Whither Latin American Capital Markets?

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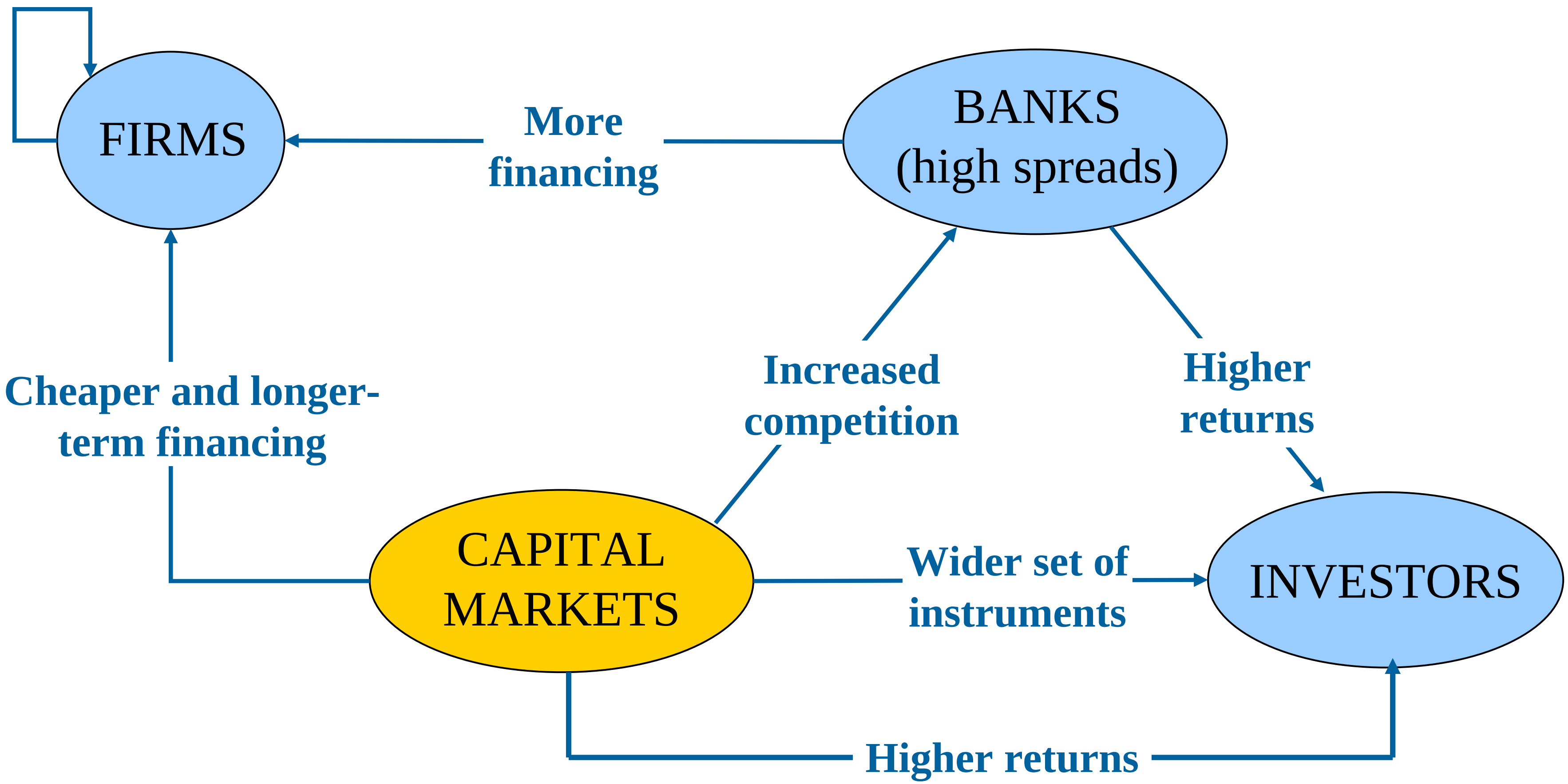
Structure of Presentation

1. The basic story: disheartening results
    - The logic of capital markets reforms
    - The intensity of reforms
    - The stylized outcomes
2. The empirics: key questions and main results
3. Whither the reform agenda?

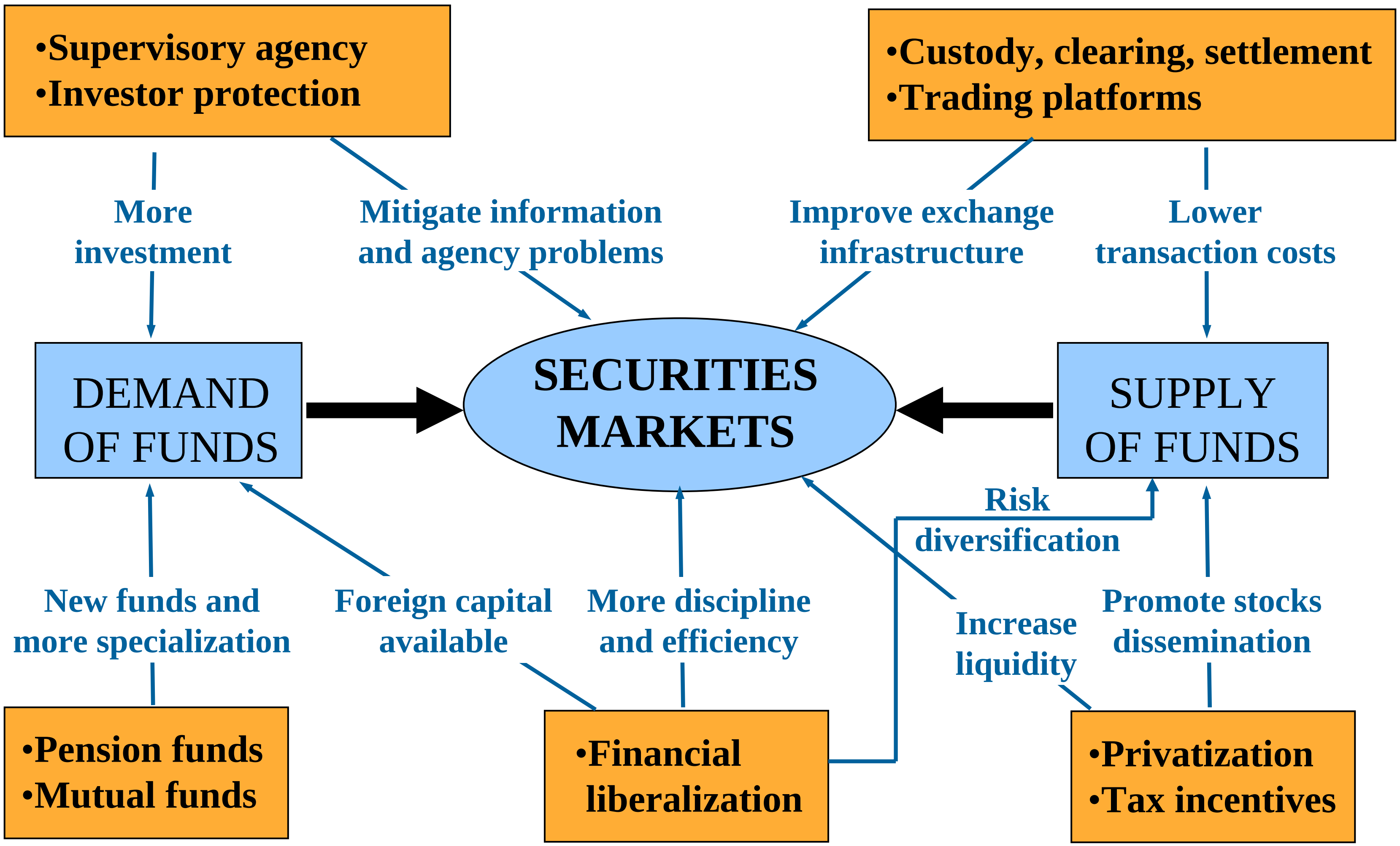
The Basic Story:

Disheartening Results

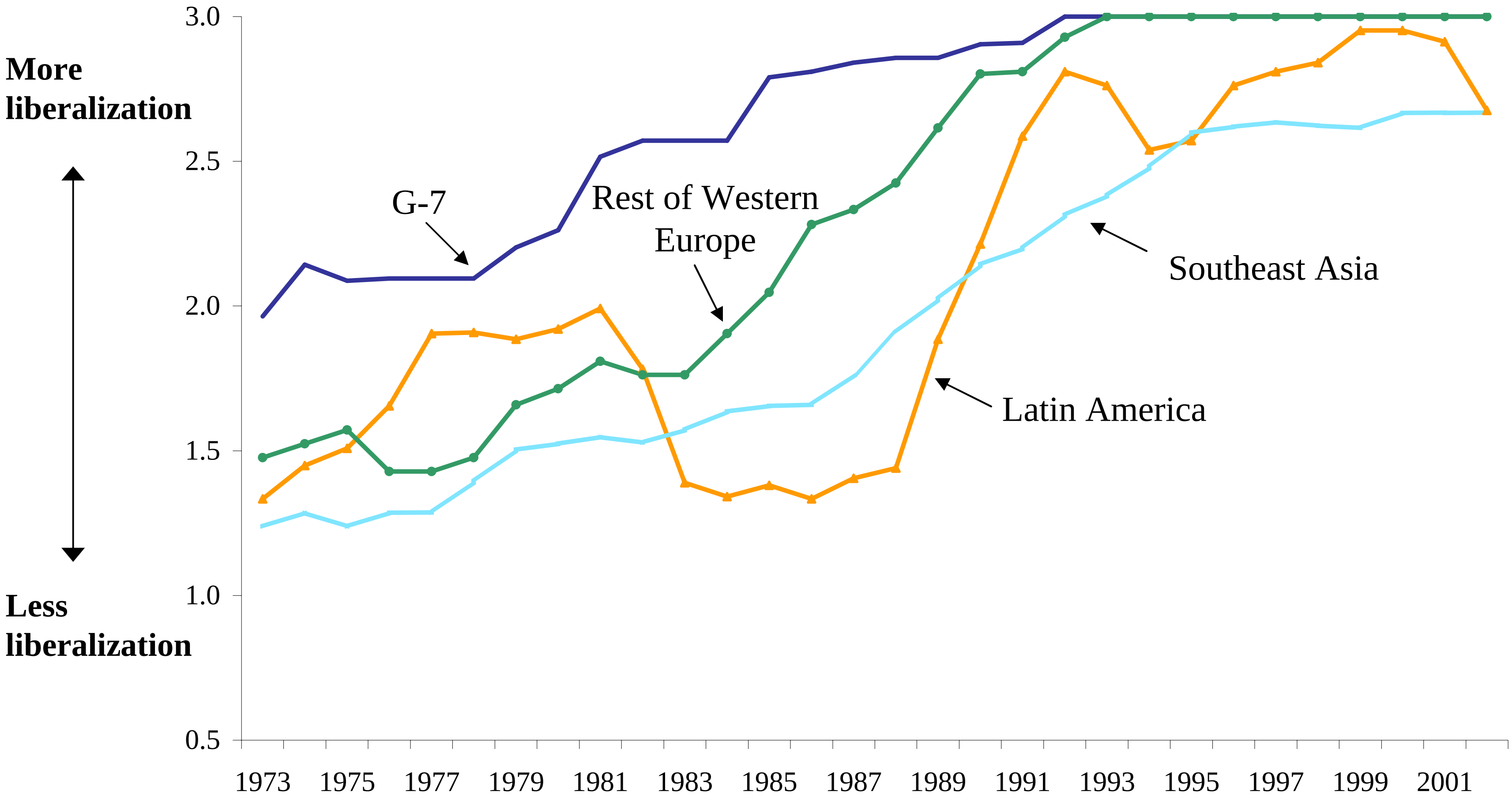
The Logic of Capital Markets Reform
A Development Focus…



The Logic of Capital Markets Reform
…Integrated and Multidimensional



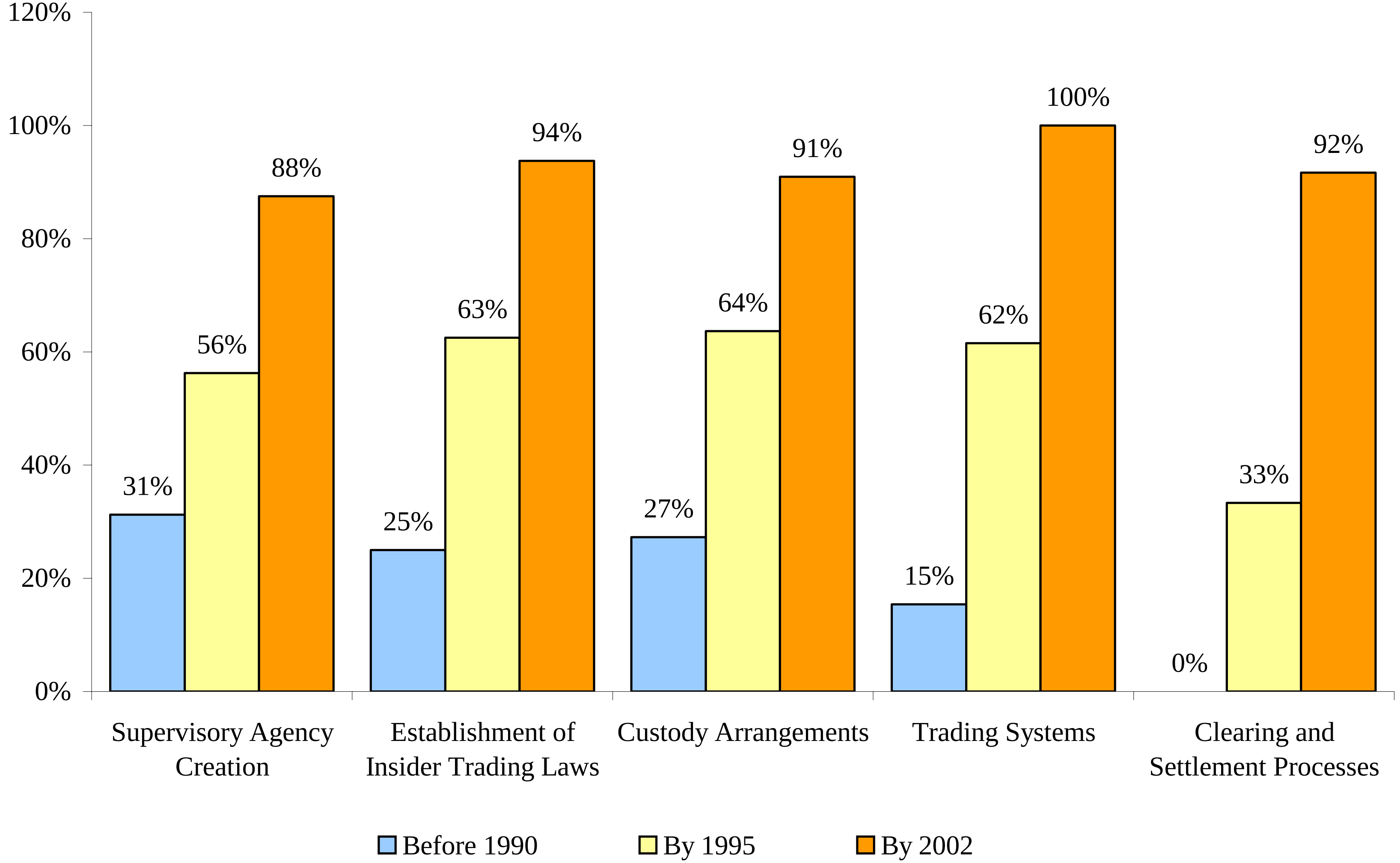
Intensity of Reforms
Financial Liberalization



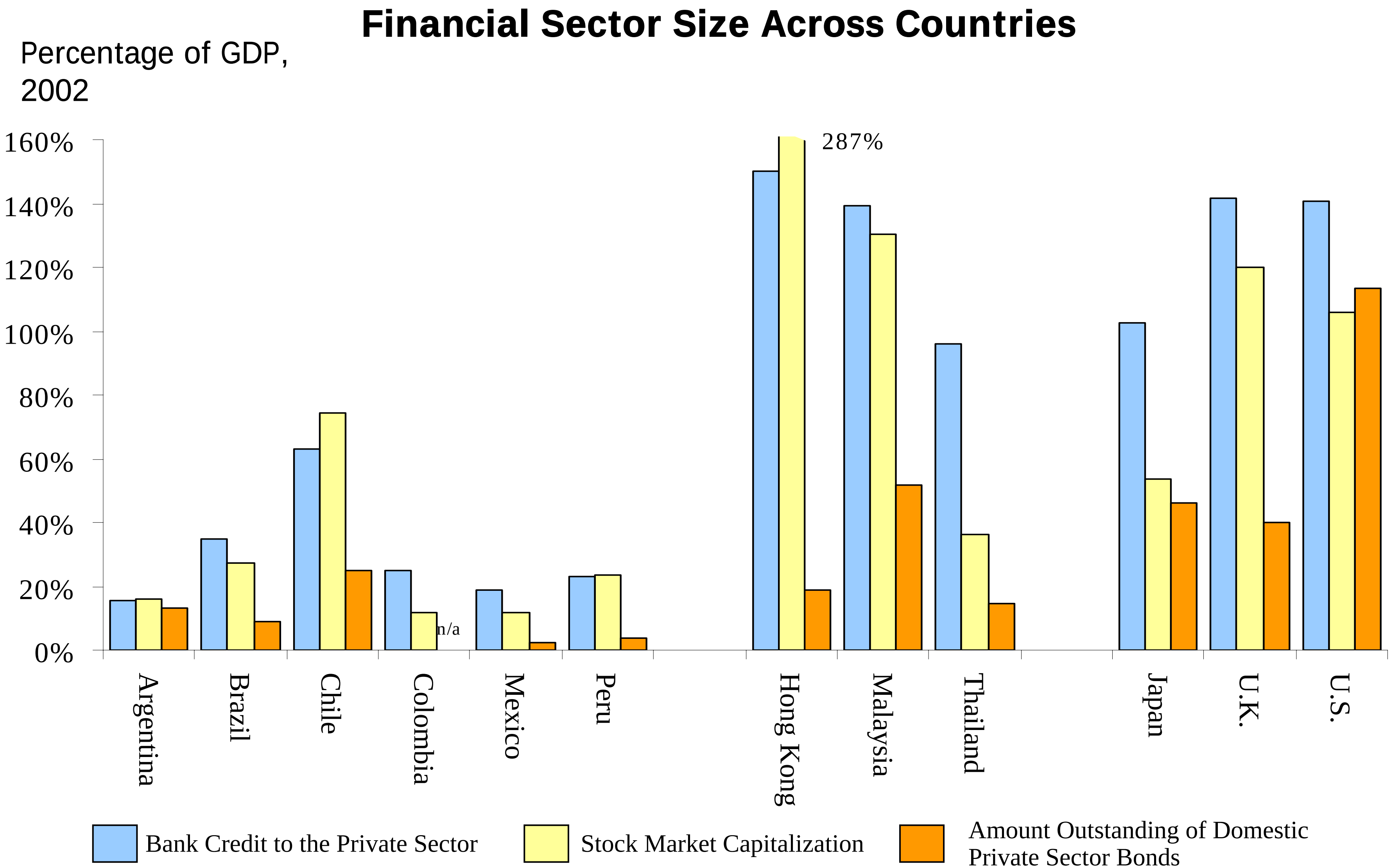
The liberalization index is calculated as the simple average of three indices (liberalization of the capital account, domestic financial sector, and stock market) that range between 1 and 3, where 1 means no liberalization and 3 means full liberalization. These data are then aggregated as the simple average between countries of each region.

Intensity of Reforms
Capital Markets Laws, Regulation, and Infrastructure

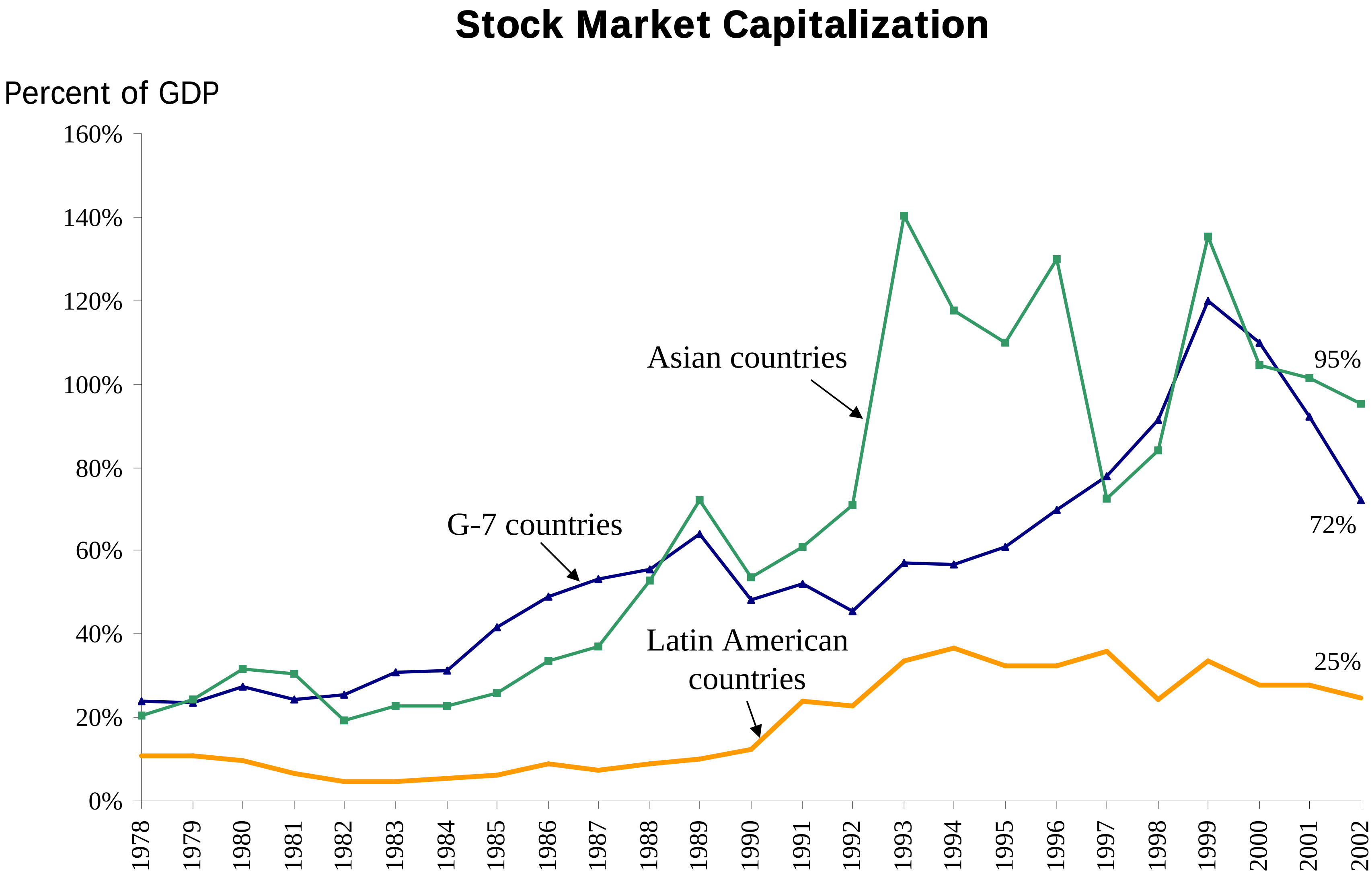
Percentage of Latin American Countries Having Implemented Reforms



Stylized Outcomes
LAC Local Financial Markets Remain Underdeveloped

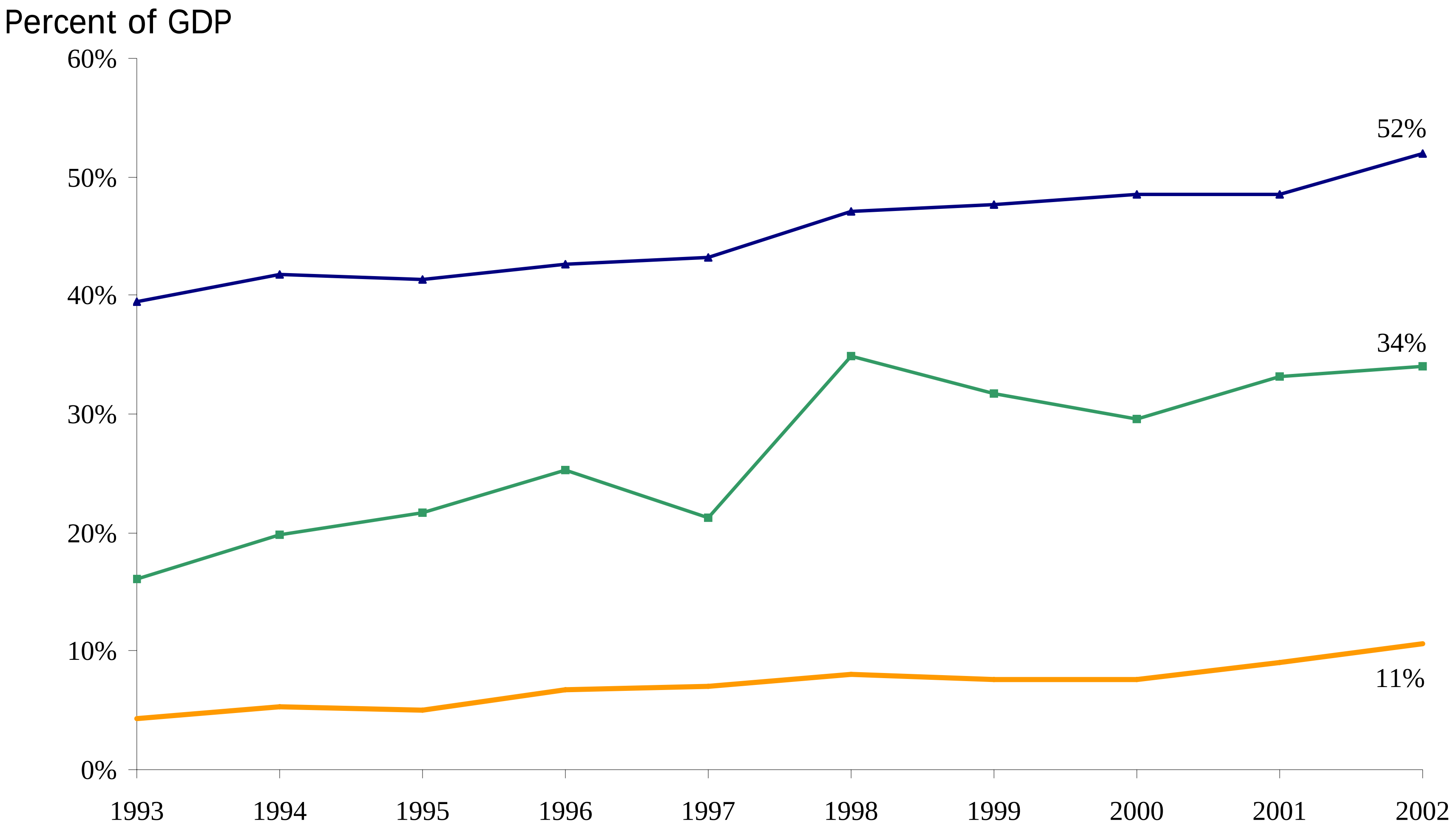


Stylized Outcomes
Stock Market Cap in LAC Lags Other Regions...



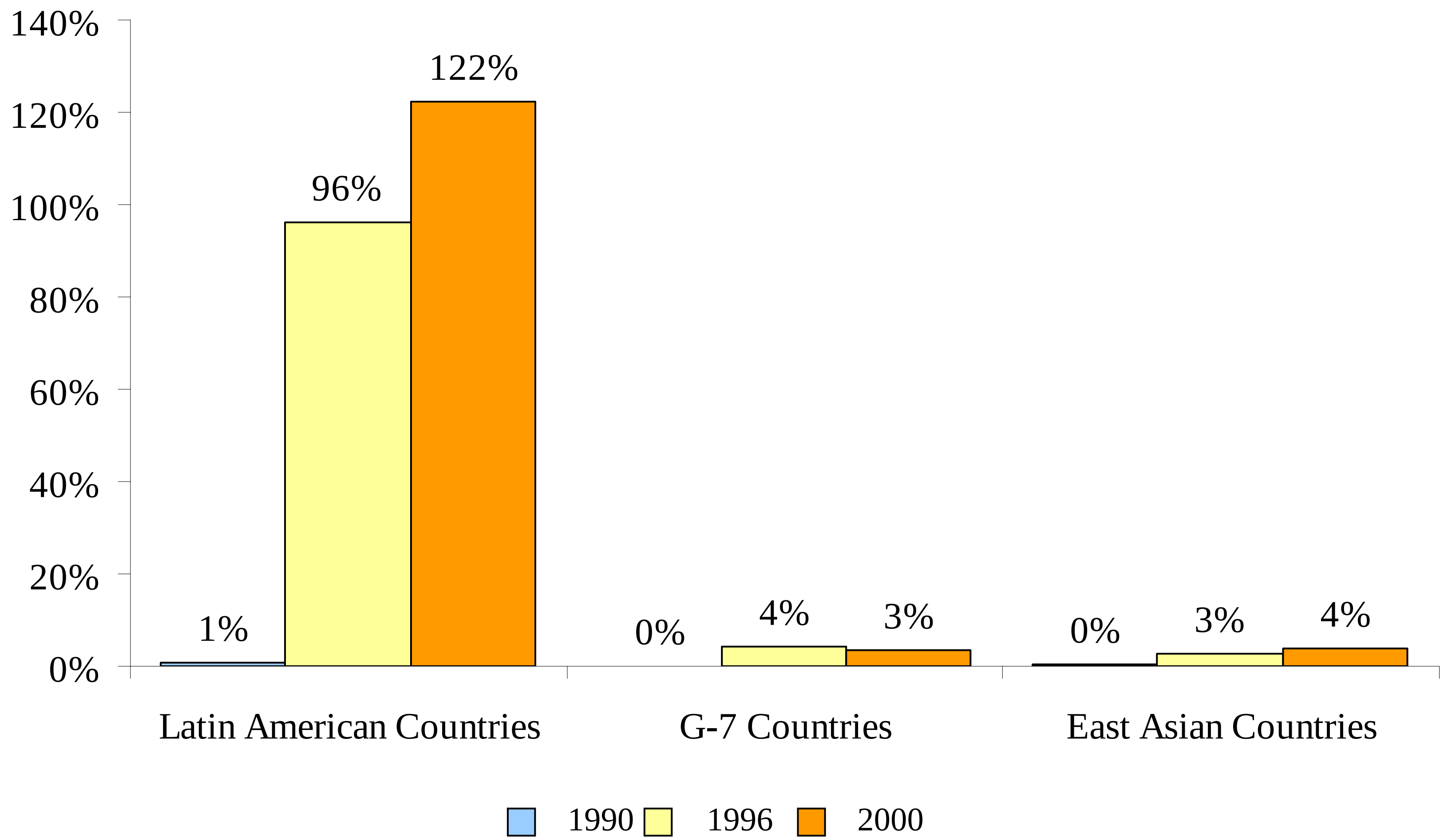
Stylized Outcomes
...And So Do Private Sector Bond Markets

Domestic Private Sector Bonds Outstanding



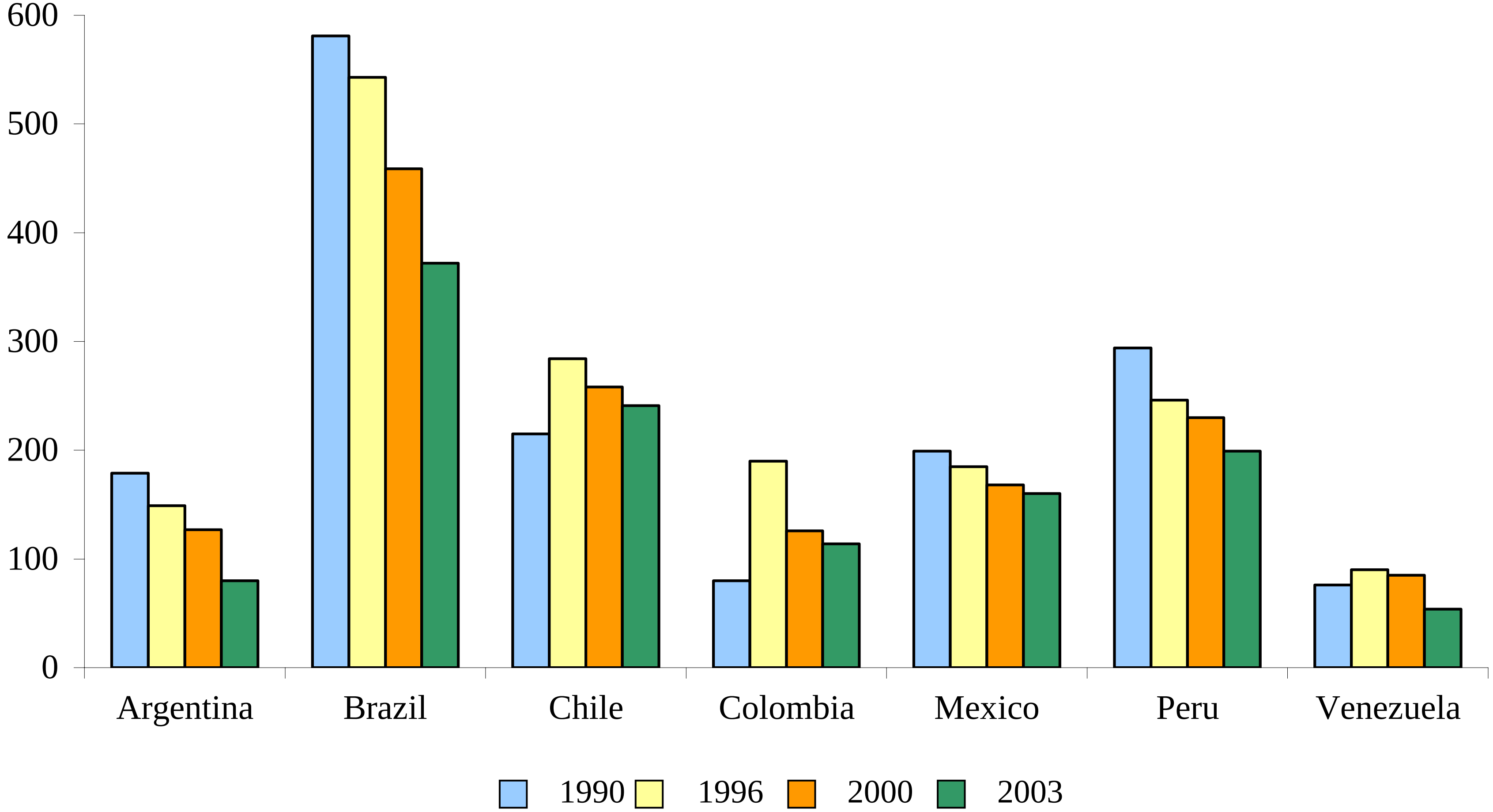
Stylized Outcomes
LAC a Leader in Stock Market Internationalization

Ratio of Value Traded Abroad to Value Traded Domestically

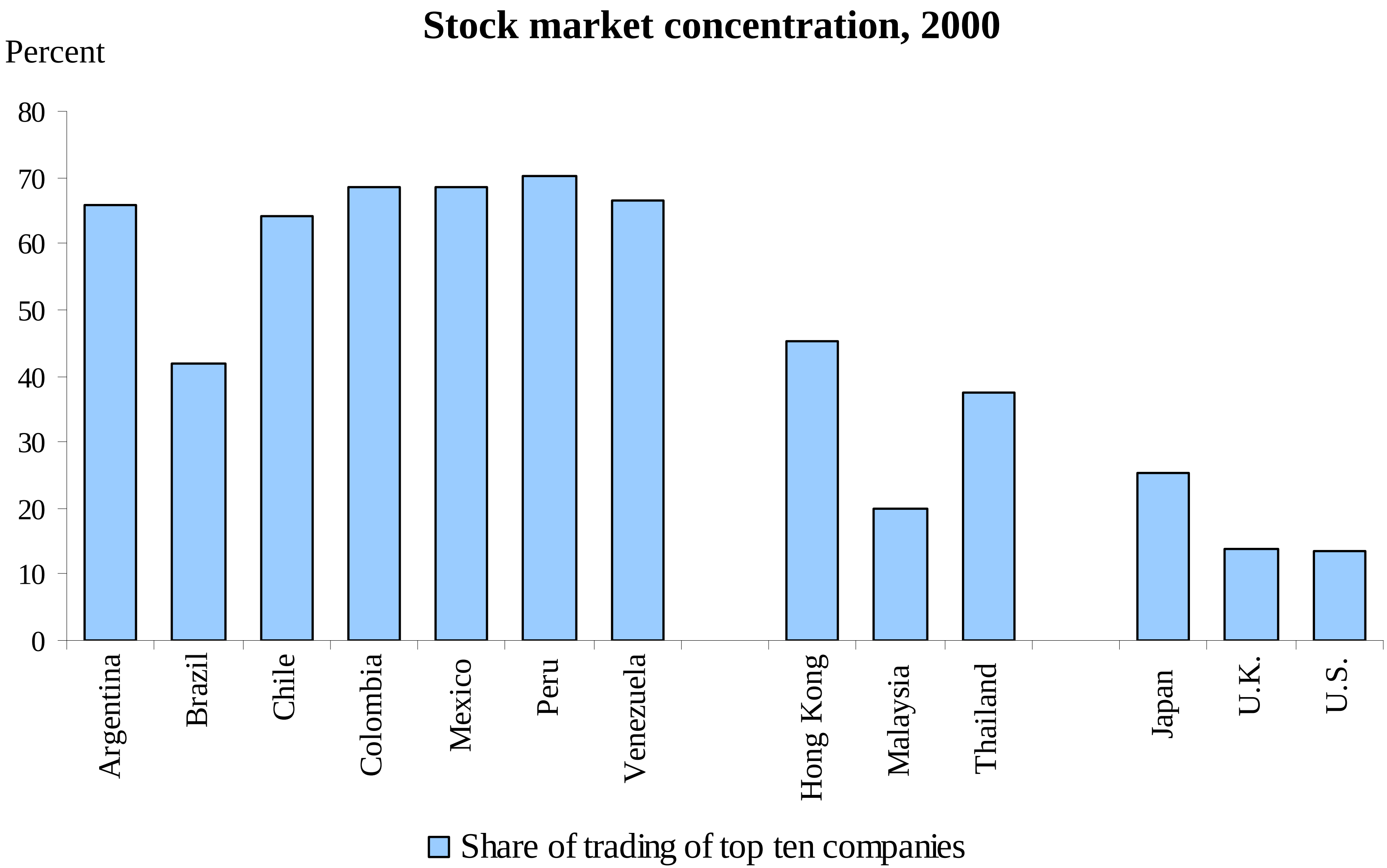


Stylized Outcomes
Significant De-Listings in LAC Stocks Markets

Number of Firms Listed in Domestic Stock Exchanges in Latin America

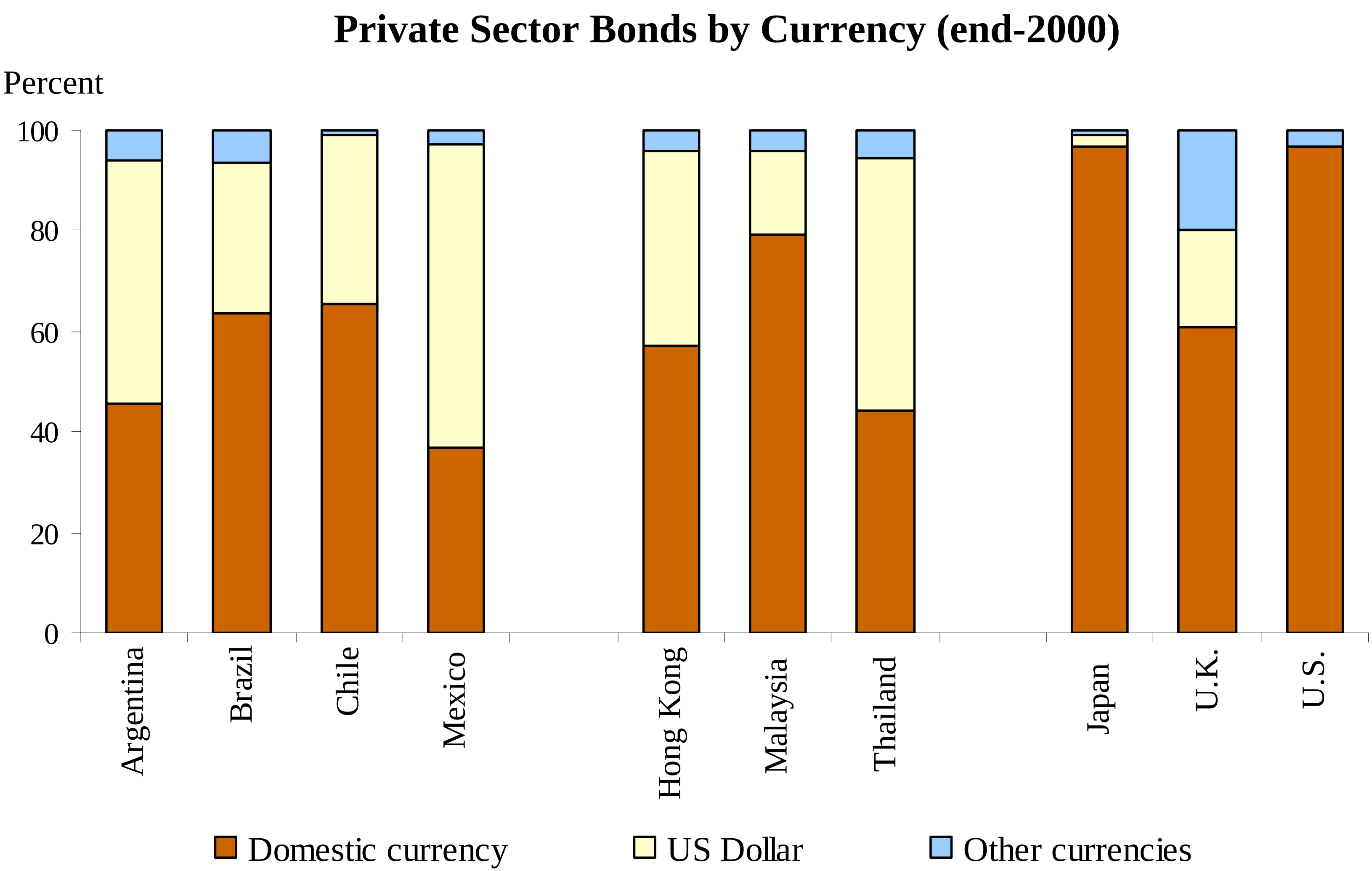


Stylized Outcomes
Few Companies Dominate LAC Stocks Markets



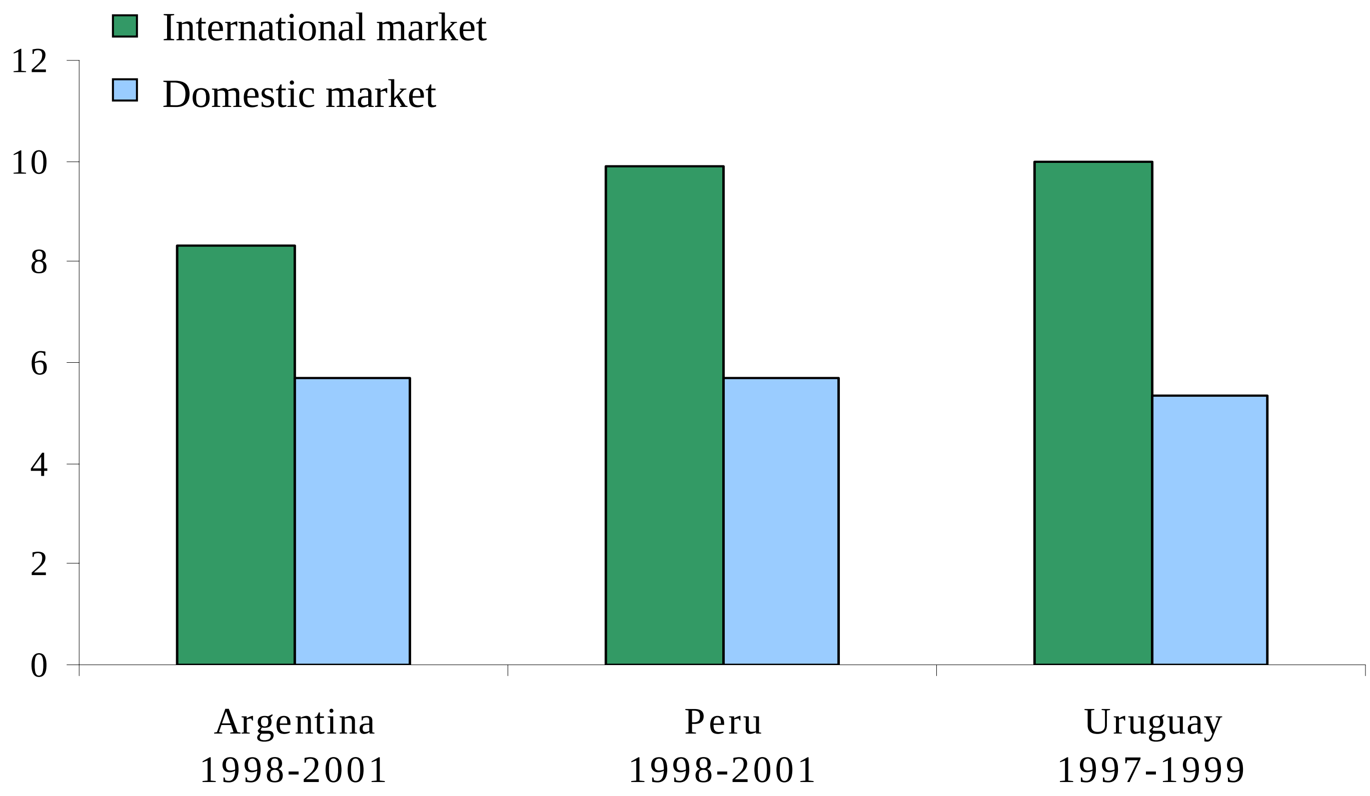
Source: IFC's Emerging Markets Database

Stylized Outcomes
Dollarization Affects Corporate Bonds



Stylized Outcomes
Long Maturities Easier to Obtain Abroad, But in Dollars

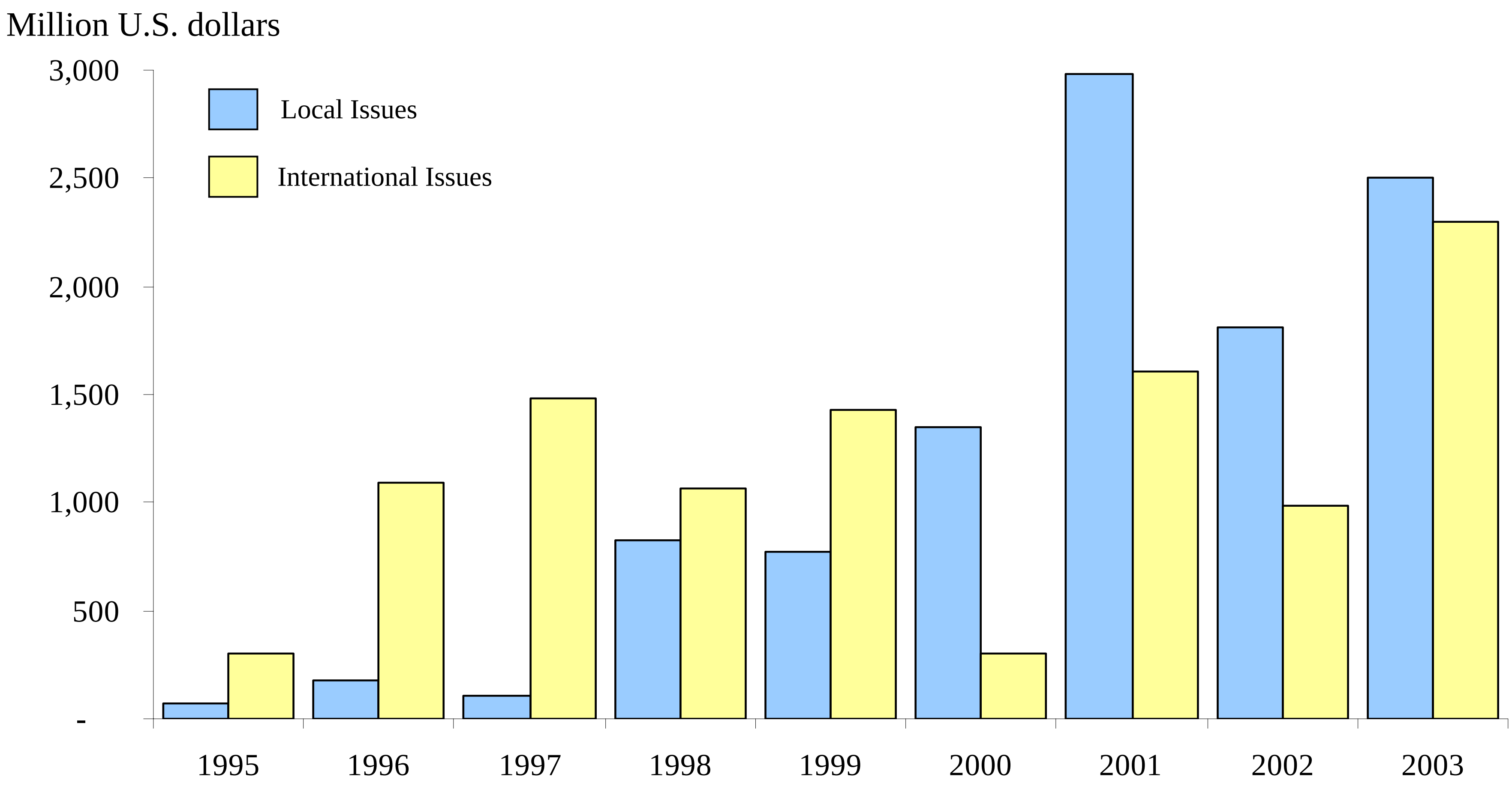
Maturity of Corporate Dollar Bonds by Jurisdiction
In years



Average maturities are weighted by amount issued. Maturities shorter than one year are excluded from the sample. Different periods of time are displayed due to limitations in the availability of data.

Stylized Outcomes
Even in Successful Corporate Bond Mkts, Like Chile's...

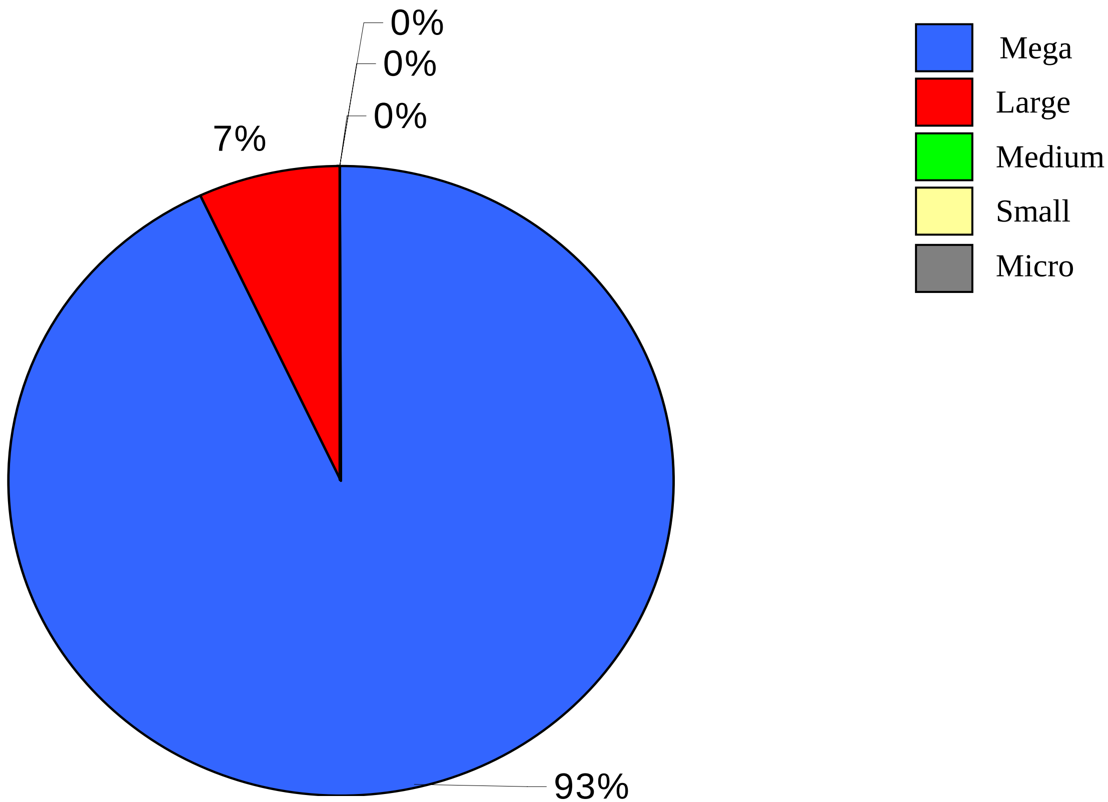
Chile - corporate bonds issues in domestic and international markets



Sources: SVS, Larrain Vial Brokerage, Euromoney, Bondware, Bloomberg

Stylized Outcomes
... Only Few, Large Companies Have Access

Chile – corporate bond issues in the local market by size of enterprise (2000 - 2003)



Mega firms are defined as those with annual sales net of VAT above UF600,000 (US$17.2 million); large firms have sales between UF100,000 (US$2.8 million) and UF600,000; medium firms have sales between UF25,000 (US$0.7 million) and UF100,000; small firms have sales between UF2,400 (US$68,688) and UF25,000 and micro firms have sales below UF2,400. Micro firms represent around 82 percent of all firms, while small firms are 15 percent and medium firms two percent. Large and mega firms combined account for only one percent of all firms. *Source*: World Bank (2004)

In Sum...

- Domestic capital markets (equity and private bonds) in LAC have under-performed other regions over the last decade
  - Frustrating initially high expectations
  - Despite apparently sound reform logic
  - Despite intense reform effort
- LAC has been a leader in embracing global capital markets
- Cannot study LAC separate from financial globalization
  - International financial integration is not a detail!

The Empirics:

Key Questions and Main Results

Key Questions

- Why the poor performance of domestic securities markets?
  - Illiquid and shrinking local stock markets, with segmented access
  - Illiquid local currency bond markets affected by short-termism or dollarization, with segmented access
- Is it due to poor economic & institutional fundamentals?
  - Monetary and fiscal discipline, level of economic development, size of the economy, rule of law, etc.
- Have reforms been irrelevant?
- What role has been played by internationalization?

But Issues Differ for Equity & Bond Contracts

- Equity contracts
  - No default risk
  - Variable income: payments depend on the issuer’s performance
  - Internationalization does not generate balance sheet vulnerabilities
  - Hence, attention concentrates on links between corporate governance and market development and internationalization
- Bond contracts
  - Commitment to pay, independent of performance
  - Contract features (currency, duration, maturity, jurisdiction) are used to cope with risks
  - Hence, attention is concentrated on balance sheet mismatches
    - Why short-term bonds given rollover risk?
    - Why dollarized or short-duration bonds given default risk?
    - Why investor preference for default risk over price risk in equilibrium?

Stock Market Development
Method and Data

- Panel and time series regressions, domestic and international market activity
- Data on domestic and international activity from 1975 to 2000 for 82 countries
- Data on international activity for 3,000 firms

Low-Income Countries		**Middle-Income Countries**	**High-Income Countries**	
Armenia	Lithuania	Argentina	Australia	Norway
Azerbaijan	Macedonia	Botswana	Austria	Portugal
Bangladesh	Moldova	Brazil	Belgium	Singapore
Bulgaria	Morocco	Chile	Britain	Slovenia
China	Nigeria	Croatia	Canada	Spain
Colombia	Pakistan	Czech Republic	Denmark	Sweden
Cote D'Ivoire	Peru	Estonia	Finland	Switzerland
Ecuador	Philippines	Hungary	France	Taiwan
Egypt	Romania	Korea	Germany	United States
Ghana	Russia	Malaysia	Greece	
India	Sri Lanka	Mauritius	Hong Kong	
Indonesia	Thailand	Mexico	Ireland	
Iran	Tunisia	Poland	Israel	
Jamaica	Ukraine	Saudi Arabia	Italy	
Jordan	Uzbekistan	Slovak Republic	Japan	
Kazakhstan	Zimbabwe	South Africa	Luxembourg	
Kenya		Trinidad & Tobago	Malta	
Kyrgyz Republic		Turkey	Netherlands	
Latvia		Venezuela	New Zealand	

Stock Market Development
Main Results (For Entire Sample)

- Better macroeconomic & institutional *fundamentals* foster
  - Domestic stock market development...
  - ...as well as the internationalization of equity trading and issuance
  - But there is a pro-internationalization bias – fundamentals accelerate internationalization, increasing the ratio of int'l to domestic activity
- *Reforms* are found to have similar impacts (on domestic & internationalization dimensions) over time within countries
  - Results are not just driven by cross-country variations
- *Internationalization* adversely affects turnover of domestic (non-internationalized) firms
  - Trade migration, negative spillovers, and trade diversion

Stock Market Development
Regressions: Role of Fundamentals

Dependent Variable	Market Capitalization / GDP			Value Traded Domestically / GDP		
Log of GDP per capita	0.14 ***	0.16 ***	0.10 ***	0.11 ***	0.10 ***	0.07 ***
Law and Order	0.03 *	0.01	0.04 **	0.00	-0.01	0.02
Shareholders Rights			0.11 **			0.03
Government Deficit / GDP	-2.63 ***	-1.77 ***	-2.14 ***	-1.43 ***	-1.24 ***	-1.62 ***
Capital Account Liberalization	0.05			0.00		
Total Equity Flows / GDP		3.85 ***	2.35 ***		2.85 ***	1.81 ***
No. of Observations	843	802	401	838	797	399
No. of Countries	73	71	58	73	71	58
R-squared	0.229	0.270	0.265	0.175	0.233	0.239

Least square regressions estimated using random effects models for a panel of 82 countries between 1975 and 2000. A constant is estimated but not reported.

*, **, *** mean significant at 10, 5, and 1 percent, respectively

Stock Market Development

Regressions: Role of Fundamentals

Dependent Variable	Market Cap of Internationalized Firms / GDP			Value Traded Abroad / GDP		
Log of GDP per capita	0.08 ***	0.08 ***	0.07 ***	0.03 ***	0.02 ***	0.03 ***
Law and Order	0.04 ***	0.04 ***	0.03 **	0.00	0.00	0.00
Shareholders Rights			0.00			0.00
Government Deficit / GDP	-0.93 ***	-0.69 ***	-0.66 **	-0.18 ***	-0.05	-0.13 **
Capital Account Liberalization	0.04			0.01		
Total Equity Flows / GDP		3.53 ***	3.25 ***		0.64 ***	0.94 ***
No. of Observations	557	536	365	611	574	380
No. of Countries	66	64	53	70	67	54
No. of Uncensored Obs.	441	423	312	287	276	215
No. of Left-Censored Obs.	116	113	53	324	298	165

Tobit regressions estimated using random effects models for a panel of 82 countries between 1975 and 2000. A constant is estimated but not reported.

*, **, *** mean significant at 10, 5, and 1 percent, respectively

Stock Market Development
Regressions: Role of Fundamentals

Dependent Variable	Market Cap of Internationalized Firms / Total Market Cap			Value Traded Abroad / Value Traded Domestically		
Log of GDP per capita	0.15 ***	0.14 ***	0.11 ***	0.43 ***	0.35 ***	0.21 ***
Law and Order	0.04 ***	0.05 ***	0.03 ***	0.10	0.11 ***	0.09 ***
Shareholders Rights			0.00			0.00
Government Deficit / GDP	-0.72 ***	-0.22	0.20	-0.83	1.78 **	1.80 ***
Capital Account Liberalization	0.06 ***			0.26 **		
Total Equity Flows / GDP		3.22 ***	3.33 ***		5.38 ***	6.72 ***
No. of Observations	528	516	354	567	541	372
No. of Countries	65	64	53	67	65	55
No. of Uncensored Obs.	433	417	307	282	269	211
No. of Left-Censored Obs.	95	99	47	285	272	161

Tobit regressions estimated using random effects models for a panel of 82 countries between 1975 and 2000. A constant is estimated but not reported.

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Stock Market Development
Regressions: Role of Reforms

Dependent Variable: Market Capitalization / GDP						
Financial liberalization	0.244 ***					
Infrastructure reform		0.427 ***				
Institutional reform			0.233 ***			
Enforcement of insider trading laws				0.469 ***		
Pension reform					0.440 ***	
Privatization						0.285 ***
No. of Observations	1,108	605	568	816	368	904
No. of Countries	49	23	33	33	17	39
R-squared	0.23	0.26	0.11	0.28	0.20	0.26

Least square regressions estimated using fixed effects models for countries implementing reforms between 1975 and 2002. A constant is estimated but not reported.

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Stock Market Development

Regressions: Role of Reforms

Dependent Variable: Value Traded Domestically / GDP						
Financial liberalization	0.171 ***					
Infrastructure reform		0.371 ***				
Institutional reform			0.196 ***			
Enforcement of insider trading laws				0.455 ***		
Pension reform					0.288 ***	
Privatization						0.178 ***
No. of Observations	1,154	625	582	844	372	904
No. of Countries	52	23	34	34	17	39
R-squared	0.06	0.17	0.11	0.22	0.13	0.15

Least square regressions estimated using fixed effects models for countries implementing reforms between 1975 and 2002. A constant is estimated but not reported.

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Stock Market Development
Regressions: Role of Reforms

Dependent Variable: Value Traded Abroad / GDP						
Financial liberalization	0.009 ***					
Infrastructure reform		0.042 **				
Institutional reform			0.011 ***			
Enforcement of insider trading laws				0.027 ***		
Pension reform					0.013 ***	
Privatization						0.016 **
No. of Observations	426	156	303	332	130	487
No. of Countries	38	13	26	28	11	42
R-squared	0.05	0.03	0.08	0.02	0.08	0.01

Least square regressions estimated using fixed effects models for countries implementing reforms between 1975 and 2000. A constant is estimated but not reported.

*, **, *** mean significant at 10, 5, and 1 percent, respectively

Stock Market Development
Regressions: Role of Reforms

Dependent Variable: Value Traded Abroad / Value Traded Domestically						
Financial liberalization	0.077 ***					
Infrastructure reform		0.415 ***				
Institutional reform			0.154 ***			
Enforcement of insider trading laws				0.155 ***		
Pension reform					0.361 ***	
Privatization						0.089 *
No. of Observations	341	156	260	313	114	311
No. of Countries	32	13	23	27	11	28
R-squared	0.02	0.15	0.05	0.06	0.13	0.01

Least square regressions estimated using fixed effects models for countries implementing reforms between 1975 and 2000. A constant is estimated but not reported.

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Stock Market Development
Regressions: Impact of Internationalization

Dependent Variable: Log of One Plus the Turnover Ratio of Domestic Firms						
Share of internationalized firms	-1.39 ***	-2.98 ***	-3.01 ***	-2.55 ***	-2.93 ***	-2.56 ***
Log of one plus aggregate turnover ratio in international markets	0.24 ***	0.18 ***	0.17 ***	0.22 ***	0.17 ***	0.19 ***
Log of GDP per capita			0.20 ***			0.16 ***
Law and order				0.05 ***		0.04 ***
Capital account liberalization					-0.01	-0.02
Log of total assets		-0.06 ***	-0.06 ***	-0.06 ***	-0.06 ***	-0.06 ***
Number of firms	2,400	1,531	1,530	1,509	1,517	1,494
Number of observations	12,762	7,312	7,298	7,233	7,138	7,045
Country dummies	Yes	Yes	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.70	0.71	0.71	0.71	0.70	0.70

Least square regressions with robust standard errors for a panel of data covering over 3,000 firms across 55 emerging market countries during the years 1989 to 2000.

*, **, *** mean significant at 10, 5, and 1 percent, respectively

Bond Market Development

Main Results (For Entire Sample)

- Better macroeconomic and institutional fundamentals foster *both* local and foreign currency bond markets
- Size matters – larger countries and local financial sectors facilitate the development of local currency bond markets
- Less flexible exchange rate policies increase the share of foreign currency bonds

Bond Market Development

Regressions: Local Currency Bond Markets

Dependent Variable: Log of Domestic Currency Government Bonds Outstanding / GDP							
	Lagged variables						Initial values
Log of GDP	0.25 ***	0.23 ***	0.20 ***	0.06 ***	0.23 ***	0.26 ***	0.14 ***
Log of total deposits / GDP	0.50 ***	0.27 ***	0.50 ***	0.82 ***	0.32 ***	0.42 ***	0.52 ***
Inflation index	-0.09 ***					-0.07 ***	-0.16 ***
Fiscal burden		0.31 ***				0.03	-0.06
Institutionalized democracy			0.08 ***			0.13 ***	0.10 ***
Official exchange rate regime				0.06 ***			
Actual exchange rate regime (LYS)					0.00	0.04 **	0.17 ***
No. of Observations	158	158	231	200	192	143	216
No. of Countries	35	35	35	30	34	32	33

Feasible generalized least squares regressions with heteroskedastic error structures and autocorrelation within countries for a panel of 36 countries between 1993 and 2000. The actual exchange rate regimes increases with the degree of flexibility of the exchange rate. A constant is estimated but not reported.

*, **, *** mean significant at 10, 5, and 1 percent, respectively

Bond Market Development

Regressions: Foreign Currency Bond Markets

Dependent Variable: Log of Foreign Currency Government Bonds Outstanding / GDP

	Lagged variables						Initial values
Log of GDP	-0.76 ***	-0.63 ***	-0.70 ***	-0.98 ***	-0.68 ***	-0.66 ***	-0.66 ***
Log of total deposits / GDP	-1.05 ***	-0.84 ***	0.01	-0.19 *	-0.62 ***	-1.15 ***	-0.34 ***
Inflation index	-0.31 ***					-0.23 ***	-0.36 ***
Fiscal burden		0.53 ***				0.26 ***	0.57 ***
Institutionalized democracy			0.08 **			0.12 ***	0.08 *
Official exchange rate regime				0.11 **			
Actual exchange rate regime (LYS)					-0.01	-0.20 ***	-0.50 ***
No. of Observations	158	158	231	200	192	143	216
No. of Countries	35	35	35	30	34	32	33

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Bond Market Development

Regressions: Share of Foreign Currency Bonds

Dependent Variable: Log of Foreign Currency Government Bonds Outstanding / Total Government Bonds Outstanding

	Lagged variables						Initial values
Log of GDP	-0.89 ***	-0.92 ***	-0.73 ***	-0.93 ***	-0.84 ***	-0.89 ***	-0.72 ***
Log of total deposits / GDP	-0.88 ***	-0.93 ***	-0.55 ***	-0.68 ***	-0.78 ***	-0.99 ***	-0.62 ***
Inflation index	-0.09 ***					-0.07 ***	-0.10 ***
Fiscal burden		0.19 ***				0.19 ***	0.49 ***
Institutionalized democracy			0.05			-0.02	0.00
Official exchange rate regime				0.08 **			
Actual exchange rate regime (LYS)					-0.07 *	-0.14 **	-0.59 ***
No. of Observations	158	158	231	200	192	143	216
No. of Countries	35	35	35	30	34	32	33

Feasible generalized least squares regressions with heteroskedastic error structures and autocorrelation within countries for a panel of 36 countries between 1993 and 2000. The actual exchange rate regimes increases with the degree of flexibility of the exchange rate. A constant is estimated but not reported.

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Latin Securities Markets
Key Result: “Shortfall” in Local Market Development

- Latin America is different – robust econometric result
  - Domestic stock markets are less developed than predicted by fundamentals and less responsive to reforms
  - Internationalization of Latin stock trading and issuance is higher than predicted by fundamentals and more responsive to reforms
  - Domestic currency bond markets are less developed, controlling for fundamentals and size
- Latin America is an extreme, but it is not alone...
  - Witness Eastern Europe and even Western Europe
- ...and East Asia is at the other extreme
  - Is East Asia the future or the past?

Whither the Reform Agenda?

Assessing the Evidence

- What went wrong and what to do next?
  - The same evidence examined from different angles can lead to different diagnoses and policy recommendations
  - But new evidence has to be taken into account seriously
- Three possible views – complementary in many respects
  - Be patient and redouble the effort
  - Get the sequence right
  - Revisit basic issues and revise expectations

Two Main Views Dominate the Debate

- Be patient and redouble the effort
  - Diagnosis: past reforms were right and the core elements of reform agenda are well known (cast in int'l standards and codes)
  - Policy recommendation: be patient, accelerate and deepen reforms
- Get the sequence right
  - Diagnosis: financial liberalization went too soon and too fast; building-block nature of reform is often ignored
  - Policy recommendation: get the sequencing right
    - Achieve minimal institutional strength and domestic currency debt markets development before liberalizing, otherwise things will backfire
    - Establish pre-conditions first, otherwise things won't work

A Third, Less Prescriptive View
Revisit Basic Issues & Reshape Expectations

- Diagnosis: shortcomings of previous views
  - Reforms spur both domestic securities markets development and internationalization, and the latter relatively more
  - Resistance to reform might not yield without outside competition
  - Implicit premise that developed capital markets are the adequate benchmark for developing countries
- Policy recommendation: step back, revisit basic issues and adjust expectations, before reformulating reform agenda
  - Basic issues: globalization, liquidity, risk diversification
  - Cross-cutting themes: size, segmentation of access

Basic Issues

- Financial globalization
  - Questions undue emphasis on domestic capital markets
  - Magnifies weak currency problems (debt markets)
  - Has undercut development of local equity markets
- Liquidity
  - A positive function of size (economies of scale, network & agglomeration effects)
  - Illiquidity begets illiquidity and undermines price revelation
- Risk Diversification
  - Local capital markets in LAC add very little to risk diversification
  - Scope for diversification might be curbed by the economics of the risk diversification process, which is biased in favor of large issues

Rethinking the Reform Agenda

- Abandon hope of creating mini-Wall Streets
  - No one-size fits all
  - Difference between int'l financial centers and peripheral markets
  - Local markets should be complementary rather than replicative
  - Is there a "light" version of capital markets for small countries?
- Emphasize links between capital markets and the rest of financial service providers and the real sector
  - Financial structures and hybrid products linking multiple stakeholders
  - Unrealistic to expect that firms of all sizes will have *direct* access to bond and stock markets
- Reassess regional integration vis-à-vis global integration

END