

Patterns of International Capital Raisings

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Presentation

- ✦ Motivation
- ✦ Data
- ✦ Which Firms Raise Capital Abroad?
- ✦ What Happens to Firms Afterwards?
- ✦ How Do Firms Use Capital Markets?
- ✦ Conclusions

Presentation

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Motivation

- ✦ Increasing international financial integration around the world since early 1990s
- ✦ Cross-border capital raisings important part of financial globalization process
 - Firms going out to attract capital abroad
 - Channel of capita flows across countries
- ✦ Amount raised abroad increased 4-fold since 1990
- ✦ Approached 1 trillion U.S. dollars in 2005

Motivation

- ✦ Basic questions remain incompletely answered
 - Why do firms sell stocks and bonds in foreign markets?
 - What are the effects of firms issuing securities in foreign markets on firm performance?
 - What are the cross-firm distributional effects from international capital raisings?
- ✦ Limited understanding of causes and effects of globalization at macro and micro level
- ✦ Lack of firm-level information on equity and debt issuances in both foreign and domestic markets

Motivation: This Paper

- ✦ First documentation of salient firm-level patterns associated with international capital raisings

Motivation: This Paper

1. Which firms raise equity and debt abroad?

Compare to firms that

- only raise capital domestically
- do not issue securities locally or internationally

Firm-level characteristics include:

- firm size, growth, investment, profitability, capital structure, exports, and corporate valuation

Motivation: This Paper

2. What happens to firms after issuing equity or debt abroad?
 - Compare these patterns to firms that raise capital domestically
3. How do firms use domestic bond and equity markets before and after they internationalize?

Motivation: This Paper

- ✦ Document new patterns with unique compiled data
- ✦ Help move research agenda
- ✦ No hypothesis testing
- ✦ Do not propose new theories

Motivation: This Paper

- + Relate patterns to existing theories and literature
 - Many papers
 - Aggregate capital raising
 - Cross-listing of stocks
 - Financial liberalization
 - Corporate finance
 - Access to international markets

Motivation: Link to Literature

+ Segmentation view

- Firms internationalize to circumvent domestic markets
- Domestic markets: poor regulations, poor accounting systems, taxes, informational barriers
- Domestic markets: small and illiquid
- Segmentation discourages international investors from purchasing their securities locally
- Internationalization lowers cost of capital
- It allows firms to expand their shareholder base and improve risk sharing

Motivation: Link to Literature

+ Bonding view

- Firms internationalize to bond themselves to a better corporate governance framework
- By going abroad, firms commit to reducing the expropriation of minority shareholders
- Capital raisings in international markets intrinsically different from domestic ones
- What matters most is the signal, not so much the actual capital raised

Motivation: Broader Discussion

+ Policy level

- Much effort to boost domestic markets
- But what is the role of domestic financial systems under financial integration?
- What is the future for those markets?
- What should the policies towards financial integration and financial development be?
- If financial globalization not inclusive, what to do?
- How could access to international and domestic capital be improved for different types of firms?

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Data

- ✦ Compile new comprehensive dataset on capital raising activity around the world
- ✦ Match capital raising data with balance sheet data
- ✦ Period: 1991 – 2005

Data

- ✦ Data on capital raisings: Security Data Corporation's (SDC) New Issues Database
- ✦ Transaction-level information on new issues of common and preferred equity and bonds
- ✦ To classify issuances: main exchange where the issues are listed, compared to firm's nationality

Data

- ✦ We exclude: public sector, investment funds, investment companies, real estate trusts, MBS, ABS
- ✦ We exclude all private placements
- ✦ Final SDC data
 - 168,514 security issues
 - 45,969 capital raising firms
 - 116 countries

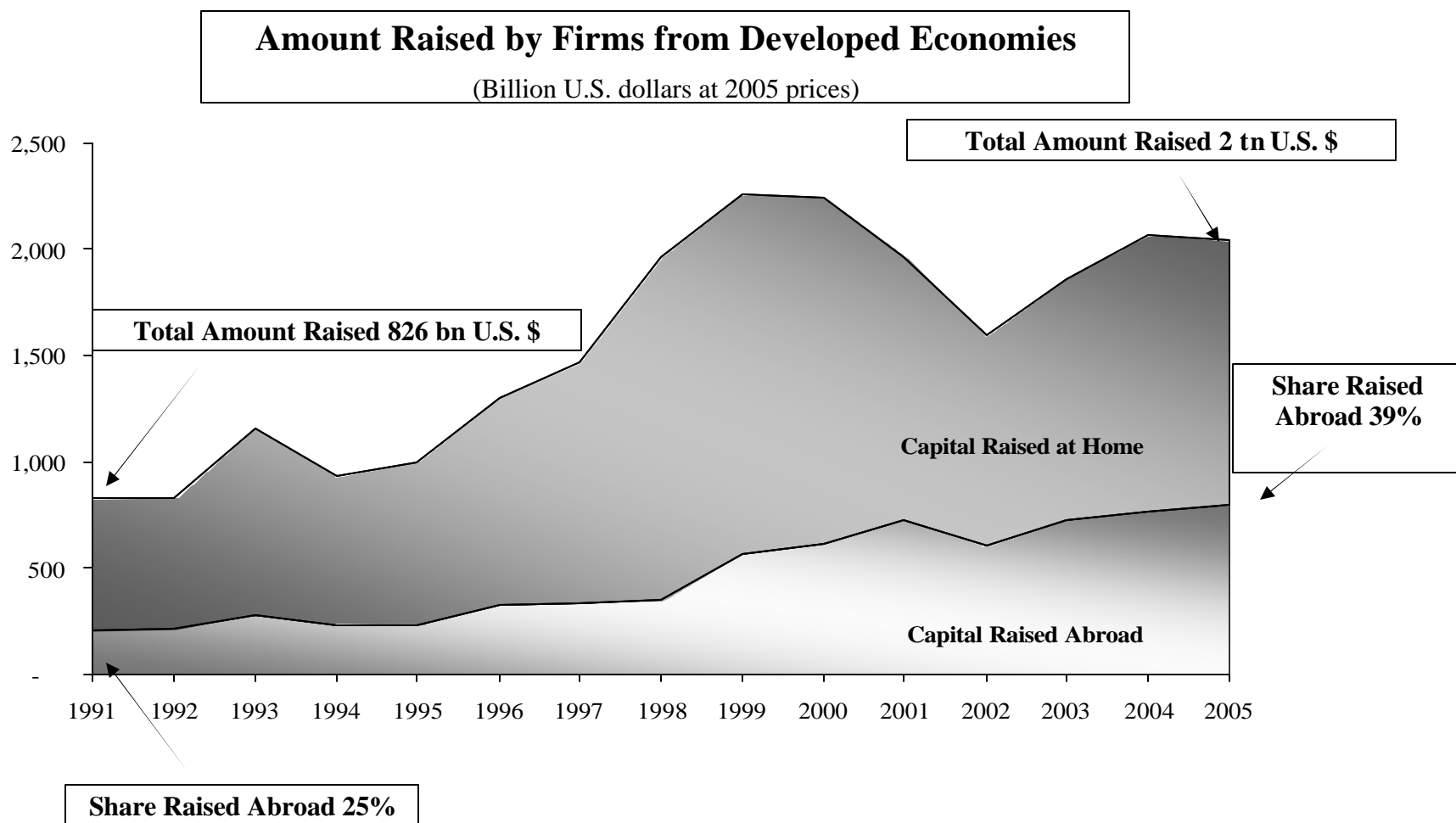
Data

- ✦ Match SDC data with firm-level accounting and income statement data from Worldscope
- ✦ Matched data
 - 23,366 firms
 - 58 countries
 - 201,543 firm-year observations
 - 14,228 firms issued securities in public markets over the sample period according to SDC

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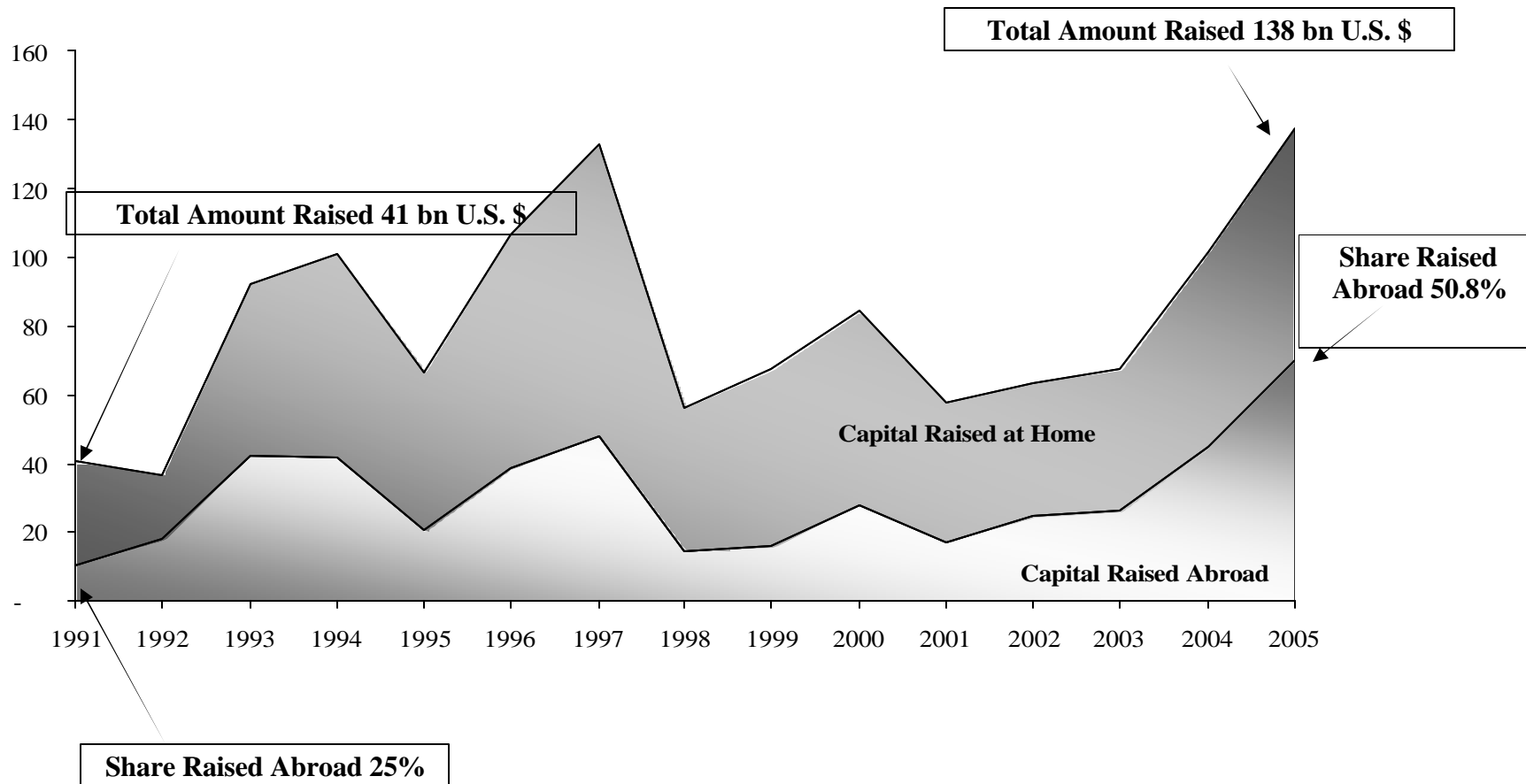
Firms Raising Capital



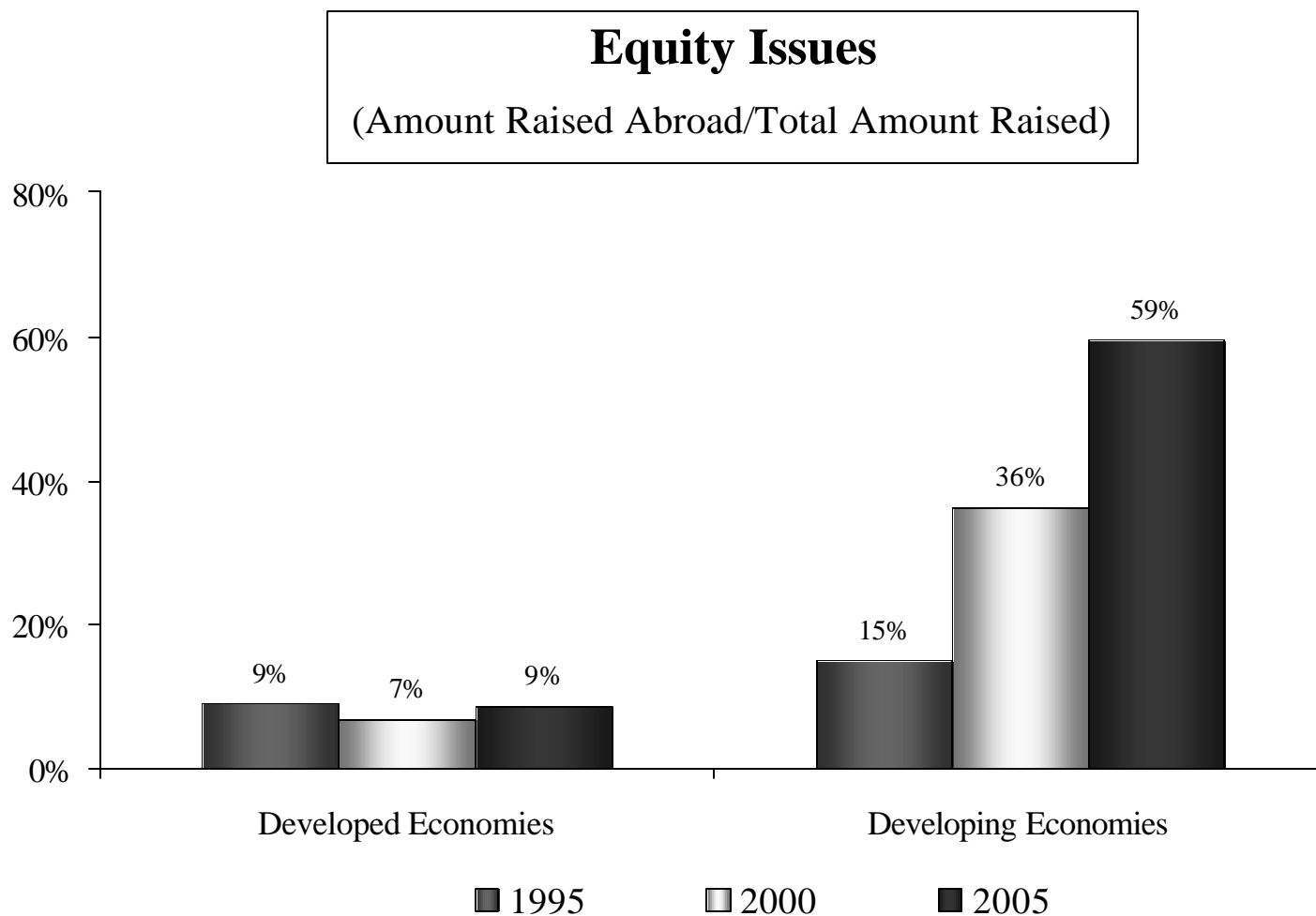
Firms Raising Capital

Amount Raised by Firms from Developing Economies

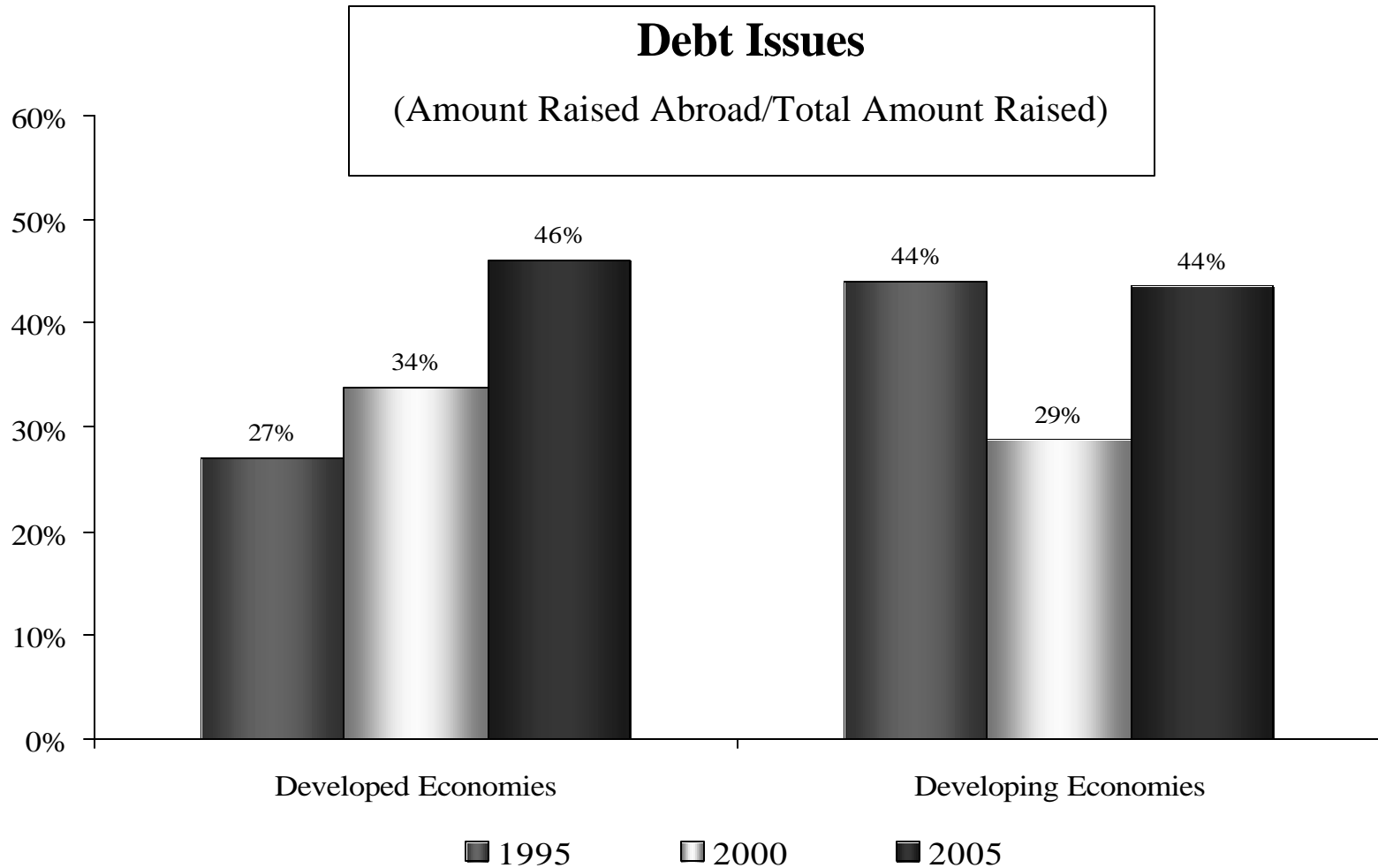
(Billion U.S. dollars at 2005 prices)



Firms Raising Capital



Firms Raising Capital



Firms Raising Capital

Total Amount of Capital Raised in Public Markets

(Million U.S. dollars at 2005 Prices, 1991-2005)

	Equity issues			
	Home	Abroad	Total	% <i>abroad</i>
Total	4,451,802	504,026	4,955,828	10.2%
Developed economies	4,030,500	341,953	4,372,453	7.8%
Developing economies	421,302	162,074	583,375	27.8%
	Debt issues			
	Home	Abroad	Total	% <i>abroad</i>
Total	12,843,684	6,932,260	19,775,944	35.1%
Developed economies	12,512,004	6,634,818	19,146,822	34.7%
Developing economies	331,679	297,442	629,122	47.3%
	Total			
	Home	Abroad	Total	% <i>abroad</i>
Total	17,295,486	7,436,287	24,731,772	30.1%
Developed economies	16,542,505	6,976,771	23,519,275	29.7%
Developing economies	752,981.0	459,516	1,212,497	37.9%

Firms Raising Capital

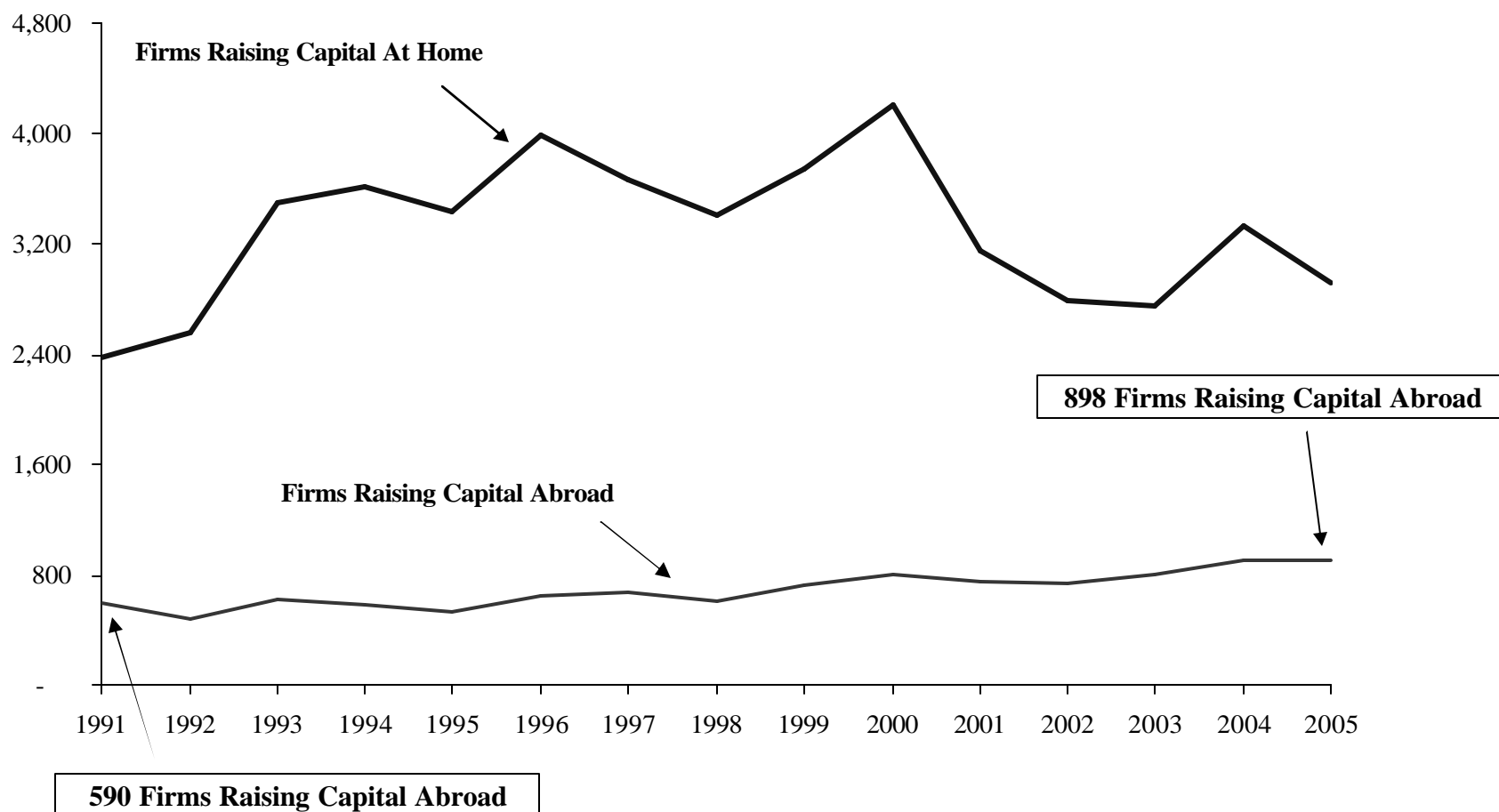
Total Amount of Capital Raised in Public Markets

(Million U.S. dollars at 2005 Prices)

	Total			
	Home	Abroad	Total	% <i>abroad</i>
Germany	1,876,460	885,102	2,761,562	32.1%
Japan	1,327,665	410,003	1,737,668	23.6%
United States	9,100,595	1,250,089	10,350,683	12.1%
Africa	14,923	20,035	34,958	57.3%
Asia	554,810	340,400	895,211	38.0%
Australia & New Zealand	158,195	263,905	422,100	62.5%
Eastern Europe & Central Asia	30,297	70,282	100,578	69.9%
Latin America & Caribbean	373,704	193,237	566,941	34.1%
Middle East	11,011	36,293	47,304	76.7%
Western Europe	3,847,774	3,473,726	7,321,501	47.4%
Other	52	493,214	493,266	100.0%

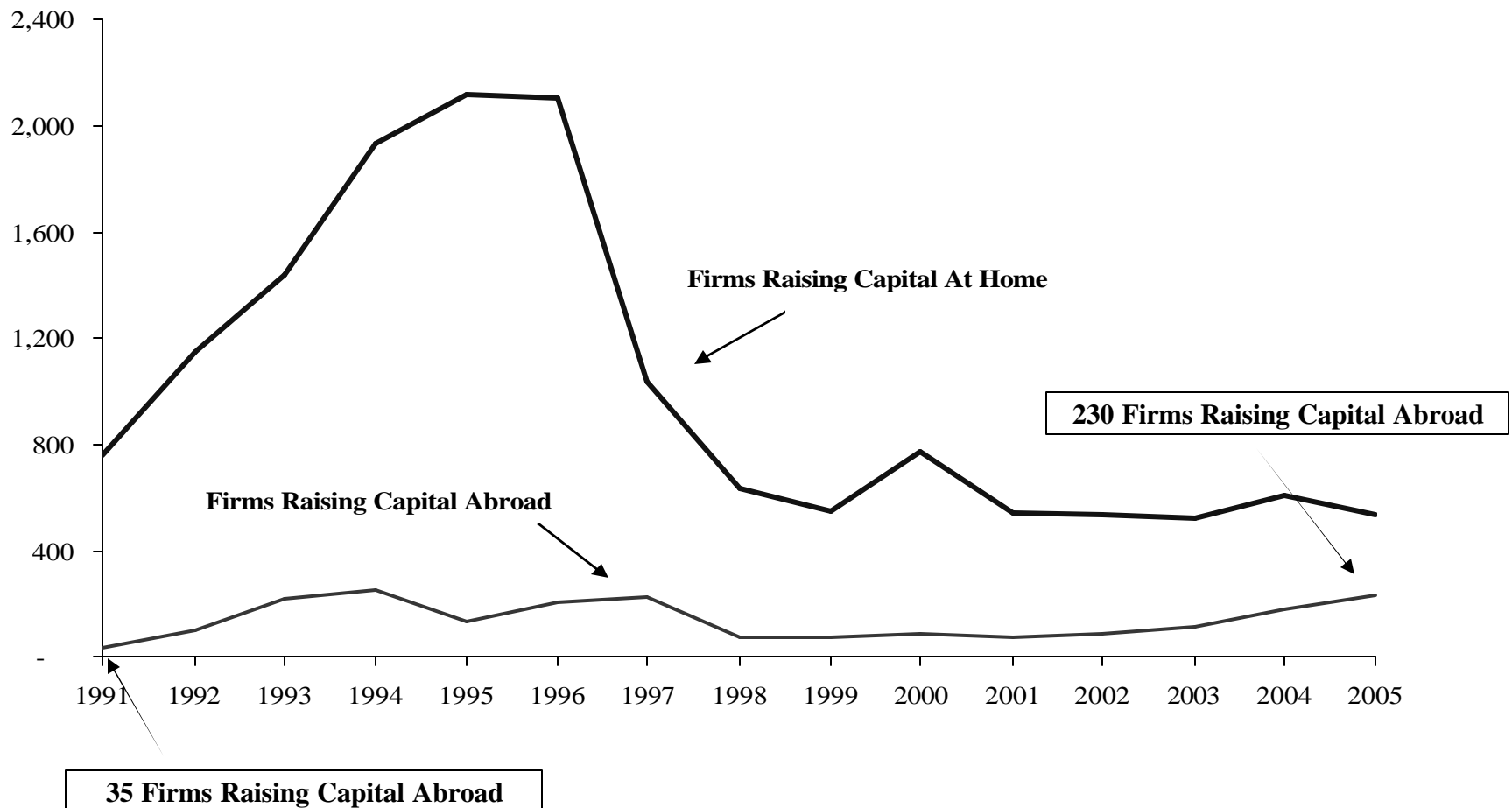
Firms Raising Capital

Number of Firms Raising Capital – Developed Economies



Firms Raising Capital

Number of Firms Raising Capital – Developed Economies



Firms Raising Capital

Number of Firms Raising Capital in Public Markets

	Equity issues			
	Home	Abroad	Total	% abroad
Total	33,388	1,923	34,810	5.5%
Developed economies	23,362	1,257	24,313	5.2%
Developing economies	10,026	666	10,497	6.3%
	Debt issues			
	Home	Abroad	Total	% abroad
Total	11,242	5,013	14,669	34.2%
Developed economies	8,713	4,171	11,504	36.3%
Developing economies	2,529	842	3,165	26.6%
	Total			
	Home	Abroad	Total	% abroad
Total	41,811	6,661	45,969	14.5%
Developed economies	29,770	5,245	32,989	15.9%
Developing economies	12,041	1,416	12,980	10.9%

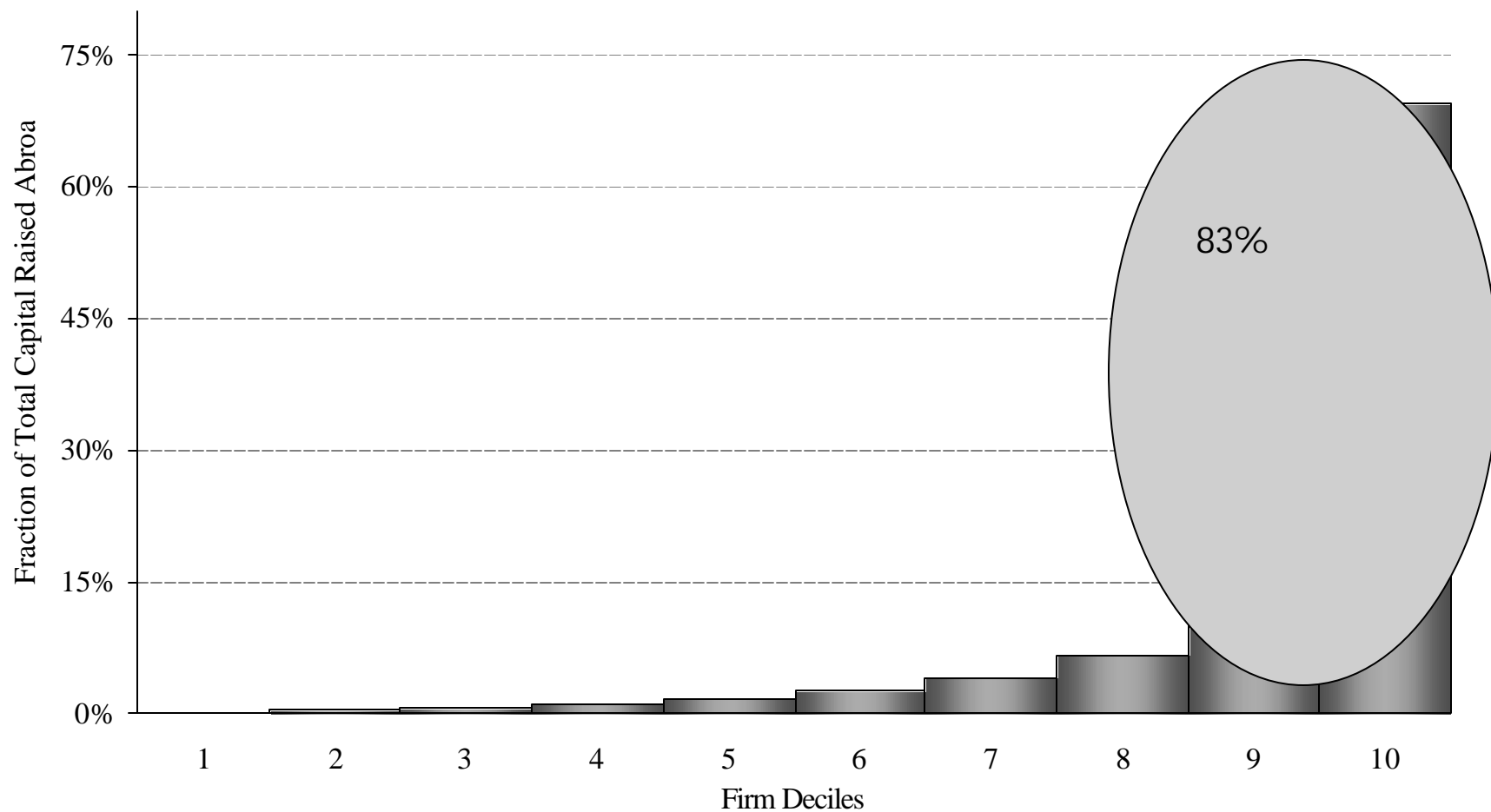
Firms Raising Capital

Total Number of Firms Raising Capital in Public Markets

	Total			
	Home	Abroad	Total	% <i>abroad</i>
Germany	1,198	247	1,306	18.9%
Japan	3,779	722	4,026	17.9%
United States	11,546	623	11,852	5.3%
Africa	218	67	274	24.5%
Asia	11,736	1,148	12,482	9.2%
Australia & New Zealand	2,178	206	2,330	8.8%
Eastern Europe & Central Asia	199	178	360	49.4%
Latin America & Caribbean	2,691	491	2,917	16.8%
Middle East	37	217	248	87.5%
Western Europe	8,228	2,223	9,634	23.1%
Other	1	539	540	99.8%

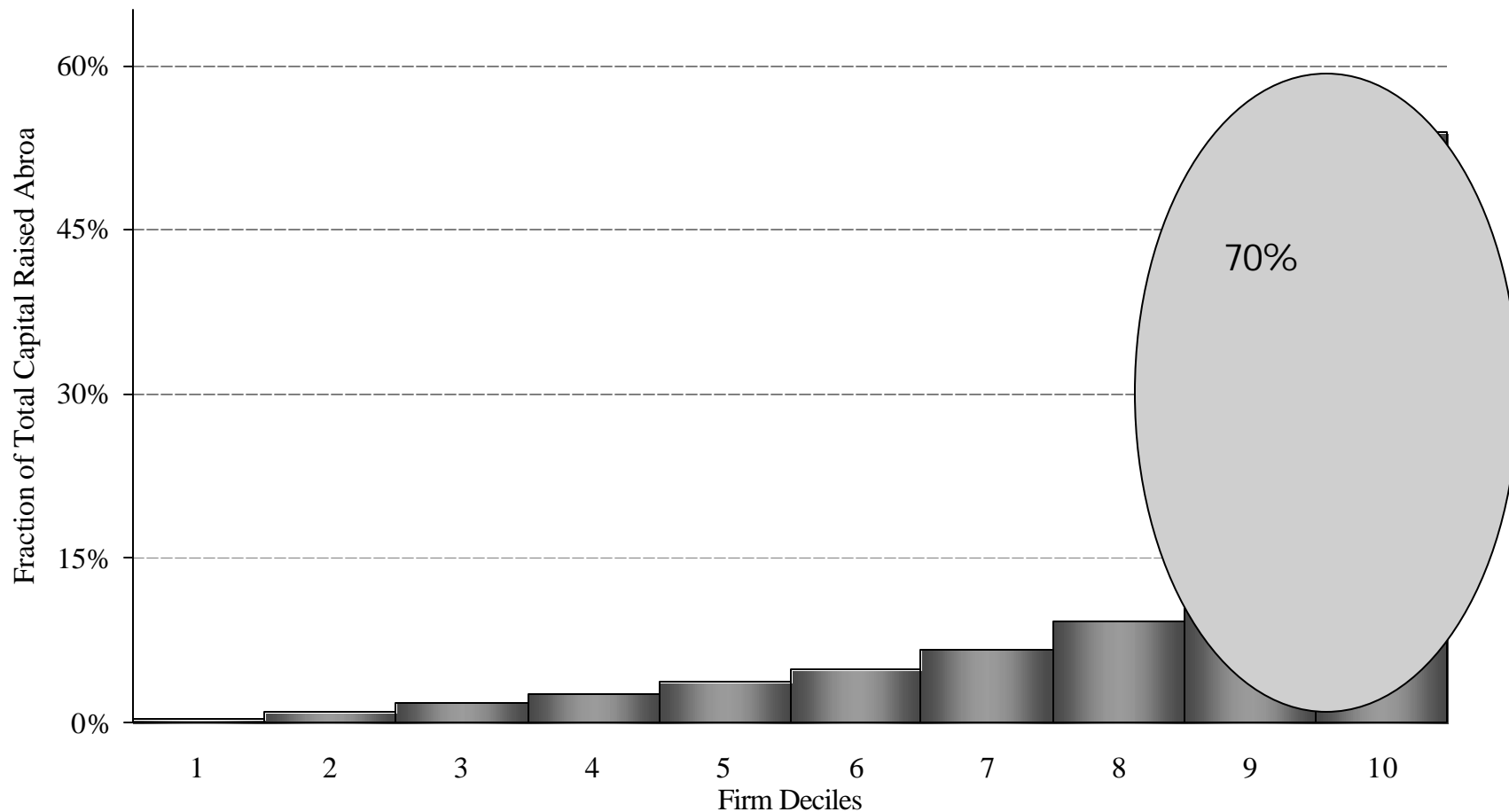
Firms Raising Capital

Distribution of Capital Raised Abroad by Firms from Developed Economies



Firms Raising Capital

Distribution of Capital Raised Abroad by Firms from Developing Economies



Firms Raising Capital

Differences Across Firms by Capital Raising Activity

	Firms with no capital raising activity	Firms with capital raising activity at home	Firms with capital raising activity abroad
	Median	Median	Median
Firms characteristics			
<i>Size</i>			
Total assets in million U.S. dollars	129.0	182.2	1,548.4
Sales in million U.S. dollars	80.3	126.4	835.9
<i>Growth</i>			
Log of (1+annual percentage change in assets in U.S. dollars)	0.047	0.071	0.068
Log of (1+annual percentage change in sales in U.S. dollars)	0.054	0.083	0.071
<i>Investment</i>			
Capital expenditures in million U.S. dollars	3.2	5.5	46.7
R&D expenditures in million U.S. dollars	1.3	3.3	15.8
Return on equity	0.063	0.069	0.071
<i>Capital structure</i>			
Total debt/total assets	0.176	0.216	0.295
Short-term debt/total debt	0.575	0.520	0.424
<i>Other</i>			
Foreign sales/total sales	0.000	0.106	0.147
Tobin's q	1.087	1.144	1.119

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Capital Raisings and Firm Attributes

Before and After Comparisons Seasoned Equity Offerings

Dependent Variable	Before SEO abroad dummy (a)	After SEO abroad dummy (b)
<i>Size</i>		
Log of total assets in million U.S. dollars	0.686 ***	1.279 ***
Log of sales in million U.S. dollars	0.547 ***	1.196 ***
<i>Growth</i>		
Log of (1+annual percentage change in assets in U.S. dollars)	0.063 ***	0.011
Log of (1+annual percentage change in sales in U.S. dollars)	0.064 ***	0.004
<i>Investment</i>		
Log of capital expenditures in million U.S. dollars	0.859 ***	1.400 ***
Log of R&D expenditures in million U.S. dollars	0.807 ***	1.199 ***
Return on equity	0.049 ***	0.027 ***
<i>Capital structure</i>		
Total debt/total assets	-0.003	0.013
Short-term debt/total debt	-0.06 ***	-0.065 ***
<i>Other</i>		
Foreign sales/total sales	0.092 ***	0.125 ***
Tobin's q	0.231 ***	0.021

Capital Raisings and Firm Attributes

Before and After Comparisons Debt Issues

Dependent Variable	Before debt issue abroad dummy (a)	After debt issue abroad dummy (b)
<i>Size</i>		
Log of total assets in million U.S. dollars	1.173 ***	1.246 ***
Log of sales in million U.S. dollars	1.008 ***	1.09 ***
<i>Growth</i>		
Log of (1+annual percentage change in assets in U.S. dollars)	0.029 ***	-0.015 ***
Log of (1+annual percentage change in sales in U.S. dollars)	0.024 ***	-0.012 ***
<i>Investment</i>		
Log of capital expenditures in million U.S. dollars	1.083 ***	1.13 ***
Log of R&D expenditures in million U.S. dollars	0.772 ***	0.801 ***
Return on equity	0.028 ***	-0.007
<i>Capital structure</i>		
Total debt/total assets	0.025 ***	0.087 ***
Short-term debt/total debt	0.029 ***	-0.012
<i>Other</i>		
Foreign sales/total sales	0.032 ***	0.045 ***
Tobin's q	0.085 ***	-0.021

Capital Raisings and Firm Attributes

Evolution of Firm Characteristics Following Seasoned Equity Offerings

Only Firms Conducting SEOs at Home vs. Only Firms Conducting SEOs Abroad

	Log of total assets in million U.S. dollars		Log of capital expenditures in million U.S. dollars		Log of R&D expenditures in million U.S. dollars	
	At Home	Abroad	At Home	Abroad	At Home	Abroad
SEO year dummy	0.236 *** [25.56]	0.448 *** [13.01]	0.292 *** [13.68]	0.487 *** [7.37]	0.058 ** [2.24]	0.259 *** [3.65]
One year after SEO dummy	0.319 *** [31.72]	0.521 *** [13.94]	0.386 *** [16.57]	0.479 *** [6.72]	0.139 *** [4.89]	0.357 *** [4.63]
Two years after SEO dummy	0.337 *** [30.48]	0.532 *** [13.01]	0.357 *** [13.80]	0.433 *** [5.54]	0.187 *** [5.88]	0.437 *** [5.22]
Three years after SEO dummy	0.350 *** [28.62]	0.507 *** [11.25]	0.274 *** [9.54]	0.400 *** [4.62]	0.259 *** [7.31]	0.443 *** [4.71]
More than three years after SEO	0.306 *** [23.47]	0.409 *** [8.22]	0.185 *** [5.94]	0.222 ** [2.33]	0.218 *** [5.66]	0.320 *** [2.99]
Firm dummies	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
No. of obs.	57,898	4,470	49,167	3,992	12,531	1,664
No. of firms	6,211	500	5,839	463	1,750	220

Capital Raisings and Firm Attributes

Evolution of Firm Characteristics Following Seasoned Equity Offerings

Only Firms Conducting SEOs at Home vs. Only Firms Conducting SEOs Abroad

	Log of (1+annual percentage change in assets in U.S. dollars)		Return on equity		Tobin's q	
	At Home	Abroad	At Home	Abroad	At Home	Abroad
SEO year dummy	0.071 *** [14.59]	0.074 *** [4.31]	-0.014 *** [2.86]	-0.008 [0.50]	0.035 *** [2.74]	-0.045 [0.91]
One year after SEO dummy	0.002 [0.46]	-0.039 ** [2.09]	-0.018 *** [3.39]	-0.037 ** [2.20]	-0.095 *** [6.96]	-0.260 *** [4.89]
Two years after SEO dummy	-0.045 *** [7.89]	-0.079 *** [3.90]	-0.031 *** [5.51]	-0.066 *** [3.59]	-0.182 *** [12.11]	-0.505 *** [8.71]
Three years after SEO dummy	-0.060 *** [9.44]	-0.112 *** [5.12]	-0.037 *** [5.92]	-0.072 *** [3.55]	-0.238 *** [14.31]	-0.548 *** [8.56]
More than three years after SEO	-0.062 *** [8.97]	-0.126 *** [5.09]	-0.035 *** [5.21]	-0.080 *** [3.57]	-0.271 *** [15.20]	-0.673 *** [9.49]
Firm dummies	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
No. of obs.	51,624	4,065	51,616	4,071	54,634	4,178
No. of firms	6,048	488	5,925	477	6,041	479

Capital Raisings and Firm Attributes

Evolution of Firm Characteristics Following Debt Issues

Only Firms Issuing Debt at Home vs. Only Firms Issuing Debt Abroad

	Log of total assets in million U.S. dollars		Log of capital expenditures in million U.S. dollars		Log of R&D expenditures in million U.S. dollars	
	At Home	Abroad	At Home	Abroad	At Home	Abroad
Debt issue year dummy	0.213 *** [18.65]	0.387 *** [25.41]	0.262 *** [8.78]	0.326 *** [8.93]	0.103 *** [3.22]	0.164 *** [4.33]
One year after debt issue dummy	0.229 *** [19.39]	0.472 *** [29.55]	0.299 *** [9.73]	0.382 *** [9.88]	0.141 *** [4.30]	0.199 *** [5.07]
Two years after debt issue dummy	0.217 *** [17.51]	0.531 *** [31.17]	0.216 *** [6.69]	0.345 *** [8.23]	0.160 *** [4.69]	0.292 *** [6.98]
Three years after debt issue dummy	0.203 *** [15.39]	0.531 *** [28.97]	0.163 *** [4.75]	0.205 *** [4.55]	0.152 *** [4.25]	0.308 *** [6.71]
More than three years after debt issue	0.070 *** [5.01]	0.373 *** [20.34]	-0.035 [0.97]	-0.042 [0.93]	0.157 *** [4.10]	0.225 *** [4.79]
Firm dummies	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
No. of obs.	25,103	15,635	20,922	13,436	7,529	5,811
No. of firms	2,190	1,356	2,119	1,339	779	613

Capital Raisings and Firm Attributes

Evolution of Firm Characteristics Following Debt Issues

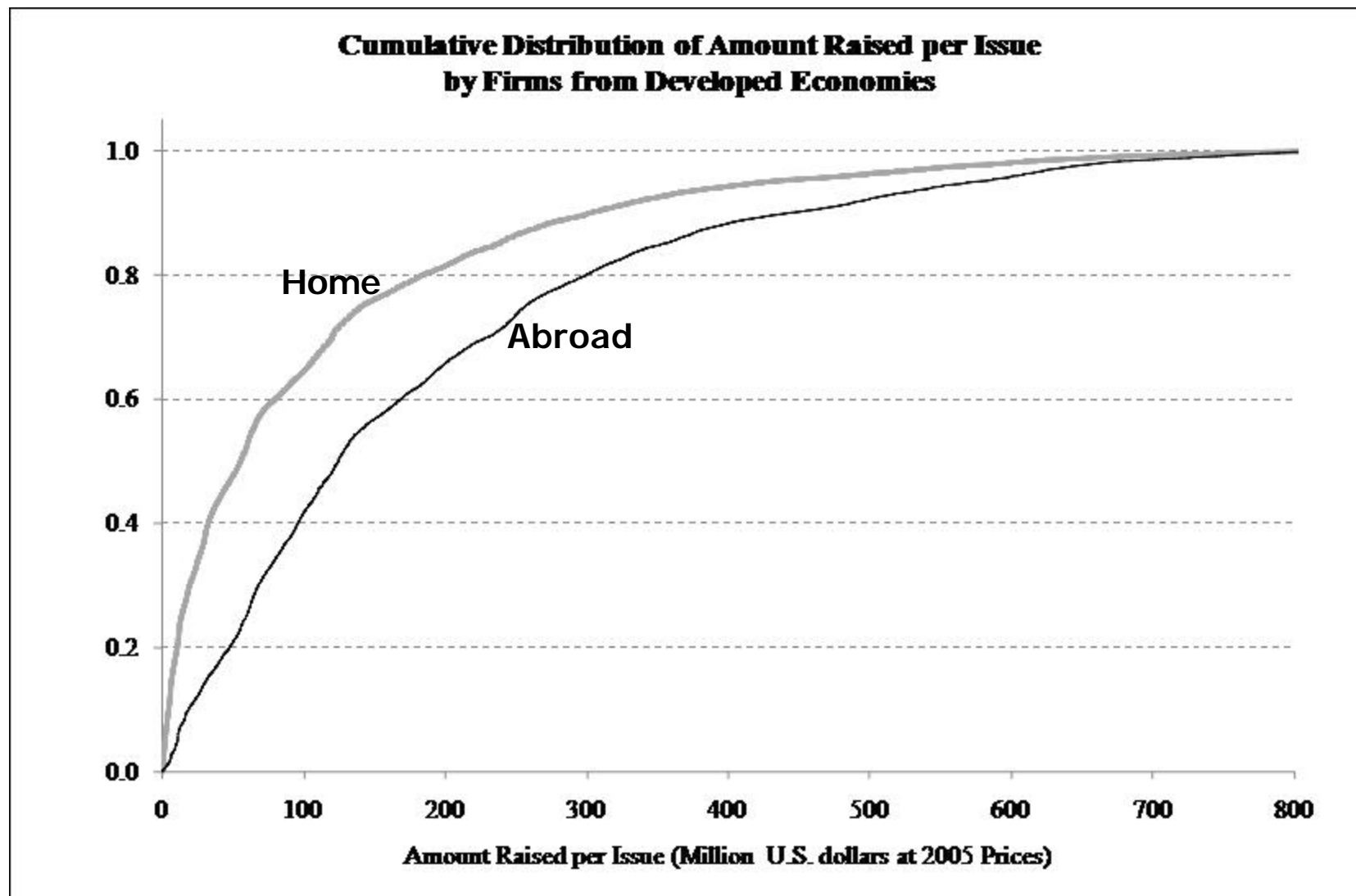
Only Firms Issuing Debt at Home vs. Only Firms Issuing Debt Abroad

	Log of (1+annual percentage change in assets in U.S. dollars)		Return of equity		Tobin's q	
	At Home	Abroad	At Home	Abroad	At Home	Abroad
Debt issue year dummy	0.031 *** [5.33]	0.025 *** [3.33]	-0.013 ** [2.41]	-0.016 ** [2.40]	-0.053 *** [4.18]	-0.035 *** [2.11]
One year after debt issue dummy	-0.018 *** [3.08]	-0.036 *** [4.65]	-0.022 *** [3.91]	-0.039 *** [5.43]	-0.089 *** [6.76]	-0.126 *** [7.36]
Two years after debt issue dummy	-0.045 *** [7.16]	-0.076 *** [9.28]	-0.033 *** [5.50]	-0.057 *** [7.46]	-0.115 *** [8.33]	-0.177 *** [9.71]
Three years after debt issue dummy	-0.055 *** [8.32]	-0.102 *** [11.77]	-0.035 *** [5.55]	-0.079 *** [9.52]	-0.122 *** [8.31]	-0.211 *** [10.72]
More than three years after debt issue	-0.063 *** [8.89]	-0.144 *** [16.18]	-0.046 *** [6.81]	-0.080 *** [9.68]	-0.122 *** [7.77]	-0.251 *** [12.62]
Firm dummies	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
No. of obs.	23,738	15,447	24,632	16,128	24,708	15,886
No. of firms	2,206	1,411	2,180	1,398	2,160	1,374

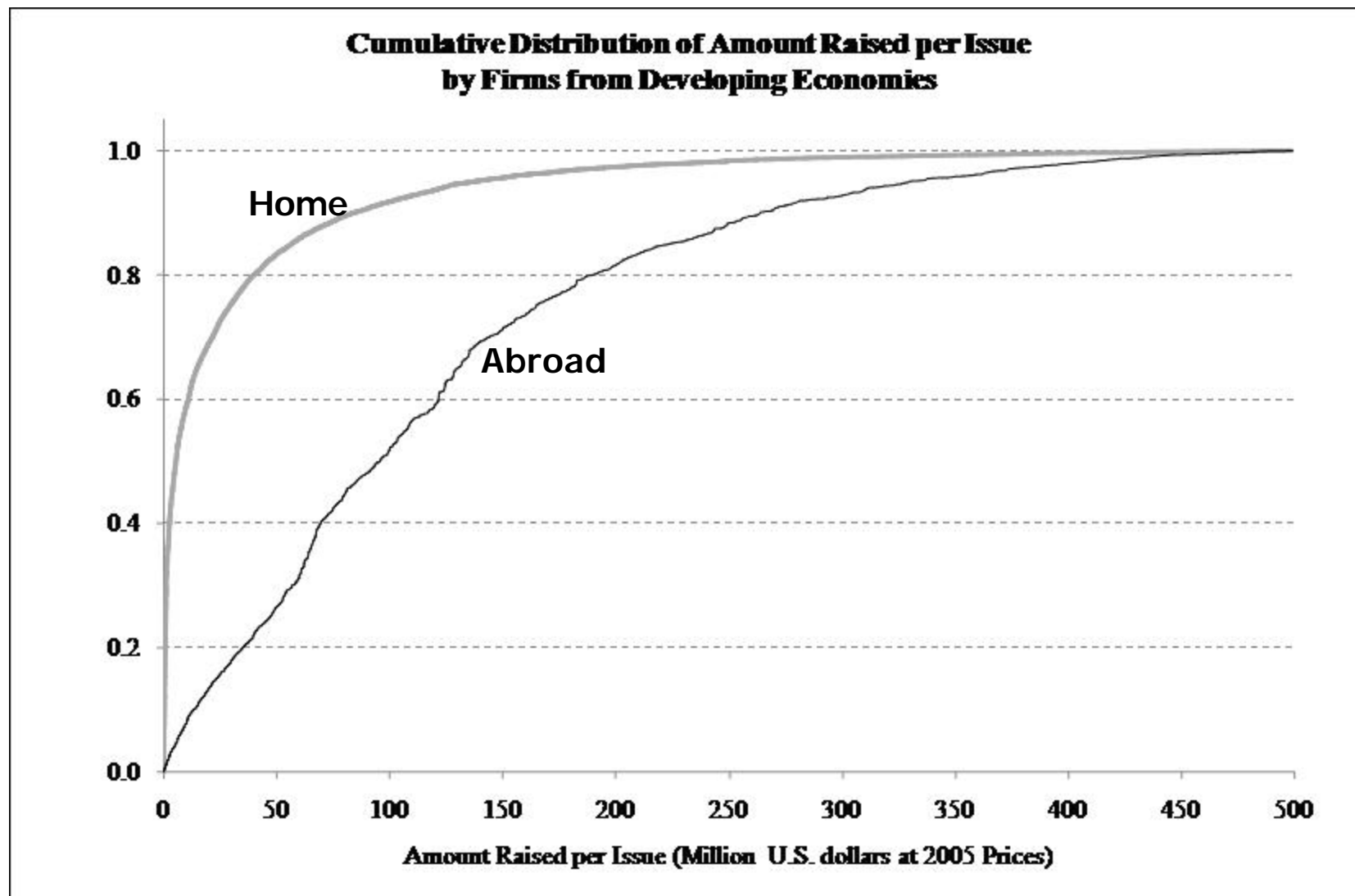
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Capital Raising at Home and Abroad



Capital Raising at Home and Abroad



Capital Raising at Home and Abroad

Size of Capital Raisings in Public Markets by Type of Issue

	Equity issues		Debt issues		All issues	
	Issues at home	Issues abroad	Issues at home	Issues abroad	Issues at home	Issues abroad
Median amount raised per security issue (million U.S. dollars at 2005 prices)						
<i>All issues</i>						
Developed economies	26.9	54.3	85.1	138.0	57.3	131.2
Developing economies	3.8	62.0	7.2	122.4	5.6	101.5
<i>Issues by firms that raise capital both at home and abroad</i>						
Developed economies	126.5	116.2	105.9	155.8	106.2	154.5
Developing economies	57.3	82.8	32.0	132.8	42.2	124.0

Capital Raising at Home and Abroad

Capital Raising Activity in Domestic Markets Following Capital Raisings Abroad Developed Economies

	<u>Equity issues</u>	<u>Debt issues</u>	<u>All capital raisings</u>
Average capital raised at home/total capital raised in public markets per firm			
Year of first capital raising abroad	0.18	0.08	0.09
One year after first capital raising abroad	0.60	0.30	0.34
Two years after first capital raising abroad	0.72	0.38	0.42
Three years after first capital raising abroad	0.74	0.44	0.47
More than three years after first capital raising abroad	0.87	0.40	0.46

Capital Raising at Home and Abroad

Capital Raising Activity in Domestic Markets Following Capital Raisings Abroad Developing Economies

	Equity issues	Debt issues	All capital raisings
Average capital raised at home/total capital raised in public markets per firm			
Year of first capital raising abroad	0.12	0.05	0.06
One year after first capital raising abroad	0.51	0.23	0.28
Two years after first capital raising abroad	0.56	0.33	0.38
Three years after first capital raising abroad	0.68	0.48	0.52
More than three years after first capital raising abroad	0.60	0.63	0.62

Capital Raising at Home and Abroad

Capital Raising Activity in Domestic Markets of Firms that Raise Capital Abroad

	All capital raisings		
	Before first capital raising abroad (a)	After first capital raising abroad (b)	Test (a)=(b) p-value
Average annual amount raised in domestic markets per firm (million U.S. dollars at 2005 prices)			
Developed economies	44.53	150.26	0.000 ***
Developing economies	4.83	12.54	0.000 ***
Average annual amount raised in domestic markets per firm/total amount raised in domestic markets			
Developed economies	0.001	0.003	0.000 ***
Developing economies	0.003	0.005	0.000 ***
Average annual amount raised in domestic markets/total assets before raising capital per firm			
Developed economies	0.126	0.048	0.057 *
Developing economies	0.013	0.028	0.343

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Conclusions: Summary of Results

1) Basic patterns of internationalization

- A large fraction of capital raisings in securities markets is conducted in international markets
- But only a small fraction of firms actually uses international capital markets
- A very small sub-sample accounts for bulk of international raisings
 - 15% of all firms went abroad, became international
 - 10% of international firms raised 2/3 of all funds abroad
- Firms that access international capital markets are quite different from those that raise only locally
 - Larger, slower growing, more leveraged, higher returns on equity, and more foreign sales

Conclusions: Summary of Results

2) Before and after capital raising

- Performance following issuances abroad similar to those that follow issuance at home
 - Become large, but decrease their growth rate and profitability following capital raisings
- I.e., issues abroad are not intrinsically different from those at home
- Differences across firms exist many years before firms actually access international markets

Conclusions: Summary of Results

3) Use of capital markets

- Issuances abroad much larger
- Median security issuance is 18 (2) times larger abroad than at home for developing (developed) countries
- Continue to issue securities in both international and domestic markets afterwards
- Firms significantly increase the amount of money raised in domestic markets after internationalizing
- Developed country firms increase amount raised in domestic markets by 200 percent afterwards
- Also capture a larger fraction of the total domestic market

Conclusions: What This Means

- ✦ Issuances abroad larger and by larger firms suggests significant fixed costs
- ✦ Costs per issuance
- ✦ Costs not per first time of issuance
- ✦ Thus, certain type of segmentation

Conclusions: What This Means

- ✦ Not consistent with bonding arguments as the driving motivation for internationalization
 - (i) Capital raisings abroad show no different time pattern from capital raisings at home
 - (ii) Debt far more internationalized than equity
- ✦ International markets seem valuable relative to domestic markets, particularly for large firms
 - Firms go abroad even as they access domestic markets
 - Likely too costly to raise large sums domestically

Conclusions: Policy Implications

- ✦ Difficult for some countries to prevent some firms from raising capital abroad
 - Contrary to initial expectations leading to liberalization and reforms during 1990s
 - Idea to reduce segmentation, attract foreign investors, increase local capital market activity

Conclusions: Policy Implications

- ✦ Local markets too small for some large corporations to meet their financing requirements
- ✦ Incentives to continue using international markets
- ✦ Policy could focus on those firms that do not access international markets
- ✦ Some reforms more important than previously thought because most firms cannot go abroad
- ✦ Potentially negative spillover effects of large companies going abroad

Thank you