Internet Appendix

Who Holds What?
A Factor Model for Direct Stockholding

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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 kth 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 $c^o = c(C-1)$.[28]

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[28]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.1
Stock Characteristic Clientele Strength
Account Size Weighted Estimates

This table is constructed as Table 2, 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.2
Stock Characteristic Clientele Strength
Robustness

This table compares the variance of characteristic tilts (using orthogonalized characteristics) across investors–the fourth column of Table 2–against alternatives that exclude the least diversified accounts (those with HHI > 0.2) or that exclude either the most popular 10 or 50 stocks (based on their average portfolio share).

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

Table A.3
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 either the most popular 10 or 50 stocks (based on their average portfolio share).

	Off-Diagonal Share of Total Variance (Orthogonalized Characteristics)			
Characteristic	All	HHI ≤ 0.2	Excl. Top 10 stocks	Excl. Top 50 stocks
Stock Age	0.118	0.432	0.160	0.217
Dividend Paying	0.119	0.440	0.139	0.195
Share Price	0.128	0.569	0.151	0.216
Stock Turnover	0.070	0.275	0.126	0.177
Business Group: Any	0.059	0.180	0.126	0.168
Realized Returns	0.074	0.333	0.137	0.163
Zone: West	0.052	0.111	0.121	0.155
Beta	0.060	0.262	0.107	0.148
Industry: Financial Services	0.070	0.286	0.099	0.147
Realized Skew	0.039	0.199	0.067	0.138
Realized Volatility	0.054	0.174	0.072	0.113
Industry: Manufacturing	0.017	0.062	0.069	0.143
Book/Market	0.039	0.181	0.116	0.118
Market Capitalization	0.069	0.317	0.096	0.110
Industry: Oil & Gas	0.090	0.162	0.187	0.280
Business Group: Reliance (ADAG)	0.115	0.189	0.544	0.383
Zone: South	0.030	0.118	0.055	0.132
Industry: IT	0.014	0.065	0.111	0.114
Industry: Construction	0.091	0.175	0.084	0.161
Public Sector Enterprise	0.058	0.179	0.111	0.220
Business Group: Reliance (DAG)	0.067	0.063	0.145	0.361
Industry: Food, Agro. & Textiles	0.047	0.005	0.044	0.106
Zone: North	0.009	0.020	0.063	0.125
Business Group: Tata	0.028	0.093	0.133	0.225
Business Group: Suzlon	0.014	-0.010	0.132	0.182
Business Group: Mahindra	0.008	-0.015	0.081	0.201
Business Group: Jaypee	0.073	0.047	0.159	0.437
Business Group: Jindal	0.014	0.023	0.151	0.188
Business Group: Birla Aditya	0.013	0.007	0.220	0.480
Business Group: Adani	0.056	0.044	0.363	0.452
Business Group: Vedanta	0.025	0.064	0.098	0.243

Table A.4
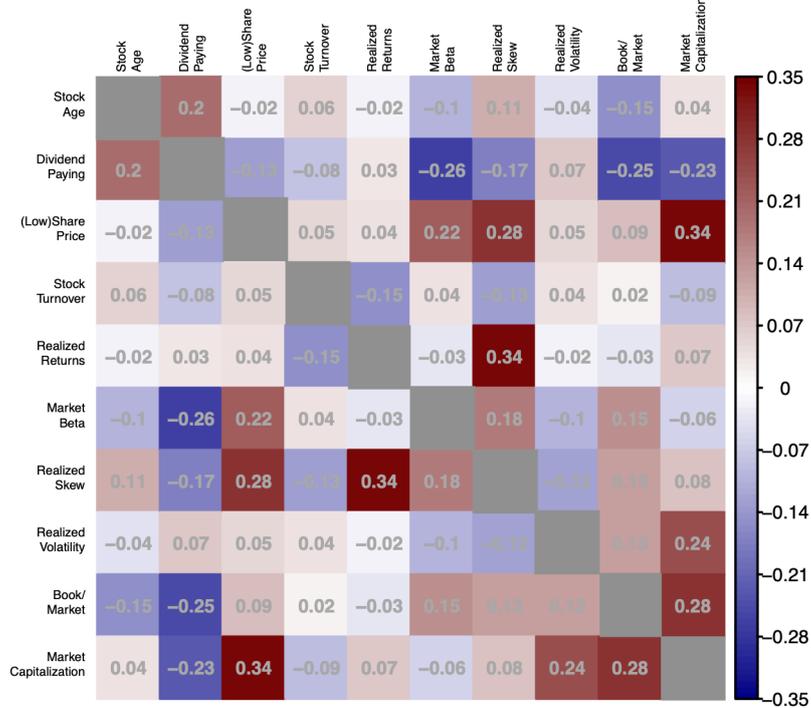## Stock Characteristic Clientele Strength in the Data and under Alternative Models

This table decomposes the August 2011 cross-sectional variance of characteristic tilts (orthogonalized characteristics) from Table 2 into the contribution from stock holdings (diagonal elements of the coholdings 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.

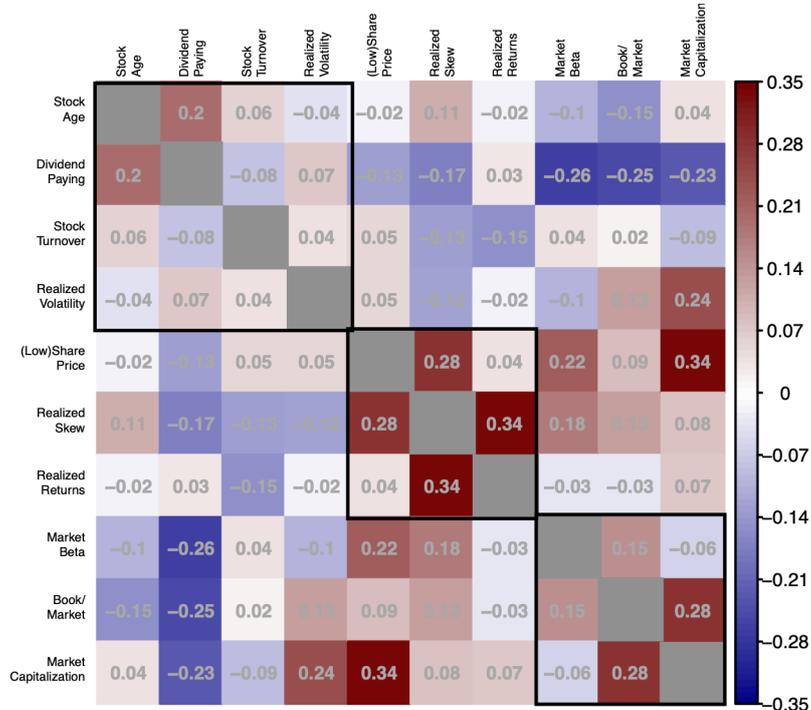|	Stock Age	Dividend Paying	Share Price	Stock Turnover	Realized Returns	Beta	Realized Skew	Realized Volatility	Book/Market	Market Cap
Holdings Contribution										
Empirical	0.0656	0.0434	0.0395	0.0415	0.0375	0.0325	0.0289	0.0280	0.0248	0.0236
Float-capitalization based	0.0497	0.0151	0.0119	0.0234	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
Coholdings Contribution										
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

Table A.5
Correlations of Investors' Characteristic Tilts
Account Size Weighted Estimates

These tables are constructed similarly to Table 3, but using account size weighted (instead of equal weighted) correlations of investors' characteristic tilts.

Panel A: Ordered by Characteristic Clientele Strength

	Stock Age	Dividend Paying	(Low)Share Price	Stock Turnover	Realized Returns	Market Beta	Realized Skew	Realized Volatility	Book/Market	Market Capitalization
Stock Age		0.2	−0.02	0.06	−0.02	−0.1	0.11	−0.04	−0.15	0.04
Dividend Paying	0.2		−0.13	−0.08	0.03	−0.26	−0.17	0.07	−0.25	−0.23
(Low)Share Price	−0.02	−0.13		0.05	0.04	0.22	0.28	0.05	0.09	0.34
Stock Turnover	0.06	−0.08	0.05		−0.15	0.04	−0.13	0.04	0.02	−0.09
Realized Returns	−0.02	0.03	0.04	−0.15		−0.03	0.34	−0.02	−0.03	0.07
Market Beta	−0.1	−0.26	0.22	0.04	−0.03		0.18	−0.1	0.15	−0.06
Realized Skew	0.11	−0.17	0.28	−0.13	0.34	0.18		−0.13	0.13	0.08
Realized Volatility	−0.04	0.07	0.05	0.04	−0.02	−0.1	−0.13		0.13	0.24
Book/Market	−0.15	−0.25	0.09	0.02	−0.03	0.15	0.13	0.13		0.28
Market Capitalization	0.04	−0.23	0.34	−0.09	0.07	−0.06	0.08	0.24	0.28	

Panel B: Ordered by Cluster

	Stock Age	Dividend Paying	Stock Turnover	Realized Volatility	(Low)Share Price	Realized Skew	Realized Returns	Market Beta	Book/Market	Market Capitalization
Stock Age		0.2	0.06	−0.04	−0.02	0.11	−0.02	−0.1	−0.15	0.04
Dividend Paying	0.2		−0.08	0.07	−0.13	−0.17	0.03	−0.26	−0.25	−0.23
Stock Turnover	0.06	−0.08		0.04	0.05	−0.13	−0.15	0.04	0.02	−0.09
Realized Volatility	−0.04	0.07	0.04		0.05	−0.13	−0.02	−0.1	0.13	0.24
(Low)Share Price	−0.02	−0.13	0.05	0.05		0.28	0.04	0.22	0.09	0.34
Realized Skew	0.11	−0.17	−0.13	−0.13	0.28		0.34	0.18	0.13	0.08
Realized Returns	−0.02	0.03	−0.15	−0.02	0.04	0.34		−0.03	−0.03	0.07
Market Beta	−0.1	−0.26	0.04	−0.1	0.22	0.18	−0.03		0.15	−0.06
Book/Market	−0.15	−0.25	0.02	0.13	0.09	0.13	−0.03	0.15		0.28
Market Capitalization	0.04	−0.23	−0.09	0.24	0.34	0.08	0.07	−0.06	0.28	

Table A.6

Who Owns What: Characteristic Tilts

Single Factor Model Estimates: Business Groups

This table extends the analysis of Table 4 to the set of investors' business group tilts.

	Reliance ADAG	Tata	Reliance DAG	Birla	Jaypee	Jindal	Mahindra	Suzlon	Vedanta	Adani	PSE
Size	-4.39	0.56	1.39	-0.12	0.18	0.02	0.14	-0.34	0.29	0.95	0.57
	(0.004)	(0.003)	(0.004)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.004)
	9.22	0.48	1.55	0.07	0.14	0.00	0.07	0.38	0.72	4.74	0.26
No.Stocks	-1.77	0.22	0.06	0.01	0.03	0.07	0.01	-0.15	0.16	0.37	-0.01
	(0.005)	(0.003)	(0.004)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.004)
	1.51	0.07	0.00	0.00	0.00	0.02	0.00	0.08	0.22	0.73	0.00
Age	-1.03	0.45	0.75	-0.03	-0.18	-0.03	-0.12	-0.46	0.01	0.19	0.15
	(0.005)	(0.003)	(0.004)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.004)
	0.50	0.31	0.45	0.00	0.13	0.00	0.05	0.73	0.00	0.19	0.02
Turnover	-0.61	-0.06	-0.89	0.04	0.05	-0.01	-0.05	0.01	0.09	0.11	0.12
	(0.005)	(0.003)	(0.004)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.004)
	0.18	0.01	0.64	0.01	0.01	0.00	0.01	0.00	0.07	0.06	0.01
Single Stock Dummy	4.12	-0.06	-1.32	0.09	-0.29	-0.21	-0.18	0.08	-0.26	-1.02	-0.36
	(0.004)	(0.003)	(0.004)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.004)
	8.10	0.01	1.41	0.04	0.34	0.19	0.12	0.02	0.57	5.51	0.11
No. Stocks Traded	-1.60	0.14	-0.41	0.00	0.06	0.02	0.04	-0.10	0.18	0.32	0.09
	(0.005)	(0.003)	(0.004)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.004)
	1.23	0.03	0.14	0.00	0.02	0.00	0.01	0.03	0.28	0.53	0.01
Eastern	-0.58	0.20	-0.17	0.00	0.09	-0.01	0.07	0.07	0.04	0.06	0.43
	(0.005)	(0.003)	(0.004)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.004)
	0.16	0.06	0.02	0.00	0.04	0.00	0.02	0.02	0.01	0.02	0.15
Southern	-0.94	-0.02	-0.53	0.07	-0.05	-0.01	0.12	0.05	0.05	0.06	-0.16
	(0.005)	(0.003)	(0.004)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.004)
	0.43	0.00	0.23	0.02	0.01	0.00	0.05	0.01	0.02	0.02	0.02
Western	0.45	0.17	0.42	-0.08	-0.30	0.05	-0.13	-0.11	0.02	0.12	-0.20
	(0.005)	(0.003)	(0.004)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.004)
	0.10	0.04	0.14	0.03	0.37	0.01	0.06	0.04	0.00	0.07	0.03
Northern	0.84	-0.33	0.16	0.04	0.34	-0.04	-0.02	0.03	-0.11	-0.24	0.07
	(0.005)	(0.003)	(0.004)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.004)
	0.33	0.17	0.02	0.01	0.46	0.01	0.00	0.00	0.09	0.31	0.00

Table A.7

Who Owns What: Characteristic Tilts

Single Factor Model Estimates: Industry Characteristics

This table extends the analysis of Table 4 to the set of investors' industry tilts.

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

Table A.8
Who Owns What: Characteristic Tilts
Single Factor Model Estimates: Geography

This table extends the analysis of Table 4 to the set of investors' tilts towards stocks in different geographical zones.

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

Table A.9

Who Owns What: Characteristic Tilts

Single Factor Model Estimates: Account Size Weighted Estimates

This table presents the analysis in Table 4 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) 0.67	2.36 (0.003) 7.16	2.60 (0.003) 8.77	-0.38 (0.003) 0.13	-1.02 (0.004) 0.61	-1.02 (0.004) 0.61	0.54 (0.004) 0.22	-1.60 (0.004) 2.10	-1.45 (0.004) 1.48	-0.27 (0.003) 0.08	-2.24 (0.003) 7.44	-1.86 (0.003) 4.54
No.Stocks	0.56 (0.002) 0.53	-0.02 (0.001) 0.00	-0.05 (0.001) 0.02	0.04 (0.002) 0.00	0.16 (0.002) 0.06	0.16 (0.002) 0.06	0.22 (0.002) 0.16	-0.02 (0.002) 0.00	0.36 (0.002) 0.40	-0.01 (0.001) 0.00	0.17 (0.001) 0.19	-0.05 (0.001) 0.01
Age	4.39 (0.007) 4.30	2.00 (0.004) 2.96	1.61 (0.004) 1.94	-1.53 (0.004) 1.21	-0.48 (0.006) 0.08	-0.48 (0.006) 0.08	1.22 (0.005) 0.65	-1.51 (0.005) 1.08	0.39 (0.005) 0.06	-0.71 (0.004) 0.34	-1.03 (0.003) 0.92	-1.27 (0.004) 1.22
Turnover	-9.08 (0.021) 1.98	-6.18 (0.011) 3.03	-4.76 (0.011) 1.81	5.51 (0.013) 1.70	0.94 (0.017) 0.03	0.94 (0.017) 0.03	-4.11 (0.015) 0.79	4.15 (0.014) 0.88	0.13 (0.015) 0.00	2.36 (0.012) 0.41	3.54 (0.011) 1.15	1.85 (0.011) 0.28
Single Stock Dummy	-2.05 (0.011) 0.37	0.36 (0.006) 0.04	0.72 (0.006) 0.15	0.81 (0.007) 0.14	-2.23 (0.009) 0.67	-2.23 (0.009) 0.67	-0.20 (0.008) 0.01	-0.99 (0.007) 0.18	-1.13 (0.008) 0.21	0.86 (0.006) 0.20	-1.27 (0.006) 0.54	-0.32 (0.006) 0.03
No. Stocks Traded	-0.18 (0.003) 0.04	-0.08 (0.002) 0.03	0.00 (0.002) 0.00	0.40 (0.002) 0.49	-0.27 (0.002) 0.15	-0.27 (0.002) 0.15	-0.20 (0.002) 0.10	-0.08 (0.002) 0.02	-0.12 (0.002) 0.04	0.05 (0.002) 0.01	0.13 (0.001) 0.09	-0.22 (0.002) 0.22
Eastern	-0.78 (0.008) 0.09	-0.36 (0.005) 0.06	-0.83 (0.005) 0.34	0.12 (0.005) 0.00	0.57 (0.007) 0.08	0.57 (0.007) 0.08	0.43 (0.006) 0.05	0.33 (0.006) 0.03	0.17 (0.006) 0.01	0.57 (0.005) 0.15	0.45 (0.004) 0.12	0.93 (0.004) 0.45
Southern	-0.47 (0.008) 0.04	1.96 (0.004) 2.32	1.90 (0.004) 2.20	1.24 (0.005) 0.66	-3.96 (0.006) 4.33	-3.96 (0.006) 4.33	-2.46 (0.005) 2.14	-2.38 (0.005) 2.19	-3.66 (0.005) 4.42	-0.81 (0.004) 0.36	-1.89 (0.004) 2.51	-1.80 (0.004) 1.99
Western	2.22 (0.007) 0.90	-0.69 (0.004) 0.29	-0.43 (0.004) 0.11	-1.00 (0.005) 0.42	2.73 (0.006) 2.08	2.73 (0.006) 2.08	2.26 (0.005) 1.83	1.05 (0.005) 0.43	2.70 (0.006) 2.42	0.45 (0.004) 0.11	1.08 (0.004) 0.82	0.11 (0.004) 0.01
Northern	-2.44 (0.009) 0.76	-1.26 (0.005) 0.67	-1.20 (0.005) 0.61	-0.15 (0.006) 0.01	0.38 (0.007) 0.03	0.38 (0.007) 0.03	-0.80 (0.006) 0.16	1.26 (0.006) 0.43	0.39 (0.007) 0.03	-0.14 (0.005) 0.01	0.42 (0.005) 0.09	1.50 (0.005) 0.97

Table A.10
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	0.0304	-0.0330
	(0.000)	(0.000)	(0.000)
	0.015	0.038	0.062
No.Stocks	0.0045	-0.0032	0.0001
	(0.000)	(0.000)	(0.000)
	0.005	0.003	0.000
Age	0.0474	0.0028	-0.0268
	(0.000)	(0.000)	(0.000)
	0.052	0.000	0.030
Turnover	-0.1492	-0.0158	0.1300
	(0.000)	(0.000)	(0.000)
	0.026	0.000	0.036
Single Stock Dummy	-0.0196	0.0219	-0.0110
	(0.000)	(0.000)	(0.000)
	0.003	0.004	0.001
No. Stocks Traded	-0.0016	0.0024	0.0020
	(0.000)	(0.000)	(0.000)
	0.000	0.001	0.001
Eastern	-0.0091	-0.0082	0.0035
	(0.000)	(0.000)	(0.000)
	0.001	0.001	0.000
Southern	0.0016	0.0607	-0.0111
	(0.000)	(0.000)	(0.000)
	0.000	0.081	0.004
Western	0.0197	-0.0388	-0.0020
	(0.000)	(0.000)	(0.000)
	0.007	0.034	0.000
Northern	-0.0281	-0.0109	0.0161
	(0.000)	(0.000)	(0.000)
	0.009	0.002	0.006

Table A.11

Who Owns What: Characteristic Tilts

Multi Factor Model Estimates

The table presents a multivariate version of the analysis in Table 4. 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	10.49	8.35	0.77	-5.34	1.94	-1.81	-1.54	0.96	-2.45	-2.48
	(0.011)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.008)	(0.007)	(0.007)	(0.007)	(0.007)
No. Stocks	0.03	-1.28	-1.28	-0.17	0.98	0.53	0.15	0.65	-0.47	0.00	0.32
	(0.012)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.008)	(0.008)	(0.008)	(0.007)	(0.007)
Age	2.21	-1.32	-1.01	-3.06	0.41	1.70	-1.40	1.24	1.14	1.40	-1.20
	(0.009)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.006)	(0.006)	(0.006)	(0.005)	(0.005)
Turnover	0.63	0.37	-2.45	2.09	-1.12	-0.11	0.29	0.98	1.73	0.56	-0.37
	(0.009)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.006)	(0.006)	(0.006)	(0.006)	(0.005)
Single Stock Dummy	-1.92	-0.96	3.63	-1.24	-0.50	-0.91	-0.55	-0.60	-1.62	-0.40	-0.87
	(0.010)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.007)	(0.007)	(0.006)	(0.006)	(0.006)
No. Stocks Traded	-0.69	-0.74	-0.69	0.86	-0.06	-1.12	0.77	0.21	0.37	0.45	-0.36
	(0.011)	(0.008)	(0.009)	(0.009)	(0.008)	(0.008)	(0.008)	(0.007)	(0.007)	(0.007)	(0.007)
Southern	-0.32	0.58	-0.17	0.31	-0.42	0.44	0.20	0.17	0.08	-0.18	-0.82
	(0.013)	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)	(0.009)	(0.008)	(0.008)	(0.008)	(0.008)
Western	-0.51	-0.99	0.43	-1.23	0.62	-0.36	-1.18	0.41	-0.29	-0.25	-0.42
	(0.014)	(0.011)	(0.011)	(0.011)	(0.011)	(0.010)	(0.010)	(0.009)	(0.009)	(0.008)	(0.008)
Northern	-1.55	-0.99	0.31	-1.05	0.54	-0.68	-0.29	-0.13	-0.67	-0.09	0.13
	(0.013)	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)	(0.009)	(0.008)	(0.008)	(0.008)	(0.008)
Adj. Rsq	8.02	20.35	11.94	4.15	5.06	3.38	2.21	1.31	3.14	2.15	3.09

Table A.12

Who Owns What: Characteristic Clusters
Multi Factor Model Estimates

This table presents a multivariate version of the regressions in Table 5. Here, each PC is regressed on the full set of account attributes, instead of each one individually.

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

Table A.13

Who Owns What: Characteristic Clusters

Single Factor Model Estimates: All Characteristics

This table presents a version of Table 5 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	-0.0271	-0.1033
	(0.000)	(0.000)	(0.000)
	9.91%	0.88%	17.73%
No.Stocks	0.0432	-0.0131	-0.0250
	(0.000)	(0.000)	(0.000)
	1.62%	0.21%	1.04%
Age	0.0274	-0.0221	-0.0302
	(0.000)	(0.000)	(0.000)
	0.65%	0.59%	1.51%
Turnover	0.0107	0.0164	0.0480
	(0.000)	(0.000)	(0.000)
	0.10%	0.32%	3.83%
Single Stock Dummy	-0.0813	0.0204	0.0303
	(0.000)	(0.000)	(0.000)
	5.73%	0.50%	1.53%
No. Stocks Traded	0.0387	-0.0022	-0.0024
	(0.000)	(0.000)	(0.000)
	1.30%	0.01%	0.01%
Eastern	0.0129	0.0019	0.0034
	(0.000)	(0.000)	(0.000)
	0.14%	0.00%	0.02%
Southern	0.0322	0.0159	0.0026
	(0.000)	(0.000)	(0.000)
	0.90%	0.30%	0.01%
Western	-0.0163	-0.0217	-0.0080
	(0.000)	(0.000)	(0.000)
	0.23%	0.56%	0.11%
Northern	-0.0221	0.0083	0.0043
	(0.000)	(0.000)	(0.000)
	0.42%	0.08%	0.03%

Table A.14
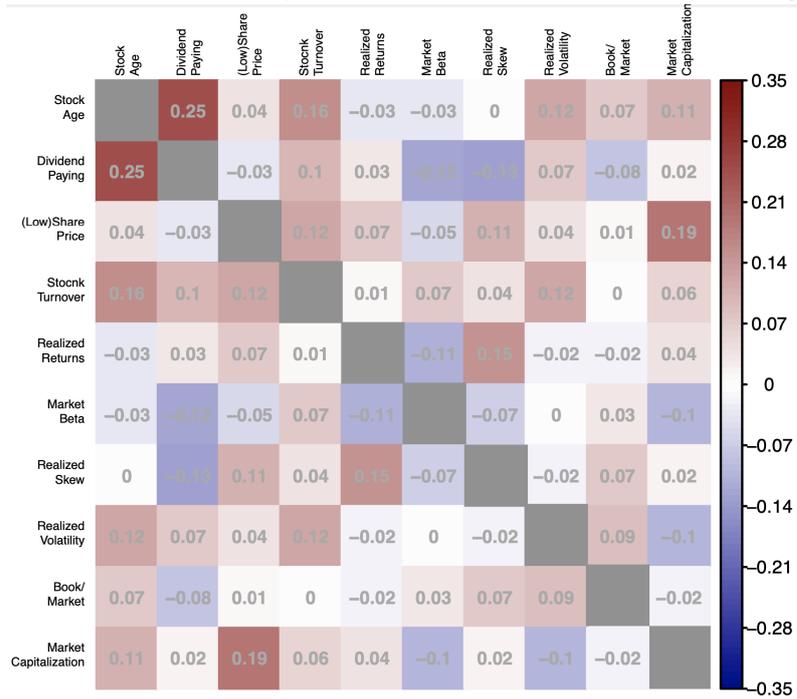### Time-series of Characteristic Clientele Strength

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.

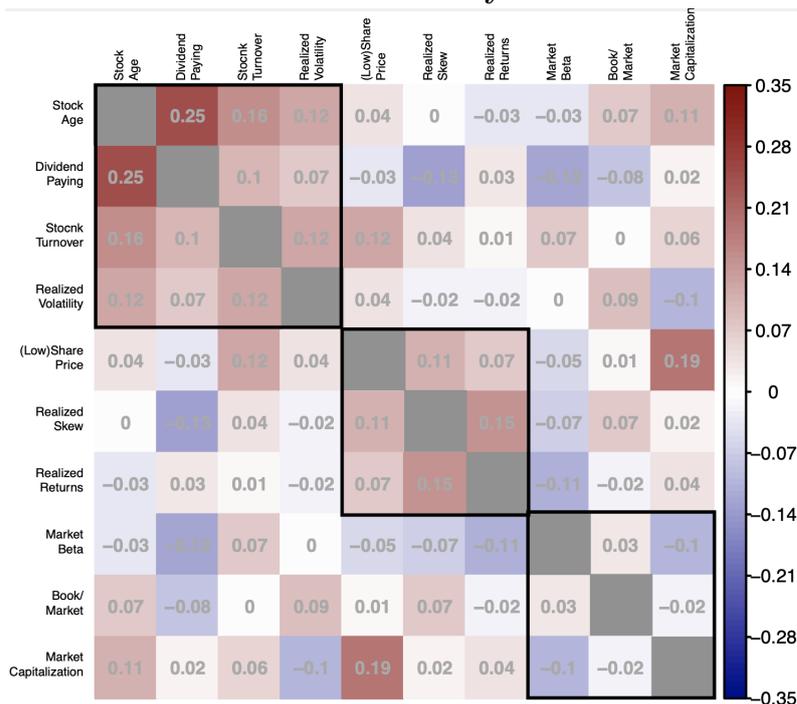| Characteristic	2002	2003	2004	2005	2006	2007	2008	2009	2010	Average	2011
Age	0.063	0.082	0.079	0.084	0.078	0.074	0.078	0.075	0.079	0.077	0.074
Dividend Payer	0.045	0.042	0.047	0.042	0.053	0.044	0.051	0.052	0.047	0.047	0.049
Share Price	0.031	0.026	0.034	0.044	0.037	0.037	0.031	0.034	0.042	0.035	0.045
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.15
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 2), whereas Panel B reorders the characteristics to illustrate the presence of clusters of (coheld) characteristics.

Panel A: Ordered by Characteristic Clientele Strength

	Stock Age	Dividend Paying	(Low)Share Price	Stocnk Turnover	Realized Returns	Market Beta	Realized Skew	Realized Volatility	Book/ Market	Market Capitalization
Stock Age		0.25	0.04	0.16	−0.03	−0.03	0	0.12	0.07	0.11
Dividend Paying	0.25		−0.03	0.1	0.03	−0.13	−0.13	0.07	−0.08	0.02
(Low)Share Price	0.04	−0.03		0.12	0.07	−0.05	0.11	0.04	0.01	0.19
Stocnk Turnover	0.16	0.1	0.12		0.01	0.07	0.04	0.12	0	0.06
Realized Returns	−0.03	0.03	0.07	0.01		−0.11	0.15	−0.02	−0.02	0.04
Market Beta	−0.03	−0.13	−0.05	0.07	−0.11		−0.07	0	0.03	−0.1
Realized Skew	0	−0.13	0.11	0.04	0.15	−0.07		−0.02	0.07	0.02
Realized Volatility	0.12	0.07	0.04	0.12	−0.02	0	−0.02		0.09	−0.1
Book/ Market	0.07	−0.08	0.01	0	−0.02	0.03	0.07	0.09		−0.02
Market Capitalization	0.11	0.02	0.19	0.06	0.04	−0.1	0.02	−0.1	−0.02	

Panel B: Ordered by Cluster

	Stock Age	Dividend Paying	Stocnk Turnover	Realized Volatility	(Low)Share Price	Realized Skew	Realized Returns	Market Beta	Book/ Market	Market Capitalization
Stock Age		0.25	0.16	0.12	0.04	0	−0.03	−0.03	0.07	0.11
Dividend Paying	0.25		0.1	0.07	−0.03	−0.13	0.03	−0.13	−0.08	0.02
Stocnk Turnover	0.16	0.1		0.12	0.12	0.04	0.01	0.07	0	0.06
Realized Volatility	0.12	0.07	0.12		0.04	−0.02	−0.02	0	0.09	−0.1
(Low)Share Price	0.04	−0.03	0.12	0.04		0.11	0.07	−0.05	0.01	0.19
Realized Skew	0	−0.13	0.04	−0.02	0.11		0.15	−0.07	0.07	0.02
Realized Returns	−0.03	0.03	0.01	−0.02	0.07	0.15		−0.11	−0.02	0.04
Market Beta	−0.03	−0.13	0.07	0	−0.05	−0.07	−0.11		0.03	−0.1
Book/ Market	0.07	−0.08	0	0.09	0.01	0.07	−0.02	0.03		−0.02
Market Capitalization	0.11	0.02	0.06	−0.1	0.19	0.02	0.04	−0.1	−0.02	

Table A.16
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.

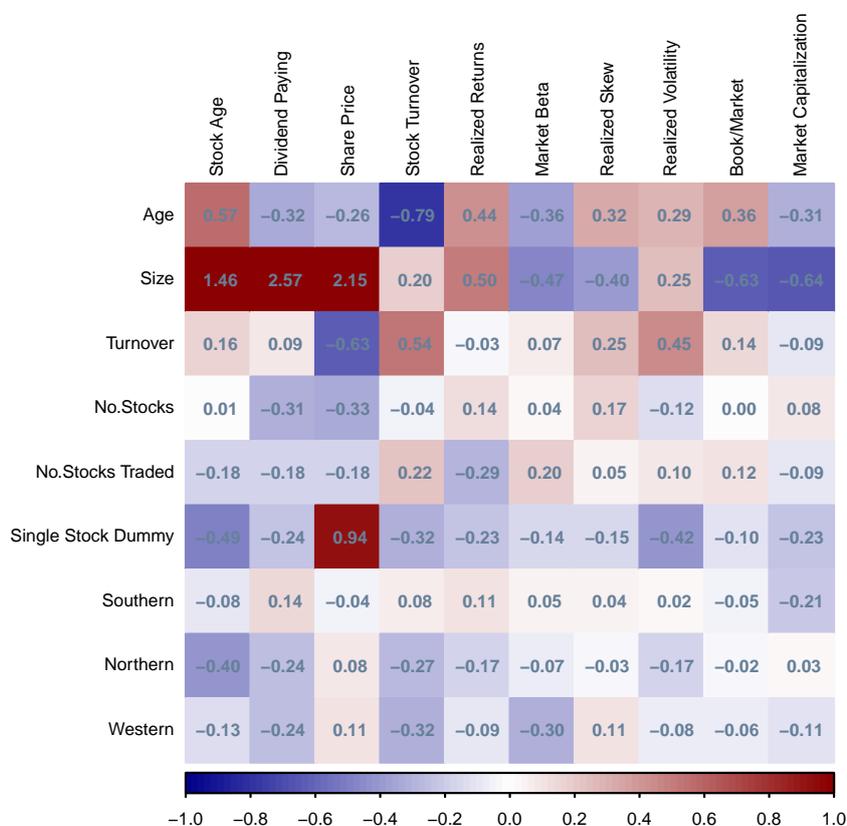|	Stock Age	Dividend Paying	Share Price	Turnover	Bus. Gp. Any	Realized Returns	Market Beta	Realized Skew	Realized Volatility	Book /Market	Market Cap.
Size	0.65	8.37	5.83	0.57	-1.87	1.06	-1.88	-1.54	0.58	-0.89	-0.11
	(1.889)	(1.349)	(1.959)	(2.867)	(2.185)	(2.362)	(2.768)	(1.885)	(1.897)	(0.814)	(1.516)
	6.38	17.26	10.54	1.42	2.01	1.91	2.41	1.32	1.13	0.52	0.82
No.Stocks	3.42	2.26	1.15	0.70	-0.16	0.78	-0.74	-0.16	0.56	-0.02	0.17
	(0.997)	(1.171)	(0.684)	(1.271)	(1.220)	(0.978)	(1.418)	(0.771)	(0.651)	(0.468)	(0.557)
	1.74	1.47	0.47	0.35	0.35	0.45	0.55	0.15	0.21	0.07	0.13
Age	5.85	1.71	0.28	-1.20	-0.20	0.85	-1.66	0.03	0.70	1.17	0.34
	(1.363)	(1.734)	(0.871)	(2.086)	(2.288)	(2.628)	(2.391)	(1.152)	(1.243)	(0.746)	(0.712)
	4.82	1.24	0.21	1.26	1.22	1.87	1.95	0.30	0.55	0.60	0.25
Turnover	-0.95	-2.84	-3.18	1.86	0.75	-0.42	0.67	0.46	1.55	-0.02	0.55
	(1.090)	(1.220)	(0.818)	(1.248)	(0.349)	(1.062)	(1.524)	(1.026)	(1.324)	(0.654)	(0.446)
	0.26	2.38	2.98	1.00	0.19	0.39	0.65	0.29	1.16	0.14	0.18
Single Stock Dummy	-4.98	-3.30	-1.39	-1.47	0.30	-1.10	0.94	0.32	-1.25	0.29	-0.80
	(1.450)	(2.627)	(1.721)	(3.174)	(2.334)	(2.030)	(2.822)	(1.637)	(1.906)	(0.818)	(1.387)
	3.62	3.82	1.26	1.93	1.30	1.49	1.84	0.63	1.29	0.27	0.91
No. Stocks Traded	1.13	0.73	-0.16	1.75	-0.06	0.06	0.02	0.01	1.13	-0.34	0.35
	(0.996)	(1.178)	(0.534)	(1.345)	(0.648)	(0.739)	(1.355)	(0.916)	(0.916)	(0.442)	(0.428)
	0.30	0.39	0.08	0.91	0.10	0.15	0.42	0.21	0.56	0.11	0.12
Eastern	0.52	0.00	-0.18	0.58	0.23	0.00	0.20	0.02	-0.12	-0.24	0.71
	(0.347)	(0.656)	(0.245)	(0.492)	(0.286)	(0.232)	(0.313)	(0.448)	(0.448)	(0.246)	(0.181)
	0.05	0.09	0.02	0.11	0.03	0.01	0.04	0.04	0.06	0.04	0.21
Southern	-1.26	1.00	-0.48	0.61	-1.01	0.13	-0.50	-0.35	0.23	-0.16	-0.01
	(1.510)	(0.737)	(0.204)	(0.686)	(0.139)	(0.481)	(0.647)	(0.579)	(0.728)	(0.185)	(0.565)
	0.48	0.35	0.08	0.16	0.29	0.06	0.15	0.10	0.15	0.02	0.12
Western	2.19	-0.02	0.65	-0.77	0.67	0.05	0.03	-0.07	0.29	0.34	-0.68
	(1.473)	(0.930)	(0.245)	(0.710)	(0.229)	(0.743)	(0.798)	(0.632)	(0.762)	(0.253)	(0.312)
	0.89	0.18	0.13	0.27	0.14	0.14	0.16	0.09	0.18	0.05	0.21
Northern	-1.74	-0.96	-0.16	-0.10	0.03	-0.18	0.30	0.41	-0.47	-0.07	0.29
	(0.448)	(0.141)	(0.361)	(0.815)	(0.496)	(0.776)	(0.762)	(0.901)	(0.376)	(0.309)	(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.17

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.

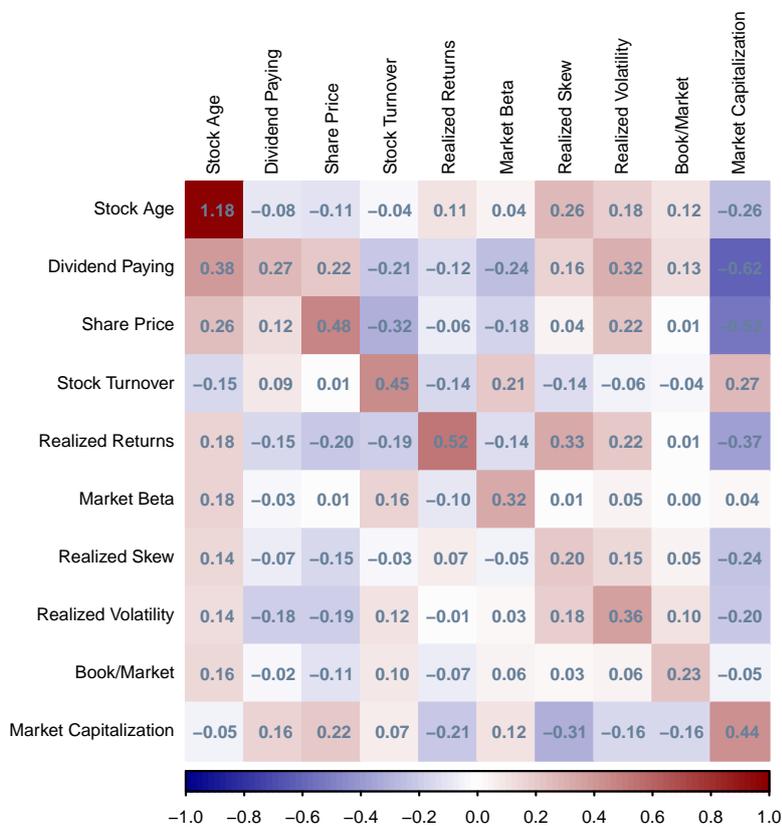|	PC1	PC2	PC3
Size	0.0812	-0.0630	0.0630
	(0.033)	(0.023)	(0.023)
	8.282	9.802	9.802
No.Stocks	0.0386	-0.0137	0.0137
	(0.017)	(0.006)	(0.006)
	1.903	0.519	0.519
Age	0.0517	-0.0204	0.0204
	(0.024)	(0.015)	(0.015)
	3.438	1.407	1.407
Turnover	-0.0042	0.0330	-0.0330
	(0.018)	(0.010)	(0.010)
	0.414	2.536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

Table A.18
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.

	Stock Age	Dividend Paying	Share Price	Stock Turnover	Realized Returns	Market Beta	Realized Skew	Realized Volatility	Book/Market	Market Capitalization
Age	0.57	−0.32	−0.26	−0.79	0.44	−0.36	0.32	0.29	0.36	−0.31
Size	1.46	2.57	2.15	0.20	0.50	−0.47	−0.40	0.25	−0.63	−0.64
Turnover	0.16	0.09	−0.63	0.54	−0.03	0.07	0.25	0.45	0.14	−0.09
No.Stocks	0.01	−0.31	−0.33	−0.04	0.14	0.04	0.17	−0.12	0.00	0.08
No.Stocks Traded	−0.18	−0.18	−0.18	0.22	−0.29	0.20	0.05	0.10	0.12	−0.09
Single Stock Dummy	−0.49	−0.24	0.94	−0.32	−0.23	−0.14	−0.15	−0.42	−0.10	−0.23
Southern	−0.08	0.14	−0.04	0.08	0.11	0.05	0.04	0.02	−0.05	−0.21
Northern	−0.40	−0.24	0.08	−0.27	−0.17	−0.07	−0.03	−0.17	−0.02	0.03
Western	−0.13	−0.24	0.11	−0.32	−0.09	−0.30	0.11	−0.08	−0.06	−0.11

−1.0 −0.8 −0.6 −0.4 −0.2 0.0 0.2 0.4 0.6 0.8 1.0

Table A.19
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.

	Stock Age	Dividend Paying	Share Price	Stock Turnover	Realized Returns	Market Beta	Realized Skew	Realized Volatility	Book/Market	Market Capitalization
Stock Age	1.18	−0.08	−0.11	−0.04	0.11	0.04	0.26	0.18	0.12	−0.26
Dividend Paying	0.38	0.27	0.22	−0.21	−0.12	−0.24	0.16	0.32	0.13	−0.62
Share Price	0.26	0.12	0.48	−0.32	−0.06	−0.18	0.04	0.22	0.01	−0.53
Stock Turnover	−0.15	0.09	0.01	0.45	−0.14	0.21	−0.14	−0.06	−0.04	0.27
Realized Returns	0.18	−0.15	−0.20	−0.19	0.52	−0.14	0.33	0.22	0.01	−0.37
Market Beta	0.18	−0.03	0.01	0.16	−0.10	0.32	0.01	0.05	0.00	0.04
Realized Skew	0.14	−0.07	−0.15	−0.03	0.07	−0.05	0.20	0.15	0.05	−0.24
Realized Volatility	0.14	−0.18	−0.19	0.12	−0.01	0.03	0.18	0.36	0.10	−0.20
Book/Market	0.16	−0.02	−0.11	0.10	−0.07	0.06	0.03	0.06	0.23	−0.05
Market Capitalization	−0.05	0.16	0.22	0.07	−0.21	0.12	−0.31	−0.16	−0.16	0.44

−1.0 −0.8 −0.6 −0.4 −0.2 0.0 0.2 0.4 0.6 0.8 1.0

Table A.20
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 6 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.21
Characteristic Return and Tilt Variances and Covariances
Account Size Weighted Estimates

This table presents a reconstruction of Table 9 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			0.003		
	(0.004)			(0.003)		
Of which, coholding contribution		-0.005	0.030		0.042***	0.054***
		(0.017)	(0.026)		(0.009)	(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.22
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	Rank normalized	Raw
	(1)	(2)	(3)
Constant	0.000***	0.627***	0.007***
	(0.000)	(0.011)	(0.000)
Holdings Variance	-0.206		
	(0.160)		
... Rank normalized		-0.253***	-0.002***
		(0.020)	(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.23
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	Rank normalized	Raw ×100
	(1)	(2)	(3)
Constant	0.100***	0.443***	0.071***
	(0.000)	(0.000)	(0.000)
Coholdings	199.490*		
	(117.990)		
... Rank normalized		0.114***	0.034***
		(0.001)	(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.24

Characteristic Return and Tilt Variances and Covariances Over Time

This table presents coefficients from regressions in columns 3 and 6 of Table 9, 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*	0.069**	0.076	0.052	0.077**	0.120***		0.057***	0.065***	0.061***	0.066***	0.061***	0.063***
	(0.032)	(0.033)	(0.050)	(0.037)	(0.033)	(0.038)		(0.011)	(0.010)	(0.010)	(0.011)	(0.008)	(0.006)
Holding Contrib	-0.009	-0.016*	-0.021	-0.013	-0.016**	-0.020**		-0.009***	-0.009***	-0.018***	-0.016***	-0.010***	-0.010***
	(0.007)	(0.008)	(0.014)	(0.010)	(0.007)	(0.008)		(0.003)	(0.002)	(0.003)	(0.003)	(0.002)	(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.25

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.20, 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***	0.167***	0.082***	0.191***	0.044***	0.257***	0.444***	0.061***	0.071***
	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Rank normalized Holdings Covariance	0.029***	0.093***	0.147***	0.140***	0.040***	0.116***	0.081***	0.013***	0.034***
	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)	(0.001)	(0.001)	(0.000)	(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.
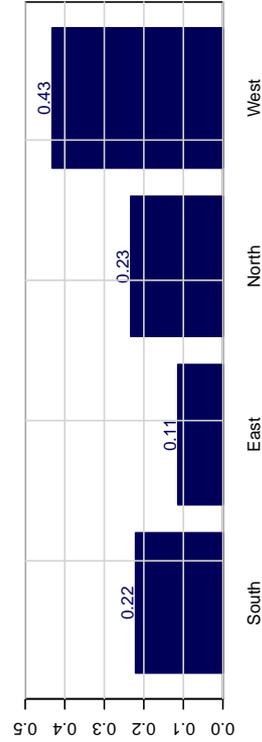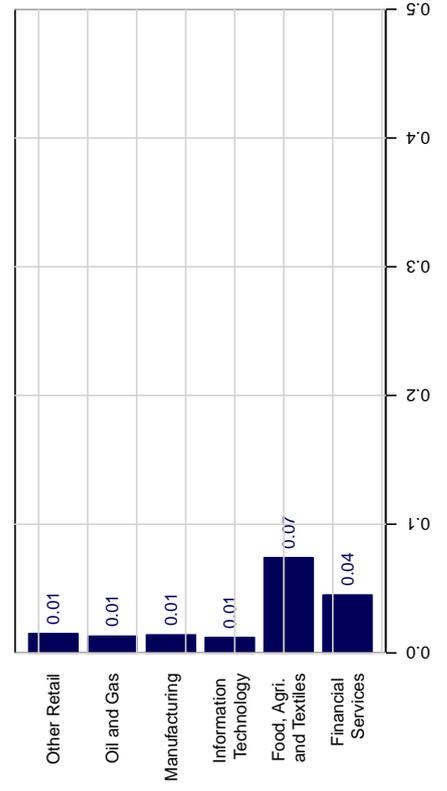
Panel A: Number of Observations
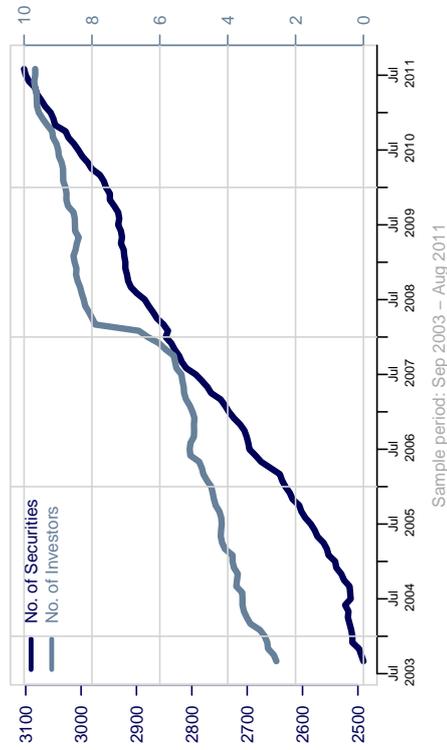
Panel B: Business Groups
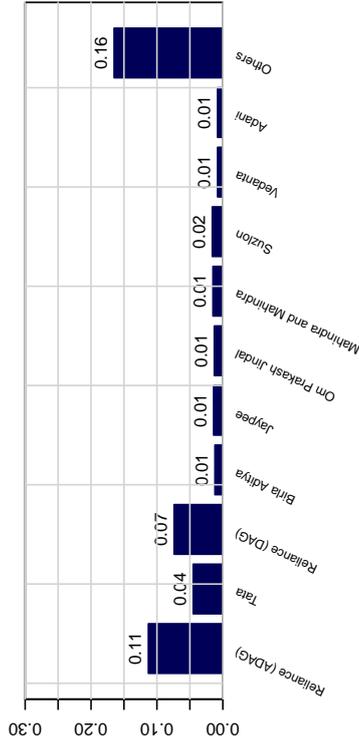
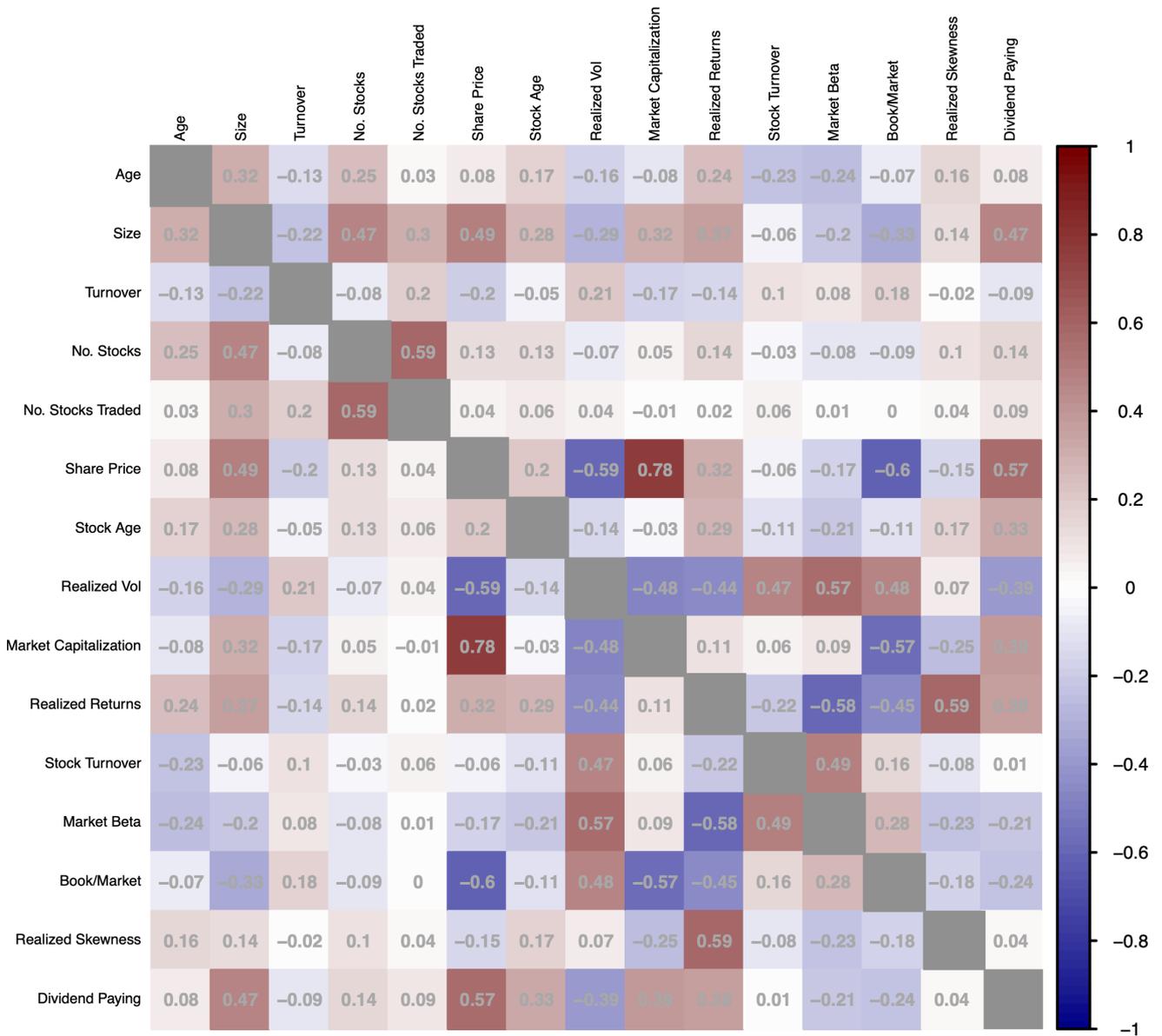Panel C: Geography

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.
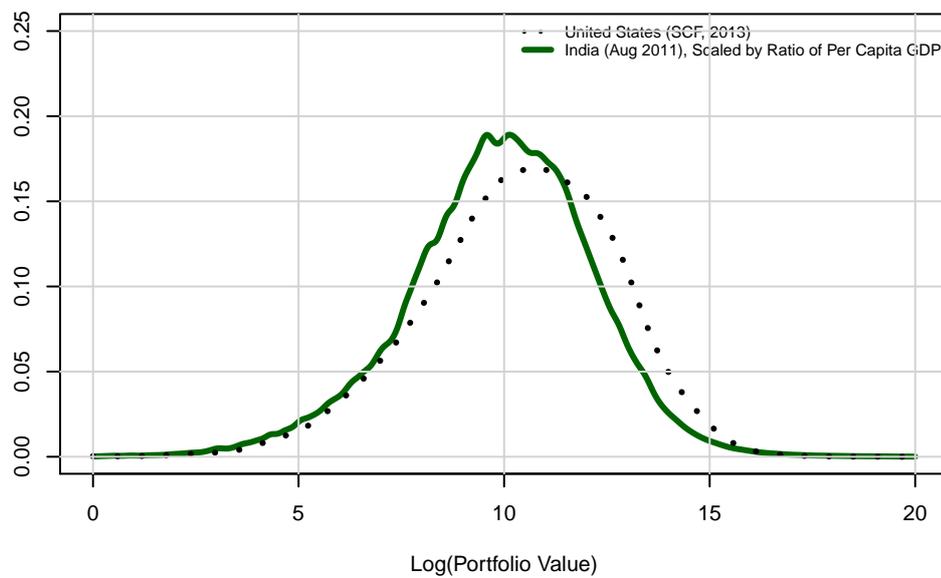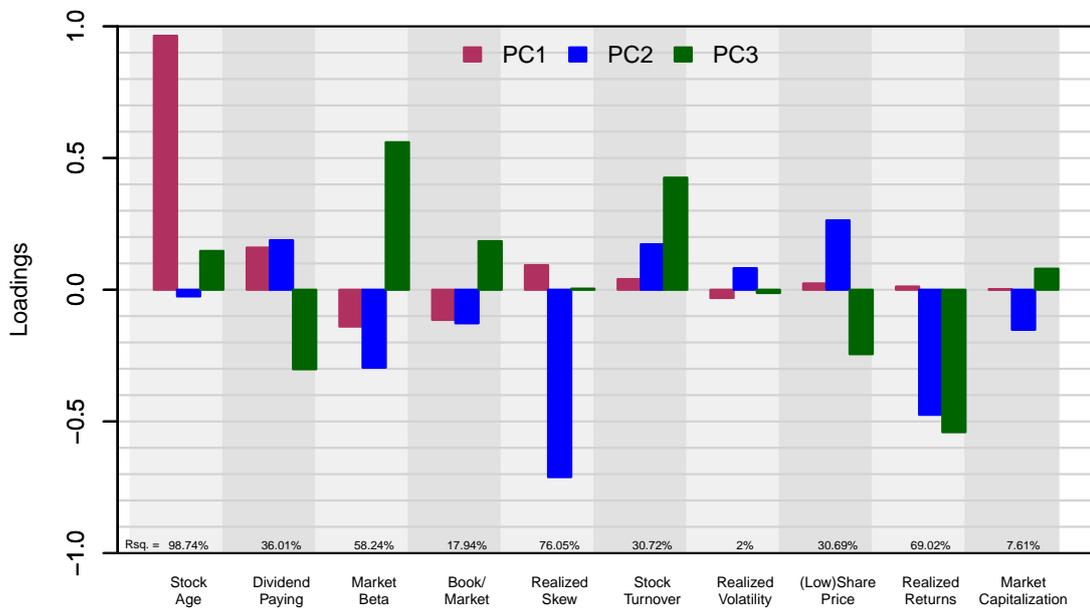
Figure A.3
Correlation Matrix

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


	Age	Size	Turnover	No. Stocks	No. Stocks Traded	Share Price	Stock Age	Realized Vol	Market Capitalization	Realized Returns	Stock Turnover	Market Beta	Book/Market	Realized Skewness	Dividend Paying
Age		0.32	−0.13	0.25	0.03	0.08	0.17	−0.16	−0.08	0.24	−0.23	−0.24	−0.07	0.16	0.08
Size	0.32		−0.22	0.47	0.3	0.49	0.28	−0.29	0.32	0.37	−0.06	−0.2	−0.33	0.14	0.47
Turnover	−0.13	−0.22		−0.08	0.2	−0.2	−0.05	0.21	−0.17	−0.14	0.1	0.08	0.18	−0.02	−0.09
No. Stocks	0.25	0.47	−0.08		0.59	0.13	0.13	−0.07	0.05	0.14	−0.03	−0.08	−0.09	0.1	0.14
No. Stocks Traded	0.03	0.3	0.2	0.59		0.04	0.06	0.04	−0.01	0.02	0.06	0.01	0	0.04	0.09
Share Price	0.08	0.49	−0.2	0.13	0.04		0.2	−0.59	0.78	0.32	−0.06	−0.17	−0.6	−0.15	0.57
Stock Age	0.17	0.28	−0.05	0.13	0.06	0.2		−0.14	−0.03	0.29	−0.11	−0.21	−0.11	0.17	0.33
Realized Vol	−0.16	−0.29	0.21	−0.07	0.04	−0.59	−0.14		−0.48	−0.44	0.47	0.57	0.48	0.07	−0.39
Market Capitalization	−0.08	0.32	−0.17	0.05	−0.01	0.78	−0.03	−0.48		0.11	0.06	0.09	−0.57	−0.25	0.39
Realized Returns	0.24	0.37	−0.14	0.14	0.02	0.32	0.29	−0.44	0.11		−0.22	−0.58	−0.45	0.59	0.39
Stock Turnover	−0.23	−0.06	0.1	−0.03	0.06	−0.06	−0.11	0.47	0.06	−0.22		0.49	0.16	−0.08	0.01
Market Beta	−0.24	−0.2	0.08	−0.08	0.01	−0.17	−0.21	0.57	0.09	−0.58	0.49		0.28	−0.23	−0.21
Book/Market	−0.07	−0.33	0.18	−0.09	0	−0.6	−0.11	0.48	−0.57	−0.45	0.16	0.28		−0.18	−0.24
Realized Skewness	0.16	0.14	−0.02	0.1	0.04	−0.15	0.17	0.07	−0.25	0.59	−0.08	−0.23	−0.18		0.04
Dividend Paying	0.08	0.47	−0.09	0.14	0.09	0.57	0.33	−0.39	0.39	0.39	0.01	−0.21	−0.24	0.04	

Figure A.4

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.5
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).
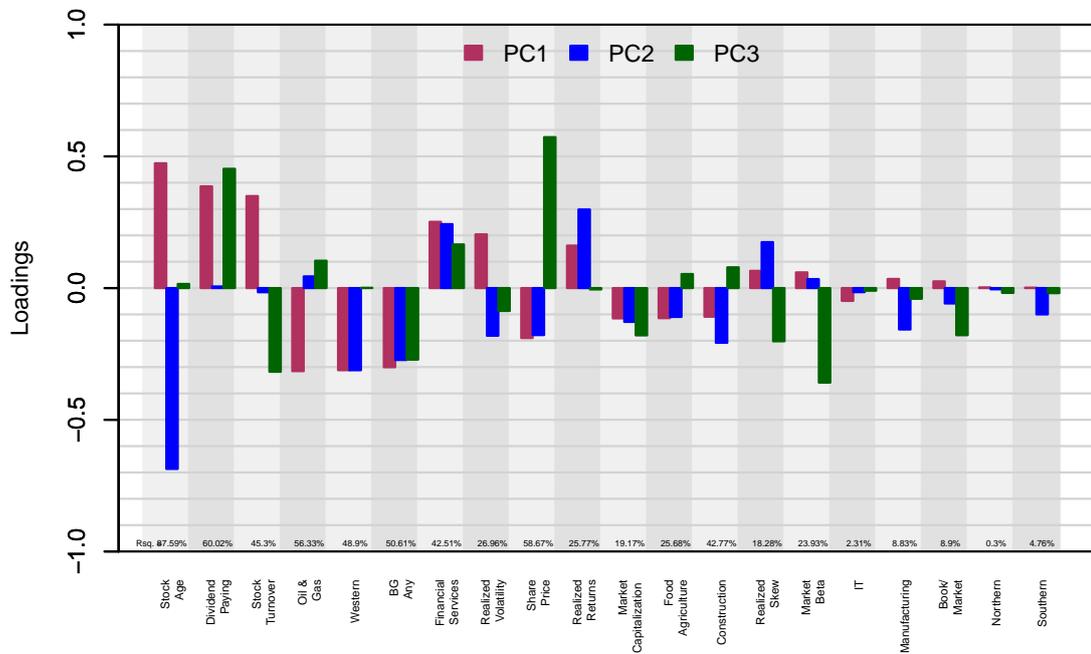
Figure A.6
Comparison of Stock Level R-Squareds

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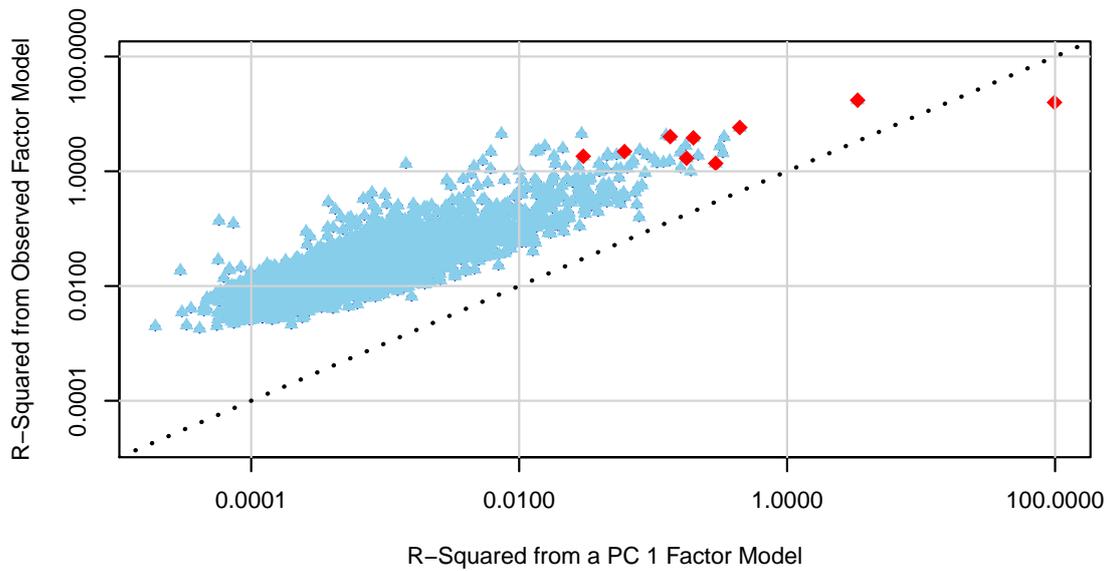
Panel B: Observed factor model vs. PC 1-10 Factor model