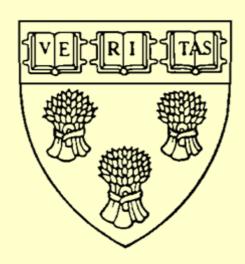
Public Enforcement of Securities Laws: A Comparative Perspective

Professor Howell E. Jackson Harvard Law School



BBL Seminar at RIETI

Ministry of Economy, Trade and Industry
June 13, 2007

Outline

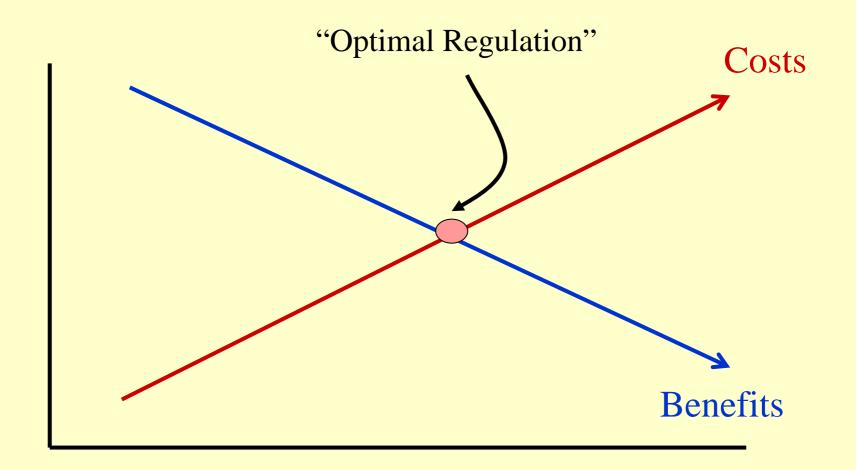
Background on Project



• Jackson & Roe, Public Enforcement Paper

Areas for Future Research and Policy Implications

How Large a Staff Should We Hire?



Level of Staffing

Problems in Measuring Costs (and Benefits) in Financial Regulation

Costs

- Direct Governmental Costs***
- Direct Private Costs
- Adjudication Costs
- Cost of Disrupted (but Desirable) Transactions
- [Sanctions (Monetary & Non-monetary) & Fees]

Benefits

- Consumer Protection
- Lowering Cost of Capital
- Elimination of Systemic Risk
- Equitable, Redistributive & Political Goals

Problems in Comparative Analysis

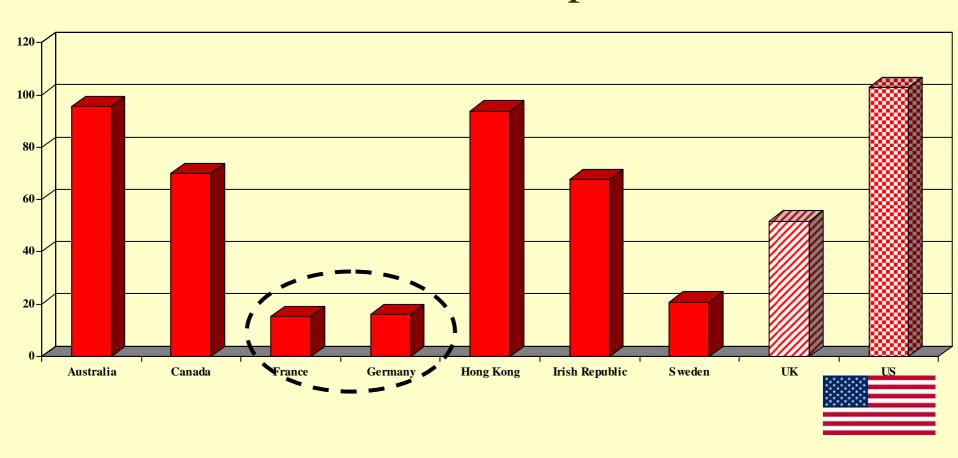
- Differences in Scale
- Differences in Financial Sectors
- Differences in Regulatory Objectives
- Differences in National Endowments
- Differences in Private Remedies/Responsibilities
- Differences in Compliance Levels

Scale of Financial Regulation in U.S.

(H. Jackson, Variation in Regulatory Intensity, 24 Yale J. Reg. 101 (2007))

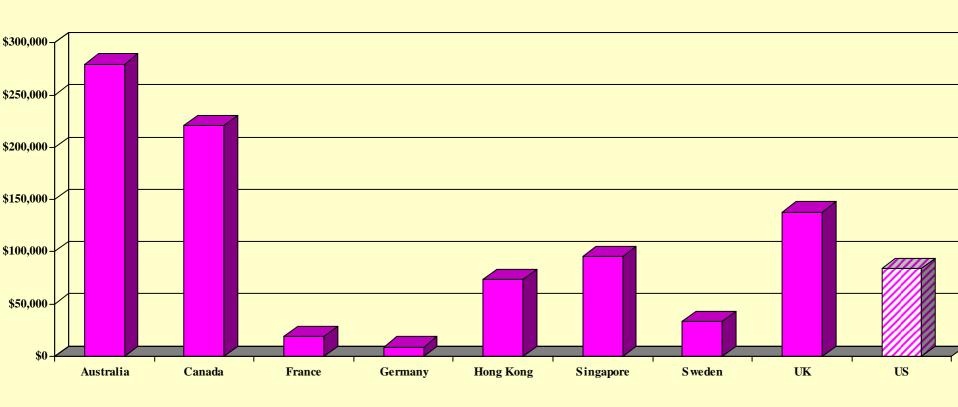
Table One U.S. Budgets and Staffing for Financial Regulation (Estimates for 2002)											
Depository	[,] Institutions										
	Budgets	\$2,779,897,996	50.02%	\$148,127							
	Staffing	18,767	43.40%								
Securities	Industry										
	Budgets	\$1,308,923,440	23.55%	\$205,644							
	Staffing	6,365	14.72%								
Insurance	Industry										
	Budgets	\$946,600,000	17.03%	\$72,501							
	Staffing	13,056	30.19%								
Private Pe	nsions										
	Budgets	\$522,178,331	9.40%	\$103,279							
	Staffing	5,056	11.69%								
		••••									
Total	• • •										
	Budgets	\$5,557,599,767	100.00%	\$128,516							
	Staffing	43,244	100.00%								

Figure Five Total Financial Regulatory Staff Per Million of Population



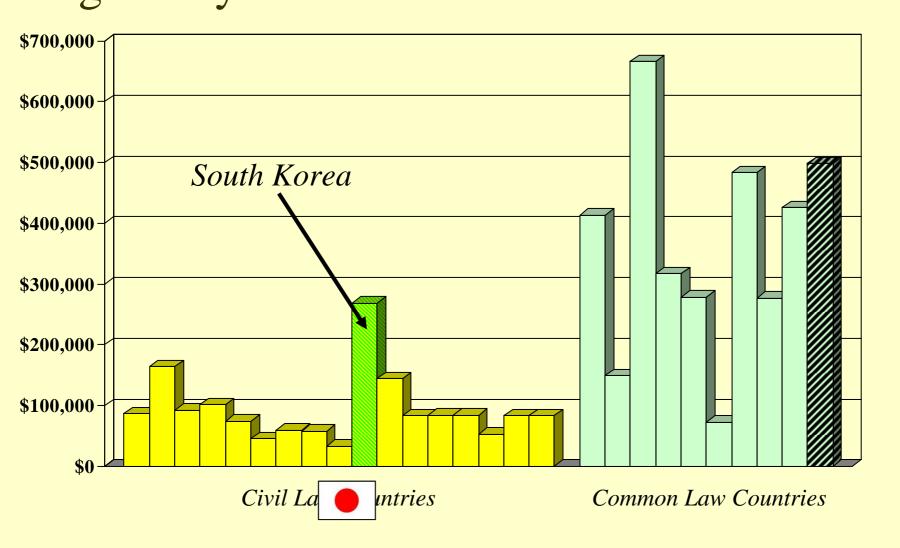
Source: FSA 2003/2004 Annual Report Appendix 5; Author's Compilations.

Figure Three Securities Regulation Costs Per Billion Dollars of Stock Market Capitalization



Source: FSA 2003/2004 Annual Report Appendix 5..

Figure Seven
Civil Law versus Common Law Countries:
Regulatory Costs Per Billion Dollars of GDP



Source: FSA 2003/2004 Annual Report Appendix 5; FBD Data; Author's Compilations.

Outline

Background on Project

Jackson & Roe, Public Enforcement Paper



Areas for Future Research and Policy Implications

Motivation for Current Paper

The World Bank . . . has announced that "[i]n banking

and securities markets, characteristics related to

private monitoring and enforcement drive

development more than public enforcement

measures". World Bank (2006: 1).

Academic Basis

- "Public enforcement plays a modest role at best in the development of stock markets. In contrast, the development of stock markets is strongly associated with extensive disclosure requirements and a relatively low burden of proof on investors seeking to recover damages resulting from omissions of material information from the prospectus."
 - La Porta, Lopez-de-Silanes & Shleifer, What Works in Securities Laws?, 41 J. Fin. 1, 20 (2006).

Claims of Paper

- In theory, both private and public enforcement have weaknesses and strengths.
- Prior empirical work on public enforcement has relied on formal measures of regulatory power.
- Using better measures, public enforcement is associated with many (but not all) indicia of strong capital markets.
- More research is needed before the World Bank can make definitive policy recommendations.

Mechanisms of Enforcement

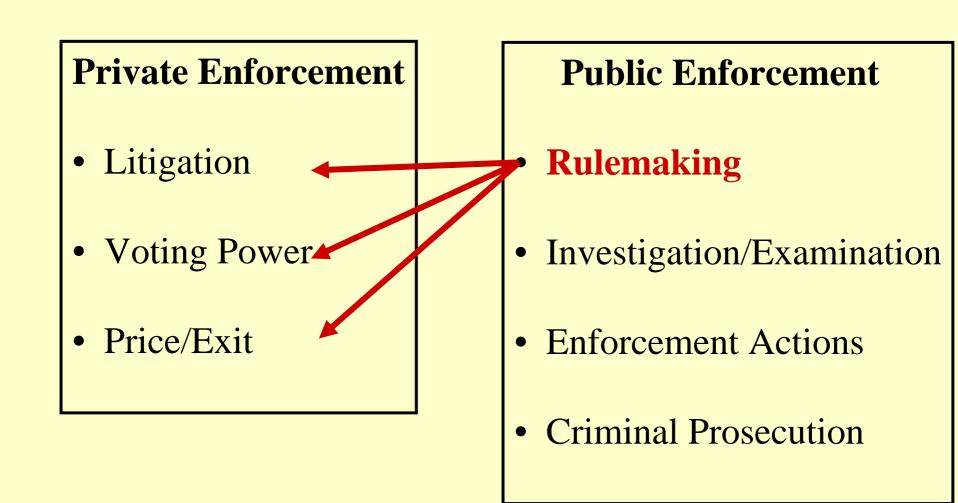
Private Enforcement

- Litigation
- Voting Power
- Price/Exit

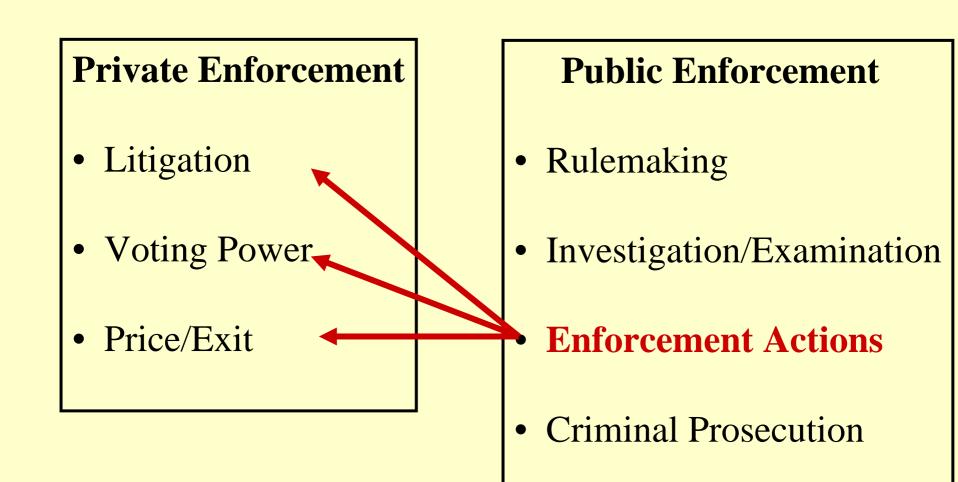
Public Enforcement

- Rulemaking
- Investigation/Examination
- Enforcement Actions
- Criminal Prosecution

Mechanisms of Enforcement



Mechanisms of Enforcement



Additional Questions About the Primacy of Private Oversight of Capital Markets

- Design of Private Litigation (in U.S.)
 - Wrong-doers often don't pay
 - Innocents often pay
 - See Coffee (2006) for comprehensive analysis
- Prevalence of Mixed Systems of Regulation
 - SRO's in U.S. & Analogs in Other Jurisdictions

Measures of Public Enforcement

Formal Powers

- LLS (2006): Independence, investigative powers, remedial orders, and criminal sanctions.
- Djankov (2005): Fines and criminal sanctions associated with specific self-dealing transactions.
- Actual Resources (Jackson & Roe)
 - Regulatory Staffing Per Million of Population
 - Regulatory Budgets Per Billion of GDP

	Securities Enforcement Variables													
Country	World	Public E	nforcement (Actu	ıal Resources)	Public Enforc	ement (Formal)								
	Bank Codes	Direct Staff Per Million of Population	Extrapolated Staff Per Million of Population	Extrapolated Budgets Per Billion US\$ of GDP	Public Enforcement Index (LLS)	Public Enforcement Index (Djankov)	Common Law Jurisdiction							
Argentina.	ARG	3.46	3.46	\$15,984	0.58	0.00	0							
Australia	AUS		39.35	\$120,162	0.90	0.50	1							
France	FRA	5.93	5.93	\$29,205	0.77	0.50	0							
Germany	DEU		6.81	\$22,196	0.22	1.00	0							
Japan	JPN	4.31	4.31	\$15,905	0.00	0.00	0							

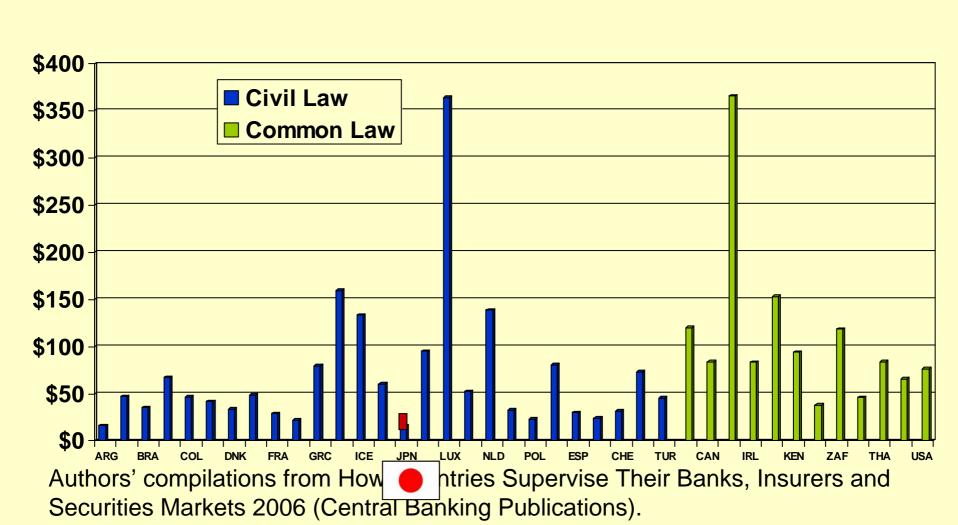
Table 1

Averages: 10.1 \$53,844

Figure Four

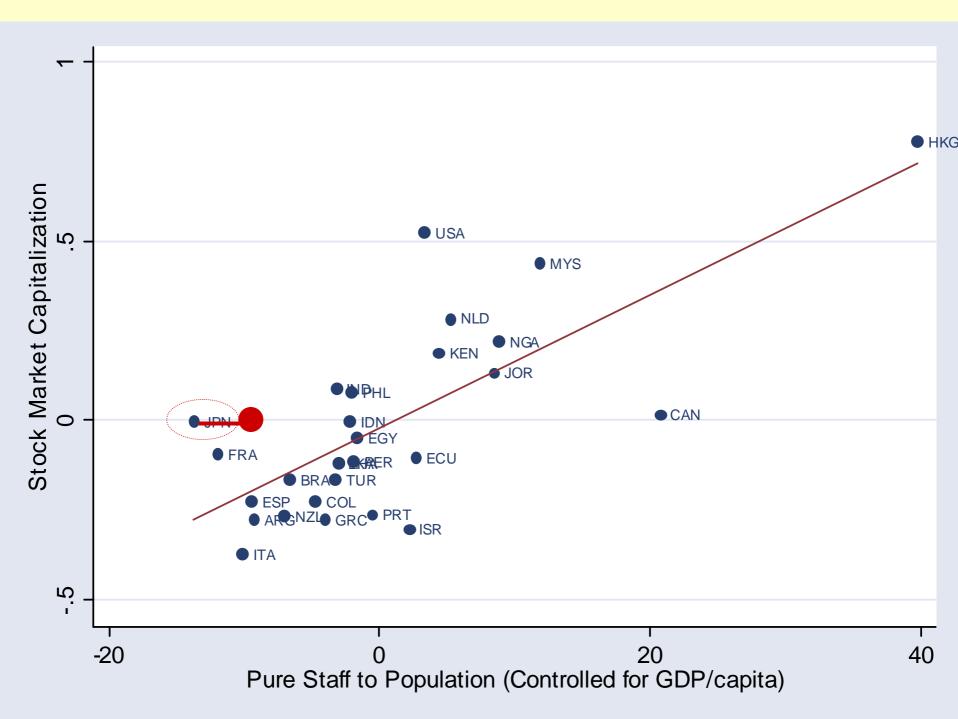
Civil versus Common Law: Budgets

('000s of U.S. Dollars per Billion of GDP based on 12/31/05 Exchange Rates)



Structure of Empirical Analysis

- Explore Impact of Public Enforcement on:
 - Market Capitalization to GDP
 - Trading Volume to GDP
 - Number of Listed Firms Per Million of Population
 - Level of IPOs to GDP
- Control for Other Factors
 - Quality of Private Enforcement (disclosure & liability)
 - Wealth of Country
 - Other Factors



New Enforc

	2004	Market Capital	ization	
	Direct Staff Per Million of Population	ExtrapolatedS taff Per Million of Population	Extrapolated Budget ('000) per US\$ billion of GDP	D
New Enforcement Variables	6.9679 ^a (1.9587)	1.6265 (1.4088)	1.0478 ^a (0.2657)	
LLS Disclosure Index	74.2363 ^b (30.0504)	121.6703 ^b (47.9094)	65.4748 (55.9261)	
LLS Liability Standards Indev	-76 6516c	2 7785	-27.4254 (39.1547)	

Key Findings:

- Positive Effect of Public Enforcement Variable

- Private Enforcement also Important

- Disclosure Quality More than Liability Rules

	(10.6922)	
Ð	-361.7742a	
	95.8003	
	34	
	60.133	

59%

Table Four

Public Enforcement of Securities Laws: Tables

					Table 4									
			New Enfo	rcement Vari	ables and t	he Size of Ca	apital Markets	3						
	(robust standard errors in parentheses)													
	2004	2004 Market Capitalization 2004 Trading Volumes Domestic Firms (2004) IPOs t												
	Direct Staff Per Million of Population	ExtrapolatedS taff Per Million of Population	Extrapolated Budget ('000) per US\$ billion of GDP	Direct Staff Per Million of Population	Extrapolated Staff Per Million of Population	Extrapolated Budget ('000) per US\$ billion of GDP	II MIIIIIOD OT	Extrapolated Staff Per Million of Population	Extrapolated Budget ('000) per US\$ billion of GDP	Direct Staff Per Million of Population	Staff Per Million of	Extrapolated Budget ('000) per US\$ billion of GDP		
New Enforcement Variables	6.9679 ^a (1.9587)	1.6265 (1.4088)	1.0478° (0.2657)	2.7391° (1.3666)	0.2354 (0.6885)	0.3271° (0.1803)	0.0457° (0.0133)	0.0188 ^a (0.0065)	0.0032 (0.0020)	0.2441 ^a (0.0834)	0.2089 ^a (0.0298)	.0412 ^a (0.0079)		
LLS Disclosure Index	74.2363 ^b (30.0504)	121.6703 ^b (47.9094)	65.4748 (55.9261)	69.8364 (40.1701)	86.3407a (26.1807)	100.6277a (35.6987)	1.1076 (0.6857)	1.4246 ^b (0.6057)	1.0231 (0.9630)	4.6388 ^b (1.8851)	1.8955 (2.9312)	0.9008 (3.9887)		
LLS Liability Standards Index	-76.6516c (37.6333)	2.7785 (31.4007)	-27.4254 (39.1547)	-6.8748 (51.7971)	23.2637 (25.3709)	19.0949 (33.1175)	-0.1844 (0.7708)	0.5086 (0.6908)	1.2818 (0.7896)	-5.7377b (1.9943)	-3.3575b (1.5108)	-3.8410c (2.0363)		
Log GNI Per Capita (PPP; 2005)	-4.6118 (9.1913)	19.1770 ^b (8.0573)	36.0768 ^a (10.6922)	12.8939 (8.6828)	23.7182 ^a (6.9390)	31.3812 ^a (8.9909)	0.5539 ^a (0.1915)	0.6941 ^a (0.1116)	0.8603 ^a (0.1392)	-0.6609 (0.6472)	-0.1687 (0.3919)	2.1265 ^b (0.9682)		
Constant	37.5693 (79.1939)	-193.2945a (69.0369)	-361.7742a 95.8003	-140.7514c (71.0094)	-237.0108a (61.6686)	-338.8298a (88.2739)	-3.9396b (1.6117)	-5.4868a (1.0760)	-7.2551a (1.3906)	6.4442 (6.2138)	2.5451 (2.8792)	-19.6965b (8.0464)		
Observations	28	46	34	20	46	34	28	46	34	20	36	34		

46.893

37%

46.212

47%

0.9287

56%

0.8268

61%

0.804

58%

2.1485

68%

2.4305

67%

2.6572

50%

48.29

76%

72.164

32%

60.133

59%

42.913

59%

34

MSE

Adjusted R Squared

a = significant at 1%; b = significant at 5 %; and c = significant at 10 %.

Table 5 New Public Enforcement Variables Versus Prior Indices of Public Enforcement (robust standard errors in parentheses)

Panel A: Regressions with New Variables and Old Enforcement Indices												
	Λ.	larket Capitali.	zation	Trading Volumes			Domestic Firms			IPOs		
	Original LLS	Pure Staff to Population	Extrapolated Budget to GDP	Original LLS	Pure Staff to Population	Extrapolated Budget to GDP	Original LLS	Pure Staff to Population	Extrapolated Budget to GDP	Original LLS	Pure Staff to Population	Extrapolated Budget to GDP
New Enforcement Variables	-	0.0137 ^a (0.0044)	0.0017 ^b (0.0007)	-	1.8446 ^b (0.7997)	0.2861 ^b (0.1051)	-	0.0369° (0.0116)	0.0048 ^b (0.0019)	-	.1682 ⁸ (0.0345)	0.0115 ^c (0.0067)
Public Enforcement Index (LLS)	0.3446 ^c (0.1990)	0.2078 (0.2393)	0.1756 (0.2456)	39.5648 (30.0063)	15.7065 (43.1267)	27.4941 (39.0173)	0.6422 (0.4813)	-0.1282 (0.7525)	-0.1236 (0.4694)	3.7220 ^b (1.5531)	-1.658 (2.1248)	3.7004 ^c (2.0805)
Anti-Director Rights Index	0.0711 ^b (0.0347)	0.0341 (0.0355)	0.0694 ^e (0.0420)	7.8568 (4.7260)	10.2996 (7.7825)	2.7567 (6.1558)	0.1761 ^b (0.0861)	-0.02 (0.1665)	0.2104 ^b (0.0822)	0.3098 (0.2434)	0.1458076 (0.4418)	0.117 (0.3250)
Ln GDP per capita	0.1041 [®] (0.0218)	.0536 ^b (0.0223)	0.1277 ⁸ (0.0342)	21.4326 ⁸ (7.0790)	10.1056 ^b (4.8139)	35.0305 ^b (12.9054)	0.2949 ^a (0.1052)	0.1974 (0.1370)	0.3156 ^è (0.1625)	1.2210 th (0.2687)	0.5216 ^c (0.2805)	1.7630 ⁴ (0.5080)
Judicial Efficiency Index	0.0518 ⁶ (0.0236)	0.0291 (0.0247)	0.0378 (0.0324)	-2.0959 (5.4241)	-1.824 (4.7958)	-9.1709 (8.6927)	0.2551 ⁶ (0.0750)	0.2263 ⁶ (0.0922)	0.1837 ^b (0.0846)	0.0355 (0.2168)	-0.3901 (0.2319)	-0.1848 (0.3393)
Constant	-1.2999a (0.2169)	-0.7035b (0.3384)	-1.4360a (0.2960)	-165.9368a (40.4056)	-90.6045 (63.0962)	-234.9664a (73.3187)	-2.847a (0.7578)	-1.2066 (1.3058)	-2.5481b (1.1832)	-10.8554a (2.0799)	-0.523 (2.4375)	-14.3922a (3.5744)
Observations MSE	49 0.274	28 0.18547	35 0.3041	49 56.885	28 34.702	35 64.559	49 0.6613	28 0.70879	35 0.6195	49 2.5737	28 2.0189	35 2.8468
Adjusted R ²	48%	72%	42%	18%	52%	13%	66%	66%	65%	34%	50%	29%

	Pan	el B: Regre	ssions with	New Enf	orcement N	lew Variables	Versus (Old Enforce	ment Indice:	5		
	A/	farket Capitali:	zation	Trading Volumes			Domestic Firms			IPOs		
	Original LLS	Pure Staff to Population	Extrapolated Budget to GDP	Original LLS	Pure Staff to Population	Extrapolated Budget to GDP	Original LLS	Pure Staff to Population	Extrapolated Budget to GDP	Original LLS	Pure Staff to Population	Extrapolated Budget to GDP
New Enforcement Variables	-	.0159 ⁸ (0.0348)	.0019 ⁴ (0.0006)	-	2.0129 ^a (0.6307)	0.3113 ⁶ (0.0920)	1	0.0356° (0.0083)	0.0046 ^b (0.0018)	-	0.1504° (0.2288)	0.0162 ^b (0.0060)
Public Enforcement Index (LLS)	0.3446 ^c (0.1990)	-	-	39.5648 (30.0063)	-	-	0.6422 (0.4813)	-	1	3.7220 ^b (1.5531)	-	-
Anti-Director Rights Index	0.0711 ^b (0.0347)	0.0434 (0.0361)	0.0800 ^b (0.0365)	7.8568 (4.7260)	11.0006 (7.7863)	4.4134 (6.4520)	0.1761 ^b (0.0861)	0257 (0.1572)	0.2030b (0.0805)	0.3098 (0.2434)	0.0718 (0.4508)	0.34 (0.3793)
Ln GDP per capita	0.1041* -0.0218	0.0464 ^b -0.0207	0.1246* -0.0333	21.4326 ⁶ -7.0790	9.5572 ^b -4.5017	34.5556* -12.5637	0.2949 ^a -0.1052	0.2019 -0.1195	0.3177 ^c -0.1621	1.2210 ^a -0.2687	0.5794 ^c -0.2856	1.6990 ^a -0.5058
Judicial Efficiency Index	0.0518 ^b (0.0236)	0.0206 (0.0208)	0.0347 (0.0312)	-2.0959 (5.4241)	-2.4698 (3.6860)	-9.6429 (8.4209)	0.2551° (0.0750)	0.2315 ^b (0.0877)	0.1858 ^c (0.0834)	0.0355 (0.2168)	-0.3219 (0.1947)	-0.2483 (0.3261)
Constant	-1.2999a (0.2169)	-0.5150b (0.2284)	-1.3465a (0.2369)	-165.9368a (40.4056)	-76.3556c (37.8691)	-220.9429a (66.0907)	-2.847a (0.7578)	-1.3229 (0.8238)	-2.6111a (1.1566)	-10.8554a (2.0799)	-2.0272 (1.5305)	-12.5048a (3.2500)
Observations MSE	49 0.274	28 0.18518	35 0.301	49 56.885	28 34.056	35 63.705	49 0.6613	28 0.69359	35 0.6096	49 2.5737	28 1.9968	35 2.8924
Adjusted R ²	48%	72%	43%	18%	54%	15%	66%	68%	66%	34%	51%	27%

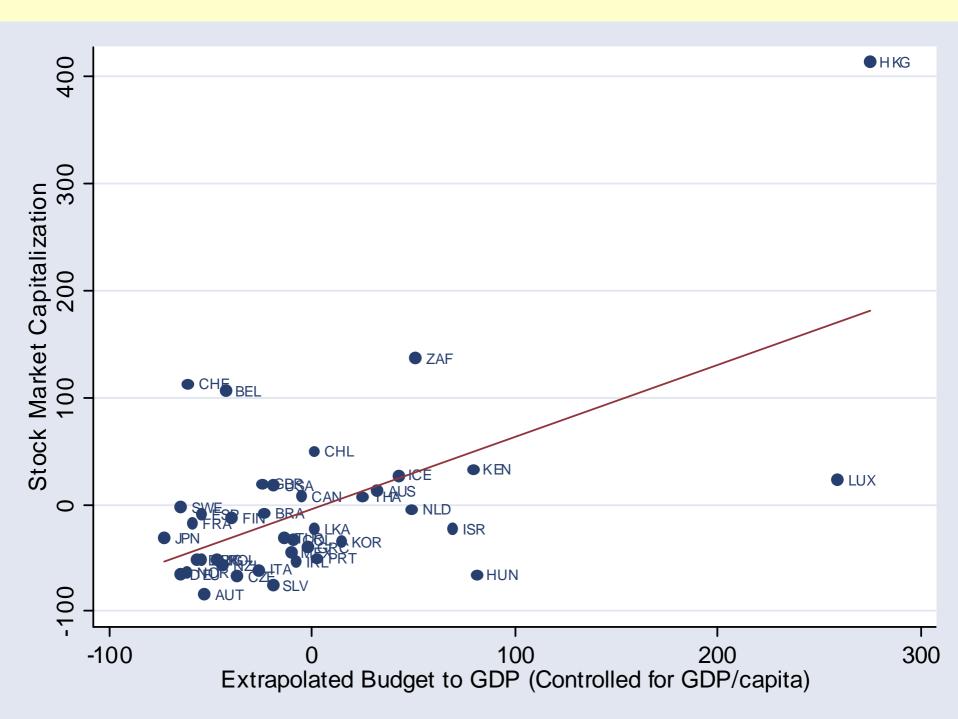
a = significant at 1%; b = significant at 5 %; and c = significant at 10 %,

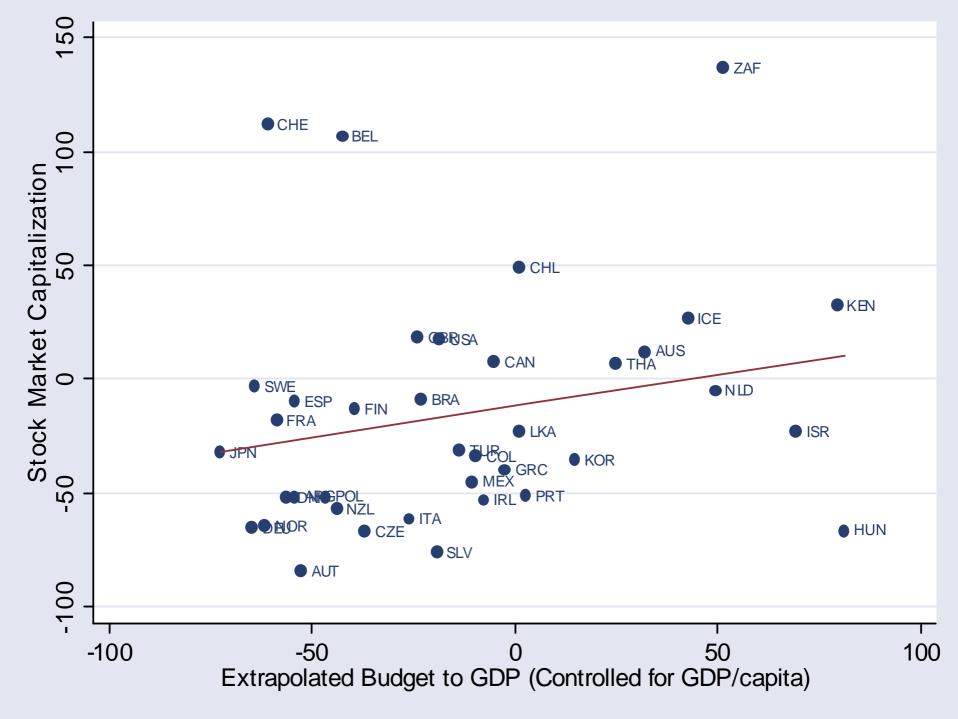
Reservations & Limitations

Significance of Outliers on Some Regressions

Problems of Causation

• Dispersed Ownership & Intermediate Variables

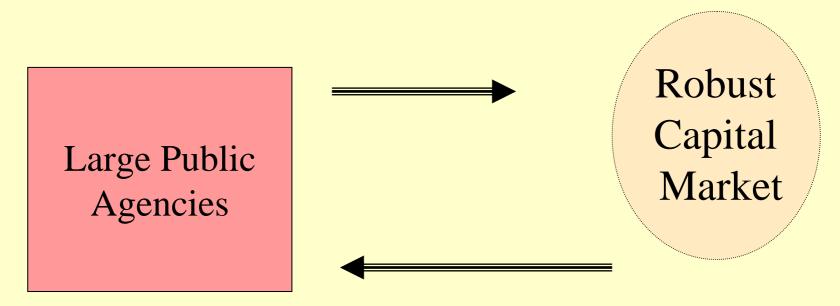




Problem of Causation

- Does More Public Enforcement Lead to Larger Capital Markets or Visa Versa?
- Possible Technical Solutions:
 - Longitudinal Studies
 - Difference-in-Difference Approaches
 - Instrumental Variables & Two-Stage Regressions
 - Legal Origins as an Instrument
 - Other Instruments

Implications of Dual Causation



- a. Special Pleading by Investors
- b. Legitimate Needs of Market
- c. Relevance of Financial Crisis?
- d. Relevance of Retail Investors?

Reservations & Limitations

Significance of Outliers on Some Regressions

Problems of Causation

Dispersed Ownership & Intermediate Variables



Impact on Other Dependent Variables

- Dispersed Ownership (concentration of shareholders, block premia, ease of access to capital markets)
 - Private Law Indices are strongly correlated with dispersion
 - Public Regulatory Intensity, either not correlated or negatively correlated.
- Technical Measures of Stock Market Performance (bid-ask spreads; synchronicity; volatility)
 - Neither public regulatory intensity <u>nor</u> private law indices are strongly correlated with technical measures.

Conclusions

- Public Enforcement, properly measured, is strongly associated with objective measures of robust capital markets.
- Analysis limited by problems of causation and puzzle of intermediate factors
 - But similar problems affect empirical research on value of private enforcement
 - Our public enforcement variables perform roughly as well.
- Therefore, World Bank's skepticism about public enforcement is premature and should not be the basis of current policy recommendations

Outline

• Background on Project

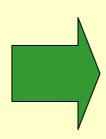
• Jackson & Roe, Public Enforcement Paper

• Areas for Future Research and Policy Implications



Better Measures of Regulatory Intensity

Public Regulatory
Personnel & Budgets
(inputs)



Potential Outputs

Policy Research
Regulations
Informal Guidance
Examination & Inspections
Enforcement Actions ***
Criminal Sanctions ***

U.S. Securities Enforcement Activity (Annual Averages: 2002-2004)

	Table Fourteen Summary of US Enforcement Actions in Securities Regulations												
	. s	ummary of US	Enforcemen	t Actions in Secur	ities Regula	tions							
		Actions		Monetary Sanctions									
	Annua	lized Data: 2002-2	004		1 Data: 2002-20 S Dollars)	04		04 Data Dollars)					
	Average Number Enforcenment Actions	Percentage of Grand Total	Percentage of Total Public Actions	Total Monetary Sanctions	Percentage of Grand Total	Percentage of Total Public Actions	Total Monetary Sanctions	Percentage of Grand Total					
Public Actions:													
SEC DOJ State Agencies (estimated) Subtotal NASD NYSE Subtotal	639 112 1,482 2,233 1,170 227 1,397	9.7% 1.7% 22.6% 34.1% 17.9% 3.5% 21.3%	17.6% 3.1% 40.8% 61.5% 32.2% 6.3% 38.5%	\$2,164,666,667 \$766,525,000 \$1,114,949,985 \$4,046,141,652 \$1,078,282,572 \$163,059,260 \$1,241,341,833	24.6% 8.7% 12.7% 46.1% 12.3% 1.9% 14.1%	40.9% 14.5% 21.1% 76.5% 20.4% 3.1% 23.5%	\$3,100,000,000 \$16,850,000 \$931,212,489 \$4,048,062,489 \$232,024,058 \$464,834,281 \$696,858,339	29.8% 0.2% 9.0% 39.0% 2.2% 4.5% 6.7%					
Total Public Actions Private Actions:	3,630	55.4%	100.0%	\$5,287,483,485	60.2%	100.0%	\$4,744,920,828	45.7%					
Class Actions NASD Arbitrations NYSE Arbitrations	210 1,720 <u>994</u>	3.2% 26.2% 15.2%	n.a. n.a. n.a.	\$3,336,333,333 \$162,333,333 missing	38.0% 1.8% <u>n.a.</u>	n.a. n.a. n.a.	\$5,456,000,000 \$186,000,000 missing	52.5% 1.8% _n.a.					
Total Private Actions	2,924	44.6%	n.a.	\$3,498,666,667	39.8%	n.a.	\$5,642,000,000	54.3%					
Grand Total Private & Public	6,554	100.0%	n.a.	\$8,786,150,151	100.0%	n.a.	\$10,386,920,828	100.0%					
Adjusted Grand Total*	n.a.	n.a.	n.a.	\$8,176,733,485	93.1%	n.a.	\$8,616,920,828	83.0%					

Adjusted to deduct sanctions reported under two or more agencies

Three International Comparison

United States

(2002-2004)

Sanctions: 3630

(SEC: 639)

(Other: 2991)

Penalties: \$ 5.2 bn

(SEC: \$2.1 bn.)

United Kingdom

(2004)

Sanctions: 90

(Penalties: 31)

(Other Formal: 48)

(Private warnings: 11)

Penalties: \$40.5 mn

Germany

(2004)

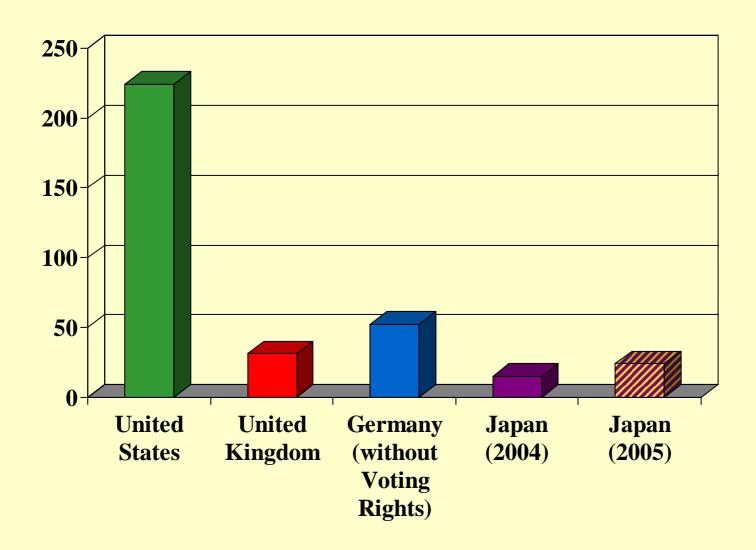
Sanctions: 149

(Voting Rights: 86) (Other Formal: 63)

Penalties: n.a.

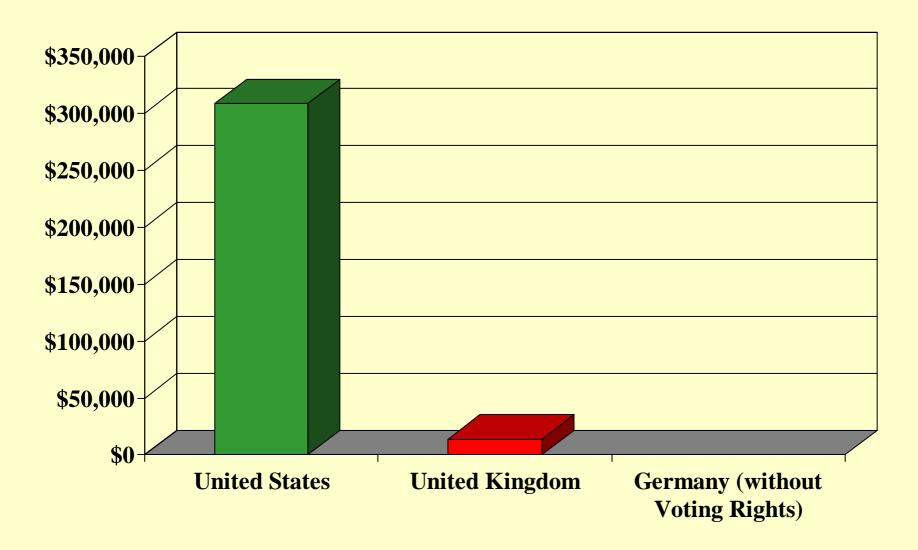
+ \$3.5 bn in private Ligitation awards

Public Securities Enforcement Actions Per Trillion Dollars of Market Capitalization in 2004



Source: Author's Compilations.

Public Securities Enforcement :Penalties Per Billion Dollars of Market Capitalization in 2004



Source: Author's Compilations.

Challenges in Comparing Sanctions

- Differences in Regulatory Strategies
 - Different Emphasis on Enforcement (UK v. US & Australia)
 - Reliance on SRO's, Industry Guidance, & Reprimands/Warnings
 - Different Distribution of Enforcement Actions
- Different Investigation to Sanction Ratios
 - High in the U.S.& Australia
 - Lower in Other Jurisdictions
- Accounting for Globalization Effect
 - Sanctions from Foreign Authorities
 - Adjustments for Cross-Listings



Image from Google Earth.

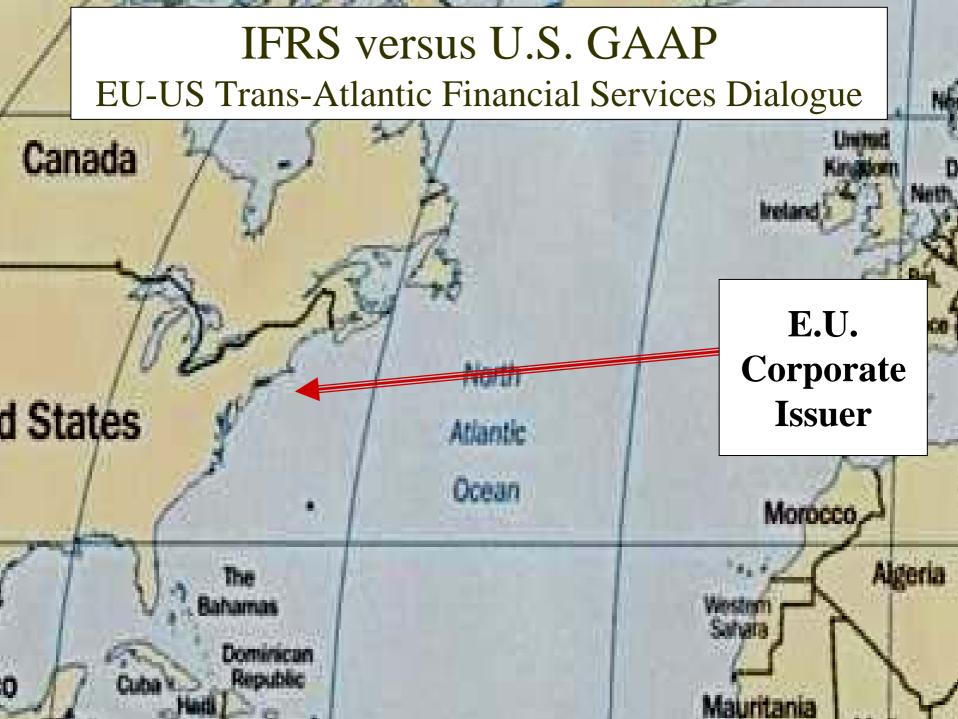
Policy Implications

1. Establishment of Financial Markets in Developing

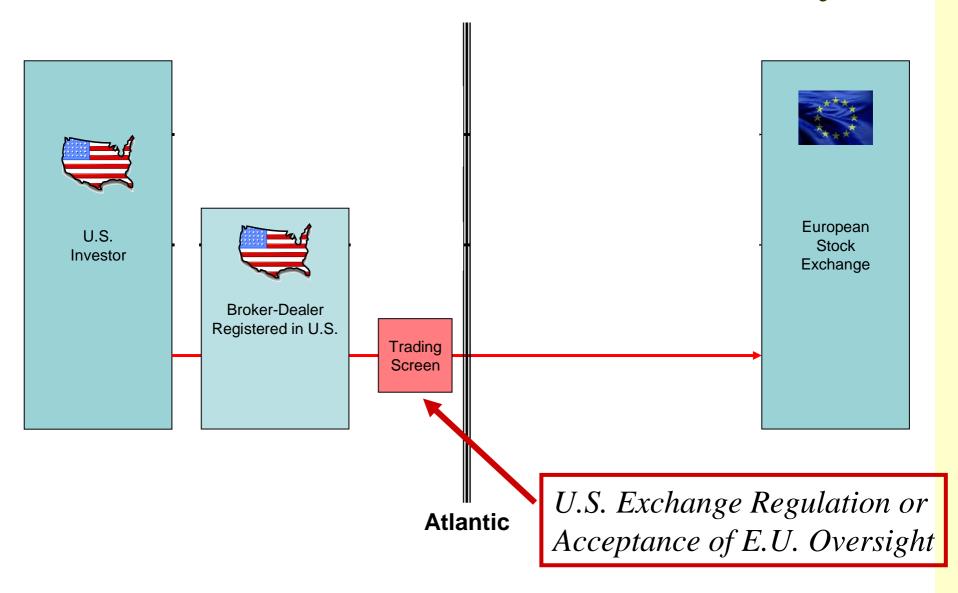
Countries

2. Acceptance of Foreign Regulatory Oversight by

Financial Supervisors in Developed Countries



The Remote Screen Controversy



Approaches to Regulatory Passporting

- No Legal Requirements (Market Controls)
- Selective Substitute Compliance
 - Based on Formal Legal Requirements
 - Based on Functional Equivalence
 - Regulatory Inputs (staffing and budgeting)
 - Regulatory Outputs (enforcement, etc.)
 - Objective Measures of Performance
 - Cost of Capital or Technical Measures
 - Behavior of Institutional Investors & Foreign Issuers
- Other Considerations
 - Reciprocity Requirements
 - Politicization of Process

Public Enforcement of Securities Laws: A Comparative Perspective

Professor Howell E. Jackson Harvard Law School



BBL Seminar at RIETI

Ministry of Economy, Trade and Industry
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