Listing Advantages Around the World

Kenichi Ueda* and Somnath Sharma**

*University of Tokyo, TCER, and CEPR, **University of Tokyo and Reserve Bank of India

NBER-TCER-CEPR (TRIO) Conference
at the University of Tokyo
July 27, 2019

The views are those of the author and should not be attributed to the institutions they belong to.

Overview

- Based on the firm-level data for each of 29 countries, we confirm that the listed firms, on an average, have lower marginal products of capital in comparison with the unlisted firms.
- A lower MPK indicates that a firm faces a lower interest rate without rationing. We call a lower MPK of the listed as *listing advantages*.
- We then investigate the institutional factors that exacerbate or mitigate the listing advantages in a cross-country study.
- Listing advantages are enlarged with product market competition and macroeconomic instability, which should increase profit volatility.
- They are lowered with financial developments and creditor's rights, which should ease borrowing constraints.
- But, we do not find robust effects of corporate governance on listing advantages, perhaps because there is a trade-off between easing financial constraints and lowering owners benefits to go public.

Literature

Empirical studies on listing effects, mostly country studies:

- *Positive evidence* Listed firms have better access to finance (Saunders and Steffen, 11; Mortal and Reisel, 13) resulting in lower *MPK* compared to unlisted firms (Schoubben and Van Hulle, 11; Ueda, Ishide, and Goto, 19).
- *Negative evidence* Listed firms are short-termist and they are less sensitive to growth opportunities (Asker et al., 14; Sheen, 16).
- *Mixed evidence* Listed firms have lower leverage, but with lower fluctuations in capital structure (Brav 09; Goyal et al. 11).

Cross-country studies on financial frictions and institutions, often focusing on the listed firms only: e.g.,

- Shareholder rights affect financial frictions while creditor's rights do not (Claessens, Ueda, and Yafeh, 14). Capital allocative efficiency improves with financial liberalizations (Abiad, Oomes, and Ueda, 08).

Data

Data at two levels—country-wise firm-level and country-level data.

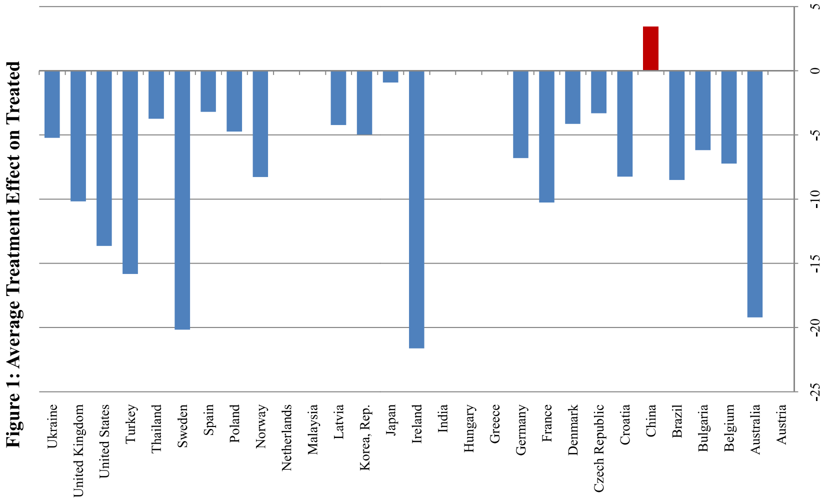
- Manufacturing firms from 2008-2017 for 29 countries by Bureau van Dijk (BvD). We follow Kalemli-Ozcan et al. (15) to prepare nationally representative data as much as possible.
- The firm-level analysis for each country produces country-level average effects of listing.
- Country-level institutional indicators from various sources, e.g., different publications of World Bank, World Economic Forum, World Value Survey and Datastream.

Estimation of Listing Advantages for Each Country

We estimate the listing advantages for each country by the average treatment effect on treated (ATT) using the propensity score matching.

- We first remove all those firms in which immediate shareholder owns more than 50 percent of the shares.
- We control for *Size*, *Age*, *Leverage* and *Industry* and use *Listing* as the treatment variable. We see the effect of *Listing* on marginal product of capital (measured by *ROA*).
- We collect the statistically significant ATT for all the countries and call it as *Listing Advantages*.

Estimation Results for Listing Advantages (ATT)



Robustness of Listing Advantages

- *ATT* of the firms with the propensity score of more than 50 percent. They are supposed to be listed. The unlisted ones are likely based on owner's benefits, which can be considered as randomly assigned.
- Fixed effects estimates.
- Highly correlated.

	ATT Overall	ATT Upper Half	Fixed Effect Coeff
ATT Overall	1		
ATT Upper Half	0.853	1	
Fixed Effect Coeff	0.668	0.425	1

Cross-Country Analysis: Institutional Factors

$$
\begin{aligned}
ATT_{it} = {} & \alpha_i + \beta_1 CorporateGovernance_{it} + \beta_2 Creditor'sRights_{it} \\
& + \beta_3 InstitutionalQuality_{it} + \beta_4 ProductMarketCompetition_{it} \\
& + \beta_5 FinancialMarketDevelopment_{it} + \beta_6 MacroVolatility_{it} \\
& + \beta_7 Inflation_{it} + \beta_8 InterestRate_{it} + \nu_{it}.
\end{aligned}
$$

Benchmark Results

Dependent Variable	ATT
Self Dealing Index	-6.771***
	(-3.550)
Creditor's Rights	2.121***
	(5.170)
Property Rights	-2.460***
	(-3.950)
Credit to GDP Ratio	0.0247*
	(2.110)
New Business Registered	-0.940***
	(-7.200)
Std. Deviation of Inflation	0.435
	(0.480)
Inflation	0.154
	(0.880)
Interest Rate	-0.152**
	(-2.710)
Constant	5.535
	(1.420)
Number of Observations	193
Adjusted R-Sq	0.404

Results with different factors raising profit volatility

Indicators	Variables	Effects		
Institutional Quality	Property Rights	-2.460***		
		(-3.950)		
	Rule of Law		-5.701***	
			(-5.560)	
	Rule of Law			-0.068
				(-1.920)
Product Market Competition	New Business Registered	-0.940***		
		(-7.200)		
	Cost of starting a Business (–)		0.333***	
			(4.330)	
	Trade Barriers			-2.824***
				(-3.360)
Macro-Volatility	Std. Deviation of Inflation	0.435		
		(0.480)		
	Std. Deviation of GDP growth		-1.309***	
			(-5.560)	
	Coefficient of variation of exchange rate			-0.350*
				(-2.510)

Note: t-statistics are reported in the parenthesis. *denotes significance at 10%; ** at 5%; and *** at 1%.

Results with different factors easing financial constraints

Indicators	Variables	Effects					
	Creditor's Rights	2.121***					
		(5.170)					
	Strength of Legal Rights (–)		0.007				
Creditor's Rights			(0.030)				
	Insolvency Time (–)			-0.764			
				(-1.250)			
	Strength of Insolvency Law (–)				-0.931*		
					(-2.040)		
	Credit to GDP Ratio	0.0247*					
		(2.110)					
	(stock + pvt. bond mkt. Cap + Bank credit) over GDP		0.077***				
Financial Development			(6.990)				
	Market Capitalization (% of GDP)			0.029*			
				(2.110)			
	Prevalence of Foreign Ownership				0.088		
					(0.090)		
	Self Dealing Index	-6.771***					
		(-3.550)					
	Corporate Governance Quality Index		-1.418***				
			(-7.040)				
	Anti-director Rights Index			1.770***			
Corporate Governance				(7.080)			
	Extent of Director's Liability				0.070		
					(0.270)		
	Corporate Board Efficacy					0.968	
						(0.850)	
	Protection of minority shareholders interests						2.628*
							(2.490)

Note: t-statistics are reported in the parenthesis. *denotes significance at 10%; ** at 5%; and *** at 1%.

Concluding Remarks

- Difference of listing advantages seems wider in a country with riskier business environment i.e., competitive in micro and unstable in macro.
- They are narrower in a countries with easier access to finance i.e., stronger creditors rights and developed financial markets.
- While it is likely to ease financial constraints, strong corporate governance does not appear relevant. A countervailing force is perhaps private benefits of owners.
    - Strong corporate governance lowers the benefits of majority shareholders (i.e., owners) if publicly traded, and thus it incentivizes firm owners to remain private even facing tighter financial constraints.
- This is a study on the extensive margin (listing) on financial constraints and institutional factors. The results is somewhat opposite to Claessens, Yafeh, and Ueda (2014) on intensive margin for listed firms for which they find corporate governance matters.