

# Internet Appendix<sup>1</sup>

## Who Owns What?

### A Factor Model for Direct Stock Holding

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## A. Details of Orthogonalization Procedure

We apply an iterative procedure to orthogonalize each stock characteristic with respect to the set of stock characteristics with stronger clienteles. Specifically, in the  $k$ th iteration, we identify the  $k$  characteristics with the largest  $c(k-1)' \Omega_h^v c(k-1)$ , where  $c(k-1)$  represents characteristics resulting from the  $k-1$ st iteration and  $c(0) = c$ . Next, we use this set of  $k$  vectors  $c$  to predict the remaining characteristics using a multivariate kernel regression. This local linear regression uses a Euclidean distance measure over the  $k$  predictor characteristics, and applies a truncated Gaussian kernel with bandwidth for each stock such that 10% of other stocks fall within twice the parameter, applying zero weight beyond. We define the rank of the residuals (over the interval -0.5 to 0.5) from this regression as  $c(k)$ , setting  $c(k) = c(k-1)$  for the  $k$  strongest selected characteristics. After  $C-1$  iterations, with  $C$  being the total number of characteristics, we have our sequentially orthogonalized set of characteristics  $c^o = c(C-1)$ .<sup>2</sup>

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<sup>2</sup>A few of our categorical variables are collinear (e.g. region). From each such set, we drop the variable with the smallest  $c' \Omega_h^v c$  prior to running the orthogonalization.

**Table A.I**  
Characteristic Tilts: Higher Order Moments

This table presents the skewness and kurtosis of the characteristic tilts presented in Table I of the paper.

	Skewness	Kurtosis
Stock Age	0.28	2.01
Dividend Paying	-0.91	2.23
Share Price	-1.30	4.58
Stock Turnover	-0.24	3.07
Realized Returns	-0.07	2.64
Market Beta	-0.24	2.87
Realized Skewness	0.92	3.72
Realized Volatility	1.28	4.52
Book/Market	1.24	4.93
Market Capitalization	-2.59	10.07

**Table A.II**  
 Clientele Strength: Alternative Orthogonalization Procedure

Panel A presents the estimates of clientele strength using an alternative orthogonalization routine to the one used in Table II of the paper and described in section 2.2 of the paper. Columns 1 and 2 present the raw and sequentially orthogonalized estimates of clientele strength (as in Table II). Column 3 presents an alternative orthogonalization routine where the characteristic is orthogonalized to all other stock characteristics at once. Panel B presents the correlations of characteristic tilt variance under different characteristic orthogonalizations, with the upper triangular portion of the matrix for correlations of variance levels, and the lower portion for correlation of variance ranks.

**Panel A: Clientele Strength: Alternative Orthogonalization Estimates**  
**Characteristics Used:**

Characteristic	Raw	Sequentially Orthogonalized	Orthogonal Component Only
Age	0.0744	0.0744	0.0654
Dividend Payer	0.0468	0.0492	0.0252
Share Price	0.0445	0.0453	0.0398
Turnover	0.0349	0.0446	0.0451
Business Group - Any	0.0475	0.0417	0.0262
Returns	0.0401	0.0404	0.0349
Zone - West	0.0410	0.0395	0.0087
Beta	0.0329	0.0346	0.0362
Industry - Financial Services	0.0296	0.0327	0.0140
Skewness	0.0349	0.0301	0.0371
Volatility	0.0331	0.0297	0.0396
Industry - Manufacturing	0.0384	0.0260	0.0213
Book-Mkt	0.0324	0.0258	0.0360
Mkt Cap	0.0292	0.0253	0.0350
Industry - Oil & Gas	0.0321	0.0218	0.0206
Business Group - Reliance (ADAG)	0.0236	0.0209	0.0201
Zone - South	0.0237	0.0180	0.0072
Industry - Info. & Comm. Tech.	0.0231	0.0130	0.0130
Industry - Construction	0.0109	0.0125	0.0110
Business Group - Reliance (DAG)	0.0123	0.0125	0.0123
Public Sector Enterprise	0.0302	0.0124	0.0133
Industry - Food, Agro. & Textiles	0.0084	0.0104	0.0134
Zone - North	0.0272	0.0078	0.0074
Business Group - Tata	0.0072	0.0067	0.0064
Business Group - Suzlon	0.0030	0.0030	0.0030
Business Group - Mahindra	0.0026	0.0027	0.0028
Business Group - Jaypee	0.0025	0.0025	0.0025
Business Group - Jindal	0.0022	0.0024	0.0024
Business Group - Birla Aditya	0.0018	0.0020	0.0021
Business Group - Adani	0.0011	0.0019	0.0019
Business Group - Vedanta	0.0011	0.0012	0.0012
Zone - East	0.0106		
Industry - Other Retail	0.0049		

**Panel B: Correlations of Characteristic Tilt Variance Under Different**  
**Characteristic Orthogonalizations**

	Raw	Sequentially Orthogonalized	Orthogonal Component Only
Raw	1.00	0.94	0.82
Sequentially Orthogonalized	0.95	1.00	0.86
Orthogonal Component Only	0.84	4	1.00

**Table A.III**  
**Stock Characteristic Clientele Strength**  
**Account Size Weighted Estimates**

This table is constructed as Table II, but weights investors according to their account size (instead of equal weighting).

Characteristic	Raw			Orthogonalized		
	Variance	% Off-diagonal	Std. Dev	Variance	% Off-diagonal	Std. Dev
Stock Age	0.055	20.2%	0.234	0.055	20.16%	0.234
Business Group: Any	0.036	12.0%	0.328	0.037	10.50%	0.332
Zone: West	0.034	12.3%	0.317	0.031	10.33%	0.307
Realized Skew	0.036	14.0%	0.190	0.030	7.32%	0.173
Industry: Manufacturing	0.033	8.4%	0.314	0.029	5.15%	0.295
Realized Returns	0.026	20.6%	0.161	0.028	11.63%	0.166
Beta	0.021	15.5%	0.144	0.026	7.46%	0.160
Stock Turnover	0.019	11.4%	0.139	0.023	6.98%	0.153
Zone: South	0.030	12.5%	0.301	0.023	10.33%	0.260
Industry: Financial Services	0.019	14.4%	0.239	0.019	12.86%	0.239
Dividend Paying	0.016	12.6%	0.218	0.019	10.47%	0.237
Realized Volatility	0.019	22.7%	0.138	0.017	6.42%	0.131
Share Price	0.015	32.0%	0.122	0.017	17.52%	0.130
Market Capitalization	0.007	36.4%	0.083	0.017	10.65%	0.130
Book/Market	0.016	25.2%	0.126	0.014	10.86%	0.120
Industry: IT	0.030	11.5%	0.302	0.014	8.51%	0.204
Industry: Food, Agro. & Textiles	0.010	7.1%	0.172	0.007	1.38%	0.148
Business Group: Reliance (DAG)	0.006	4.5%	0.137	0.006	4.22%	0.138
Industry: Construction	0.012	4.1%	0.189	0.006	10.73%	0.137
Public Sector Enterprise	0.009	26.5%	0.160	0.006	12.53%	0.129
Business Group: Tata	0.005	12.5%	0.126	0.005	10.91%	0.123
Industry: Oil & Gas	0.005	10.8%	0.127	0.004	6.53%	0.115
Zone: North	0.016	8.7%	0.219	0.004	1.65%	0.114
Business Group: Jindal	0.003	9.9%	0.090	0.003	9.63%	0.090
Business Group: Suzlon	0.002	1.2%	0.079	0.002	1.12%	0.079
Business Group: Jaypee	0.002	4.7%	0.075	0.002	4.25%	0.073
Business Group: Mahindra	0.001	0.3%	0.061	0.001	0.95%	0.064
Business Group: Vedanta	0.001	5.3%	0.050	0.001	5.52%	0.050
Business Group: Reliance (ADAG)	0.001	15.5%	0.048	0.001	7.40%	0.045
Business Group: Birla Aditya	0.001	8.2%	0.039	0.001	1.80%	0.045
Business Group: Adani	0.000	10.2%	0.030	0.000	6.48%	0.032
Industry: Other	0.001	7.3%	0.061			
Zone: East	0.006	2.1%	0.129			

**Table A.IV**  
**Stock Characteristic Clientele Strength**  
**Robustness**

This table compares the variance of characteristic tilts (using orthogonalized characteristics) across investors—the fourth column of Table II—against alternatives that exclude the least diversified accounts (those with  $\text{HHI} > 0.2$ ) or that exclude the most popular 10, 50, 100 and 500 stocks (based on their average portfolio share).

Characteristic	Total Variance (Orthogonalized Characteristics)					
	All	HHI $\leq$ 0.2	Excl. Top 10 stocks	Excl. Top 50 stocks	Excl. Top 100 stocks	Excl. Top 500 stocks
Stock Age	0.075	0.025	0.060	0.064	0.069	0.074
Dividend Paying	0.049	0.012	0.044	0.050	0.052	0.057
Share Price	0.045	0.014	0.049	0.059	0.063	0.067
Stock Turnover	0.045	0.011	0.047	0.050	0.049	0.056
Business Group: Any	0.042	0.011	0.041	0.044	0.047	0.047
Realized Returns	0.040	0.012	0.044	0.046	0.051	0.058
Zone: West	0.040	0.008	0.039	0.042	0.043	0.048
Beta	0.035	0.010	0.042	0.045	0.049	0.056
Industry: Financial Services	0.033	0.008	0.032	0.030	0.022	0.018
Realized Skew	0.030	0.008	0.038	0.044	0.051	0.061
Realized Volatility	0.030	0.006	0.031	0.037	0.041	0.053
Industry: Manufacturing	0.026	0.007	0.029	0.033	0.038	0.048
Book/Market	0.026	0.006	0.037	0.039	0.044	0.055
Market Capitalization	0.025	0.008	0.029	0.033	0.037	0.053
Industry: Oil & Gas	0.022	0.003	0.011	0.009	0.006	0.003
Business Group: Reliance (ADAG)	0.021	0.001	0.007	0.001	0.001	0.000
Zone: South	0.018	0.004	0.024	0.026	0.026	0.028
Industry: IT	0.013	0.003	0.019	0.018	0.020	0.024
Industry: Construction	0.013	0.003	0.004	0.006	0.006	0.007
Public Sector Enterprise	0.012	0.003	0.000	0.001	0.001	0.000
Business Group: Reliance (DAG)	0.012	0.003	0.015	0.014	0.010	0.004
Industry: Food, Agro. & Textiles	0.010	0.002	0.007	0.009	0.010	0.014
Zone: North	0.008	0.002	0.008	0.009	0.010	0.014
Business Group: Tata	0.007	0.002	0.004	0.003	0.005	0.003
Business Group: Suzlon	0.003	0.000	0.000	0.000	0.000	0.000
Business Group: Mahindra	0.003	0.001	0.004	0.001	0.000	0.001
Business Group: Jaypee	0.002	0.000	0.004	0.002	0.001	0.000
Business Group: Jindal	0.002	0.000	0.004	0.002	0.001	0.000
Business Group: Birla Aditya	0.002	0.001	0.003	0.003	0.002	0.001
Business Group: Adani	0.002	0.000	0.002	0.002	0.000	0.000
Business Group: Vedanta	0.001	0.000	0.002	0.002	0.001	0.000

**Table A.V**  
**Stock Characteristic Clientele Strength**  
**Robustness: Off-Diagonal Share of Total Variance**

This table compares the off-diagonal share of the total variance of characteristic tilts (using orthogonalized characteristics) across investors against alternatives that exclude the least diversified accounts (those with  $HHI > 0.2$ ) or that exclude the most popular 10, 50, 100, and 500 stocks (based on their average portfolio share).

Characteristic	Total Variance (Orthogonalized Characteristics)					
	All	$HHI \leq 0.2$	Excl. Top 10 stocks	Excl. Top 50 stocks	Excl. Top 100 stocks	Excl. Top 500 stocks
Stock Age	0.118	0.434	0.160	0.217	0.262	0.347
Dividend Paying	0.119	0.439	0.139	0.195	0.231	0.315
Share Price	0.128	0.568	0.152	0.219	0.254	0.286
Stock Turnover	0.071	0.277	0.126	0.176	0.186	0.219
Business Group: Any	0.060	0.183	0.127	0.169	0.208	0.294
Realized Returns	0.074	0.336	0.137	0.161	0.196	0.238
Zone: West	0.053	0.105	0.122	0.155	0.195	0.261
Beta	0.061	0.264	0.108	0.149	0.177	0.234
Industry: Financial Services	0.071	0.287	0.100	0.150	0.154	0.188
Realized Skew	0.039	0.197	0.068	0.140	0.189	0.274
Realized Volatility	0.054	0.169	0.071	0.112	0.138	0.203
Industry: Manufacturing	0.018	0.056	0.069	0.142	0.184	0.254
Book/Market	0.038	0.182	0.116	0.118	0.147	0.218
Market Capitalization	0.069	0.317	0.096	0.112	0.132	0.226
Industry: Oil & Gas	0.091	0.167	0.186	0.279	0.272	0.306
Business Group: Reliance (ADAG)	0.116	0.190	0.545	0.391	0.460	0.638
Zone: South	0.031	0.114	0.056	0.133	0.186	0.265
Industry: IT	0.014	0.065	0.111	0.113	0.175	0.226
Industry: Construction	0.091	0.178	0.083	0.162	0.256	0.326
Public Sector Enterprise	0.068	0.064	0.169	0.377	0.452	0.423
Business Group: Reliance (DAG)	0.058	0.181	0.109	0.216	0.288	0.399
Industry: Food, Agro. & Textiles	0.047	-0.001	0.044	0.105	0.162	0.245
Zone: North	0.009	0.018	0.062	0.125	0.194	0.306
Business Group: Tata	0.029	0.094	0.137	0.230	0.308	0.529
Business Group: Suzlon	0.014	-0.009	0.152	0.237	0.185	0.210
Business Group: Mahindra	0.008	-0.017	0.085	0.223	0.150	0.461
Business Group: Jaypee	0.073	0.047	0.158	0.436	0.477	0.415
Business Group: Jindal	0.013	0.029	0.153	0.194	0.373	0.641
Business Group: Birla Aditya	0.011	0.005	0.220	0.476	0.664	0.444
Business Group: Adani	0.056	0.044	0.364	0.453	0.299	0.397
Business Group: Vedanta	0.026	0.062	0.092	0.233	0.246	0.399

**Table A.VI**

## Stock Characteristic Clientele Strength in the Data and under Alternative Models

This table decomposes the August 2011 cross-sectional variance of characteristic tilts (orthogonalized characteristics) from Table II into the contribution from stock holdings (diagonal elements of the co-holdings matrix) and coholdings, and compares these quantities with those from three model-based alternatives where investors hold the same number of stocks. Under the float-capitalization based model, portfolios are formed by randomly selecting stocks with probabilities proportional to the capitalization of their float, and investing an equal amount in each selected stock. Under the MVO models, investors choose the mean-variance optimal portfolio (derived via LASSO) when assuming that either the CAPM or 4 Factor Model (market, size, value, momentum) hold. The maximum benchmark represents a scenario where, across the actual distribution of number of stocks held, half of all investors with N stocks hold equal portfolio shares in the N stocks with the most extreme characteristic in the positive direction, with the other half holding equal shares in the N stocks with the most extreme characteristic in the negative direction.

		Stock Age	Dividend Paying	Share Price	Stock Turnover	Realized Returns	Beta	Realized Skew	Realized Volatility	Book/ Market	Market Cap
<i>Holdings Contribution</i>											
	Empirical	0.0656	0.0434	0.0395	0.0415	0.0375	0.0325	0.0289	0.0280	0.0248	0.0236
	Float-capitalization based	0.0497	0.0151	0.0119	0.0234	0.0254	0.0240	0.0246	0.0152	0.0144	0.0149
	MVO: CAPM	0.0030	0.0018	0.0065	0.0021	0.0019	0.0010	0.0010	0.0030	0.0040	0.0028
	MVO: 4 Factor Model	0.0009	0.0002	0.0027	0.0009	0.0058	0.0018	0.0049	0.0027	0.0042	0.0030
	Maximum	0.0791	0.0791	0.0791	0.0791	0.0791	0.0791	0.0791	0.0791	0.0791	0.0791
<i>Coholdings Contribution</i>											
	Empirical	0.0088	0.0058	0.0058	0.0031	0.0030	0.0021	0.0012	0.0016	0.0010	0.0017
	Float-capitalization based	0.0008	0.0001	0.0001	0.0002	0.0004	0.0002	0.0004	0.0002	0.0002	0.0002
	MVO: CAPM	0.0074	0.0041	0.0251	0.0062	0.0093	0.0001	0.0047	0.0162	0.0165	0.0055
	MVO: 4 Factor Model	0.0027	0.0010	0.0114	0.0010	0.0202	0.0013	0.0054	0.0101	0.0129	0.0040
	Maximum	0.1697	0.1697	0.1697	0.1697	0.1697	0.1697	0.1697	0.1697	0.1697	0.1697
<i>Total</i>											
	Empirical	0.0744	0.0492	0.0453	0.0446	0.0405	0.0346	0.0301	0.0296	0.0258	0.0253
	Float-capitalization based	0.0505	0.0152	0.0120	0.0236	0.0258	0.0242	0.0250	0.0154	0.0146	0.0151
	MVO: CAPM	0.0104	0.0059	0.0316	0.0083	0.0112	0.0011	0.0057	0.0192	0.0205	0.0083
	MVO: 4 Factor Model	0.0036	0.0012	0.0141	0.0019	0.0260	0.0031	0.0103	0.0128	0.0171	0.0070
	Maximum	0.2488	0.2488	0.2488	0.2488	0.2488	0.2488	0.2488	0.2488	0.2488	0.2488



**Table A.VII**  
Who Owns What: Characteristic Tilts  
Single Factor Model Estimates: Business Groups

This table extends the analysis of Table III to the set of investors' business group tilts.

	Reliance ADAG	Tata	Reliance DAG	Birla	Jaypee	Jindal	Mahindra	Suzlon	Vedanta	Adani	FSE
Size	-4.39 (0.004)	0.56 (0.003)	1.39 (0.004)	-0.12 (0.001)	0.18 (0.002)	0.02 (0.002)	0.14 (0.002)	-0.34 (0.002)	0.29 (0.001)	0.95 (0.001)	0.57 (0.004)
No.Stocks	9.22 (0.005)	0.48 (0.003)	1.55 (0.004)	0.07 (0.001)	0.14 (0.002)	0.00 (0.002)	0.07 (0.002)	0.38 (0.002)	0.72 (0.001)	4.74 (0.001)	0.26 (0.004)
Age	-1.03 (0.005)	0.45 (0.003)	0.75 (0.004)	-0.03 (0.001)	-0.18 (0.002)	-0.03 (0.002)	-0.12 (0.002)	-0.46 (0.002)	0.01 (0.001)	0.19 (0.001)	0.15 (0.004)
Turnover	0.50 (0.005)	0.31 (0.003)	0.45 (0.004)	0.00 (0.001)	0.13 (0.002)	0.00 (0.002)	0.05 (0.002)	0.73 (0.002)	0.00 (0.001)	0.19 (0.001)	0.02 (0.004)
Single Stock Dummy	0.18 (0.004)	0.01 (0.003)	0.64 (0.004)	0.01 (0.001)	0.01 (0.002)	0.00 (0.002)	0.01 (0.002)	0.00 (0.002)	0.07 (0.001)	0.06 (0.001)	0.01 (0.004)
No. Stocks Traded	4.12 (0.004)	-0.06 (0.003)	-1.32 (0.004)	0.09 (0.001)	-0.29 (0.002)	-0.21 (0.002)	-0.18 (0.002)	0.08 (0.002)	-0.26 (0.001)	-1.02 (0.001)	-0.36 (0.004)
Eastern	8.10 (0.005)	0.01 (0.003)	1.41 (0.004)	0.04 (0.001)	0.34 (0.002)	0.19 (0.002)	0.12 (0.002)	0.02 (0.002)	0.57 (0.001)	5.51 (0.001)	0.11 (0.004)
Southern	-1.60 (0.005)	0.14 (0.003)	-0.41 (0.004)	0.00 (0.001)	0.06 (0.002)	0.02 (0.002)	0.04 (0.002)	-0.10 (0.002)	0.18 (0.001)	0.32 (0.001)	0.09 (0.004)
Western	1.23 (0.005)	0.03 (0.003)	0.14 (0.004)	0.00 (0.001)	0.02 (0.002)	0.00 (0.002)	0.01 (0.002)	0.03 (0.002)	0.28 (0.001)	0.53 (0.001)	0.01 (0.004)
Northern	-0.58 (0.005)	0.20 (0.003)	-0.17 (0.004)	0.00 (0.001)	0.09 (0.002)	-0.01 (0.002)	0.07 (0.002)	0.07 (0.002)	0.04 (0.001)	0.06 (0.001)	0.43 (0.004)
	0.16 (0.005)	0.06 (0.003)	0.02 (0.004)	0.00 (0.001)	0.04 (0.002)	0.00 (0.002)	0.02 (0.002)	0.02 (0.002)	0.01 (0.001)	0.02 (0.001)	0.15 (0.004)
	-0.94 (0.005)	-0.02 (0.003)	-0.53 (0.004)	0.07 (0.001)	-0.05 (0.002)	-0.01 (0.002)	0.12 (0.002)	0.05 (0.002)	0.05 (0.001)	0.06 (0.001)	-0.16 (0.004)
	0.43 (0.005)	0.00 (0.003)	0.23 (0.004)	0.02 (0.001)	0.01 (0.002)	0.00 (0.002)	0.05 (0.002)	0.01 (0.002)	0.02 (0.001)	0.02 (0.001)	0.02 (0.004)
	0.45 (0.005)	0.17 (0.003)	0.42 (0.004)	-0.08 (0.001)	-0.30 (0.002)	0.05 (0.002)	-0.13 (0.002)	-0.11 (0.002)	0.02 (0.001)	0.12 (0.001)	-0.20 (0.004)
	0.10 (0.005)	0.04 (0.003)	0.14 (0.004)	0.03 (0.001)	0.37 (0.002)	0.01 (0.002)	0.06 (0.002)	0.04 (0.002)	0.00 (0.001)	0.07 (0.001)	0.03 (0.004)
	0.84 (0.005)	-0.33 (0.003)	0.16 (0.004)	0.04 (0.001)	0.34 (0.002)	-0.04 (0.002)	-0.02 (0.002)	0.03 (0.002)	-0.11 (0.001)	-0.24 (0.001)	0.07 (0.004)
	0.33 (0.005)	0.17 (0.003)	0.02 (0.004)	0.01 (0.001)	0.46 (0.002)	0.01 (0.002)	0.00 (0.002)	0.00 (0.002)	0.09 (0.001)	0.31 (0.001)	0.00 (0.004)

**Table A.VIII**  
**Who Owns What: Characteristic Tilts**  
**Single Factor Model Estimates: Industry Characteristics**

This table extends the analysis of Table III to the set of investors' industry tilts.

	Construction	Financial	Food,	Agri.	Information	Manufacturing	Oil	and
	Services	Services	& Textiles	Textiles	Technology	Technology	Gas	Gas
Size	-0.43 (0.004)	<b>2.98</b> (0.006)	-0.72 (0.003)	-0.69 (0.004)	0.35 (0.005)	-3.43 (0.005)		
No.Stocks	0.15	2.72	0.50	0.37	0.05	5.38		
	-0.57 (0.004)	0.18 (0.006)	-0.65 (0.003)	-0.28 (0.004)	0.02 (0.005)	-1.58 (0.005)		
Age	0.26	0.01	0.40	0.06	0.00	1.15		
	0.07 (0.004)	-0.06 (0.006)	0.03 (0.003)	0.26 (0.004)	0.00 (0.005)	-1.00 (0.005)		
Turnover	0.00	0.00	0.00	0.05	0.00	0.46		
	-1.07 (0.004)	-0.16 (0.006)	-0.61 (0.003)	-0.30 (0.004)	-0.28 (0.005)	-0.63 (0.005)		
Single Stock Dummy	0.92	0.01	0.35	0.07	0.03	0.18		
	0.49 (0.004)	-0.51 (0.006)	0.84 (0.003)	0.56 (0.004)	-0.37 (0.005)	<b>3.35</b> (0.005)		
No. Stocks Traded	0.19	0.08	0.68	0.24	0.05	5.13		
	-0.95 (0.004)	0.32 (0.006)	-0.77 (0.003)	-0.41 (0.004)	0.05 (0.005)	-1.51 (0.005)		
Eastern	0.73	0.03	0.57	0.13	0.00	1.04		
	-0.34 (0.004)	0.32 (0.006)	-0.27 (0.003)	-0.06 (0.004)	0.08 (0.005)	-0.51 (0.005)		
Southern	0.09	0.03	0.07	0.00	0.00	0.12		
	-0.83 (0.004)	<b>1.62</b> (0.006)	-0.39 (0.003)	0.21 (0.004)	-0.17 (0.005)	-1.45 (0.005)		
Western	0.55	0.81	0.15	0.04	0.01	0.96		
	0.52 (0.004)	-1.48 (0.006)	0.26 (0.003)	-0.09 (0.004)	0.08 (0.005)	<b>0.88</b> (0.005)		
Northern	0.22	0.67	0.06	0.01	0.00	0.36		
	0.46 (0.004)	-0.10 (0.006)	0.29 (0.003)	-0.06 (0.004)	0.01 (0.005)	<b>0.77</b> (0.005)		
	0.17	0.00	0.08	0.00	0.00	0.27		

**Table A.IX**  
Who Owns What: Characteristic Tilts  
Single Factor Model Estimates: Geography

This table extends the analysis of Table III to the set of investors' tilts towards stocks in different geographical zones.

	South	West	North
Size	-0.23 (0.004)	-1.64 (0.006)	0.11 (0.003)
	0.03	0.68	0.02
No.Stocks	-0.11 (0.004)	-0.52 (0.006)	0.16 (0.003)
	0.01	0.07	0.03
Age	-0.11 (0.004)	0.35 (0.006)	0.36 (0.003)
	0.01	0.03	0.17
Turnover	0.02 (0.004)	-0.87 (0.006)	0.03 (0.003)
	0.00	0.19	0.00
Single Stock Dummy	0.64 (0.004)	1.62 (0.006)	-0.48 (0.003)
	0.23	0.66	0.29
No. Stocks Traded	0.08 (0.004)	-0.91 (0.006)	0.04 (0.003)
	0.00	0.21	0.00
Eastern	-0.61 (0.004)	-0.82 (0.006)	-0.54 (0.003)
	0.21	0.17	0.38
Southern	2.58 (0.004)	-2.57 (0.006)	0.03 (0.003)
	3.71	1.66	0.00
Western	-0.45 (0.004)	2.98 (0.006)	-0.06 (0.003)
	0.11	2.24	0.00
Northern	-1.55 (0.004)	-0.35 (0.006)	0.45 (0.003)
	1.33	0.03	0.26

**Table A.X**  
**Who Owns What: Characteristic Tilts**  
**Single Factor Model Estimates: Account Size Weighted Estimates**

This table presents the analysis in Table III using investor size weighted regressions instead of equally weighting all investors.

	Stock Age	Dividend Paying	Share Price	Turnover	Bus. Any	Gp. Any	Realized Returns	Market Beta	Realized Skew	Realized Volatility	Book /Market	Market Cap.
Size	1.32 (0.005)	2.36 (0.003)	2.60 (0.003)	-0.38 (0.003)	-1.02 (0.004)	0.54 (0.004)	-1.60 (0.004)	-1.45 (0.004)	-0.27 (0.003)	-2.24 (0.003)	-1.86 (0.003)	
No.Stocks	0.67 (0.002)	7.16 (0.001)	8.77 (0.001)	0.13 (0.002)	0.61 (0.002)	0.22 (0.002)	2.10 (0.002)	1.48 (0.002)	0.08 (0.001)	7.44 (0.001)	4.54 (0.001)	
Age	4.39 (0.007)	2.00 (0.004)	1.61 (0.004)	-1.53 (0.004)	-0.48 (0.006)	1.22 (0.005)	-1.51 (0.005)	0.39 (0.005)	-0.71 (0.004)	-1.03 (0.003)	-1.27 (0.004)	
Turnover	4.30 (0.021)	2.96 (0.011)	1.94 (0.011)	1.21 (0.013)	0.08 (0.017)	0.65 (0.015)	1.08 (0.014)	0.06 (0.015)	0.34 (0.012)	0.92 (0.011)	1.22 (0.011)	
Single Stock Dummy	1.98 (0.011)	3.03 (0.006)	1.81 (0.006)	1.70 (0.007)	0.03 (0.009)	0.79 (0.008)	0.88 (0.007)	0.00 (0.008)	0.41 (0.006)	1.15 (0.006)	0.28 (0.006)	
No. Stocks Traded	-2.05 (0.011)	0.36 (0.006)	0.72 (0.006)	0.81 (0.007)	-2.23 (0.009)	-0.20 (0.008)	-0.99 (0.007)	-1.13 (0.008)	0.86 (0.006)	-1.27 (0.006)	-0.32 (0.006)	
Eastern	0.37 (0.003)	0.04 (0.002)	0.15 (0.002)	0.14 (0.002)	0.67 (0.002)	0.01 (0.002)	0.18 (0.002)	0.21 (0.002)	0.20 (0.002)	0.54 (0.001)	0.03 (0.002)	
Southern	-0.18 (0.008)	-0.08 (0.005)	0.00 (0.005)	0.40 (0.005)	-0.27 (0.007)	-0.20 (0.006)	-0.08 (0.006)	-0.12 (0.006)	0.05 (0.005)	0.13 (0.004)	-0.22 (0.004)	
Western	0.04 (0.009)	0.03 (0.005)	0.00 (0.005)	0.49 (0.005)	0.15 (0.007)	0.10 (0.006)	0.02 (0.006)	0.04 (0.006)	0.01 (0.005)	0.09 (0.004)	0.22 (0.004)	
Northern	-0.78 (0.008)	-0.36 (0.005)	-0.83 (0.005)	0.12 (0.005)	0.57 (0.007)	0.43 (0.006)	0.33 (0.006)	0.17 (0.006)	0.57 (0.005)	0.45 (0.004)	0.93 (0.004)	
	0.09 (0.008)	0.06 (0.004)	0.34 (0.004)	0.00 (0.005)	0.08 (0.006)	0.05 (0.005)	0.03 (0.005)	0.01 (0.005)	0.15 (0.004)	0.12 (0.004)	0.45 (0.004)	
	-0.47 (0.008)	1.96 (0.004)	1.90 (0.004)	1.24 (0.005)	-3.96 (0.006)	-2.46 (0.005)	-2.38 (0.005)	-3.66 (0.005)	-0.81 (0.004)	-1.89 (0.004)	-1.80 (0.004)	
	0.04 (0.007)	2.32 (0.004)	2.20 (0.004)	0.66 (0.005)	4.33 (0.006)	2.14 (0.005)	2.19 (0.005)	4.42 (0.005)	0.36 (0.004)	2.51 (0.004)	1.99 (0.004)	
	2.22 (0.007)	-0.69 (0.004)	-0.43 (0.004)	-1.00 (0.005)	2.73 (0.006)	2.26 (0.005)	1.05 (0.005)	2.70 (0.006)	0.45 (0.004)	1.08 (0.004)	0.11 (0.004)	
	0.90 (0.009)	0.29 (0.005)	0.11 (0.005)	0.42 (0.006)	2.08 (0.007)	1.83 (0.006)	0.43 (0.006)	2.42 (0.007)	0.11 (0.005)	0.82 (0.005)	0.01 (0.005)	
	-2.44 (0.009)	-1.26 (0.005)	-1.20 (0.005)	-0.15 (0.006)	0.38 (0.007)	-0.80 (0.006)	1.26 (0.006)	0.39 (0.007)	-0.14 (0.005)	0.42 (0.005)	1.50 (0.005)	
	0.76 (0.009)	0.67 (0.005)	0.61 (0.005)	0.01 (0.006)	0.03 (0.007)	0.16 (0.006)	0.43 (0.006)	0.03 (0.007)	0.01 (0.005)	0.09 (0.005)	0.97 (0.005)	

**Table A.XI**  
**Who Owns What: Characteristic Clusters**  
**Single Factor Model Estimates: Account Size Weighted Estimates**

This table reconstructs the analysis in Table 5 – applying size-weighted univariate regressions of size weighted PC (of investors’ characteristic tilts) on account attributes. Loadings of characteristics on size-weighted PC are shown in Figure A.6.

	PC1	PC2	PC3
Size	0.0221 (0.000)	0.0304 (0.000)	-0.0330 (0.000)
	0.015	0.038	0.062
No.Stocks	0.0045 (0.000)	-0.0032 (0.000)	0.0001 (0.000)
	0.005	0.003	0.000
Age	0.0474 (0.000)	0.0028 (0.000)	-0.0268 (0.000)
	0.052	0.000	0.030
Turnover	-0.1492 (0.000)	-0.0158 (0.000)	0.1300 (0.000)
	0.026	0.000	0.036
Single Stock Dummy	-0.0196 (0.000)	0.0219 (0.000)	-0.0110 (0.000)
	0.003	0.004	0.001
No. Stocks Traded	-0.0016 (0.000)	0.0024 (0.000)	0.0020 (0.000)
	0.000	0.001	0.001
Eastern	-0.0091 (0.000)	-0.0082 (0.000)	0.0035 (0.000)
	0.001	0.001	0.000
Southern	0.0016 (0.000)	0.0607 (0.000)	-0.0111 (0.000)
	0.000	0.081	0.004
Western	0.0197 (0.000)	-0.0388 (0.000)	-0.0020 (0.000)
	0.007	0.034	0.000
Northern	-0.0281 (0.000)	-0.0109 (0.000)	0.0161 (0.000)
	0.009	0.002	0.006

**Table A.XII**  
**Who Owns What: Characteristic Tilts**  
**Multi Factor Model Estimates**

The table presents a multivariate version of the analysis in Table III. Each characteristic tilt is regressed on the full set of account attributes instead of each one separately.

	Stock Age	Dividend Paying	Share Price	Turnover	Bus. Gp. Any	Realized Returns	Market Beta	Realized Skew	Realized Volatility	Book /Market	Market Cap.
Size	5.67 (0.011)	10.49 (0.009)	8.35 (0.009)	0.77 (0.009)	-5.34 (0.009)	1.94 (0.009)	-1.81 (0.008)	-1.54 (0.007)	0.96 (0.007)	-2.45 (0.007)	-2.48 (0.007)
No. Stocks	0.03 (0.012)	-1.28 (0.009)	-1.28 (0.009)	-0.17 (0.009)	0.98 (0.009)	0.53 (0.009)	0.15 (0.008)	0.65 (0.008)	-0.47 (0.008)	0.00 (0.007)	0.32 (0.007)
Age	2.21 (0.009)	-1.32 (0.007)	-1.01 (0.007)	-3.06 (0.007)	0.41 (0.007)	1.70 (0.007)	-1.40 (0.006)	1.24 (0.006)	1.14 (0.006)	1.40 (0.005)	-1.20 (0.005)
Turnover	0.63 (0.009)	0.37 (0.007)	-2.45 (0.007)	2.09 (0.007)	-1.12 (0.007)	-0.11 (0.007)	0.29 (0.006)	0.98 (0.006)	1.73 (0.006)	0.56 (0.006)	-0.37 (0.005)
Single Stock Dummy	-1.92 (0.010)	-0.96 (0.008)	3.63 (0.008)	-1.24 (0.008)	-0.50 (0.008)	-0.91 (0.008)	-0.55 (0.007)	-0.60 (0.007)	-1.62 (0.006)	-0.40 (0.006)	-0.87 (0.006)
No. Stocks Traded	-0.69 (0.011)	-0.74 (0.008)	-0.69 (0.009)	0.86 (0.009)	-0.06 (0.008)	-1.12 (0.008)	0.77 (0.008)	0.21 (0.007)	0.37 (0.007)	0.45 (0.007)	-0.36 (0.007)
Southern	-0.32 (0.013)	0.58 (0.010)	-0.17 (0.010)	0.31 (0.010)	-0.42 (0.010)	0.44 (0.010)	0.20 (0.009)	0.17 (0.008)	0.08 (0.008)	-0.18 (0.008)	-0.82 (0.008)
Western	-0.51 (0.014)	-0.99 (0.011)	0.43 (0.011)	-1.23 (0.011)	0.62 (0.011)	-0.36 (0.010)	-1.18 (0.010)	0.41 (0.009)	-0.29 (0.009)	-0.25 (0.008)	-0.42 (0.008)
Northern	-1.55 (0.013)	-0.99 (0.010)	0.31 (0.010)	-1.05 (0.010)	0.54 (0.010)	-0.68 (0.010)	-0.29 (0.009)	-0.13 (0.008)	-0.67 (0.008)	-0.09 (0.008)	0.13 (0.008)
<b>Adj. Rsq</b>	8.02	20.35	11.94	4.15	5.06	3.38	2.21	1.31	3.14	2.15	3.09

**Table A.XIII**  
Who Owns What: Characteristic Clusters  
Multi Factor Model Estimates

This table presents a multivariate version of the regressions in Table IV. Here, each PC is regressed on the full set of account attributes, instead of each one individually.

	PC1	PC2	PC3
Size	0.0803 (0.000)	-0.0743 (0.000)	0.0879 (0.000)
No. Stocks	-0.0049 (0.000)	0.0130 (0.000)	-0.0069 (0.000)
Age	0.0084 (0.000)	0.0015 (0.000)	0.0088 (0.000)
Turnover	0.0216 (0.000)	0.0268 (0.000)	-0.0088 (0.000)
Single Stock Dummy	-0.0324 (0.000)	-0.0316 (0.000)	0.0036 (0.000)
No. Stocks Traded	-0.0034 (0.000)	0.0078 (0.000)	-0.0155 (0.000)
Eastern	0.0168 (0.000)	0.0042 (0.000)	0.0020 (0.000)
Southern	0.0233 (0.000)	0.0111 (0.000)	0.0090 (0.000)
Western	0.0125 (0.000)	-0.0017 (0.000)	0.0059 (0.000)
Adj. R squared	0.110	0.082	0.137

**Table A.XIV**  
Who Owns What: Characteristic Clusters  
Single Factor Model Estimates: All Characteristics

This table presents a version of Table IV where the principal components are extracted from the set of all investor characteristic tilts (e.g. including business group, industry and geographical zone).

	PC1	PC2	PC3
Size	0.1070 (0.000) 9.91%	-0.0271 (0.000) 0.88%	-0.1033 (0.000) 17.73%
No.Stocks	0.0432 (0.000) 1.62%	-0.0131 (0.000) 0.21%	-0.0250 (0.000) 1.04%
Age	0.0274 (0.000) 0.65%	-0.0221 (0.000) 0.59%	-0.0302 (0.000) 1.51%
Turnover	0.0107 (0.000) 0.10%	0.0164 (0.000) 0.32%	0.0480 (0.000) 3.83%
Single Stock Dummy	-0.0813 (0.000) 5.73%	0.0204 (0.000) 0.50%	0.0303 (0.000) 1.53%
No. Stocks Traded	0.0387 (0.000) 1.30%	-0.0022 (0.000) 0.01%	-0.0024 (0.000) 0.01%
Eastern	0.0129 (0.000) 0.14%	0.0019 (0.000) 0.00%	0.0034 (0.000) 0.02%
Southern	0.0322 (0.000) 0.90%	0.0159 (0.000) 0.30%	0.0026 (0.000) 0.01%
Western	-0.0163 (0.000) 0.23%	-0.0217 (0.000) 0.56%	-0.0080 (0.000) 0.11%
Northern	-0.0221 (0.000) 0.42%	0.0083 (0.000) 0.08%	0.0043 (0.000) 0.03%



**Table A.XV**  
Time-series of Characteristic Clientele Strength

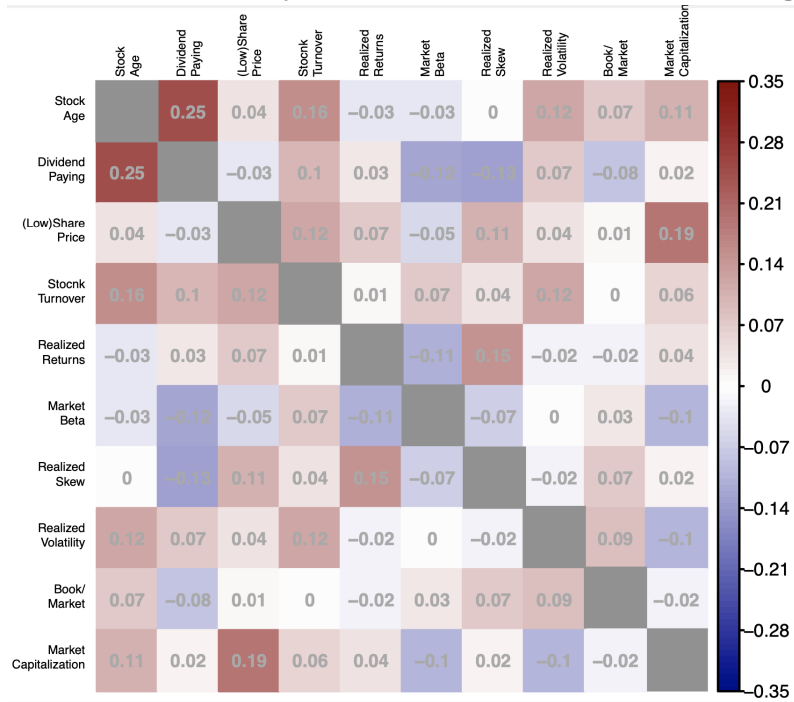
This table presents the variance of investors' characteristic tilts (i.e. characteristic clientele strength) separately for each August cross-section 2002 through 2011. All characteristics are orthogonalized in the same order as is applied in 2011.

Characteristic	2002	2003	2004	2005	2006	2007	2008	2009	2010	Average	2011
Age	0.063	0.082	0.079	0.084	0.078	0.074	0.078	0.075	0.079	0.077	0.074
Dividend Payer	0.045	0.042	0.047	0.042	0.053	0.044	0.051	0.052	0.047	0.047	0.049
Share Price	0.031	0.026	0.034	0.044	0.037	0.037	0.031	0.034	0.042	0.035	0.045
Turnover	0.030	0.036	0.040	0.046	0.053	0.050	0.065	0.041	0.064	0.047	0.044
Business Group - Any	0.044	0.041	0.041	0.039	0.041	0.040	0.039	0.043	0.040	0.041	0.042
Returns	0.041	0.050	0.040	0.029	0.032	0.045	0.038	0.033	0.038	0.038	0.040
Zone - West	0.037	0.036	0.034	0.034	0.034	0.035	0.033	0.035	0.038	0.035	0.040
Beta	0.030	0.025	0.026	0.032	0.045	0.029	0.048	0.039	0.035	0.034	0.035
Industry - Financial Services	0.024	0.024	0.030	0.030	0.034	0.030	0.025	0.026	0.024	0.028	0.033
Skewness	0.052	0.041	0.046	0.051	0.056	0.044	0.032	0.044	0.043	0.046	0.030
Volatility	0.024	0.022	0.025	0.036	0.032	0.036	0.039	0.045	0.029	0.032	0.030
Industry - Manufacturing	0.023	0.024	0.024	0.022	0.032	0.033	0.025	0.028	0.026	0.026	0.026
Book/Market	0.038	0.032	0.035	0.043	0.033	0.035	0.021	0.027	0.026	0.032	0.026
Market Cap	0.021	0.022	0.029	0.031	0.030	0.026	0.022	0.020	0.032	0.026	0.025
Industry - Oil & Gas	0.001	0.001	0.001	0.010	0.006	0.006	0.045	0.037	0.026	0.015	0.022
Business Group - Reliance (ADAG)	0.000	0.000	0.000	0.001	0.004	0.005	0.036	0.026	0.023	0.011	0.021
Zone - South	0.013	0.018	0.017	0.018	0.018	0.017	0.012	0.015	0.016	0.016	0.018
Industry - Info. & Comm. Tech.	0.008	0.007	0.009	0.009	0.011	0.012	0.011	0.012	0.013	0.010	0.013
Industry - Construction	0.001	0.002	0.002	0.002	0.002	0.004	0.007	0.008	0.013	0.004	0.012
Public Sector Enterprise	0.013	0.017	0.023	0.023	0.018	0.014	0.012	0.013	0.013	0.016	0.012
Business Group - Reliance (DAG)	0.000	0.000	0.000	0.010	0.020	0.015	0.014	0.013	0.012	0.009	0.012
Industry - Food, Agro. & Textiles	0.004	0.004	0.004	0.004	0.006	0.004	0.003	0.007	0.009	0.005	0.010
Zone - North	0.007	0.008	0.009	0.011	0.008	0.007	0.006	0.007	0.007	0.008	0.008
Business Group - Tata	0.008	0.008	0.008	0.011	0.009	0.008	0.006	0.006	0.006	0.008	0.007
Business Group - Suzlon	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.004	0.001	0.003
Business Group - Mahindra	0.001	0.001	0.000	0.000	0.001	0.001	0.000	0.000	0.003	0.001	0.003
Business Group - Jaypee	0.001	0.001	0.001	0.003	0.001	0.001	0.002	0.002	0.003	0.002	0.002
Business Group - Jindal	0.001	0.001	0.001	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.002
Business Group - Birla Aditya	0.003	0.003	0.003	0.002	0.002	0.003	0.002	0.002	0.002	0.003	0.002
Business Group - Adani	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.003	0.001	0.002
Business Group - Vedanta	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Zone - East	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Industry - Other Retail	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

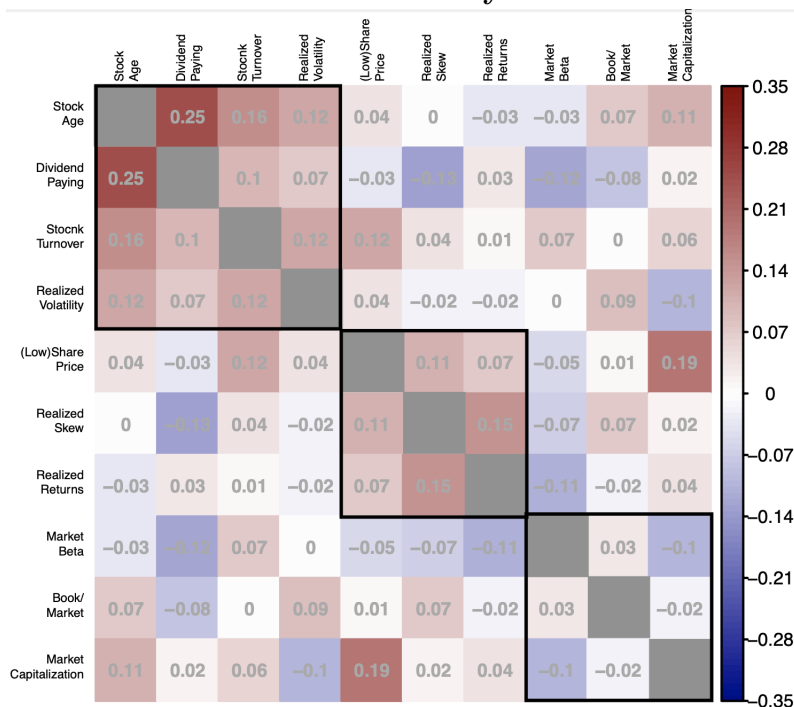
**Table A.XVI**  
**Robustness over Time**  
**Correlations of Investors' Characteristic Tilts**

The panels below present the time-series average correlations of investors' characteristic tilts (using orthogonalized characteristics, excluding business group, industry and geographic zone) for August vintages of the data between 2003 and 2010. The shading illustrates the sign and magnitude of the correlations indicated in gray text. In Panel A, characteristics are presented in order of their clientele strength (Table II), whereas Panel B reorders the characteristics to illustrate the presence of clusters of (coheld) characteristics.

**Panel A: Ordered by Characteristic Clientele Strength**



**Panel B: Ordered by Cluster**



**Table A.XVII**  
 Robustness over Time  
 Who Owns What: Characteristic Tilts  
 Single Factor Model Estimates

This table reports the time-series average factor loadings, standard deviation of loadings, and the average  $R^2$  from univariate regressions of investors' characteristic tilts (in columns, using orthogonalized characteristics) on account attributes (in rows) using August cross-sections of the data between 2003 and 2010. Shading of coefficients corresponds to their sign and magnitude.

	Stock Age	Dividend Paying	Share Price	Turnover	Bus. Gp. Any	Realized Returns	Market Beta	Realized Skew	Realized Volatility	Book /Market	Market Cap.
Size	6.65 (1.889)	8.37 (1.349)	5.83 (1.959)	0.57 (2.867)	-1.87 (2.185)	1.06 (2.362)	-1.88 (2.768)	-1.54 (1.885)	0.58 (1.897)	-0.89 (0.814)	-0.11 (1.516)
No. Stocks	3.42 (0.997)	2.26 (1.171)	1.15 (0.684)	0.70 (1.271)	-0.16 (1.220)	0.78 (0.978)	-0.74 (1.418)	-0.16 (0.771)	0.56 (0.651)	-0.02 (0.468)	0.82 (0.557)
Age	1.74 (5.85)	1.47 (1.71)	0.47 (0.28)	0.35 (1.20)	0.35 (-0.20)	0.45 (0.85)	0.55 (-1.66)	0.15 (0.03)	0.21 (0.70)	0.07 (1.17)	0.13 (0.34)
Turnover	4.82 (1.363)	1.24 (1.734)	0.21 (0.871)	1.26 (2.086)	1.22 (2.288)	1.87 (2.628)	1.95 (2.391)	0.30 (1.152)	0.55 (1.243)	0.60 (0.746)	0.25 (0.712)
Single Stock Dummy	-0.95 (1.090)	-2.84 (1.220)	-3.18 (0.818)	1.86 (1.248)	0.75 (0.349)	-0.42 (1.062)	0.67 (1.524)	0.46 (1.026)	1.55 (1.324)	-0.02 (0.654)	0.55 (0.446)
No. Stocks Traded	3.62 (0.996)	3.82 (1.178)	1.26 (0.534)	1.93 (1.345)	1.30 (0.648)	1.49 (0.739)	1.84 (1.355)	0.63 (0.916)	1.29 (0.916)	0.27 (0.442)	0.91 (0.428)
Eastern	1.13 (0.347)	0.73 (0.656)	-0.16 (0.245)	1.75 (0.492)	-0.06 (0.286)	0.06 (0.232)	0.02 (0.313)	0.21 (0.448)	0.56 (0.448)	0.11 (0.246)	0.12 (0.181)
Southern	0.05 (1.510)	0.09 (0.737)	0.02 (0.204)	0.11 (0.686)	0.03 (0.139)	0.01 (0.481)	0.04 (0.647)	0.04 (0.579)	0.06 (0.728)	0.04 (0.185)	0.21 (0.565)
Western	-1.26 (1.473)	1.00 (0.930)	-0.48 (0.245)	0.61 (0.710)	-1.01 (0.229)	0.13 (0.743)	-0.50 (0.798)	-0.35 (0.632)	0.23 (0.762)	-0.16 (0.253)	-0.01 (0.312)
Northern	0.89 (0.448)	0.18 (0.96)	0.13 (0.361)	0.27 (0.815)	0.14 (0.496)	0.14 (0.776)	0.16 (0.762)	0.09 (0.901)	0.18 (0.376)	0.05 (0.309)	0.21 (0.372)
	0.43	0.23	0.04	0.12	0.06	0.16	0.17	0.21	0.11	0.03	0.08

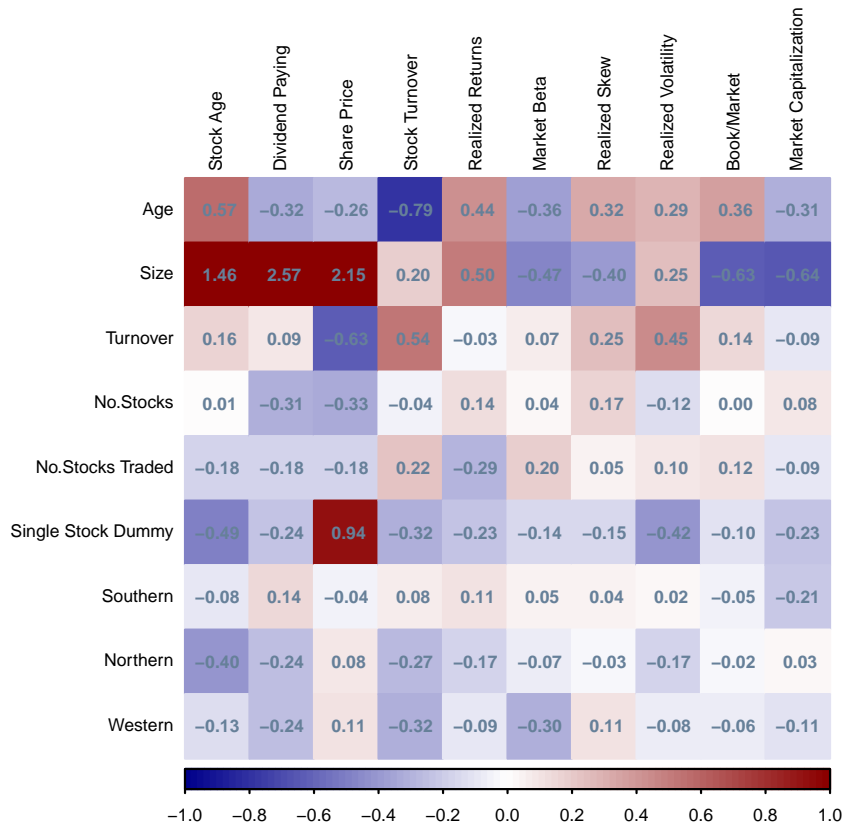
**Table A.XVIII**  
 Robustness Over Time  
 Who Owns What: Characteristic Clusters  
 Single Factor Model Estimates

This table reports the average factor loadings, the time-series standard deviation of loadings, and the average  $R^2$  from univariate regressions of the characteristic portfolios formed by fixing the composition of the three PCs to that estimated in August 2011 in the August cross-sections between 2003 and 2010 on account attributes. Shading of coefficients corresponds to their sign and magnitude. The estimates equally weight all investors in the data.

	PC1	PC2	PC3
Size	0.0812 (0.033) 8.282	-0.0630 (0.023) 9.802	0.0630 (0.023) 9.802
No.Stocks	0.0386 (0.017) 1.903	-0.0137 (0.006) 0.519	0.0137 (0.006) 0.519
Age	0.0517 (0.024) 3.438	-0.0204 (0.015) 1.407	0.0204 (0.015) 1.407
Turnover	-0.0042 (0.018) 0.414	0.0330 (0.010) 2.536	-0.0330 (0.010) 2.536
Single Stock Dummy	-0.0590 (0.037) 4.719	0.0168 (0.020) 1.405	-0.0168 (0.020) 1.405
No. Stocks Traded	0.0208 (0.019) 0.738	0.0043 (0.007) 0.157	-0.0043 (0.007) 0.157
Eastern	0.0057 (0.008) 0.083	0.0020 (0.002) 0.020	-0.0020 (0.002) 0.020
Southern	-0.0033 (0.016) 0.315	0.0066 (0.004) 0.140	-0.0066 (0.004) 0.140
Western	0.0155 (0.016) 0.664	-0.0123 (0.008) 0.437	0.0123 (0.008) 0.437
Northern	-0.0192 (0.005) 0.463	0.0066 (0.008) 0.217	-0.0066 (0.008) 0.217

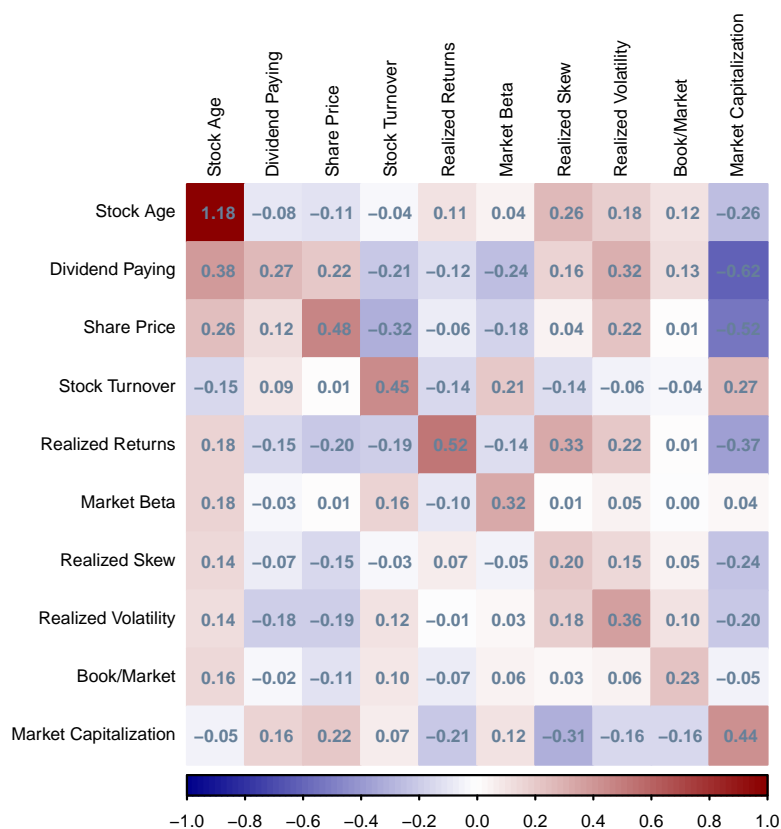
**Table A.XIX**  
**Who Owns What**  
**Stock-level Multi Factor Model Estimates**

This table reports the characteristic-weighted loadings of stockholdings on account attributes, using orthogonalized characteristics. Each column corresponds to a characteristic, centered at zero and scaled so that positive and negative weights each sum to one. Colors indicate the magnitude and sign of coefficients.



**Table A.XX**  
Who Owns What  
Stock-level Multi Factor Model Estimates

This table reports the characteristic-weighted loadings of stockholdings on characteristic tilts, using orthogonalized characteristics. Each column corresponds to a characteristic, centered at zero and scaled so that positive and negative weights each sum to one. Colors indicate the magnitude and sign of coefficients.



**Table A.XXI**

## Stock-level Estimates: Observable and Unobservable Factor Model Summary

The first two rows of this table compare the R-squareds of the observed factor model in Table V with the R-squared from the first ten principal components of the stockholding data  $Q_v$ . The left column presents an R-squared across all 3,103 stocks, with columns to the right presenting R-squareds excluding the top 1, 10 and 50 stocks based on average portfolio share from the calculation. The bottom three rows of the table present R-squareds associated with each of the first three principal components.

	Full sample	W/o Top 1	W/o Top 10	W/o Top 50
Observed Factor Model	3.96	2.30	0.66	0.29
PCA 1-10	31.51	21.99	1.36	0.04
PC1	12.37	0.33	0.04	0.01
PC2	6.77	7.58	0.03	0.01
PC3	2.00	2.28	0.02	0.00

**Table A.XXII**Characteristic Return and Tilt Variances and Covariances  
Account Size Weighted Estimates

This table presents a reconstruction of Table VII using account size weights in the construction of the characteristic tilt (co)variances.

Dep. Var: Return Factor (Co)Variance	Variances			Covariances		
	(1)	(2)	(3)	(4)	(5)	(6)
Holding Factor (Co)variance	-0.004 (0.004)			0.003 (0.003)		
Of which, coholding contribution		-0.005 (0.017)	0.030 (0.026)		0.042*** (0.009)	0.054*** (0.010)
Of which, holding contribution			-0.015 (0.009)			-0.009*** (0.003)
Constant	Y	Y	Y	Y	Y	Y
Adj. R-squared	-0.010	-0.115	0.076	0.002	0.301	0.384
N	10	10	10	45	45	45

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

**Table A.XXIII**  
Stock Return and Holding Variances

This table presents a regression of empirical return variance estimates on holdings variance. The return variance measures are based on weekly returns data for a year leading up to August 2011. Column (1) presents the regression with the raw measures, Column (2) with rank normalized measures and Column (3) the relationship when holdings variance is rank normalized to be between 0 and 1. Standard errors in parentheses.

Dep. Var: Return Variance			
	Raw (1)	Rank normalized (2)	Raw (3)
Constant	0.000*** (0.000)	0.627*** (0.011)	0.007*** (0.000)
Holdings Variance	-0.206 (0.160)		
... Rank normalized		-0.253*** (0.020)	-0.002*** (0.000)
Adj. R-squared	0.001	0.064	0.002
Observations	3103	3103	3103

\* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01

**Table A.XXIV**  
Stock Covariances and Holding Covariances

This table presents a regression of empirical return covariance estimates on empirical holdings covariance in columns (1) and (2). The return covariance measures are based on weekly returns data for a year leading up to August 2011. Column (2) present the relationship when both measures are rank normalized to be between 0 and 1, and Column (3) the relationship when empirical holdings covariance is rank normalized to be between 0 and 1. Standard errors in parentheses.

Dep. Var: Return Covariance			
	Raw × 100 (1)	Rank normalized (2)	Raw × 100 (3)
Constant	0.100*** (0.000)	0.443*** (0.000)	0.071*** (0.000)
Coholdings	199.490* (117.990)		
... Rank normalized		0.114*** (0.001)	0.034*** (0.000)
R-squared	0.0040	0.0130	0.010
Observations	4,812,753	4,812,753	4,812,753

\* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01



**Table A.XXV**  
Characteristic Return and Tilt Variances and Covariances Over Time

This table presents coefficients from regressions in columns 3 and 6 of Table VII, run using August cross-sections from each year between 2006 and 2011. Characteristic Tilt (co)variances are constructed using data from March 2002 through August of the given year.

	Variances						Covariances					
	2006	2007	2008	2009	2010	2011	2006	2007	2008	2009	2010	2011
Coholding Contrib.	0.056* (0.032)	0.069** (0.033)	0.076 (0.050)	0.052 (0.037)	0.077** (0.033)	0.120*** (0.038)	0.057*** (0.011)	0.065*** (0.010)	0.061*** (0.010)	0.066*** (0.011)	0.061*** (0.008)	0.063*** (0.006)
Holding Contrib	-0.009 (0.007)	-0.016* (0.008)	-0.021 (0.014)	-0.013 (0.010)	-0.016** (0.007)	-0.020** (0.008)	-0.009*** (0.003)	-0.009*** (0.002)	-0.018*** (0.003)	-0.016*** (0.003)	-0.010*** (0.002)	-0.010*** (0.001)
Adj. R-squared	0.126	0.234	0.038	0.006	0.279	0.499	0.355	0.469	0.436	0.444	0.545	0.685

**Table A.XXVI**  
Robustness over Time  
Stock Covariances and Holding Covariances

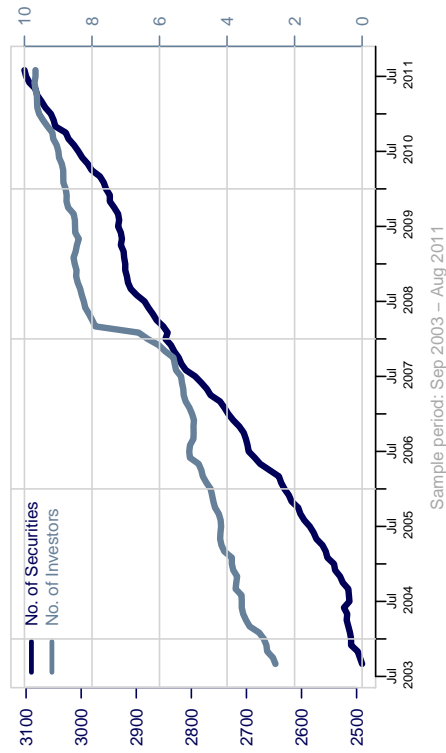
This table presents the results from a regression of empirical return covariance estimates on normalized empirical holdings covariance as in Column (3) of Table A.XXIV, every August for the years 2003-2011. Standard errors in parentheses.

	Dep. Var: Return Covariance x 100										
	2003	2004	2005	2006	2007	2008	2009	2010	2011		
Constant	0.083*** (0.001)	0.167*** (0.000)	0.082*** (0.000)	0.191*** (0.000)	0.044*** (0.000)	0.257*** (0.000)	0.444*** (0.000)	0.061*** (0.000)	0.071*** (0.000)		
Rank normalized Holdings Covariance	0.029*** (0.001)	0.093*** (0.001)	0.147*** (0.001)	0.140*** (0.000)	0.040*** (0.000)	0.116*** (0.001)	0.081*** (0.001)	0.013*** (0.000)	0.034*** (0.000)		
R-squared	0.001	0.006	0.019	0.059	0.009	0.019	0.005	0.001	0.01		
Observations	3,081,403	3,158,841	3,365,715	3,638,253	3,946,645	4,200,651	4,293,915	4,537,578	4,812,753		

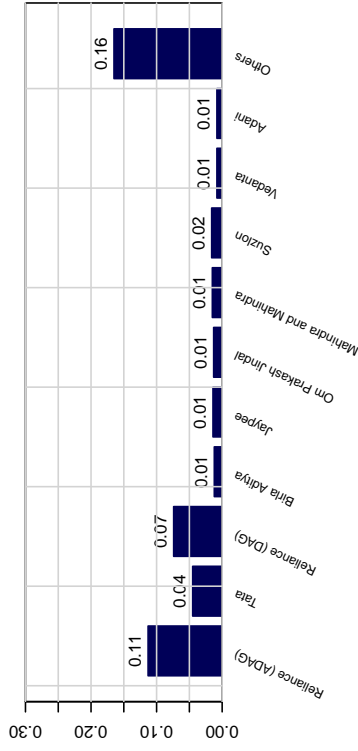
**Figure A.1**  
Summary Statistics

Panel A plots the number of investors in our data (right axis) in millions, and the number of stocks in our data (left axis) over time. Panel B plots the share of each business group (x-axis) in the average investor's stockholdings. Panel C plots the geographic region of the investor; Panel D summarizes the presence of each industry (y-axis) in the average investors' portfolio.

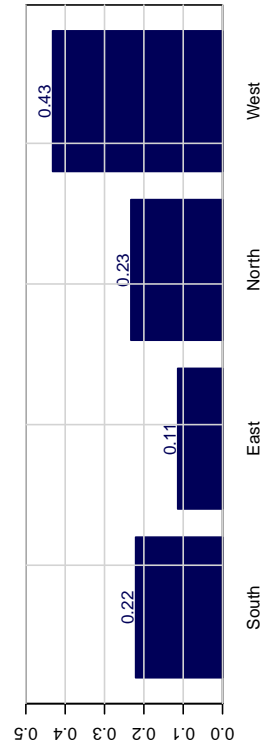
Panel A: Number of Observations



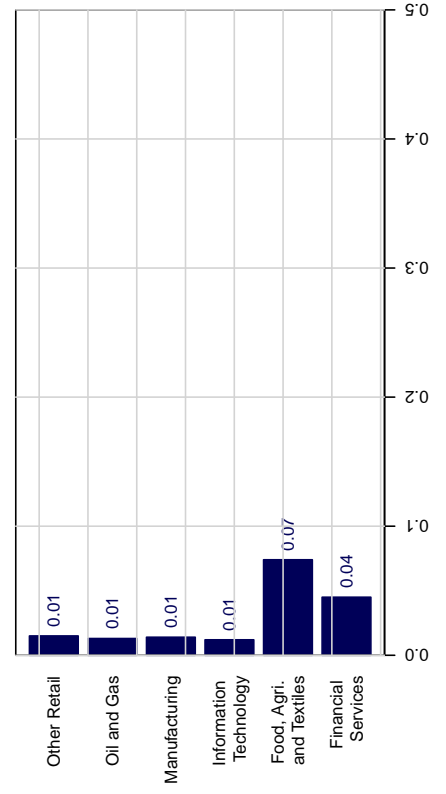
Panel B: Business Groups



Panel C: Geography

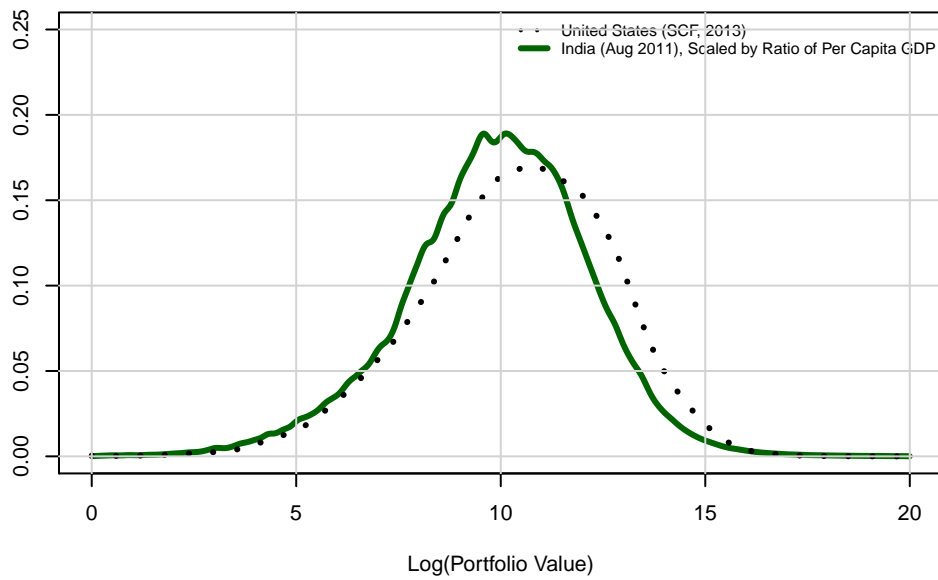


Panel D: Industry



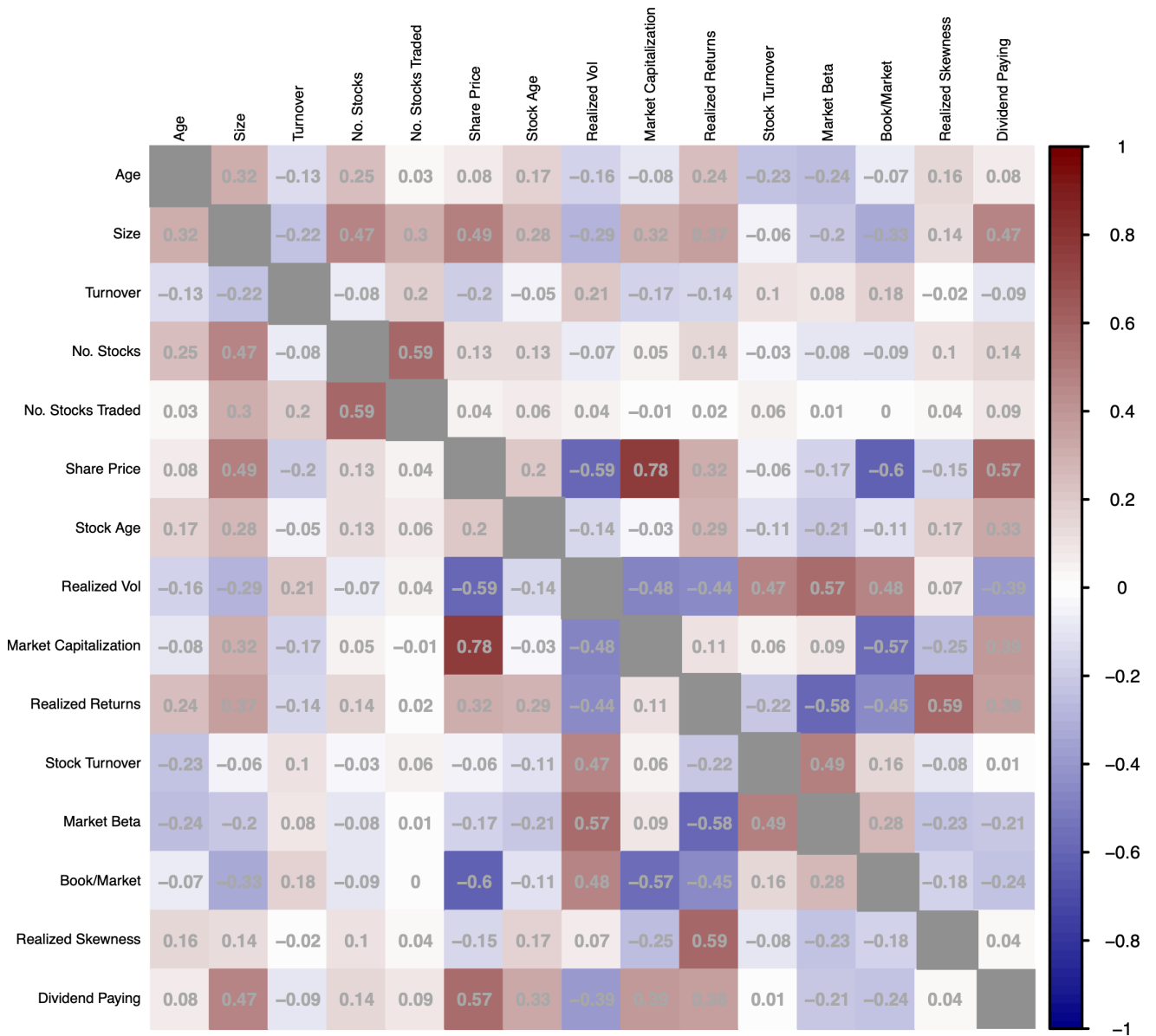
**Figure A.2**  
Comparison of U.S. and Indian Household Stock Wealth

This figure presents the empirical kernel density plot of the logarithmic value of all equity investments in US dollars in the United States (black dashed line) from the Survey of Consumer Finances (SCF), 2013 and in Indian depository accounts in August 2011. The Indian portfolio value distribution is scaled by the ratio of per capita GDP in India to the United States.



**Figure A.3**  
Correlation Matrix

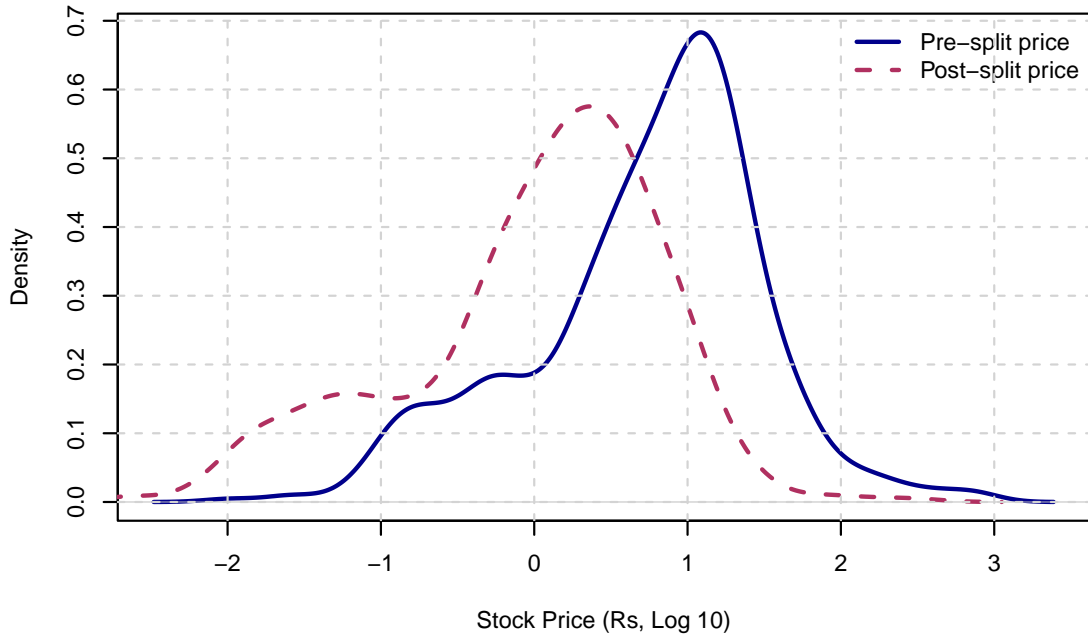
This figure plots the correlation between the set of account attributes and characteristic tilts constructed as in Table 1.



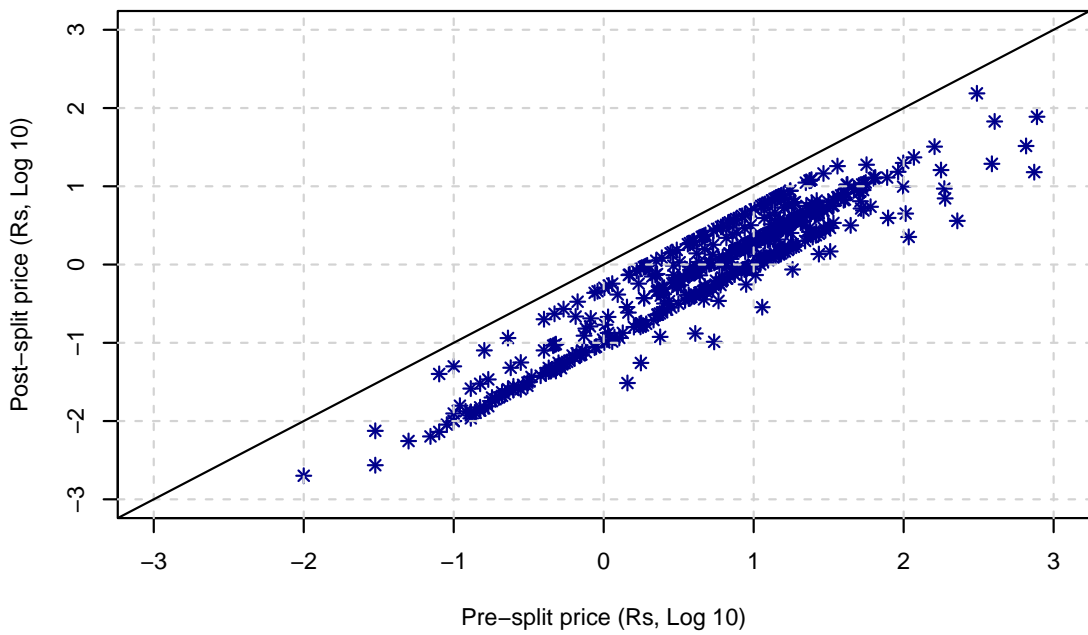
**Figure A.4**  
Stock Splits

Panel A presents the distribution of stock prices for stocks just before stock splits (smooth line), and just after stock splits (dashed line). Panel B presents a scatter plot of the pre-split price and post-split price, in log-scales, across the universe of stock splits observed for the 3103 stock between February 2002 and August 2011. There are a total of 526 stock split events for 501 stocks in this period.

**Panel A: Distribution of Stock Prices**

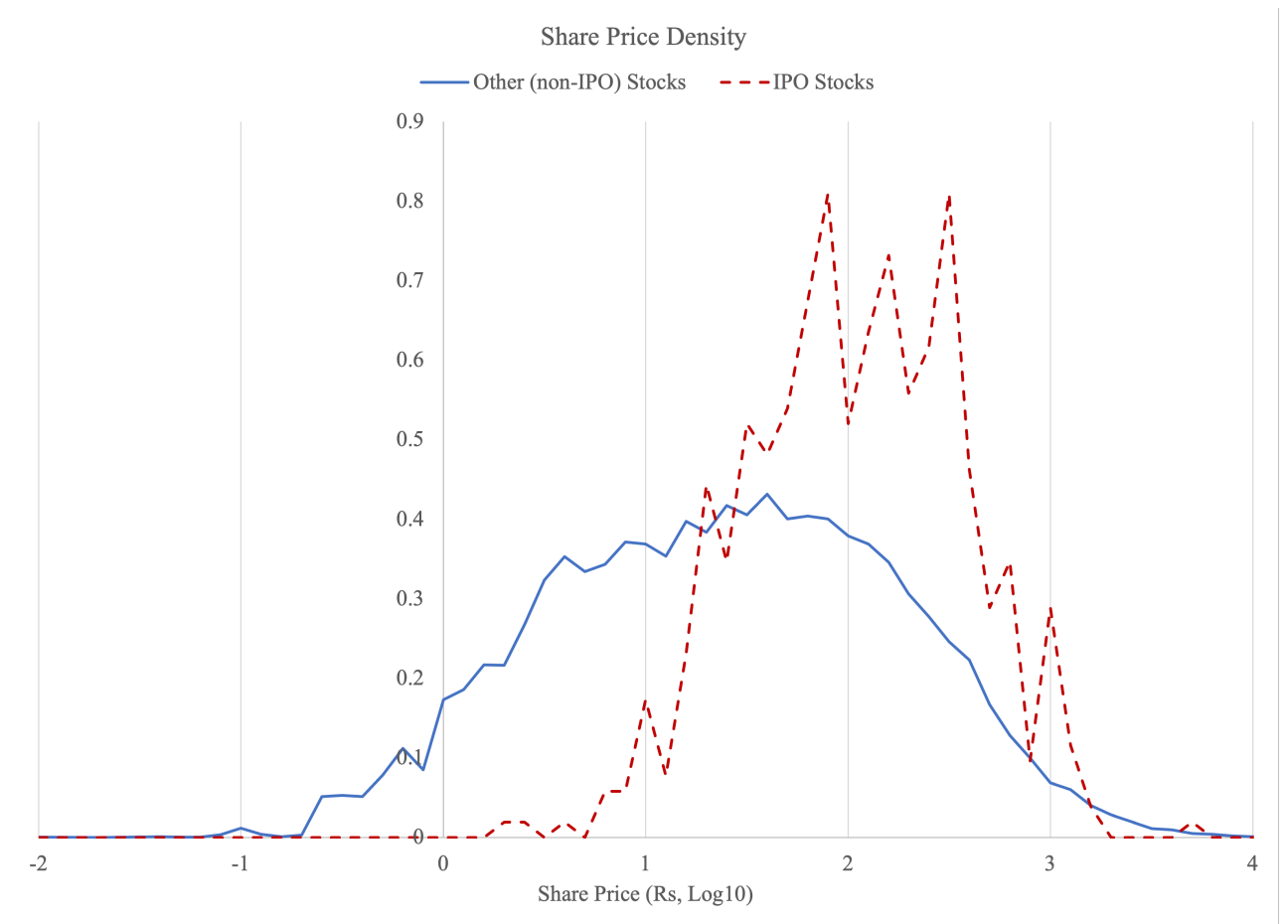


**Panel B: Stock Split Ratio**



**Figure A.5**  
Distribution of IPO Prices

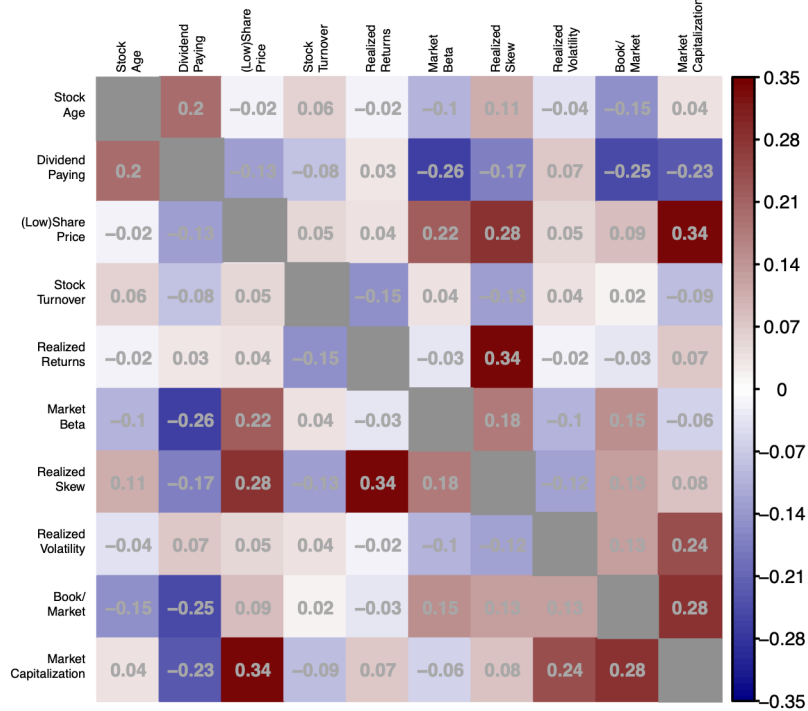
This figure presents the empirical distribution of share prices for IPO stocks (dashed-line) and other (non-IPO) stocks (smooth line).



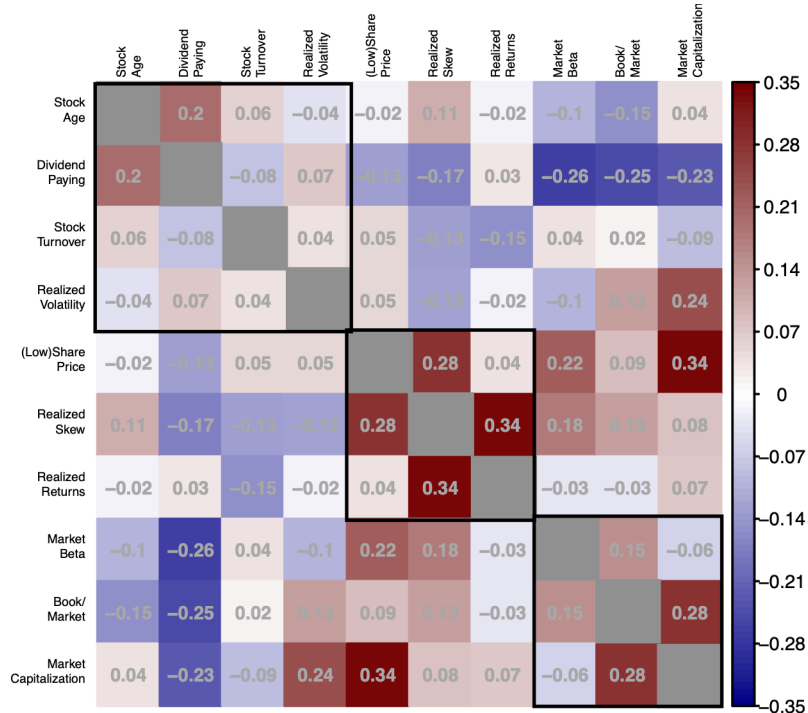
**Figure A.6**  
Correlations of Investors' Characteristic Tilts  
Account Size Weighted Estimates

These tables are constructed similarly to Figure 4, but using account size weighted (instead of equal weighted) correlations of investors' characteristic tilts.

**Panel A: Ordered by Characteristic Clientele Strength**

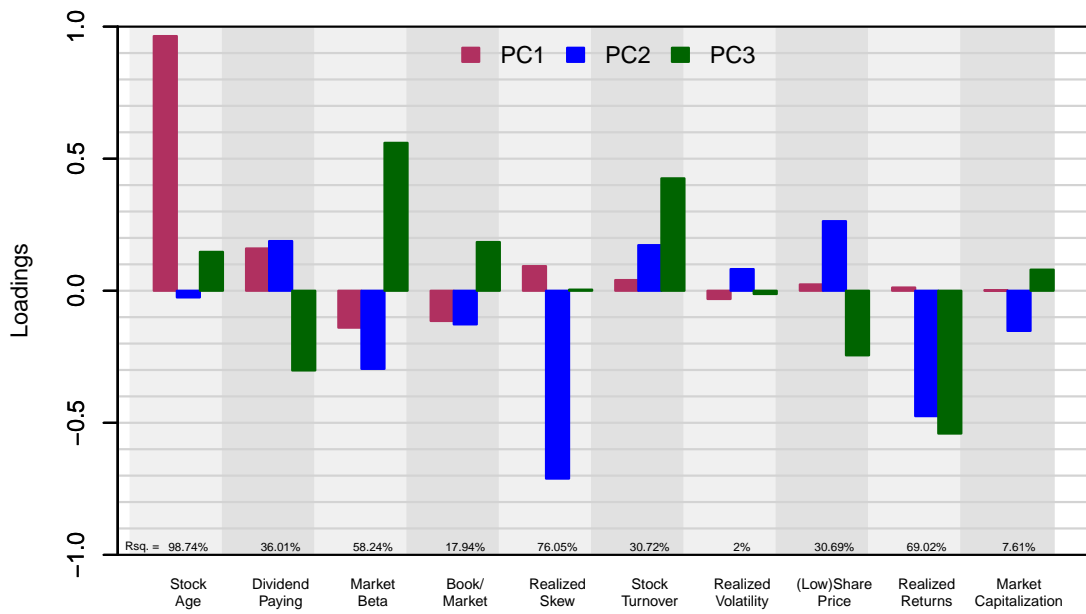


**Panel B: Ordered by Cluster**



**Figure A.7**  
 Stock Characteristic Clusters  
 Principal Component Analysis: Account Size Weighted Estimates

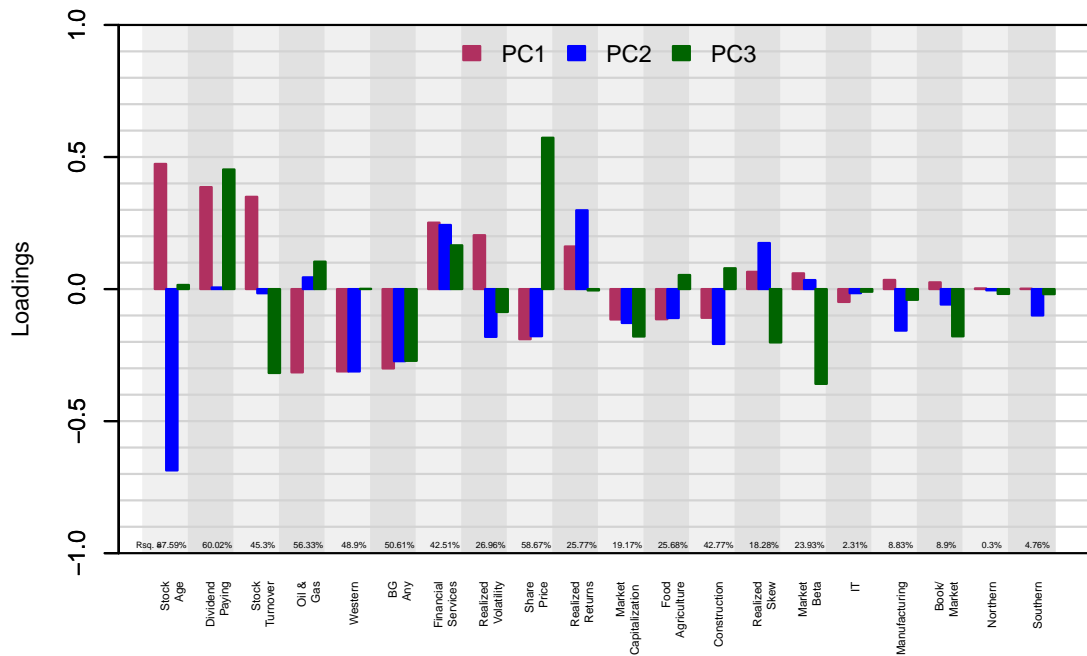
This figure reconstructs the analysis in Figure 3 using PCs and regressions that weight accounts by their size.





**Figure A.8**  
**Stock Characteristic Clusters**  
**Principal Component Analysis: All Characteristics**

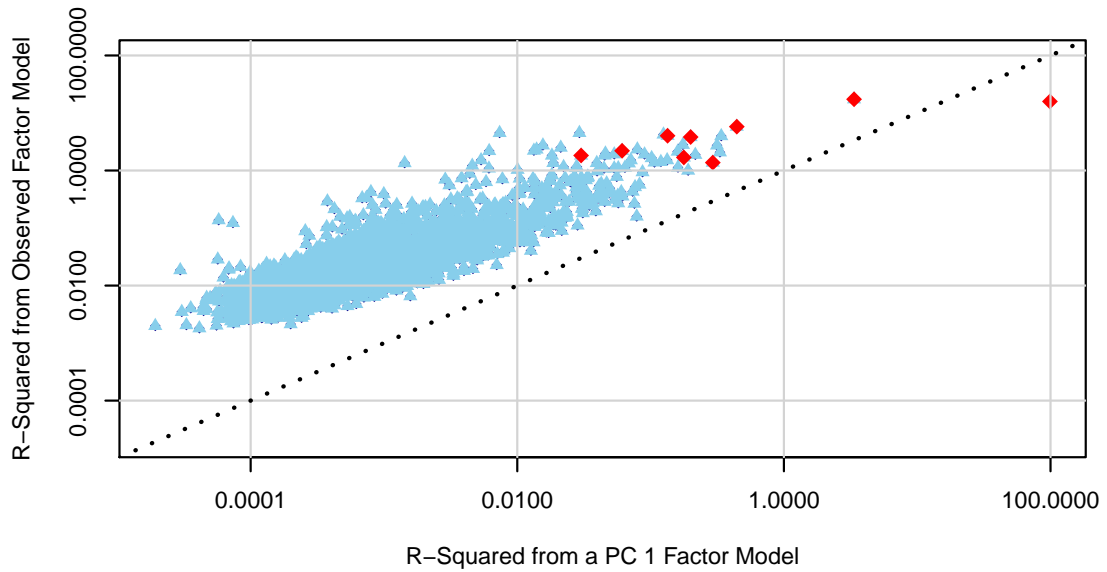
This figure reconstructs the analysis in Figure 3 when using PCs constructed from the full set of investors' characteristic tilts (e.g. including business groups, industries and geographic zones).



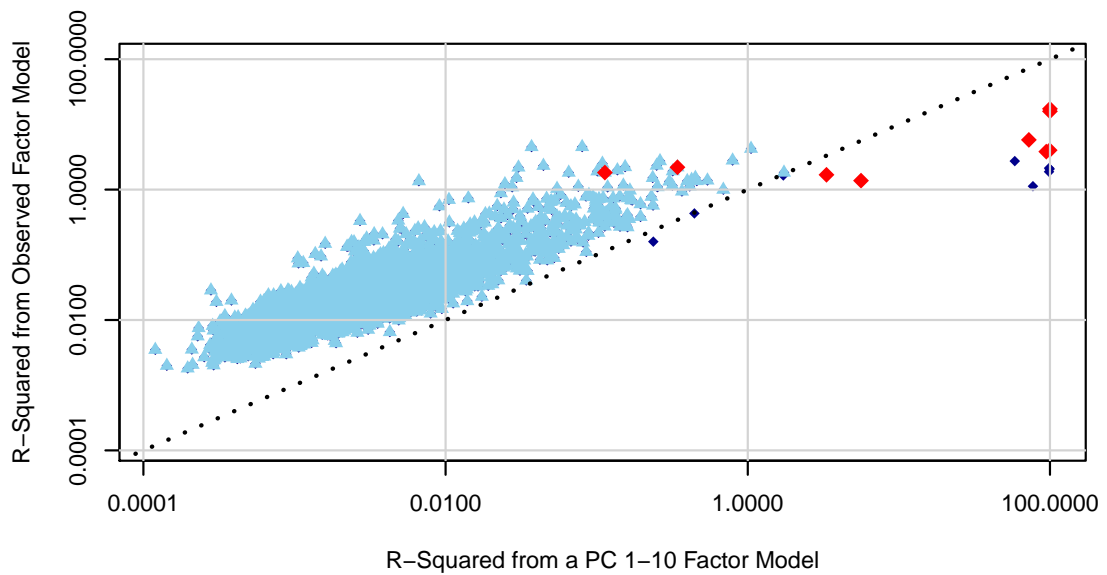
**Figure A.9**  
Comparison of Stock Level R-Squareds

This figure presents a stock-by-stock comparison of the  $R^2$  estimates from the observed factor model ( $y$ -axis), and the unobserved factor model ( $x$ -axis), both on logarithmic scales. The dashed line marks the 45-degree line. The triangles (diamonds) are stocks in which the observed factor model does better (worse) than the unobserved PCA model. The red diamonds represent the top 10 stocks by the share of investors holding the stock. Panel A presents a comparison to a 1-factor model, while panel B presents a comparison to a PC1-10 factor model.

**Panel A: Observed Multifactor model vs. PC 1 Factor model**



**Panel B: Observed factor model vs. PC 1-10 Factor model**



**Figure A.10**  
Stock Return Correlation and Holdings Covariance

This figure presents the relationship between stock return correlation and decile bins of holdings covariances for all stock pairs by varying the stock return frequency. The  $\Delta$ ,  $+$  and  $\times$  shapes mark the return correlation estimated using exponentially-weighted moving average returns where the weights are set to present estimates with half-lives of 1 day, 1 week and 1 month, using daily returns data for a year leading up to August 2011.

