

APPENDIX TO
INVESTIBILITY AND RETURN VOLATILITY IN EMERGING EQUITY MARKETS

Kee-Hong Bae
College of Business Administration
Korea University
Seoul 136-701
Korea

Kalok Chan*
Department of Finance
Hong Kong University of Science and Technology
Clearwater Bay
Hong Kong
China

Angela Ng
Department of Finance
Hong Kong University of Science and Technology
Clearwater Bay
Hong Kong
China

October, 2002

Appendix. Filtering extreme observations

Table A1.

We screen out the return and volume outliers based on the following criteria.

Return outliers:

1. Absolute return for an individual stock in a month is bigger than 99.9% of the all firm-month return observations of the country but monthly turnover in that month is not bigger than 90% of the firm-month turnover observations
2. The return deviates from the return figure from the Datastream by more than 5% or if the return figure is not available from the Datastream.

Volume outliers:

1. Turnvoer for an individual stock in a month is bigger than 99.9% of the all firm-month turnover observations of the country but absolute returns in that month is not bigger than 90% of the firm-month absolute return observations
2. The turnover deviates from the turnover figure from the Datastream by more than 5% or if the turnover figure is not available from the Datastream.

	Country	Company name	Date	Monthly Return	Monthly Turnover
Extreme return observations					
1	Argentina	Massalin Particulares	199111	13.9972	0.0000
2	Argentina	Pirelli Cables	198906	5.6415	0.0000
3	Argentina	Rigolleau S.A.	198906	4.1597	0.0000
4	Brazil	Companhia Acos Especiais Itabira - Acesita	199105	2.2740	0.0013
5	Brazil	Companhia Acos Especiais Itabira - Acesita	198908	2.8571	0.0004
6	Brazil	Companhia Acos Especiais Itabira - Acesita	199201	2.9357	0.0011
7	Brazil	Companhia Hering	199201	3.0454	0.0317
8	Brazil	Companhia Paulista de Forca e Luz	199105	2.0585	0.0068
9	Brazil	Companhia Paulista de Forca e Luz	199112	2.4138	0.0132
10	Brazil	Eluma S.A. Industria e Comercio	199201	2.7826	0.0197
11	Brazil	Mesbla S.A.	199201	2.8349	0.0271
12	China	Dazhong Transportation	199304	2.3899	0.1030
13	China	SHA Chlor Alkali Chemicals Company Ltd.	199408	1.8978	0.0436
14	China	SHA Huang Pu Real Estate Company Ltd.	199408	1.8357	0.2711
15	China	SHA Light Industry Machinery Company Ltd.	199408	2.0511	0.2526
16	China	SHA Refrigerator Compressor Company Ltd.	199408	1.8657	0.2152
17	Chile	Antar S.A.	199408	0.7946	0.0074
18	Chile	Cia. de Inversiones Luz S. A.	199809	-0.8377	0.0130
19	Chile	Forestal Cholguan S.A.	199102	1.0735	0.0010
20	Chile	Pesquera Indo S.A.	199305	1.1687	0.0102
21	Chile	Telex-Chile S.A.	199811	2.0071	0.0111
22	Chile	Vi. Concha y Toro S.A.	199102	0.8982	0.0013
23	Colombia	Aerovias .cio.les (Avianca)	199111	3.4128	0.0091
24	Colombia	Cementos Diamante	199812	1.6768	0.0044
25	Colombia	Siderurgica de Medellin	199602	2.4473	0.0018
26	Czech Republic	Armabeton a.s.Praha	199402	1.1395	0.0000
27	Czech Republic	SELIKO a.s.	199608	1.5794	0.0000
28	Czech Republic	Sklarny Kavalier a.s.	199402	1.1464	0.0000

29	Czech Republic	Zavody presneho strojirenstvi Zlin a.s.	199402	1.1315	0.0000
30	Egypt	Alexandria Spinning and Weaving	200003	2.7815	0.0000
31	Egypt	El Shams for Housing and Development	199607	1.0943	0.0086
32	Greece	Piraiiki Patraiki	199004	2.0000	0.0000
33	India	Hindustan Motors Ltd.	199906	1.1799	0.0487
34	India	Jaiprakash Industries Ltd.	199907	1.5697	0.0572
35	India	Jindal Strips Ltd.	199910	2.2797	0.0000
36	India	Oswal Agro Mills Ltd.	199203	1.6446	0.0193
37	India	Philips Medical Systems India Ltd.	199803	1.2520	0.0257
38	India	Titan Industries Ltd.	199812	1.1412	0.0527
39	Indonesia	PT. Duta Anggada Realty	199811	3.0828	0.0338
40	Indonesia	PT. Japfa Comfeed Indonesia	199905	4.0161	0.0467
41	Jordan	Jordan French Insurance Co.	198906	-0.4682	0.0583
42	Korea	Central Investment & Finance Corp.	199801	2.6441	0.1931
43	Korea	Han Shin Construction Co., Ltd.	199809	2.6900	0.0962
44	Malaysia	Renong Berhad	199809	2.1260	0.0412
45	Mexico	Cia. Mex. de Aviacion S.A.	198910	3.6947	0.0000
46	Mexico	Far-Ben, S. A. de C. V.	199504	1.3069	0.0223
47	Mexico	Grupo Financiero Bancomer, S. A. de C. V.	199504	1.0935	0.0179
48	Mexico	Grupo Ind. Saltillo	198801	1.9401	0.0018
49	Mexico	Grupo Sidek, S.A. de C.V.	199705	1.4551	0.0041
50	Mexico	Grupo Sidek, S.A. de C.V.	199803	2.3365	0.0577
51	Mexico	Grupo Simec, S.A. de C.V.	199903	1.2545	0.0491
52	Mexico	Savia, S.A. de C.V.	198911	1.3232	0.0000
53	Nigeria	Evans Medical Plc.	199401	1.7273	0.0001
54	Nigeria	First Bank Of Nigeria Plc.	199308	3.0036	0.0001
55	Nigeria	Union Bank of Nigeria Plc.	199401	2.8583	0.0001
56	Nigeria	United Bank for Africa Plc.	199403	3.0751	0.0000
57	Pakistan	Bankers Equity Ltd.	199111	1.1088	0.0339
58	Pakistan	Ciba-Geigy (Pakistan) Ltd.	199204	1.0929	0.0190
59	Pakistan	Dandot Cement Company Ltd.	199902	1.0909	0.0004
60	Pakistan	Mohib Exports Ltd.	199702	1.4242	0.0343
61	Pakistan	Tri-Star Power Ltd.	199702	1.3113	0.0240
62	Philippines	Manila Mining Corporation	199810	2.2556	0.0113
63	Philippines	Mondragon International Phils. Inc.	199810	2.1805	0.0807
64	Portugal	Banco Comercial Portugues, S.A.	199204	0.8855	0.0077
65	Portugal	Investimentos, Participacoes e Gestao, S.A.	199308	0.6549	0.0233
66	Portugal	Mague, Gestao e Participacoes, S.A.	198909	0.6461	0.0486
67	Russia	YUKOS Oil Company	199901	18.8083	0.0000
68	Slovakia	Povazske Strojarnie a.s.	199906	26.7727	0.0000
69	South Africa	Anglovaal Mining Limited	199809	0.9527	0.0239
70	Sri Lanka	Hora. Plantations Limited	199909	1.5998	0.0092
71	Taiwan	Chi. Steel	198809	1.0026	0.7363
72	Taiwan	Chi. Trust Business Bank	199312	1.1356	0.5008
73	Taiwan	Ever Fortune Industrial Co., Ltd.	200001	0.9420	0.3749
74	Taiwan	Taiwan Pineapple	200001	0.9283	0.3932
75	Taiwan	Teco Electronics & Machinery	198809	0.9395	0.3609
76	Taiwan	The Medium Business Bank of Taitung	200001	1.1261	0.3183

77	Thailand	Phatra Tha.kit Co. Ltd.	199810	1.9880	0.0066
78	Turkey	Goodyear Lastikleri T.A.S.	198909	1.6978	0.0077
79	Turkey	Rabak Elektrolitik Bakir Mamulleri	198909	2.2736	0.1553

Extreme turnover observations

1	Argentina	Ca.le	199206	0.2750	36.5556
2	Argentina	Celulosa Argenti. S.A.	199201	0.0138	0.8048
3	Argentina	Industria Argenti. de Acero S.A.	199212	0.1016	0.6564
4	Brazil	Companhia de Bebidas das Americas (Ambev)	199909	0.1408	0.8891
5	Brazil	Companhia Vale Do Rio Doce	199604	-0.0650	1.2645
6	Brazil	Mannesmann S.A.	199304	-0.0352	2.0548
7	Brazil	Petroleo Brasileiro S.A. - Petrobras	200006	0.3237	0.7798
8	Brazil	Sadia S.A.	199404	-0.2728	1.4309
9	Brazil	Sementes Agrocereos S.A.	199805	-0.0300	0.7317
10	Brazil	Unipar - Uniao de Industrias Petroquimicas S.A.	199506	-0.0751	5.9423
11	China	SHA Aishi Electric Appliance Company Ltd.	199312	0.0174	3.6648
12	China	SHA Feile Video Company Ltd.	199312	0.1429	3.5410
13	China	SHA Yanzhong Industrial Company Ltd.	199403	0.0536	2.8698
14	China	SHA Yanzhong Industrial Company Ltd.	199311	0.0751	3.0103
15	China	SHZ Konka Electronics Group Company Ltd.	199308	0.0341	4.0734
16	Chile	Emp. .c. de Electricidad S.A.	199905	-0.1439	0.3153
17	Chile	Soc. Quimica y Minera de Chile S.A.	199510	-0.0079	0.1426
18	Colombia	Cerveceria Union	198808	-0.0689	0.2579
19	Czech Republic	DEZA a.s.	199811	-0.0051	0.4182
20	Czech Republic	Rakovnicke keramicke zavody a.s.	199803	0.1176	0.4211
21	Czech Republic	Vodni stavby Praha a.s.	199805	-0.1185	0.4649
22	Egypt	El Kahera Housing and Development	199703	-0.1117	0.9843
23	Greece	Altec SA Info & Comm systems	200006	-0.1902	0.8237
24	Greece	Hellenic Sugar Industry	199612	-0.0405	0.7956
25	Greece	Mortgage Bank (ex-.tio.l Mortgage Bank)	199512	-0.0190	0.8549
26	India	Pentamedia Graphics Ltd.	199902	-0.1914	3.3433
27	India	The Associated Cement Companies Ltd.	198912	0.1518	2.0758
28	Indonesia	Lippo Land	199908	-0.1537	1.1699
29	Indonesia	PT. Bank Inter.tio.l Indonesia	199906	-0.0612	1.7302
30	Indonesia	PT. Inter.tio.l Nickel Indonesia	199908	-0.1398	1.2194
31	Jordan	The Middle East & Commodore Hotels	199204	0.0360	1.1022
32	Korea	Daishin Securities Co., Ltd.	200007	-0.0230	3.3469
33	Korea	Korea Computer Inc.	199905	0.2081	3.2276
34	Korea	Korea Express Co., Ltd.	199912	-0.0242	2.9295
35	Korea	Medison Co. Ltd.	199802	0.1257	3.1219
36	Korea	Samsung Corporation	199805	-0.0906	66.9513
37	Korea	The Will-Bes & Co.	200001	0.1101	3.7326
38	Malaysia	Chase Perda.	199710	-0.1327	2.2035
39	Malaysia	Chase Perda.	199709	-0.0514	1.5993
40	Malaysia	Perda. Industri Holdings Bhd.	199703	0.0171	1.8495
41	Malaysia	TH Group Bhd.	199907	-0.1109	3.9609
42	Malaysia	TH Group Bhd.	199609	0.2160	2.2683
43	Malaysia	TH Group Bhd.	199607	0.2299	1.7939

44	Mexico	Acciones y Valores de Mexico S.A. de C.V.	199109	0.0523	0.9919
45	Mexico	Aerovias de Mexico, S.A. de C.V.	199606	-0.0773	1.1434
46	Mexico	Aerovias de Mexico, S.A. de C.V.	199508	0.1272	1.2675
47	Mexico	Cementos Guadalajara	199004	0.0523	0.8099
48	Mexico	Grupo Elektra, S.A. de C. V.	199709	0.1400	0.8821
49	Mexico	Grupo Video Visa, S.A. de C. V.	199402	-0.0224	0.6450
50	Nigeria	Nigerian Breweries Plc.	199610	-0.1779	0.1469
51	Nigeria	Unipetrol Nigeria PLC	199912	0.1129	0.2588
52	Nigeria	United Bank for Africa Plc.	199811	-0.1099	0.3101
53	Nigeria	United Bank for Africa Plc.	199807	-0.0262	0.1017
54	Pakistan	Pakistan State Oil Co. Ltd.	200005	-0.2199	3.3307
55	Pakistan	Pakistan State Oil Co. Ltd.	200006	-0.0365	2.8489
56	Peru	Banco de Credito del Peru	199510	-0.1253	0.9354
57	Philippines	Mondragon Inter.tio.l Phils. Inc.	199909	0.1230	1.4926
58	Philippines	Philippine Commercial Int. Bank	199905	0.0514	0.7498
59	Poland	Exbud Spolka Akcyj.	199303	0.0793	0.5300
60	Portugal	Banco Chemical, S.A.	199304	-0.0506	0.8469
61	Portugal	Modelo, S.G.P.S., S.A.	199509	0.0078	0.7800
62	Russia	AO "Moscow City Telephone"	199604	0.0308	4046.0313
63	Slovakia	Slovenska poistov. a.s.	199812	0.0891	0.7200
64	South Africa	Computer Configuration Holding Limited	200007	-0.0532	0.3177
65	South Africa	Specialized Outsourcing Limited	199912	0.1113	0.4983
66	South Africa	Usko Limited	199907	-0.0674	0.3686
67	South Africa	Usko Limited	199908	0.0639	0.3746
68	Sri Lanka	United Motors Lanka Limited	199911	0.1164	0.4616
69	Taiwan	Chi. Wire & Cable	199004	-0.0457	3.8168
70	Taiwan	Imperial Hotel	199406	0.1283	3.8538
71	Taiwan	Imperial Hotel	199404	0.1518	6.1709
72	Taiwan	Imperial Hotel	199405	0.2035	4.5850
73	Taiwan	Taroko Textile	198911	0.0158	4.0194
74	Thailand	Krisada Maha.korn Co., Ltd.	199811	0.1752	1.8614
75	Thailand	NEP Realty and Industry Co., Ltd.	199209	0.2399	1.9799
76	Turkey	Cukurova Elektrik A.S.	199508	-0.2207	2.2598
77	Turkey	Cukurova Elektrik A.S.	199507	0.1094	3.3007
78	Turkey	Cukurova Elektrik A.S.	199510	0.3602	2.4513
79	Turkey	Kepez Elektrik T.A.?	199605	-0.0266	2.6482
80	Venezuela	Mantex	199101	0.0613	0.6374

Table A2.

Below are the observations that meet the following conditions.

The difference between (Number of shares traded / Shares outstanding) and (Dollar value traded / Market capitalization) is greater than 1.

	Country	Name	Date	Turnover Share	Turnover Dollar
1	Argentina	Fiplasto S.A.	199112	39.5263	0.0298
2	Argentina	Garovaglio Y Zorraquin	199005	20.7625	0.0198
3	Brazil	Companhia Energetica de Minas Gerais - Cemig	199207	11.9405	0.0339
4	Brazil	Perdigao S.A.	200006	96.1162	0.0324
5	Brazil	Petroleo Brasileiro S.A. - Petrobras	200006	3.8859	0.0441
6	Brazil	Usinas Siderugicas de Minas Gerais S.A.-USIMINA	199706	624.5640	0.1073
7	China	SHA Aishi Electric Appliance Company Ltd.	199303	0.6407	1.8471
8	China	SHA Feile Video Company Ltd.	199303	0.9290	2.3322
9	China	Jiangsu Zhengxin Industry and Commerce Share Co	199610	2.7147	1.5247
10	China	SHA Yanzhong Industrial Company Ltd.	199310	11.9327	9.6829
11	Greece	Econ Industries S.A.	199705	0.2406	3.1919
12	Greece	Epilektos S.A.	199705	0.1273	2.9378
13	Greece	Fourlis	199705	0.2160	1.6280
14	Greece	Selonta-Fisheries S.A.	199705	0.3883	5.5607
15	Hungary	Agrimpex RT	199710	2.4774	0.0024
16	Hungary	Danubius Hotel and Spa RT	199808	468.7500	0.0247
17	Hungary	BorsodChem Rt.	199808	485.0659	0.0455
18	Hungary	Dunaholding RT	199301	1.2142	0.0012
19	Hungary	Dunaholding RT	199302	1.2833	0.0014
20	Hungary	Egis	199808	635.7810	0.0810
21	Hungary	Fotex RT	199302	1.6980	0.0017
22	Hungary	Fotex RT	199808	1.3607	0.0110
23	Hungary	Globus	199808	1525.3693	0.2542
24	Hungary	Ibusz	199302	5.5903	0.0050
25	Hungary	Konzum RT	199302	1.9231	0.0020
26	Hungary	Magyar Olaj Gazi Rt.	199808	45.6809	0.0049
27	Hungary	Orszagos Takarekpenztar es Kereskedelmi Bank Rt	199808	271.8808	0.0224
28	Hungary	Pannoplast Muanyagipari Rt.	199808	1468.3928	0.1652
29	Hungary	Pick Szeged RT	199302	3.0178	0.0026
30	Hungary	Pick Szeged RT	199808	2627.9077	0.2066
31	Hungary	Primagaz	199808	611.1111	0.1596
32	Hungary	Richter Gedeon Vegy, szeti Gyr Rt.	199808	382.0594	0.0719
33	Hungary	Skala-Coop RT	199302	9.2791	0.0089
34	Hungary	Tiszai Vegyi Kombinat Rt.	199808	116.6667	0.0195
35	Hungary	Zalakeramia RT	199808	831.5317	0.5353
36	Hungary	Zwack Unicum RT	199808	2155.0000	0.0858
37	India	ITC Bhadrachalam Paper Boards	199811	0.6025	19.6841
38	India	Pentamedia Graphics Ltd.	200007	1.6332	0.0000
39	Korea	Anam Electronics Co., Ltd.	199903	1.9198	3.0835
40	Korea	Daewoo Corporation	199910	1.9205	3.0283

41	Korea	Daishin Securities Co., Ltd.	200003	1.2224	2.2542
42	Korea	Daishin Securities Co., Ltd.	200008	1.3164	3.0651
43	Korea	Dong-A Pharmaceutical Co., Ltd.	199912	4.2980	6.1404
44	Korea	Dong Shin Pharmaceutical Co., Ltd.	199808	0.5459	1.8701
45	Korea	Mirae Co.	199802	7.1396	0.1512
46	Korea	Namhae Chemical Co.	200004	1.7718	0.3775
47	Korea	Samsung Electronics Co., Ltd.	200006	10.5068	0.2043
48	Korea	Segye Corporation	199909	1.5050	2.6521
49	Korea	Taihan Electric Wire Co., Ltd.	198908	2.0162	0.2002
50	Korea	The Will-Bes & Co.	200003	4.9281	6.0363
51	Malaysia	Anson Perdana	200005	0.2548	3.4839
52	Malaysia	Anson Perdana	200006	0.2318	3.5336
53	Malaysia	Brem Holdings	200005	0.5588	1.6274
54	Malaysia	Brem Holdings	200006	0.9182	2.3422
55	Malaysia	Chase Perdana	199708	1.5602	2.6998
56	Malaysia	Concrete Engineering Products	200005	1.0645	6.5855
57	Malaysia	Concrete Engineering Products	200006	0.8998	5.7215
58	Malaysia	Johan Holdings Bhd.	198912	1.3415	0.1277
59	Malaysia	Mah Sing Group	200005	1.3707	15.9921
60	Malaysia	Mah Sing Group	200006	1.6691	21.3071
61	Malaysia	Mancon	200005	0.7604	2.9519
62	Malaysia	Mancon	200006	0.6609	1.8238
63	Malaysia	Seal Inc.	200006	0.4963	2.2327
64	Malaysia	Tekala Corporation Berhad	200005	0.4994	3.8083
65	Malaysia	Tekala Corporation Berhad	200006	0.4785	4.0854
66	Philippines	Basic Petroleum & Minerals Inc.	199012	2.1173	0.3595
67	Poland	Zaklad Matali Lekkich "Kety" SA	199811	1.5284	0.2017
68	Russia	AO "Chernogorneft"	199604	1973.1947	0.0374
69	Russia	AO "Condpetroleum"	199604	577.6468	0.0264
70	Russia	AO "Far Eastern Shipping"	199604	3.4215	0.0061
71	Russia	AO "Irkutskenergo"	199604	11.9629	0.0002
72	Russia	AO "KamAZ"	199604	294.3654	0.0185
73	Russia	AO "Kombineft"	199604	21.1770	0.0234
74	Russia	AO Oil Company LUKOIL	199604	265.2851	0.0015
75	Russia	AO "Megionneftegaz"	199604	254.3073	0.0101
76	Russia	AO "Moscow City Telephone"	199704	1.4885	0.0014
77	Russia	AO "Moscow City Telephone"	199705	2.7067	0.0029
78	Russia	AO "Moscow City Telephone"	199706	1.6608	0.0015
79	Russia	AO "Mosenergo"	199604	149.0490	0.0004
80	Russia	AO "Nizhnevartovskneftegaz"	199604	238.5321	0.0732
81	Russia	Russian AO "Norilsk Nickel"	199604	1118.5203	0.0106
82	Russia	AO "Noyabrskneftegaz"	199604	209.9940	0.0170
83	Russia	AO "Purneftegaz"	199604	133.8777	0.0120
84	Russia	AO "Rostelecom"	199604	142.1790	0.0014
85	Russia	AO "St.Petersburg Telephone"	199604	6.5632	0.0785
86	Russia	AO "Surgutneftegaz"	199604	13.4943	0.0002
87	Russia	AO "Tomskneft"	199604	272.9961	0.0296
88	Russia	Russian AO "Unified Energy System"	199604	2.4590	0.0000

89	Russia	AO "Yuganskneftegaz"	199604	288.0514	0.0250
90	Slovakia	Chirana-PREMA a.s.	199903	0.1086	2.5291
91	Slovakia	Chirana-PREMA a.s.	200003	0.0371	7.2827
92	Slovakia	Chirana-PREMA a.s.	200008	0.0582	8.0926
93	Slovakia	Drotovna a.s.	199904	0.2964	4.8362
94	Slovakia	Drotovna a.s.	199907	0.2663	3.2104
95	Slovakia	Drotovna a.s.	200003	0.2971	1.8950
96	Slovakia	Slovenske Energeticke Strojarne (SES),j.s.c.	199905	0.5284	2.7447
97	Slovakia	Investicna a rozvojova banka a.s.	199802	0.0588	2.1629
98	Slovakia	Investicna a rozvojova banka a.s.	199803	0.0745	2.7771
99	Slovakia	Investicna a rozvojova banka a.s.	199805	0.2285	2.1296
100	Slovakia	Investicna a rozvojova banka a.s.	199806	0.0485	1.1999
101	Taiwan	China Wire & Cable	199005	3.1023	4.3361
102	Taiwan	China Wire & Cable	199006	2.1156	3.1475
103	Taiwan	Feng An Metal Industries Co.	200001	42.0013	45.1612
104	Taiwan	Kwong Fong Industries	199306	1.7813	0.0052
105	Taiwan	Nan Kang Rubber Tire	199006	1.9168	4.3598
106	Taiwan	Taiwan Tea Corp.	198904	2.7213	1.6646
107	Taiwan	Yue Loong Motor	199304	1.1485	0.1280
108	Thailand	Asia Credit Ltd.	200008	0.0640	4.7734

Table A.3
Pooled regression of monthly return volatility on investibility, size, and time dummy variables by country

This table presents the time-series and cross-sectional regression results of monthly return volatility on investibility, size, and time dummy variables for each country. The regression model is given by

$$\ln(r_{i,t}^2) = \alpha + \sum_{k=1}^3 \rho_k INVEST_k + \sum_{k=1}^5 \delta_k SIZE_{i,t} + \sum_{k=1}^{141} \tau_k MONTH_k + \varepsilon_{i,t},$$

$$\sum_{k=1}^3 \rho_k = 0, \sum_{k=1}^5 \delta_k = 0, \text{ and } \sum_{k=1}^{141} \tau_k = 0.$$

The dependent variable, $\ln(r_{i,t}^2)$, is the log of monthly US dollar returns squared of a stock i at time t . $INVEST_1$, $INVEST_2$, and $INVEST_3$ are dummy variables that take the value of one if the investible weight of a stock i at time t is zero, between zero and 0.50, and above 0.50, respectively, and zero otherwise. $SIZE_k$ takes the value of one if a stock i at time t is from size group k , and zero otherwise. $MONTH_k$ is a time dummy that takes the value of one if time t equals k and zero otherwise.

Country	$INVEST_1$ (ρ_1)	$INVEST_2$ (ρ_2)	$INVEST_3$ (ρ_3)	F-statistic for the hypothesis $\rho_1 = \rho_3$	P-value
Argentina	-0.330	0.258	0.072	6.46	0.01
Brazil	0.059	-0.052	-0.007	1.03	0.31
Chile	-0.232	0.031	0.201	12.98	0.00
China	-0.365	0.415	-0.050	29.18	0.00
Colombia	-0.255	0.227	0.027	5.24	0.02
Czech Republic	-0.072	0.107	-0.035	0.08	0.78
Egypt	-0.296	0.092	0.204	12.80	0.00
Greece	-0.426	0.233	0.193	38.08	0.00
Hungary	-0.648	0.574	0.073	14.22	0.00
India	N/A	N/A	N/A	N/A	N/A
Indonesia	-0.287	0.127	0.160	9.15	0.00
Israel	0.209	-0.133	-0.077	1.38	0.24
Jordan	-0.394	0.105	0.289	1.91	0.17
Korea	0.016	-0.039	0.022	0.00	0.95
Malaysia	-0.649	0.171	0.478	74.90	0.00
Mexico	-0.488	0.257	0.231	106.28	0.00
Morocco	-0.302	0.436	-0.134	0.79	0.37
Nigeria	N/A	N/A	N/A	N/A	N/A
Pakistan	-0.475	0.225	0.250	65.11	0.00
Peru	-0.203	0.148	0.055	3.36	0.07
Philippines	-0.261	0.195	0.066	11.95	0.00
Poland	0.048	-0.199	0.151	0.09	0.76
Portugal	0.129	-0.232	0.104	0.05	0.82
Russia	-0.450	0.274	0.177	8.46	0.00
Saudi Arabia	N/A	N/A	N/A	N/A	N/A
Slovakia	-1.012	0.810	0.202	9.99	0.00
South Africa	-0.259	0.119	0.141	3.46	0.06
Sri Lanka	-0.201	0.045	0.156	6.05	0.01
Taiwan	-0.660	0.151	0.509	11.75	0.00
Thailand	-0.233	0.102	0.131	2.00	0.16
Turkey	-0.178	0.191	-0.013	1.19	0.28

Venezuela	N/A	N/A	N/A	N/A	N/A
Zimbabwe	N/A	N/A	N/A	N/A	N/A
Average	-0.293	0.166	0.128		

Number of countries with $\rho_1 < \rho_3 = 25$ (89.3%)

Number of countries with $\rho_1 < \rho_3$ at the 5 percent significance level = 16 (57.4%)

Table A.4.**Pooled regression of monthly return volatility on investibility, size, and time dummy variables for three different turnover groups by country**

This table presents the time-series and cross-sectional regression results of monthly return volatility on investibility, size, and time dummy variables for three different turnover groups for each country. The regression model is given by

$$\ln(r_{i,t}^2) = \alpha + \sum_{k=1}^3 \rho_k INVEST_k + \sum_{k=1}^5 \delta_k SIZE_{i,t} + \sum_{k=1}^{141} \tau_k MONTH_k + \varepsilon_{i,t},$$

$$\sum_{k=1}^3 \rho_k = 0, \sum_{k=1}^5 \delta_k = 0, \text{ and } \sum_{k=1}^{141} \tau_k = 0.$$

The dependent variable, $\ln(r_{i,t}^2)$, is the log of monthly US dollar returns squared of a stock i at time t . $INVEST_1$, $INVEST_2$, and $INVEST_3$ are dummy variables that take the value of one if the investible weight of a stock i at time t is zero, between zero and 0.50, and above 0.50, respectively, and zero otherwise. $SIZE_k$ takes the value of one if a stock i at time t is from size group k , and zero otherwise. $MONTH_k$ is a time dummy that takes the value of one if time t equals k and zero otherwise.

	Average of estimates			Number of countries with $\rho_1 < \rho_3$ / Number of countries estimated	Percent of countries with $\rho_1 < \rho_3$
	$INVEST_1$ (ρ_1)	$INVEST_2$ (ρ_2)	$INVEST_3$ (ρ_3)		
Low turnover	-0.947	-0.572	1.519	18 / 23	78.26%
Medium turnover	-0.121	0.096	0.025	18 / 26	69.23%
High turnover	-0.049	-0.005	0.054	14 / 26	53.85%

Endnote