

IV. Empirical Results

4.1 Descriptive Statistics

We collect 143,170 non-financial observations in thirty-two countries in the period 1995 to 2004 from Compustat Global Vantage database. After applying our restrictions, only 75,143 observations left. Table 3 describes the coverage ratio for each country. Column (1) in Table 3 shows the number of observations contained in the database for each country from 1995 to 2004, and column (2) shows the number of observations left in our sample for each country at the same period. We cover at least 41% of the original observations for one specific country in our sample. Argentina, Austria, United Kingdom, Portugal, United States and South Africa contain more than 60% of the original observations.

A large proportion of our sample is American, Japanese, and English firms, which accounts for 54.36% of total observations used. Argentina, Portugal and New Zealand are the least represented countries (There is only 168 observations in Argentina, 220 in Portugal and 328 in New Zealand). Taiwan has 236 firms with 1,289 observations, which accounts for 1.72% of total observations used.

Table 4 shows that there are twenty-two developed countries with 63,224 observations in our sample, which accounts for 84.15% of total observations. Emerging country are Argentina, India, Indonesia, South Korea, Mexico, Malaysia, Philippines, Thailand, Taiwan and South Africa. Most of them locate in Asia. As we know, there are more countries following civil-law tradition. We have twenty civil-law countries. But countries with most observations, such as the United States, Japan, and United Kingdom, are all common-law countries. Therefore, the observations in civil-law countries are a little fewer than those in common-law countries (48.35% vs. 51.65% of total observations). As for bank-based or market-based financial system, we have equal number of countries in each group. The number of observations of bank-based countries is less than market-based (42.19% vs. 57.81% of total observations).

Values of all country-level factors are listed in Table 5. Among all countries, Switzerland has the strongest law enforcement, and Philippines has the weakest. Compared to global average law-enforcement measure, Taiwan has relatively weaker law enforcement. G-7 countries all have strong law enforcement. Capital market and banking development indexes are listed in columns (5) and (6) in Table 5. Switzerland has the biggest capital and banking market in the period of 1996 to 2004. Indonesia has the smallest capital market, and United Kingdom has the smallest banking market in the same period.

Table 3. The Coverage Ratio in Each Country

	Abbr.	Country	(1)	(2)	(3)
			# of Observations in Database*	# of Observations Used*	Coverage Ratio
1	ARG	Argentina	280	168	60%
2	AUS	Australia	3,280	1,438	44%
3	AUT	Austria	710	426	60%
4	BEL	Belgium	1,190	663	56%
5	CAN	Canada	6,220	3,432	55%
6	CHE	Switzerland	2,560	1,608	63%
7	DEU	Germany	6,370	2,912	46%
8	DNK	Denmark	1,160	608	53%
9	ESP	Spain	1,130	643	57%
10	FIN	Finland	1,470	782	53%
11	FRA	France	5,450	2,608	48%
12	GBR	United Kingdom	9,830	6,047	62%
13	HKG	Hong Kong	1,370	731	54%
14	IDN	India	2,570	1,519	59%
15	IND	Indonesia	2,040	866	42%
16	IRL	Ireland	700	397	57%
17	ITA	Italy	2,360	1,180	50%
18	JPN	Japan	34,520	17,110	50%
19	KOR	Korea	3,110	1,269	41%
20	MEX	Mexico	1,150	655	57%
21	MYS	Malaysia	7,020	3,265	47%
22	NLD	Netherlands	1,670	875	53%
23	NOR	Norway	1,300	589	45%
24	NZL	New Zealand	630	328	52%
25	PHL	Philippines	1,510	665	44%
26	PRT	Portugal	340	220	65%
27	SGP	Singapore	4,220	1,741	42%
28	SWE	Sweden	2,730	1,192	44%
29	THA	Thailand	3,620	1,667	46%
30	TWN	Taiwan	2,860	1,289	45%
31	USA	United States	28,910	17,694	61%
32	ZAF	South Africa	890	556	62%
Total			143,170	75,143	

*total number of observations from 1995 to 2004.

Table 4. Observations Distribution

	# of Countries	# of Observations	%
Developed	22	63,224	84.14%
Emerging	10	11,919	15.86%
Civil-law	20	36,328	48.35%
Common-law	12	38,815	51.65%
Bank-based	16	31,700	42.19%
Market-based	16	43,443	57.81%

*total number of observations from 1995 to 2004.

Table 5. Country-Level Factors among the World

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
Abbr.	Country	Market condition	Legal Tradition	Financial System	Law Enforcement	Capital Market Development	Banking Development	Shareholder Right	Creditor Right	Ownership Concentration	Corporate Tax Rate	Accounting Standards	
1	ARG	Argentina	Emerging	Civil	Bank	5.64	0.1222	0.1872	4	1	0.53	30%	45
2	AUS	Australia	Developed	Common	Market	9.30	0.7682	0.8607	4	1	0.54	33%	75
3	AUT	Austria	Developed	Civil	Bank	9.47	0.0096	0.0746	2	3	0.58	34%	54
4	BEL	Belgium	Developed	Civil	Bank	9.49	0.0126	0.0188	0	2	0.54	40%	61
5	CAN	Canada	Developed	Common	Market	9.58	0.6971	0.6802	5	1	0.40	44%	74
6	CHE	Switzerland	Developed	Civil	Market	9.99	2.0218	1.6113	2	1	0.41	34%	68
7	DEU	Germany	Developed	Civil	Bank	9.37	0.1953	0.5936	1	3	0.48	54%	62
8	DNK	Denmark	Developed	Civil	Market	9.80	0.4211	0.9633	2	3	0.45	34%	62
9	ESP	Spain	Developed	Civil	Bank	7.87	0.0025	0.7946	4	2	0.51	35%	64
10	FIN	Finland	Developed	Civil	Bank	9.76	1.5026	0.5957	3	1	0.37	25%	77
11	FRA	France	Developed	Civil	Bank	8.97	0.0886	0.1320	3	0	0.34	33%	69
12	GBR	United Kingdom	Developed	Common	Market	9.40	1.3164	0.0013	5	4	0.19	33%	78
13	HKG	Hong Kong	Developed	Common	Market	8.77	2.6231	1.4807	5	4	0.54	18%	69
14	IDN	India	Emerging	Common	Bank	6.12	0.2120	0.2866	5	4	0.40	52%	57
15	IND	Indonesia	Emerging	Civil	Bank	4.38	0.1847	0.5574	2	4	0.58	35%	na.
16	IRL	Ireland	Developed	Common	Bank	8.74	0.0006	0.0014	4	1	0.39	40%	na.
17	ITA	Italy	Developed	Civil	Bank	7.95	0.1919	0.5594	1	2	0.58	52%	62
18	JPN	Japan	Developed	Civil	Bank	9.37	0.6451	1.0970	4	2	0.18	52%	65
19	KOR	Korea	Emerging	Civil	Market	6.71	0.3033	0.8073	2	3	0.23	34%	62
20	MEX	Mexico	Emerging	Civil	Market	5.99	0.1920	0.1820	1	0	0.64	41%	60
21	MYS	Malaysia	Emerging	Common	Market	7.71	1.1471	1.1644	4	4	0.54	30%	76
22	NLD	Netherlands	Developed	Civil	Market	9.87	1.3243	1.4201	2	2	0.39	35%	64
23	NOR	Norway	Developed	Civil	Bank	9.92	0.3015	0.7011	4	2	0.36	28%	74
24	NZL	New Zealand	Developed	Common	Bank	9.79	0.4050	1.1149	4	3	0.48	33%	70
25	PHL	Philippines	Emerging	Civil	Market	4.08	0.3993	0.6354	3	0	0.57	35%	65
26	PRT	Portugal	Developed	Civil	Bank	7.81	0.0021	0.0071	3	1	0.52	40%	36
27	SGP	Singapore	Developed	Common	Market	8.99	1.2839	0.8048	4	4	0.49	27%	78
28	SWE	Sweden	Developed	Civil	Market	9.80	0.8173	0.6716	3	2	0.28	28%	83
29	THA	Thailand	Emerging	Common	Market	5.93	0.3141	1.1045	2	3	0.47	30%	64
30	TWN	Taiwan	Emerging	Civil	Bank	8.08	0.7725	1.3251	3	2	0.18	25%	65
31	USA	United States	Developed	Common	Market	9.52	1.0657	0.8303	5	1	0.20	42%	71
32	ZAF	South Africa	Emerging	Common	Market	6.70	0.7705	0.7132	5	3	0.52	40%	70
				Average		8.28	0.63	0.69	3.16	2.16	0.43	0.36	66.00

Column (7) and (8) in Table 5 show the shareholder and creditor right formed by La Porta et al. (1998). The larger the number, the greater the shareholder or creditor right a country has. As shown in the table, in our sample, Canada, France, United Kingdom, Hong Kong, United States, and South Africa are countries whose legal system strongly favors minority shareholders against managers or dominant shareholders in the corporate decision-making process. Among these highest shareholder-right countries, only South Africa is emerging country, others are all developed. Belgium is the only country with zero score of shareholder right in our sample.

When it comes to creditor right, France, United Kingdom, Hong Kong, Indonesia, Mexico and Portugal protect their creditors best. Finland, South Korea and New Zealand are countries with zero creditor-right score. Surprisingly, the United States only get one score in creditor right index. Column (9)-(11) in Table 5 show ownership concentration, corporate tax rate and accounting standards index respectively. Ownership concentration varies from 0.64 in South Korea to 0.18 in Thailand. Germany is the country with the highest corporate tax rate among the world, while the United Kingdom has the lowest. Accounting standard index is only available in thirty countries in our sample. And it also varies from 83 in Sweden to 36 in Portugal.

Means of firm-level factors are listed in Table 6 (We omit other descriptive statistics for brevity). We use two kinds of leverage measures, one is both long-term and short-term debts divide by total assets, and the other is long-term debts divide by net assets. For each measure, we will have the market value and book value. Most countries have larger book debt ratio than market, except for Argentina, Japan, South Korea, Philippines and Portugal. Additionally, the market debt ratios (*MDR* and *MDR2*) are divergent from 0.70 and 0.47 in Portugal to 0.44 and 0.21 in Hong Kong. When we take a look at book debt ratios (*BDR* and *BDR2*), South Korea all are the highest. As suggested by Lee et al. (2000), the high leverage of Korean firms can be explained by the excessive investment in “chaebols”, Korean conglomerates, encouraged by local banks, observed particularly in the financial crises of 1997. The correlation between market and book debt ratios is quite high, which can be seen in Table A.1 in the appendix. Germany is the country with the highest average market to book asset ratio (*MB*) and depreciation expenses (*DEP_TA*). Not surprisingly, United States has the highest average reported R&D expenses (*RD_TA*).

Table 6. Means of Firm-Level Factors (in the period 1995-2004)

	Abbr.	Country	MDR	BDR	MDR2	BDR2	EBIT_TA	MB	DEP_TA	LnTA	FA_TA	RD_DUM	RD_TA	Ind_Median	FINDEF	EFWA
1	ARG	Argentina	0.520	0.560	0.350	0.410	0.090	1.030	0.060	16.200	0.650	1.000	0.000	0.520	-0.010	0.900
2	AUS	Australia	0.500	0.380	0.320	0.240	0.040	1.550	0.050	14.740	0.370	0.740	0.010	0.370	0.040	1.730
3	AUT	Austria	0.620	0.580	0.410	0.410	0.040	1.210	0.060	14.740	0.360	0.870	0.000	0.590	0.020	1.570
4	BEL	Belgium	0.630	0.510	0.390	0.320	0.060	1.620	0.060	15.130	0.310	0.800	0.010	0.530	0.010	2.170
5	CAN	Canada	0.510	0.420	0.350	0.300	0.050	1.650	0.050	15.040	0.450	0.700	0.020	0.410	0.070	1.820
6	CHE	Switzerland	0.560	0.460	0.380	0.310	0.060	1.640	0.050	15.360	0.350	0.690	0.020	0.470	0.000	1.700
7	DEU	Germany	0.620	0.530	0.440	0.380	0.040	2.800	0.070	14.680	0.270	0.750	0.010	0.520	0.020	1.930
8	DNK	Denmark	0.540	0.480	0.320	0.290	0.050	1.810	0.050	14.590	0.370	0.780	0.020	0.490	0.020	2.520
9	ESP	Spain	0.600	0.480	0.360	0.280	0.070	1.550	0.040	15.410	0.370	0.990	0.000	0.470	0.030	2.190
10	FIN	Finland	0.540	0.450	0.330	0.270	0.070	1.660	0.060	15.160	0.340	0.430	0.020	0.450	0.010	2.110
11	FRA	France	0.630	0.510	0.340	0.270	0.060	1.640	0.050	14.660	0.200	0.830	0.010	0.510	0.030	2.290
12	GBR	United Kingdom	0.560	0.410	0.280	0.210	0.080	1.880	0.050	15.410	0.360	0.650	0.020	0.390	0.030	2.370
13	HKG	Hong Kong	0.440	0.470	0.210	0.270	0.030	1.160	0.030	14.980	0.330	0.910	0.000	0.490	0.020	1.390
14	IDN	India	0.540	0.490	0.320	0.330	0.120	1.830	0.040	14.670	0.400	0.530	0.000	0.500	0.010	3.010
15	IND	Indonesia	0.630	0.590	0.350	0.370	0.100	1.250	0.040	14.320	0.430	0.940	0.000	0.610	0.000	1.970
16	IRL	Ireland	0.580	0.400	0.390	0.240	0.080	1.720	0.040	15.410	0.380	0.690	0.010	0.400	-0.020	1.910
17	ITA	Italy	0.620	0.540	0.410	0.350	0.040	1.340	0.040	15.480	0.270	0.980	0.000	0.560	0.020	1.330
18	JPN	Japan	0.570	0.580	0.320	0.330	0.040	1.130	0.030	15.310	0.320	0.420	0.010	0.600	0.000	1.130
19	KOR	Korea	0.580	0.650	0.350	0.450	0.070	0.990	0.030	15.990	0.430	0.200	0.010	0.710	0.020	0.990
20	MEX	Mexico	0.530	0.530	0.410	0.420	0.100	1.150	0.040	16.350	0.560	0.970	0.000	0.530	0.020	1.430
21	MYS	Malaysia	0.490	0.460	0.230	0.300	0.050	1.300	0.030	13.850	0.410	0.940	0.000	0.430	0.010	4.100
22	NLD	Netherlands	0.610	0.450	0.350	0.240	0.080	1.860	0.050	15.040	0.280	0.810	0.010	0.440	0.030	4.960
23	NOR	Norway	0.570	0.470	0.390	0.340	0.040	1.790	0.060	14.650	0.380	0.890	0.010	0.490	0.040	3.560
24	NZL	New Zealand	0.490	0.340	0.350	0.240	0.100	1.760	0.060	14.560	0.530	0.770	0.000	0.350	0.000	1.580
25	PHL	Philippines	0.520	0.550	0.350	0.380	0.070	2.320	0.050	15.170	0.540	0.990	0.000	0.550	0.010	4.610
26	PRT	Portugal	0.700	0.600	0.470	0.380	0.050	1.290	0.050	15.640	0.410	1.000	0.000	0.600	0.040	1.730
27	SGP	Singapore	0.490	0.460	0.220	0.220	0.020	1.250	0.040	13.900	0.360	0.900	0.000	0.440	0.010	1.740
28	SWE	Sweden	0.540	0.420	0.330	0.240	0.040	1.730	0.050	15.010	0.260	0.650	0.020	0.400	0.030	1.790
29	THA	Thailand	0.520	0.500	0.280	0.280	0.080	1.270	0.050	14.170	0.420	1.000	0.000	0.530	0.000	2.800
30	TWN	Taiwan	0.480	0.420	0.270	0.250	0.050	1.520	0.030	15.450	0.370	0.440	0.010	0.390	0.020	1.930
31	USA	United States	0.520	0.370	0.340	0.260	0.070	2.120	0.050	15.250	0.300	0.430	0.040	0.340	0.030	3.310
32	ZAF	South Africa	0.560	0.410	0.320	0.220	0.120	1.610	0.040	15.590	0.340	0.650	0.000	0.380	0.020	2.320
	Average		0.557	0.483	0.342	0.306	0.064	1.576	0.047	15.060	0.379	0.761	0.008	0.483	0.018	2.215

4.2 Partially Adjustment Speeds Under Different Estimation Methods

In this subsection, we evaluate each country's adjustment speed by Eq.(5). Three estimation methods—Fama and MacBeth (1973) estimation, panel regression, and Flanney and Rangan (2006)'s “base” specification—are used. Table 7 only presents each model's coefficient on the lagged dependent variable, its corresponding t-value and adjustment speed. Detailed model results are listed in Table A.3 in the appendix.

Columns (1) and (4) in Table 7 present Fama and MacBeth (1973) estimation (hereafter, M1_FM). From the coefficient on the lagged dependent variable, $-\lambda$, we can easily get the adjustment speed, λ . For example, American firms close 10.52% ($= -0.105$) of the gap between current and desired leverage within one year. M1_FM estimates relatively slow

adjustment speed. The fastest is 22.41% for firms in South Africa. These slow adjustment speeds imply that converging toward a long-run target seems unlikely to explain much of the variation in firms' debt ratios around the world.

Since FM estimates fail to recognize the data's panel characteristics, we use panel regression to undertake in depth analysis of complex economic hypotheses by controlling for influences corresponding to both individual and time heterogeneities. There are several kinds of estimation models in panel regression analysis, such as fixed-effect and random-effect model. Hausman (1978) addresses a Hausman m-statistic that provides information about the appropriateness of the random effects specification. The null hypothesis is that there is no correlation between the effects variables and regressors. Rejection of the null hypothesis might suggest that the fixed-effect model is more appropriate (The fixed-effect estimator is simultaneously consistent and efficient, and the estimator from random-effect is only consistent, but not efficient). Table A.3 in the appendix provides Hausman m-statistics of our sample, and most of them are significant enough to reject the null hypothesis. Hence, fixed-effect model is adopted.

Under firm and time fixed-effect panel regression (hereafter, M2_Panel), we can observe a much faster adjustment speed (Columns (2) and (5) in Table 7). For example, American firms adjust toward their desired leverage at a speed of 56.71% annually; 46.19% faster than M1_FM's. Even the lowest adjustment speed is as high as 45.98% in Italy. Compared to previous researches, we also observe faster adjustment speed for firms in the United States, Germany, Spain, United Kingdom and Switzerland. This may be because firms included in Compustat Global Vantage database are firms with high market value in each country. And high market value firms are believed to have relative lower adjustment costs or costs of being away from optimum, which leads to faster adjustment speed.

One problem may arise when the residual component of the lagged dependent variable is correlated with the unobserved effect in the error term. To solve this problem, Greene (2003) proposes that using an instrument that is correlated with the lagged dependent variable but not the error term will be helpful. Flannery and Rangan (2006) find that lagged book debt ratio (*BDR*) is a reliable instrument of the lagged dependent variable. Therefore, we apply their "base" specification but erasing bond rating variable as our third model, M3_Base, since Compustat Global Vantage database doesn't offer bond rating. The results show that estimated adjustment speeds are still divergent among countries, from 69.95% in Argentina to 15.0% in Austria.

Overall, no matter which estimation methods we focus on, firms around the world

adjust toward target leverage, but with significantly different adjustment speeds. The divergent adjustment costs may be one potential reason for the variation. We leave this discussion to Section 4.4. In next subsection, we discuss the pecking order and market timing effects in explaining capital structure.

Table 7. Alternative Estimation Methods

M1_FM: Fama and MacBeth (1973) estimates: $\Delta\text{MDR}_{i,t} = (-\lambda)\text{MDR}_{i,t-1} + (\lambda\beta)X_{i,t-1} + \varepsilon_{i,t}$
M2_Panel: Firm and time fixed-effect panel model: $\Delta\text{MDR}_{i,t} = (-\lambda)\text{MDR}_{i,t-1} + (\lambda\beta)X_{i,t-1} + \varepsilon_{i,t}$
M3_Base: Flanney and Rangan (2006)'s base specification: $\Delta\text{MDR}_{i,t} = (-\lambda)\text{BDR}_{i,t-1} + (\lambda\beta)X_{i,t-1} + \varepsilon_{i,t}$

Abbr.	(1)	(2)	(3)	(4)	(5)	(6)
	Coefficient on lagged MDR(or BDR)			Adjustment speed (λ)		
	M1_FM	M2_Panel	M3_Base	M1	M2	M3
1 ARG	-0.162 (-1.96)**	-0.637 (-4.85)***	-0.700 (-5.06)***	16.21%	63.67%	69.95%
2 AUS	-0.184 (-5.23)***	-0.556 (-18.13)***	-0.304 (-9.87)***	18.43%	55.64%	30.41%
3 AUT	-0.127 (-4.37)***	-0.466 (-9.58)***	-0.150 (-3.01)***	12.71%	46.59%	15.00%
4 BEL	-0.097 (-5.86)***	-0.635 (-15.12)***	-0.459 (-10.17)***	9.68%	63.52%	45.88%
5 CAN	-0.130 (-9.49)***	-0.593 (-32.32)***	-0.370 (-18.91)***	13.02%	59.29%	36.95%
6 CHE	-0.097 (-4.79)***	-0.470 (-19.80)***	-0.228 (-7.92)***	9.74%	47.00%	22.80%
7 DEU	-0.139 (-7.17)***	-0.617 (-33.13)***	-0.378 (-14.36)***	13.88%	61.72%	37.83%
8 DNK	-0.081 (-4.16)***	-0.473 (-10.25)***	-0.156 (-2.95)***	8.15%	47.29%	15.63%
9 ESP	-0.099 (-4.78)***	-0.585 (-14.94)***	-0.357 (-8.39)***	9.87%	58.50%	35.74%
10 FIN	-0.093 (-2.97)***	-0.623 (-16.58)***	-0.344 (-6.26)***	9.31%	62.27%	34.35%
11 FRA	-0.126 (-5.92)***	-0.668 (-33.95)***	-0.402 (-15.19)***	12.63%	66.76%	40.21%
12 GBR	-0.143 (-8.91)***	-0.548 (-42.66)***	-0.223 (-19.82)***	14.31%	54.80%	22.29%
13 HKG	-0.137 (-8.11)***	-0.586 (-14.89)***	-0.346 (-9.32)***	13.74%	58.59%	34.55%
14 IDN	-0.084 (-2.61)***	-0.588 (-21.58)***	-0.411 (-10.70)***	8.39%	58.80%	41.11%
15 IND	-0.172 (-7.44)***	-0.625 (-17.25)***	-0.305 (-10.42)***	17.22%	62.45%	30.46%
16 IRL	-0.170 (-3.83)***	-0.618 (-11.09)***	-0.311 (-4.99)***	16.97%	61.79%	31.05%
17 ITA	-0.085 (-3.85)***	-0.460 (-14.58)***	-0.340 (-8.66)***	8.55%	45.98%	34.00%
18 JPN	-0.057 (-3.68)***	-0.617 (-75.88)***	-0.352 (-32.16)***	5.68%	61.72%	35.21%
19 KOR	-0.167 (-2.62)***	-0.518 (-15.94)***	-0.378 (-10.89)***	16.72%	51.82%	37.81%
20 MEX	-0.091 (-3.72)***	-0.685 (-15.15)***	-0.529 (-8.15)***	9.12%	68.52%	52.85%
21 MYS	-0.104 (-3.52)***	-0.683 (-35.99)***	-0.332 (-15.43)***	10.40%	68.28%	33.19%
22 NLD	-0.114 (-5.94)***	-0.559 (-15.29)***	-0.277 (-8.10)***	11.37%	55.86%	27.72%
23 NOR	-0.107 (-3.56)***	-0.710 (-14.21)***	-0.357 (-5.75)***	10.68%	71.04%	35.66%
24 NZL	-0.133 (-2.32)**	-0.687 (-8.96)***	-0.282 (-3.74)***	13.27%	68.67%	28.24%
25 PHL	-0.122 (-3.47)***	-0.655 (-16.02)***	-0.400 (-7.62)***	12.24%	65.50%	40.00%
26 PRT	-0.129 (-3.10)***	-0.556 (-6.41)***	-0.350 (-3.25)***	12.92%	55.55%	35.01%
27 SGP	-0.135 (-5.03)***	-0.677 (-24.21)***	-0.400 (-13.94)***	13.48%	67.71%	40.02%
28 SWE	-0.121 (-8.37)***	-0.568 (-18.68)***	-0.455 (-11.85)***	12.12%	56.82%	45.52%
29 THA	-0.163 (-4.24)***	-0.628 (-23.11)***	-0.358 (-11.08)***	16.28%	62.81%	35.83%
30 TWN	-0.111 (-3.10)***	-0.600 (-18.88)***	-0.458 (-11.04)***	11.10%	60.00%	45.76%
31 USA	-0.105 (-8.04)***	-0.567 (-74.50)***	-0.212 (-33.63)***	10.52%	56.71%	21.17%
32 ZAF	-0.224 (-5.03)***	-0.775 (-15.55)***	-0.428 (-8.10)***	22.41%	77.47%	42.80%
Average				12.53%	60.10%	35.47%

*, **, and *** indicate significance at 10%, 5% and 1%

4.3 Pecking Order and Market Timing Factors Effects

If firms follow pecking order or market timing theory, adding the pecking order or market timing variable into Eq.(5) should absorb the changes in leverage, i.e., we should observe either a lower speed of adjustment or a significantly higher power of the model. If not, the static trade-off theory still dominates. We use Eq. (6) and (7) to evaluate the effect of pecking order or market timing.

$$\Delta D_{i,t} = (-\lambda) D_{i,t-1} + (\lambda\beta) X_{i,t-1} + \gamma FINDEF_{i,t} + \varepsilon_{i,t} \quad (6)$$

$$\Delta D_{i,t} = (-\lambda) D_{i,t-1} + (\lambda\beta) X_{i,t-1} + \gamma EFWA_{i,t-1} + \varepsilon_{i,t} \quad (7)$$

where $\Delta D_{i,t}$ is the difference between debt ratios for firm i at time t to time $t-1$, D is the debt ratio for firm i , X is the vector of several firm-level factors used to evaluate firm i 's target debt ratio, $FINDEF$ is financing deficit used as pecking order proxy, and $EFWA$ is external finance average market to book asset ratio($EFWA$) variable to capture market timing effect, as suggested by Baker and Wurgler (2002).

The debt ratio of including both short-term and long-term debts as a proportion of total assets is widely used. Rajan and Zingales (1995) propose that the previous leverage measure fails to incorporate the fact that there are some assets will be offset by specific non-debt liabilities. For instance, an increase in the gross amount of trade credit is reflected in a reduction of the first measure of leverage. Given that the level of accounts payable and accounts receivable may jointly be influenced by industry considerations, it seems appropriate to use a measure of leverage unaffected by the gross level of trade credit. Hence, we define second leverage measure as the ratio of long-term debt to net assets, where net assets are total assets less accounts payable and other liabilities. For both leverage of measure, market and book values are used. The results are shown in Table 8.

Table 8-Panel A and Panel B show the result of using first leverage measure, both short-term and long-term debts divide by total assets. Pecking order factor, $FINDEF$ variable, is significant for almost every country, except for Australia, Ireland, and Portugal. And the coefficient sign is consistently positive, which means that firms around the world with higher pecking order coefficient will use more debts when they have external financial need. On the other hand, market timing factor, $EFWA$ variable, doesn't show much significance and the coefficient on $EFWA$ variable is relatively small. Columns (6)-(9) in Table 8-Panel A show that after including pecking order or market timing factor will slightly change adjustment speed in each countries, but the effect is inconsistent. Table 8-Panel B tells the same story, and the difference is that book value of first leverage

measure is used in Panel A while market value is used in Panel B.

When second leverage measure is applied, it is another story. As shown in Table 8-Panel C and Panel D, *EFWA* variable is still insignificant in most country. Comparatively, *FINDEF* variable carries significance in all countries with the same sign. And the magnitude of coefficients on *FINDEF* variable is more reasonable; countries with greater information asymmetry, like Argentina and Indonesia, have larger coefficients. Columns (6) and (7) in Table 8-Panel C show that including pecking order factor lower the adjustment speed in most countries.

Comparing the adjustment speed of using first and second leverage measure, we observe that the adjustment speed is always larger when we use first leverage measure. This is because first leverage measure includes short-term assets and liabilities, which have the property of higher liquidity, and firms can use them to change their debt ratio in the short-run. Therefore, it is not surprise to see that adjustment speed is quicker when first leverage measure is applies.

Table 9 shows the correlation between the pecking order coefficient and the magnitude of decrease in adjustment speed after including pecking order factor. *D5* means the adjustment speed difference between M5_Pecking(BDR) and M4_Baseline; *D7* is the that between M7_Pecking(MDR) and M2_Panel; *D11* is that between M11_Pecking(BDR2) and M10_Baseline(BDR2); and *D13* is that between D13_Pecking(MDR2) and M9_Panel(MDR2). Using second leverage measure, the reduction in adjustment speed after including pecking order factor is significantly correlated with the pecking order coefficient. Firms with higher pecking order coefficient tend to have larger reduction in adjustment speed. This is not obvious when we use first leverage measure.

In short, the measure of leverage matters. Leverage ratio defined as long-term debts divide by net assets, where net assets are total assets less accounts payable and other liabilities, is more likely to show the impact of pecking order in explain the magnitude of decrease in adjustment speed. And the impact is negative.

Table 8- Panel A. Pecking Order and Market Timing Explanations of Debt Ratio

M4_Baseline: $\Delta BDR_{i,t} = (-\lambda)BDR_{i,t-1} + (\lambda\beta)X_{i,t-1} + \varepsilon_{i,t}$
M5_Pecking(BDR): $\Delta BDR_{i,t} = (-\lambda)BDR_{i,t-1} + (\lambda\beta)X_{i,t-1} + \gamma FINDEF_{i,t} + \varepsilon_{i,t}$
M6_Timing(BDR): $\Delta BDR_{i,t} = (-\lambda)BDR_{i,t-1} + (\lambda\beta)X_{i,t-1} + \gamma EFWA_{i,t-1} + \varepsilon_{i,t}$

Abbr.	(1)	(2)		(3)		(4)	(5)	(6)	(7)	(8)
	M4_Baseline coeBDR	M5_Pecking(BDR) coeBDR coeFINDEF		M6_Timing(BDR) coeBDR coeEFWA		Adjustment speed (λ) M4 M5 M6				
1 ARG	-0.517 (-5.35)***	-0.662 (-5.10)***	0.372 (4.31)***	-0.566 (-3.43)***	0.010 (0.19)	51.69%	66.17%	56.60%		
2 AUS	-0.541 (-19.12)***	-0.532 (-16.93)***	0.102 (6.51)***	-0.585 (-16.71)***	0.009 (3.66)***	54.14%	53.18%	58.51%		
3 AUT	-0.238 (-6.12)***	-0.497 (-7.60)***	0.039 (0.61)	-0.544 (-8.31)***	-0.028 (-1.16)	23.75%	49.74%	54.35%		
4 BEL	-0.569 (-15.05)***	-0.628 (-11.22)***	0.187 (4.19)***	-0.714 (-11.91)***	0.002 (1.48)	56.89%	62.81%	71.40%		
5 CAN	-0.480 (-27.55)***	-0.580 (-28.95)***	0.077 (5.52)***	-0.632 (-30.49)***	0.000 (-0.15)	47.99%	57.97%	63.20%		
6 CHE	-0.342 (-14.27)***	-0.438 (-17.70)***	0.126 (7.37)***	-0.466 (-17.52)***	0.005 (2.89)***	34.19%	43.78%	46.63%		
7 DEU	-0.508 (-26.43)***	-0.627 (-29.85)***	0.122 (6.56)***	-0.691 (-29.85)***	0.001 (1.23)	50.83%	62.65%	69.05%		
8 DNK	-0.407 (-9.90)***	-0.454 (-9.39)***	0.303 (6.11)***	-0.512 (-10.02)***	-0.001 (-0.81)	40.66%	45.38%	51.23%		
9 ESP	-0.391 (-10.16)***	-0.670 (-10.81)***	0.236 (5.04)***	-0.672 (-10.45)***	0.001 (1.16)	39.09%	66.95%	67.23%		
10 FIN	-0.337 (-5.67)***	-0.562 (-14.68)***	0.291 (8.46)***	-0.585 (-14.51)***	0.001 (0.96)	33.73%	56.18%	58.48%		
11 FRA	-0.510 (-24.84)***	-0.669 (-30.73)***	0.107 (5.92)***	-0.730 (-30.88)***	0.000 (0.87)	50.98%	66.89%	72.97%		
12 GBR	-0.573 (-49.38)***	-0.532 (-39.72)***	0.103 (11.32)***	-0.599 (-41.68)***	0.001 (3.23)***	57.30%	53.18%	59.89%		
13 HKG	-0.650 (-16.59)***	-0.593 (-15.10)***	0.124 (4.24)***	-0.650 (-14.50)***	0.002 (0.28)	65.03%	59.26%	65.02%		
14 IDN	-0.407 (-17.46)***	-0.581 (-21.11)***	0.175 (6.09)***	-0.644 (-21.07)***	0.000 (-0.37)	40.73%	58.08%	64.42%		
15 IND	-0.520 (-15.31)***	-0.634 (-17.48)***	0.052 (3.51)***	-0.674 (-15.53)***	0.000 (0.07)	51.99%	63.41%	67.37%		
16 IRL	-0.482 (-10.75)***	-0.613 (-9.84)***	0.013 (1.29)	-0.703 (-11.38)***	-0.013 (-2.84)***	48.16%	61.29%	70.33%		
17 ITA	-0.476 (-15.97)***	-0.427 (-13.14)***	0.182 (6.74)***	-0.448 (-11.68)***	0.017 (1.80)*	47.55%	42.72%	44.75%		
18 JPN	-0.336 (-36.58)***	-0.816 (-43.80)***	0.110 (7.77)***	-0.713 (-33.39)***	0.000 (-0.57)	33.56%	81.64%	71.34%		
19 KOR	-0.612 (-21.61)***	-0.503 (-15.42)***	0.172 (8.02)***	-0.547 (-16.24)***	-0.003 (-0.51)	61.21%	50.27%	54.74%		
20 MEX	-0.506 (-10.57)***	-0.681 (-13.16)***	0.157 (4.44)***	-0.779 (-14.18)***	-0.004 (-1.65)*	50.55%	68.14%	77.90%		
21 MYS	-0.415 (-20.95)***	-0.679 (-35.71)***	0.039 (7.34)***	-0.737 (-33.83)***	0.000 (0.03)	41.54%	67.85%	73.65%		
22 NLD	-0.504 (-14.60)***	-0.551 (-14.40)***	0.075 (3.07)***	-0.558 (-13.57)***	0.000 (-1.39)	50.38%	55.12%	55.84%		
23 NOR	-0.710 (-15.80)***	-0.706 (-12.74)***	0.199 (6.04)***	-0.778 (-13.74)***	0.000 (-0.24)	71.02%	70.58%	77.76%		
24 NZL	-0.562 (-8.07)***	-0.690 (-9.51)***	0.141 (5.88)***	-0.696 (-7.95)***	-0.002 (-0.18)	56.21%	68.95%	69.55%		
25 PHL	-0.407 (-10.82)***	-0.627 (-15.40)***	0.178 (7.16)***	-0.633 (-13.45)***	0.000 (0.00)	40.71%	62.73%	63.25%		
26 PRT	-0.157 (-1.99)**	-0.590 (-6.13)***	0.086 (1.22)	-0.598 (-5.48)***	0.009 (1.30)	15.69%	58.98%	59.76%		
27 SGP	-0.703 (-20.04)***	-0.680 (-23.74)***	0.046 (1.96)**	-0.717 (-22.15)***	0.000 (0.56)	70.34%	67.99%	71.73%		
28 SWE	-0.648 (-22.40)***	-0.614 (-19.22)***	0.173 (7.81)***	-0.674 (-19.13)***	0.000 (-0.11)	64.79%	61.42%	67.37%		
29 THA	-0.543 (-22.34)***	-0.623 (-22.41)***	0.041 (2.62)***	-0.656 (-20.91)***	0.000 (-0.05)	54.27%	62.33%	65.60%		
30 TWN	-0.594 (-20.50)***	-0.537 (-16.86)***	0.249 (7.82)***	-0.608 (-18.32)***	0.001 (1.51)	59.43%	53.66%	60.75%		
31 USA	-0.510 (-67.63)***	-0.538 (-61.59)***	0.099 (18.84)***	-0.619 (-69.49)***	0.000 (-1.41)	50.99%	53.83%	61.94%		
32 ZAF	-0.726 (-17.79)***	-0.745 (-13.75)***	0.115 (2.43)**	-0.793 (-14.71)***	0.000 (0.02)	72.55%	74.52%	79.33%		
Average						49.62%	60.24%	64.12%		

*, **, and *** indicate significance at 10%, 5% and 1%

Table 8- Panel B. Pecking Order and Market Timing Explanations of Debt Ratio

$$\begin{aligned} \text{M2_Pecking:} \quad \Delta \text{MDR}_{i,t} &= (-\lambda) \text{MDR}_{i,t-1} + (\lambda\beta) X_{i,t-1} + \varepsilon_{i,t} \\ \text{M7_Pecking(MDR):} \quad \Delta \text{MDR}_{i,t} &= (-\lambda) \text{MDR}_{i,t-1} + (\lambda\beta) X_{i,t-1} + \gamma \text{FINDEF}_{i,t} + \varepsilon_{i,t} \\ \text{M8_Timing(MDR):} \quad \Delta \text{MDR}_{i,t} &= (-\lambda) \text{MDR}_{i,t-1} + (\lambda\beta) X_{i,t-1} + \gamma \text{EFWA}_{i,t-1} + \varepsilon_{i,t} \end{aligned}$$

Abbr.	(1)	(2)		(3)		(4)	(5)	(6)	(7)	(8)
	M2_Panel coeMDR	M7_Pecking(MDR) coeMDR coeFINDEF		M8_Timing(MDR) coeMDR coeEFWA		Adjustment speed (λ) M2 M7 M8				
1 ARG	-0.637 (-4.85)***	-0.557 (-5.54)***	0.164 (2.61)***	-0.534 (-4.09)***	-0.009 (-0.24)	63.67%	55.71%	53.35%		
2 AUS	-0.556 (-18.13)***	-0.514 (-17.29)***	0.070 (4.35)***	-0.586 (-18.04)***	-0.011 (-4.30)***	55.64%	51.39%	58.64%		
3 AUT	-0.466 (-9.58)***	-0.372 (-7.69)***	0.065 (1.38)	-0.289 (-5.74)***	-0.026 (-1.27)	46.59%	37.15%	28.89%		
4 BEL	-0.635 (-15.12)***	-0.618 (-10.71)***	0.173 (4.97)***	-0.682 (-12.98)***	0.000 (-0.30)	63.52%	61.84%	68.19%		
5 CAN	-0.593 (-32.32)***	-0.444 (-23.39)***	0.112 (8.10)***	-0.539 (-26.54)***	0.001 (0.76)	59.29%	44.37%	53.89%		
6 CHE	-0.470 (-19.80)***	-0.262 (-10.57)***	0.170 (11.05)***	-0.336 (-12.84)***	0.002 (1.10)	47.00%	26.19%	33.56%		
7 DEU	-0.617 (-33.13)***	-0.499 (-23.86)***	0.139 (8.92)***	-0.574 (-22.77)***	0.000 (0.17)	61.72%	49.91%	57.39%		
8 DNK	-0.473 (-10.25)***	-0.345 (-8.93)***	0.348 (9.38)***	-0.462 (-10.15)***	-0.001 (-0.73)	47.29%	34.46%	46.18%		
9 ESP	-0.585 (-14.94)***	-0.372 (-5.63)***	0.257 (5.13)***	-0.428 (-6.47)***	0.000 (0.53)	58.50%	37.24%	42.83%		
10 FIN	-0.623 (-16.58)***	-0.321 (-8.75)***	0.363 (14.10)***	-0.338 (-4.99)***	0.000 (0.02)	62.27%	32.12%	33.79%		
11 FRA	-0.668 (-33.95)***	-0.558 (-25.15)***	0.094 (5.96)***	-0.573 (-22.29)***	0.000 (1.92)*	66.76%	55.77%	57.34%		
12 GBR	-0.548 (-42.69)***	-0.579 (-49.65)***	0.198 (20.28)***	-0.575 (-43.23)***	0.000 (-0.09)	54.80%	57.85%	57.53%		
13 HKG	-0.586 (-14.89)***	-0.695 (-18.04)***	0.106 (3.22)***	-0.615 (-14.50)***	-0.010 (-1.49)	58.59%	69.53%	61.51%		
14 IDN	-0.588 (-21.58)***	-0.374 (-16.80)***	0.252 (13.61)***	-0.435 (-16.03)***	0.000 (0.11)	58.80%	37.37%	43.54%		
15 IND	-0.625 (-17.25)***	-0.544 (-15.51)***	0.061 (3.18)***	-0.540 (-13.54)***	0.004 (1.36)	62.45%	54.37%	54.04%		
16 IRL	-0.618 (-11.09)***	-0.514 (-10.97)***	0.000 (0.00)	-0.559 (-11.47)***	-0.008 (-2.36)**	61.79%	51.44%	55.92%		
17 ITA	-0.460 (-14.58)***	-0.450 (-14.51)***	0.223 (10.17)***	-0.385 (-12.00)***	-0.008 (-1.18)	45.98%	45.04%	38.51%		
18 JPN	-0.617 (-75.88)***	-0.578 (-36.39)***	0.087 (8.81)***	-0.673 (-56.43)***	0.000 (-0.54)	61.72%	57.75%	67.30%		
19 KOR	-0.518 (-15.94)***	-0.526 (-19.42)***	0.256 (14.77)***	-0.649 (-22.65)***	0.003 (0.67)	51.82%	52.57%	64.89%		
20 MEX	-0.685 (-15.15)***	-0.436 (-11.02)***	0.200 (9.84)***	-0.584 (-13.28)***	0.000 (-0.10)	68.52%	43.62%	58.44%		
21 MYS	-0.683 (-35.99)***	-0.411 (-20.43)***	0.022 (3.75)***	-0.444 (-19.26)***	0.000 (0.05)	68.28%	41.07%	44.38%		
22 NLD	-0.559 (-15.29)***	-0.484 (-13.26)***	0.157 (5.73)***	-0.442 (-12.46)***	0.000 (-0.67)	55.86%	48.40%	44.18%		
23 NOR	-0.710 (-14.21)***	-0.727 (-15.49)***	0.182 (6.97)***	-0.775 (-15.13)***	0.001 (1.28)	71.04%	72.71%	77.49%		
24 NZL	-0.687 (-8.96)***	-0.678 (-10.35)***	0.163 (6.85)***	-0.671 (-7.85)***	0.007 (0.62)	68.67%	67.76%	67.05%		
25 PHL	-0.655 (-16.02)***	-0.378 (-10.25)***	0.161 (8.01)***	-0.424 (-10.04)***	0.000 (0.02)	65.50%	37.79%	42.39%		
26 PRT	-0.556 (-6.41)***	-0.204 (-2.47)**	0.220 (4.13)***	-0.123 (-1.27)	-0.008 (-1.54)	55.55%	20.42%	12.34%		
27 SGP	-0.677 (-24.21)***	-0.706 (-19.72)***	0.052 (1.60)	-0.759 (-18.04)***	-0.001 (-0.95)	67.71%	70.56%	75.85%		
28 SWE	-0.568 (-18.68)***	-0.664 (-22.00)***	0.110 (5.96)***	-0.740 (-22.83)***	-0.001 (-0.84)	56.82%	66.41%	74.02%		
29 THA	-0.628 (-23.11)***	-0.549 (-22.61)***	0.056 (4.34)***	-0.538 (-20.13)***	0.000 (0.17)	62.81%	54.88%	53.78%		
30 TWN	-0.600 (-18.88)***	-0.491 (-18.06)***	0.275 (12.17)***	-0.592 (-19.77)***	0.000 (-0.06)	60.00%	49.13%	59.24%		
31 USA	-0.567 (-74.50)***	-0.441 (-50.09)***	0.200 (27.22)***	-0.569 (-63.85)***	0.000 (-0.76)	56.71%	44.13%	56.94%		
32 ZAF	-0.775 (-15.55)***	-0.654 (-15.80)***	0.311 (8.15)***	-0.764 (-17.72)***	0.000 (0.54)	77.47%	65.36%	76.41%		
	Average					60.10%	49.82%	53.74%		

*, **, and *** indicate significance at 10%, 5% and 1%

Table 8- Panel C. Pecking Order and Market Timing Explanations of Debt Ratio

$$\begin{aligned} \text{M10_Baseline(BDR2):} \quad & \Delta \text{BDR}_{2,t} = (-\lambda) \text{BDR}_{2,t-1} + (\lambda\beta) X_{i,t-1} + \varepsilon_{i,t} \\ \text{M11_Pecking(BDR2):} \quad & \Delta \text{BDR}_{2,t} = (-\lambda) \text{BDR}_{2,t-1} + (\lambda\beta) X_{i,t-1} + \gamma \text{FINDEF}_{i,t} + \varepsilon_{i,t} \\ \text{M12_Timing(BDR2):} \quad & \Delta \text{BDR}_{2,t} = (-\lambda) \text{BDR}_{2,t-1} + (\lambda\beta) X_{i,t-1} + \gamma \text{EFA}_{i,t-1} + \varepsilon_{i,t} \end{aligned}$$

Abbr.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
	M10_Baseline(BDR2) coeBDR2	M11_Pecking(BDR2) coeBDR2	coeFINDEF	M12_Timing(BDR2) coeBDR2	coeEFA	Adjustment speed (λ)			
						M10	M11	M12	
1 ARG	-0.716 (-6.91)***	-0.300 (-3.67)***	0.783 (12.12)***	-0.717 (-5.54)***	-0.112 (-1.94)*	71.64%	30.02%	71.65%	
2 AUS	-0.591 (-20.79)***	-0.403 (-15.72)***	0.425 (22.62)***	-0.620 (-18.30)***	-0.011 (-3.63)***	59.07%	40.27%	61.98%	
3 AUT	-0.423 (-8.23)***	-0.286 (-5.75)***	0.492 (11.04)***	-0.418 (-6.46)***	-0.045 (-2.12)**	42.25%	28.61%	41.83%	
4 BEL	-0.555 (-13.57)***	-0.618 (-12.66)***	0.426 (12.44)***	-0.646 (-10.25)***	-0.001 (-0.73)	55.48%	61.78%	64.57%	
5 CAN	-0.589 (-33.32)***	-0.462 (-26.95)***	0.354 (28.28)***	-0.652 (-32.82)***	0.001 (0.84)	58.93%	46.19%	65.18%	
6 CHE	-0.395 (-16.19)***	-0.238 (-10.62)***	0.361 (23.17)***	-0.424 (-15.38)***	-0.001 (-0.65)	39.50%	23.79%	42.43%	
7 DEU	-0.604 (-29.21)***	-0.392 (-20.83)***	0.561 (34.72)***	-0.636 (-25.19)***	0.000 (-0.69)	60.43%	39.23%	63.62%	
8 DNK	-0.450 (-10.67)***	-0.256 (-8.08)***	0.801 (22.36)***	-0.517 (-10.97)***	-0.001 (-0.99)	44.95%	25.64%	51.67%	
9 ESP	-0.458 (-12.72)***	-0.330 (-8.36)***	0.742 (19.41)***	-0.499 (-9.33)***	-0.001 (-0.96)	45.78%	33.04%	49.93%	
10 FIN	-0.508 (-13.25)***	-0.284 (-9.80)***	0.635 (25.34)***	-0.512 (-12.42)***	0.001 (1.57)	50.79%	28.39%	51.22%	
11 FRA	-0.576 (-27.23)***	-0.493 (-23.98)***	0.468 (24.34)***	-0.632 (-24.36)***	0.000 (0.17)	57.55%	49.29%	63.19%	
12 GBR	-0.584 (-44.18)***	-0.473 (-39.66)***	0.422 (43.28)***	-0.628 (-42.04)***	0.000 (-0.68)	58.38%	47.29%	62.75%	
13 HKG	-0.620 (-16.09)***	-0.471 (-13.74)***	0.585 (16.83)***	-0.655 (-15.11)***	0.014 (1.78)*	61.99%	47.12%	65.53%	
14 IDN	-0.482 (-18.78)***	-0.285 (-14.28)***	0.603 (32.62)***	-0.483 (-16.50)***	0.000 (0.58)	48.22%	28.50%	48.27%	
15 IND	-0.676 (-17.16)***	-0.448 (-12.46)***	0.596 (16.95)***	-0.715 (-15.24)***	0.005 (1.27)	67.64%	44.77%	71.51%	
16 IRL	-0.470 (-9.03)***	-0.489 (-9.71)***	0.028 (2.53)**	-0.589 (-10.31)***	-0.010 (-1.97)**	46.98%	48.85%	58.88%	
17 ITA	-0.580 (-17.63)***	-0.334 (-12.23)***	0.676 (30.46)***	-0.544 (-15.01)***	-0.023 (-2.50)**	58.03%	33.43%	54.36%	
18 JPN	-0.565 (-75.25)***	-0.432 (-32.63)***	0.646 (48.99)***	-0.727 (-62.25)***	0.000 (-1.18)	56.50%	43.21%	72.73%	
19 KOR	-0.681 (-21.52)***	-0.459 (-18.60)***	0.632 (30.10)***	-0.698 (-21.37)***	0.007 (1.10)	68.12%	45.92%	69.79%	
20 MEX	-0.553 (-13.62)***	-0.353 (-10.71)***	0.477 (23.37)***	-0.631 (-14.74)***	0.001 (0.31)	55.33%	35.34%	63.08%	
21 MYS	-0.549 (-29.29)***	-0.511 (-27.85)***	0.077 (15.89)***	-0.581 (-26.30)***	0.000 (-0.04)	54.89%	51.05%	58.10%	
22 NLD	-0.633 (-18.78)***	-0.495 (-15.92)***	0.506 (16.60)***	-0.651 (-16.85)***	0.000 (-1.21)	63.30%	49.45%	65.06%	
23 NOR	-0.689 (-15.27)***	-0.520 (-13.34)***	0.387 (15.71)***	-0.760 (-14.81)***	0.001 (1.77)*	68.90%	51.98%	75.97%	
24 NZL	-0.558 (-8.05)***	-0.644 (-11.21)***	0.285 (10.78)***	-0.596 (-7.35)***	0.010 (0.75)	55.79%	64.40%	59.59%	
25 PHL	-0.492 (-11.80)***	-0.355 (-10.28)***	0.303 (18.51)***	-0.521 (-11.19)***	0.000 (0.20)	49.22%	35.53%	52.11%	
26 PRT	-0.452 (-6.56)***	-0.330 (-5.71)***	0.714 (11.67)***	-0.619 (-6.74)***	-0.006 (-0.80)	45.17%	32.95%	61.90%	
27 SGP	-0.580 (-22.04)***	-0.312 (-15.33)***	0.673 (36.40)***	-0.610 (-19.68)***	0.001 (1.52)	58.02%	31.20%	61.03%	
28 SWE	-0.615 (-19.68)***	-0.524 (-18.18)***	0.394 (18.33)***	-0.655 (-18.81)***	-0.001 (-0.58)	61.53%	52.42%	65.51%	
29 THA	-0.560 (-24.20)***	-0.416 (-19.30)***	0.310 (21.05)***	-0.618 (-23.47)***	0.000 (-0.57)	55.97%	41.55%	61.83%	
30 TWN	-0.672 (-20.97)***	-0.306 (-12.13)***	0.659 (30.15)***	-0.669 (-20.16)***	0.000 (0.41)	67.20%	30.60%	66.86%	
31 USA	-0.557 (-75.39)***	-0.423 (-57.55)***	0.396 (66.47)***	-0.594 (-68.99)***	0.000 (-0.36)	55.66%	42.29%	59.40%	
32 ZAF	-0.658 (-15.59)***	-0.517 (-15.12)***	0.690 (18.17)***	-0.685 (-15.13)***	0.000 (-0.79)	65.75%	51.68%	68.53%	
						Average	56.53%	41.12%	60.94%

*, **, and *** indicate significance at 10%, 5% and 1%

Table 8- Panel D Pecking Order and Market Timing Explanations of Debt Ratio

$$\begin{aligned} \text{M9_Panel(MDR2):} \quad & \Delta \text{MDR2}_{i,t} = (-\lambda) \text{MDR2}_{i,t-1} + (\lambda\beta) X_{i,t-1} + \varepsilon_{i,t} \\ \text{M13_Pecking(MDR2):} \quad & \Delta \text{MDR2}_{i,t} = (-\lambda) \text{MDR2}_{i,t-1} + (\lambda\beta) X_{i,t-1} + \gamma \text{FINDEF}_{i,t} + \varepsilon_{i,t} \\ \text{M14_Timing(MDR2):} \quad & \Delta \text{MDR2}_{i,t} = (-\lambda) \text{MDR2}_{i,t-1} + (\lambda\beta) X_{i,t-1} + \gamma \text{EFWA}_{i,t-1} + \varepsilon_{i,t} \end{aligned}$$

Abbr.	(1)	(2)		(3)		(4)	(5)	(6)	(7)	(8)
	M9_Panel(MDR2) coeMDR2	M13_Pecking(MDR2) coeMDR2 coeFINDEF		M14_Timing(MDR2) coeMDR2 coeEFWA		Adjustment speed (λ) M9 M13 M14				
1 ARG	-0.949 (-8.09)***	-0.654 (-5.95)***	0.834 (7.58)***	-0.783 (-5.19)***	-0.121 (-1.52)	94.85%	65.40%	78.33%		
2 AUS	-0.662 (-22.10)***	-0.511 (-17.41)***	0.357 (16.81)***	-0.696 (-19.37)***	-0.008 (-2.49)**	66.23%	51.09%	69.55%		
3 AUT	-0.414 (-8.37)***	-0.325 (-5.71)***	0.402 (6.48)***	-0.454 (-7.04)***	-0.069 (-2.77)***	41.38%	32.48%	45.43%		
4 BEL	-0.631 (-14.57)***	-0.535 (-10.18)***	0.459 (10.35)***	-0.660 (-11.42)***	0.001 (0.90)	63.14%	53.51%	66.03%		
5 CAN	-0.616 (-33.69)***	-0.535 (-27.83)***	0.257 (17.67)***	-0.643 (-30.90)***	0.000 (-0.20)	61.55%	53.49%	64.33%		
6 CHE	-0.397 (-17.00)***	-0.314 (-14.14)***	0.288 (17.77)***	-0.413 (-15.50)***	0.004 (1.78)*	39.68%	31.39%	41.26%		
7 DEU	-0.613 (-30.59)***	-0.518 (-24.79)***	0.409 (20.61)***	-0.670 (-27.79)***	0.000 (0.37)	61.27%	51.84%	66.98%		
8 DNK	-0.508 (-11.28)***	-0.390 (-8.95)***	0.638 (12.14)***	-0.558 (-11.30)***	-0.001 (-1.05)	50.80%	39.00%	55.75%		
9 ESP	-0.577 (-15.38)***	-0.508 (-10.31)***	0.564 (13.87)***	-0.656 (-10.67)***	0.000 (-0.38)	57.65%	50.84%	65.59%		
10 FIN	-0.630 (-16.53)***	-0.473 (-13.40)***	0.467 (14.91)***	-0.595 (-14.03)***	0.001 (0.66)	63.03%	47.34%	59.49%		
11 FRA	-0.648 (-32.12)***	-0.556 (-26.30)***	0.368 (19.54)***	-0.715 (-28.70)***	0.000 (0.30)	64.83%	55.61%	71.45%		
12 GBR	-0.563 (-42.99)***	-0.458 (-36.64)***	0.331 (35.27)***	-0.610 (-41.06)***	0.000 (1.20)	56.26%	45.83%	61.00%		
13 HKG	-0.610 (-16.44)***	-0.473 (-13.55)***	0.543 (13.32)***	-0.635 (-15.17)***	0.004 (0.45)	60.96%	47.33%	63.48%		
14 IDN	-0.586 (-21.27)***	-0.503 (-18.86)***	0.419 (14.38)***	-0.632 (-20.53)***	0.000 (0.33)	58.58%	50.30%	63.15%		
15 IND	-0.757 (-17.91)***	-0.628 (-14.83)***	0.398 (9.67)***	-0.803 (-15.48)***	0.005 (1.18)	75.74%	62.80%	80.31%		
16 IRL	-0.568 (-10.24)***	-0.499 (-8.70)***	0.045 (4.17)***	-0.692 (-11.11)***	-0.013 (-2.59)***	56.84%	49.91%	69.16%		
17 ITA	-0.537 (-17.22)***	-0.449 (-15.96)***	0.512 (19.58)***	-0.587 (-16.37)***	-0.008 (-0.77)	53.71%	44.90%	58.65%		
18 JPN	-0.621 (-79.40)***	-0.616 (-38.44)***	0.643 (34.65)***	-0.767 (-62.99)***	0.000 (-1.37)	62.08%	61.62%	76.72%		
19 KOR	-0.641 (-20.62)***	-0.550 (-19.12)***	0.499 (18.29)***	-0.652 (-20.01)***	0.002 (0.30)	64.10%	55.01%	65.20%		
20 MEX	-0.628 (-14.47)***	-0.523 (-11.09)***	0.386 (10.32)***	-0.722 (-14.36)***	-0.003 (-1.28)	62.81%	52.34%	72.16%		
21 MYS	-2.388 (-3.91)***	-2.432 (-3.87)***	-0.020 (-0.11)	-2.905 (-3.70)***	0.000 (-0.04)	238.77%	243.24%	290.46%		
22 NLD	-0.555 (-16.75)***	-0.459 (-14.68)***	0.288 (11.59)***	-0.562 (-14.54)***	0.000 (-2.05)**	55.51%	45.87%	56.18%		
23 NOR	-0.698 (-13.77)***	-0.576 (-10.98)***	0.344 (10.87)***	-0.774 (-13.70)***	0.000 (-0.10)	69.82%	57.57%	77.43%		
24 NZL	-0.698 (-10.11)***	-0.672 (-10.49)***	0.191 (7.49)***	-0.684 (-8.79)***	-0.001 (-0.05)	69.84%	67.19%	68.39%		
25 PHL	-0.614 (-13.68)***	-0.503 (-13.31)***	0.378 (17.06)***	-0.605 (-12.05)***	0.000 (0.25)	61.40%	50.33%	60.50%		
26 PRT	-0.503 (-6.95)***	-0.341 (-4.68)***	0.591 (7.32)***	-0.651 (-7.42)***	0.008 (1.11)	50.29%	34.14%	65.05%		
27 SGP	-0.666 (-24.56)***	-0.467 (-18.91)***	0.578 (23.97)***	-0.681 (-21.63)***	0.000 (0.76)	66.62%	46.65%	68.07%		
28 SWE	-0.578 (-18.52)***	-0.529 (-17.72)***	0.324 (16.04)***	-0.625 (-18.28)***	-0.001 (-0.65)	57.81%	52.85%	62.48%		
29 THA	-0.636 (-26.12)***	-0.535 (-22.12)***	0.251 (13.17)***	-0.683 (-25.34)***	0.000 (-0.61)	63.62%	53.48%	68.26%		
30 TWN	-0.560 (-17.80)***	-0.369 (-12.39)***	0.498 (16.51)***	-0.559 (-16.97)***	0.002 (2.05)**	56.03%	36.92%	55.90%		
31 USA	-0.587 (-76.17)***	-0.474 (-56.82)***	0.313 (49.39)***	-0.644 (-71.05)***	0.000 (-0.43)	58.70%	47.36%	64.36%		
32 ZAF	-0.814 (-17.91)***	-0.649 (-14.09)***	0.403 (9.00)***	-0.823 (-16.93)***	0.000 (-1.10)	81.38%	64.89%	82.30%		
						Average	67.04%	56.33%	72.29%	

*, **, and *** indicate significance at 10%, 5% and 1%

Table 9. Pearson Correlation between Speed Reduction and Pecking Order Coefficient

	First Leverage Measure		Second Leverage Measure	
	D5	D7	D11	D13
coeFINDEF	-0.08953	-0.27973	-0.64607	-0.61064
<i>p-value</i>	(0.626)	(0.121)	(<.0001)***	(0.000)***

D5=Speed(M5)-Speed(M4); D7=Speed(M7)-Speed(M2);

D11=Speed(M11)-Speed(M10); D13=Speed(M13)-Speed(M9);

coeFINDEF is the coefficient on FINDEF variables for M5, M7, M11, M13 respectively

*, **, and *** indicate significance at 10%, 5% and 1%

4.4 Cross Country Differences

Up to now, we find strong evidence that non-financial firms in thirty-two countries strive out to maintain target leverage, even including the pecking order or market timing factor. But the adjustment speeds varies quite a lot among countries. Furthermore, when we define the leverage ratio as long-term debts divide by net assets, we find that including pecking order factor, firms with higher pecking order coefficient tend to have much lower adjustment speed. The potential explanation for these divergences may be the difference of country factors which may affect the cost of being away from target or the adjustment costs. In this subsection, we don't consider all models. Since M1_FM fails to capture our sample's panel characteristics and provides a quite different result, we don't include it in this discussion. Besides, M4_Baseline, M9_Panel(MDR2) and M10_Baseline(BDR2) are also omitted because they are used to be comparisons.

According to Demirguc-Kunt and Maksimovic (1999), legal system and development of capital market influence capital structure. We separate our sample into two groups, based on the three qualitative country factors respectively—market condition (developed or emerging), legal system (civil or common law), and financial system (bank- or market-based). Table 10 shows the results. Wilcoxon rank sum test is used to test the median difference between two groups, and t-test is focus on the mean difference.

Surprisingly, firms in emerging market adjust faster toward their desired leverage than those in developed market. Firms in common-law country have a higher adjustment speed than those in civil-law country. Results about financial system are ambiguous, and the difference between market-based and bank-based countries is insignificant.

Table 10. Wilcoxon Rank Sum Test and T Test

	Market Condition		Wilcoxon Test	T Test
	Developed	Emerging		
M2_Panel	0.584	0.639	(-2.07)**	(2.053)**
M3_Base	0.321	0.430	(-3.02)***	(2.541)**
M5_Pecking(BDR)	0.591	0.627	(-1.07)	(1.159)
M6_Timing(BDR)	0.631	0.664	(-0.98)	(0.813)
M7_Pecking(MDR)	0.501	0.492	(0.18)	(-0.264)
M8_Timing(MDR)	0.532	0.551	(-0.33)	(-0.020)
M11_Pecking(BDR2)	0.419	0.395	(0.59)	(-0.508)
M12_Timing(BDR2)	0.599	0.632	(-1.02)	(1.037)
M13_Pecking(MDR2)	0.485	0.735	(-1.93)	(2.053)**
M14_Timing(MDR2)	0.635	0.917	(-1.88)	(1.728)*
D11	-0.129	-0.209	(2.17)**	(-2.013)**
D13	-0.100	-0.123	(0.98)	(-1.077)

	Legal System		Wilcoxon Test	T Test
	Civil Law	Common Law		
M2_Panel	0.586	0.626	(-1.47)	(0.993)
M3_Base	0.369	0.331	(0.96)	(-0.954)
M5_Pecking(BDR)	0.595	0.615	(-0.64)	(0.409)
M6_Timing(BDR)	0.624	0.669	(-1.44)	(1.343)
M7_Pecking(MDR)	0.469	0.546	(-1.65)	(1.499)
M8_Timing(MDR)	0.507	0.588	(-1.52)	(1.265)
M11_Pecking(BDR2)	0.388	0.450	(-1.69)	(1.499)
M12_Timing(BDR2)	0.610	0.609	(0.01)	(-0.681)
M13_Pecking(MDR2)	0.491	0.684	(-1.53)	(0.720)
M14_Timing(MDR2)	0.640	0.860	(-1.51)	(1.304)
D11	-0.177	-0.116	(-1.68)	(1.382)
D13	-0.112	-0.099	(-0.60)	(0.214)

	Financial system		Wilcoxon Test	T Test
	Bank-based	Market-based		
M2_Panel	0.606	0.596	(0.35)	(0.622)
M3_Base	0.372	0.337	(0.93)	(0.660)
M5_Pecking(BDR)	0.619	0.586	(1.08)	(1.037)
M6_Timing(BDR)	0.648	0.635	(0.41)	(0.415)
M7_Pecking(MDR)	0.491	0.505	(-0.30)	(-0.132)
M8_Timing(MDR)	0.511	0.564	(-1.02)	(-0.773)
M11_Pecking(BDR2)	0.406	0.417	(-0.30)	(-0.622)
M12_Timing(BDR2)	0.610	0.609	(0.04)	(0.057)
M13_Pecking(MDR2)	0.514	0.613	(-0.79)	(0.471)
M14_Timing(MDR2)	0.668	0.778	(-0.76)	(0.697)
D11	-0.156	-0.152	(-0.09)	(-0.094)
D13	-0.110	-0.104	(-0.31)	(0.471)

D11=Speed(M11)-Speed(M10); D13=Speed(M13)-Speed(M9);

*, **, and *** indicate significance at 10%, 5% and 1%

Even there are only some models with significance in market condition and legal tradition analyses, the results are consistent. Firms in countries with emerging market or with common-law tradition tend to have higher adjustment speed.

Next, we use three dummy variables to represent market condition (dummy variable equals to one for developed countries, otherwise equals to zero), legal tradition (dummy variable equals to one for common-law countries, otherwise equals to zero) and financial system (dummy variable equals to one for market-based countries, otherwise equals to zero). Except for these three dummies, legal enforcement, capital market development, banking development, shareholder right, creditor right, ownership concentration, corporate tax rate, and accounting standards are also included. Most of them are introduced by La Porta et al. (1997, 1998, 2000). The relationship between these country-level factors and adjustment speeds or reduction in adjustment speed is described in Pearson correlation matrix. The result is consistent with simple OLS-regressions. (For brevity, we don't show the OLS-regressions.)

Among eleven country-level factors, market condition and accounting standards have significant correlation with adjustment speed. Firms in emerging countries or in countries with more completed accounting standards tend to adjust toward their optimal leverage faster. On the other hand, market condition, law enforcement, corporate tax rate and accounting standards are more important county-level factors determining the magnitude of decrease on adjustment speed after including pecking order factor (when second leverage measure is used).

Since the adjustment speed decreases after including pecking order factor, the positive relationships between market condition dummy variable, law enforcement, corporate tax rate and accounting standards mean that firms in emerging countries or in countries with stronger law enforcement, higher corporate tax rate or more completed accounting standards tend to decrease less after including pecking order factor. Coefficient on *FINDEF* is the index of financing behavior indicating whether firms rely more on debt or equity financing when they need external fund. It also can be viewed as information asymmetry proxy. Our results show that countries with common-law tradition or with more completed accounting standards tend to have lower coefficient on *FINDEF*. In other words, countries with these characteristics have less information asymmetry.

Table 11. Pearson Correlation between Adjustment Speed and Country-Level Factors

	Market Condition	Legal Tradition	Financial System	Law Enforcement	Capital Market Development	Banking Development	Shareholder Right	Creditor Right	Ownership Concentration	Corporate Tax Rate	Accounting Standards
Speed_M2	-0.35293	0.25896	-0.06366	-0.27725	-0.09783	-0.07801	0.28314	-0.0216	0.14108	-0.12282	0.22717
<i>p-value</i>	(0.048)**	(0.152)	(0.729)	(0.125)	(0.594)	(0.671)	(0.116)	(0.907)	(0.441)	(0.503)	(0.227)
Speed_M3	-0.48309	-0.1726	-0.16679	-0.46329	-0.24212	-0.23434	-0.02693	-0.25899	0.14517	-0.0221	-0.22203
<i>p-value</i>	(0.005)***	(0.345)	(0.362)	(0.008)***	(0.182)	(0.197)	(0.884)	(0.152)	(0.428)	(0.904)	(0.238)
Speed_M5	-0.19154	0.11521	-0.19265	-0.20326	-0.19168	-0.08272	0.2916	0.01512	0.06749	0.03957	0.09168
<i>p-value</i>	(0.294)	(0.530)	(0.291)	(0.265)	(0.293)	(0.653)	(0.105)	(0.935)	(0.714)	(0.830)	(0.630)
Speed_M6	-0.17646	0.25436	-0.07412	-0.12241	-0.17319	-0.1672	0.24065	0.06916	0.06876	-0.00357	0.26975
<i>p-value</i>	(0.334)	(0.160)	(0.687)	(0.505)	(0.343)	(0.360)	(0.185)	(0.707)	(0.708)	(0.985)	(0.149)
Speed_M7	0.03304	0.2881	0.0551	0.10711	0.10271	0.08255	0.2163	0.33558	-0.1368	-0.26239	0.44639
<i>p-value</i>	(0.858)	(0.110)	(0.765)	(0.560)	(0.576)	(0.653)	(0.234)	(0.060)*	(0.455)	(0.147)	(0.013)**
Speed_M8	-0.06013	0.26754	0.18274	0.10277	0.06414	0.12688	0.21057	0.21323	-0.2739	-0.13494	0.53554
<i>p-value</i>	(0.744)	(0.139)	(0.317)	(0.576)	(0.727)	(0.489)	(0.247)	(0.241)	(0.129)	(0.462)	(0.002)***
Speed_M11	0.10653	0.29534	0.05382	0.18229	-0.02822	-0.00415	0.11871	0.14149	-0.11703	-0.05379	0.37657
<i>p-value</i>	(0.562)	(0.101)	(0.770)	(0.318)	(0.878)	(0.982)	(0.518)	(0.440)	(0.524)	(0.770)	(0.040)**
Speed_M12	-0.18232	-0.00158	-0.00795	-0.10913	-0.0702	0.00795	0.12282	0.05178	-0.24879	-0.08009	0.08684
<i>p-value</i>	(0.318)	(0.993)	(0.966)	(0.552)	(0.703)	(0.966)	(0.503)	(0.778)	(0.170)	(0.663)	(0.648)
Speed_M13	-0.33288	0.26924	0.14202	-0.13727	0.07767	0.1619	0.16505	0.2715	0.15251	-0.09466	0.23272
<i>p-value</i>	(0.063)*	(0.136)	(0.438)	(0.454)	(0.673)	(0.376)	(0.367)	(0.133)	(0.405)	(0.606)	(0.216)
Speed_M14	-0.32506	0.26517	0.13794	-0.14084	0.07256	0.13116	0.16643	0.26338	0.16377	-0.0979	0.19251
<i>p-value</i>	(0.070)*	(0.142)	(0.452)	(0.442)	(0.693)	(0.474)	(0.363)	(0.145)	(0.370)	(0.594)	(0.308)
D11	0.36795	0.29313	0.01684	0.33461	-0.06169	-0.10028	0.0373	0.00317	0.03439	0.10022	0.23783
<i>p-value</i>	(0.038)**	(0.104)	(0.927)	(0.061)*	(0.737)	(0.585)	(0.839)	(0.986)	(0.852)	(0.585)	(0.206)
D13	0.17534	0.10801	0.05605	0.24073	-0.02747	0.17936	-0.05743	0.15137	-0.12725	0.30859	0.30741
<i>p-value</i>	(0.337)	(0.556)	(0.761)	(0.184)	(0.881)	(0.326)	(0.755)	(0.408)	(0.488)	(0.086)*	(0.098)*
coeFINDEF_{M11}	-0.0349	-0.4148	-0.21816	-0.12495	-0.06804	-0.02008	-0.09554	0.13115	0.02562	0.06735	-0.45798
<i>p-value</i>	(0.850)	(0.018)**	(0.230)	(0.496)	(0.711)	(0.913)	(0.603)	(0.474)	(0.889)	(0.714)	(0.011)**
coeFINDEF_{M13}	0.0012	-0.45929	-0.24866	-0.14739	-0.10352	-0.10846	-0.09671	-0.02191	0.0362	0.01121	-0.51493
<i>p-value</i>	(0.995)	(0.008)***	(0.170)	(0.421)	(0.573)	(0.555)	(0.599)	(0.905)	(0.844)	(0.952)	(0.004)***

Speed_M1--Speed_M14 are adjustment speeds evaluated from models M1 to M14; D11=Speed(M11)/Speed(M10); D13=Speed(M13)/Speed(M9);

coeFINDEF_{M11} and coeFINDEF_{M13} is the coefficient on FINDEF variables for M11, M13 respectively; *, **, and *** indicate significance at 10%, 5% and 1%

Furthermore, we use five multiple regressions to discuss. Some country-level factors are highly correlation, for example, the correlation between market condition dummy variable and law enforcement is 0.85906 (Table A.2). Therefore, our first multiple regression only consists market condition, legal tradition and financial system dummy variables. The second one includes accounting standards additionally. Banking development, creditor right, ownership concentration and corporate tax rate are added into the second regression to be our third one. The fourth regression is combined by law enforcement, capital market development and shareholder right. And the last one adds creditor right, ownership concentration and corporate tax rate and accounting standards into the fourth.

The results of multiple regressions are listed in Table 12. The conclusion is similar to Pearson correlation matrix's. Market condition dummy variable and accounting standards are two significant variables which can be used to explain the difference of adjustment speed toward target leverage ratio among the world. The impact of market condition dummy variable is negative, while the impact of accounting standards variable is positive. When it comes to the reduction on adjustment speed after considering pecking order coefficient (when second leverage measure is used), market condition dummy variable, corporate tax rate and accounting standards are important.

In short, firms in emerging countries or in countries with more completed accounting standards tend to adjust toward their optimal leverage faster. Firms in countries with common-law tradition, stronger law enforcement, higher corporate tax rate, or more completed accounting standards tend to have less decrease on adjustment speed after including pecking order variable (refers to second leverage measure). This may because these countries have less information asymmetries.

Table 12-Panel A. Adjustment Speed Analysis by Multiple Regressions

	Intercept	Market Condition	Legal Tradition	Financial System	Accounting Standards	Banking Development	Creditor Right	Ownership Concentration	Corporate Tax Rate	Law Enforcement	Capital Market Development	Shareholder Right	R ²	#
M2_Panel	Coefficient	0.643 (21.55)***	-0.06059 (-2.11)**	0.05345 (1.79)*	-0.03927 (-1.35)								0.2355	32
	Coefficient	0.454 (5.04)***	-0.08368 (-2.92)***	0.03474 (1.20)	-0.06402 (-2.18)**	0.00342 (2.22)**							0.3610	30
	Coefficient	0.413 (2.70)***	-0.0844 (-2.93)***	0.05004 (1.49)	-0.07198 (-2.32)**	0.00421 (2.42)**	-0.01323 (-0.43)	-0.01439 (-1.25)	0.12545 (1.25)	-0.07337 (-0.47)			0.4667	30
	Coefficient	0.648 (7.88)***								-0.01151 (-1.26)	-0.01438 (-0.59)	0.01813 (1.75)*	0.1759	32
	Coefficient	0.440 (2.67)***				0.00365 (2.12)**	-0.00441 (-0.40)	0.12208 (1.09)	-0.09581 (-0.55)	-0.01406 (-1.44)	-0.03925 (-1.44)	0.01691 (1.57)	0.3529	30
M3_Base	Coefficient	0.492 (12.82)***	-0.13608 (-3.69)***	-0.0281 (-0.73)	-0.05426 (-1.45)								0.3770	32
	Coefficient	0.427 (3.39)***	-0.14408 (-3.59)***	-0.03458 (-0.85)	-0.06283 (-1.53)	0.00119 (0.55)							0.3844	30
	Coefficient	0.450 (2.09)**	-0.14444 (-3.58)***	-0.00876 (-0.19)	-0.06623 (-1.52)	0.00197 (0.80)	-0.04174 (-0.97)	-0.0211 (-1.31)	0.0864 (0.61)	-0.1237 (-0.57)			0.4829	30
	Coefficient	0.663 (6.19)***								-0.03508 (-2.95)***	-0.01778 (-0.56)	0.00028 (0.02)	0.3119	32
	Coefficient	0.738 (3.17)***				0.00057 (0.23)	-0.01706 (-1.10)	-0.02463 (-0.16)	-0.16707 (-0.68)	-0.03535 (-2.57)**	-0.02655 (-0.69)	0.00111 (0.07)	0.3654	30
M5_Pecking(BDR)	Coefficient	0.646 (17.02)***	-0.04247 (-1.17)	0.04522 (1.19)	-0.05878 (-1.59)								0.1299	32
	Coefficient	0.499 (4.12)***	-0.06028 (-1.56)	0.03079 (0.79)	-0.07787 (-1.97)**	0.00264 (1.27)							0.1826	30
	Coefficient	0.419 (1.89)*	-0.06234 (-1.50)	0.03724 (0.76)	-0.08141 (-1.81)*	0.00337 (1.33)	-0.00322 (-0.07)	-0.00818 (-0.49)	0.08258 (0.57)	0.04966 (0.22)			0.2093	30
	Coefficient	0.592 (6.12)***								-0.00549 (-0.51)	-0.04179 (-1.46)	0.02623 (2.15)**	0.1967	32
	Coefficient	0.415 (1.96)**				0.00248 (1.12)	-0.00156 (-0.11)	0.0931 (0.65)	0.00473 (0.02)	-0.00727 (-0.58)	-0.05456 (-1.56)	0.02557 (1.85)*	0.2485	30
M6_Timing(BDR)	Coefficient	0.661 (17.84)***	-0.03547 (-1.00)	0.05732 (1.55)	-0.03658 (-1.01)								0.1198	32
	Coefficient	0.450 (3.95)***	-0.06121 (-1.68)*	0.03646 (0.99)	-0.06416 (-1.73)*	0.00382 (1.95)*							0.2362	30
	Coefficient	0.336 (1.66)*	-0.06345 (-1.67)*	0.03326 (0.75)	-0.05828 (-1.42)	0.0051 (2.22)**	-0.03823 (-0.94)	-0.0028 (-0.18)	0.11051 (0.83)	0.04125 (0.20)			0.3045	30
	Coefficient	0.607 (6.17)***								-0.00138 (-0.13)	-0.03496 (-1.20)	0.02078 (1.67)*	0.1202	32
	Coefficient	0.320 (1.61)				0.00461 (2.21)**	0.00375 (0.28)	0.12262 (0.91)	-0.01915 (-0.09)	-0.00634 (-0.54)	-0.06241 (-1.90)*	0.01714 (1.32)	0.2982	30

*, **, and *** indicate significance at 10%, 5% and 1%.

Table 12-Panel B. Adjustment Speed Analysis by Multiple Regressions

	Intercept	Market Condition	Legal Tradition	Financial System	Accounting Standards	Banking Development	Creditor Right	Ownership Concentration	Corporate Tax Rate	Law Enforcement	Capital Market Development	Shareholder Right	R ²	#	
M7_Pecking(MDR)	Coefficient	0.455	0.02169	0.09331	-0.01597								0.1013	32	
	t-value	(7.95)***	(0.39)	(1.63)	(-0.29)										
	Coefficient	0.080	-0.024	0.0563	-0.06492	0.00677							0.2580	30	
	t-value	(0.47)	(-0.44)	(1.02)	(-1.16)	(2.30)**									
	Coefficient	0.191	-0.01782	0.02651	-0.05413	0.0062	-0.03275	0.02589	-0.01692	-0.27084				0.3299	30
t-value	(0.63)	(-0.31)	(0.40)	(-0.88)	(1.79)*	(-0.54)	(1.14)	(-0.08)	(-0.88)						
M8_Timing(MDR)	Coefficient	0.321								0.01275	-0.00273	0.02227	0.0734	32	
	t-value	(2.08)**								(0.74)	(-0.06)	(1.14)			
	Coefficient	0.160				0.00633		0.03202	-0.01851	-0.35223	0.00065	-0.06935	0.00774	0.3480	30
	t-value	(0.55)				(2.06)**		(1.64)	(-0.09)	(-1.14)	(0.04)	(-1.43)	(0.41)		
	Coefficient	0.501	-0.00816	0.07187	0.02747									0.0818	32
t-value	(7.67)***	(-0.13)	(1.10)	(0.43)											
M11_Timing(BDR2)	Coefficient	-0.040	-0.07404	0.0185	-0.04312	0.00977							0.3376	30	
	t-value	(-0.22)	(-1.27)	(0.31)	(-0.72)	(3.11)***									
	Coefficient	0.002	-0.0734	-0.00098	-0.02417	0.00941	-0.02895	0.01666	-0.13192	0.05699				0.3670	30
	t-value	(0.01)	(-1.17)	(-0.01)	(-0.36)	(2.48)**	(-0.43)	(0.67)	(-0.60)	(0.17)					
	Coefficient	0.360									0.01259	-0.0127	0.02495	0.0601	32
t-value	(2.05)**									(0.65)	(-0.24)	(1.13)			
M12_Panel(MDR2)	Coefficient	0.085				0.01013		0.02294	-0.17838	-0.12882	-0.01143	-0.08201	0.0024	0.4101	30
	t-value	(0.27)				(3.07)***		(1.10)	(-0.84)	(-0.39)	(-0.61)	(-1.57)	(0.12)		
	Coefficient	0.361	0.03302	0.06689	-0.00279									0.1034	32
	t-value	(8.04)***	(0.77)	(1.49)	(-0.06)										
	Coefficient	0.153	0.00771	0.04638	-0.02992	0.00375								0.1815	30
t-value	(1.08)	(0.17)	(1.02)	(-0.65)	(1.54)										
M12_Panel(MDR2)	Coefficient	0.151	0.00742	0.04241	-0.02245	0.00395	-0.02232	0.00257	-0.01869	0.01635				0.1895	30
	t-value	(0.57)	(0.15)	(0.74)	(-0.42)	(1.32)	(-0.42)	(0.13)	(-0.11)	(0.06)					
	Coefficient	0.229									0.01836	-0.02432	0.01265	0.0817	32
	t-value	(1.90)*									(1.57)	(-0.68)	(0.83)		
	Coefficient	0.015				0.00484		0.01053	0.02289	-0.05668	0.00998	-0.05724	0.00491	0.2262	30
t-value	(0.06)				(1.84)*		(0.63)	(0.14)	(-0.22)	(0.67)	(-1.38)	(0.30)			
M12_Panel(MDR2)	Coefficient	0.621	-0.02235	0.00544	-0.0012									0.0166	32
	t-value	(16.67)***	(-0.62)	(0.15)	(-0.03)										
	Coefficient	0.544	-0.03168	-0.00211	-0.01119	0.00138								0.0335	30
	t-value	(4.47)***	(-0.82)	(-0.05)	(-0.28)	(0.66)									
	Coefficient	0.772	-0.02904	0.015	-0.00501	-0.00005	-0.01237	-0.00506	-0.21986	-0.08522				0.1385	30
t-value	(3.61)***	(-0.72)	(0.32)	(-0.12)	(-0.02)	(-0.29)	(-0.32)	(-1.57)	(-0.39)						
M12_Panel(MDR2)	Coefficient	0.563								0.00171	-0.018	0.0129	0.0430	32	
	t-value	(5.78)***								(0.16)	(-0.62)	(1.05)			
	Coefficient	0.758				0.00038		-0.00141	-0.21119	-0.13292	-0.00441	-0.02777	0.00662	0.1496	30
	t-value	(3.65)***				(0.17)		(-0.10)	(-1.50)	(-0.61)	(-0.36)	(-0.81)	(0.49)		

*, **, and *** indicate significance at 10%, 5% and 1%.

Table 12-Panel C. Adjustment Speed Analysis by Multiple Regressions

	Intercept	Market Condition	Legal Tradition	Financial System	Accounting Standards	Banking Development	Creditor Fight	Ownership Concentration	Corporate Tax Rate	Law Enforcement	Capital Market Development	Shareholder Right	R ²	#	
M13_Pecking(MDR2)	Coefficient	0.669 (4.56)***	-0.2429 (-1.72)*	0.20058 (1.37)	-0.01752 (-0.12)								0.1793	32	
	Coefficient	0.024 (0.05)	-0.32143 (-2.17)**	0.13696 (0.91)	-0.10166 (-0.67)	0.01164 (1.46)							0.2437	30	
	Coefficient	-0.734 (-0.90)	-0.32655 (-2.12)**	0.03913 (0.22)	-0.11908 (-0.72)	0.01558 (1.67)*	0.07351 (0.45)	0.04963 (0.81)	0.71019 (1.32)	0.23123 (0.28)				0.3231	30
	Coefficient	0.720 (1.72)*									-0.03676 (-0.79)	0.04612 (0.37)	0.03821 (0.72)	0.0544	32
	Coefficient	-0.393 (-0.46)				0.01351 (1.50)		0.07006 (1.23)	0.60497 (1.04)	0.0079 (0.01)	-0.04727 (-0.93)	-0.04847 (-0.34)	0.02565 (0.46)	0.2215	30
M14_Tuning(MDR2)	Coefficient	0.840 (4.92)***	-0.27514 (-1.69)*	0.22332 (1.31)	-0.01573 (-0.09)								0.1707	32	
	Coefficient	0.239 (0.44)	-0.34832 (-1.99)**	0.16403 (0.93)	-0.09414 (-0.53)	0.01085 (1.15)							0.2125	30	
	Coefficient	-0.550 (-0.56)	-0.3521 (-1.92)*	0.05323 (0.25)	-0.1104 (-0.56)	0.01514 (1.37)	0.06131 (0.31)	0.05789 (0.79)	0.78783 (1.23)	0.14475 (0.15)				0.2852	30
	Coefficient	0.911 (1.88)*									-0.04347 (-0.81)	0.05338 (0.37)	0.0441 (0.72)	0.0552	32
	Coefficient	-0.247 (-0.25)				0.01295 (1.23)		0.07935 (1.18)	0.715 (1.05)	-0.0581 (-0.05)	-0.05 (-0.84)	-0.04557 (-0.27)	0.03388 (0.52)	0.1989	30
D11	Coefficient	-0.231 (-5.74)***	0.07667 (1.98)**	0.05339 (1.33)	0.00056 (0.01)								0.1779	32	
	Coefficient	-0.274 (-2.07)**	0.07143 (1.69)*	0.04914 (1.15)	-0.00505 (-0.12)	0.00078 (0.34)							0.1817	30	
	Coefficient	-0.457 (-1.91)*	0.06791 (1.51)	0.03814 (0.72)	-0.00106 (-0.02)	0.00215 (0.79)	-0.01596 (-0.33)	0.0016 (0.09)	0.12786 (0.81)	0.13878 (0.57)				0.2249	30
	Coefficient	-0.341 (-3.09)***									0.02284 (1.86)*	-0.02528 (-0.77)	0.00284 (0.20)	0.1184	32
	Coefficient	-0.680 (-2.91)***				0.00313 (1.28)		0.00563 (0.36)	0.20486 (1.29)	0.1198 (0.49)	0.02228 (1.61)	-0.03646 (-0.94)	0.00343 (0.22)	0.2283	30
D13	Coefficient	-0.131 (-4.85)***	0.02278 (0.88)	0.00813 (0.30)	0.0085 (0.32)								0.0358	32	
	Coefficient	-0.245 (-2.84)***	0.00898 (0.33)	-0.00305 (-0.11)	-0.00629 (-0.22)	0.00205 (1.39)							0.1047	30	
	Coefficient	-0.485 (-3.60)***	0.00335 (0.13)	-0.02665 (-0.90)	-0.00092 (-0.03)	0.00294 (1.92)*	0.02838 (1.05)	0.01142 (1.13)	0.04018 (0.45)	0.36278 (2.67)***				0.3657	30
	Coefficient	-0.179 (-2.54)**									0.01005 (1.28)	-0.00829 (-0.40)	-0.00226 (-0.25)	0.0659	32
	Coefficient	-0.426 (-3.17)***				0.00297 (2.11)**		0.01005 (1.12)	0.00261 (0.03)	0.28804 (2.04)**	0.00313 (0.39)	-0.00844 (-0.38)	-0.00741 (-0.85)	0.3402	30

D11=Speed(M11)/Speed(M10); D13=Speed(M13)/Speed(M9);

*, **, and *** indicate significance at 10%, 5% and 1%