market testing portfolios. What about momentum?
- 7 Poor performance of the Fama-French (1993) model in Korea. Is this pervasive in emerging markets?

Conclusion

My discussion

Nice paper.

Explore the real options interpretation à la Johnson (2004)

Beef up the empirics