



Public-Private Partnerships (PPP) in Highways

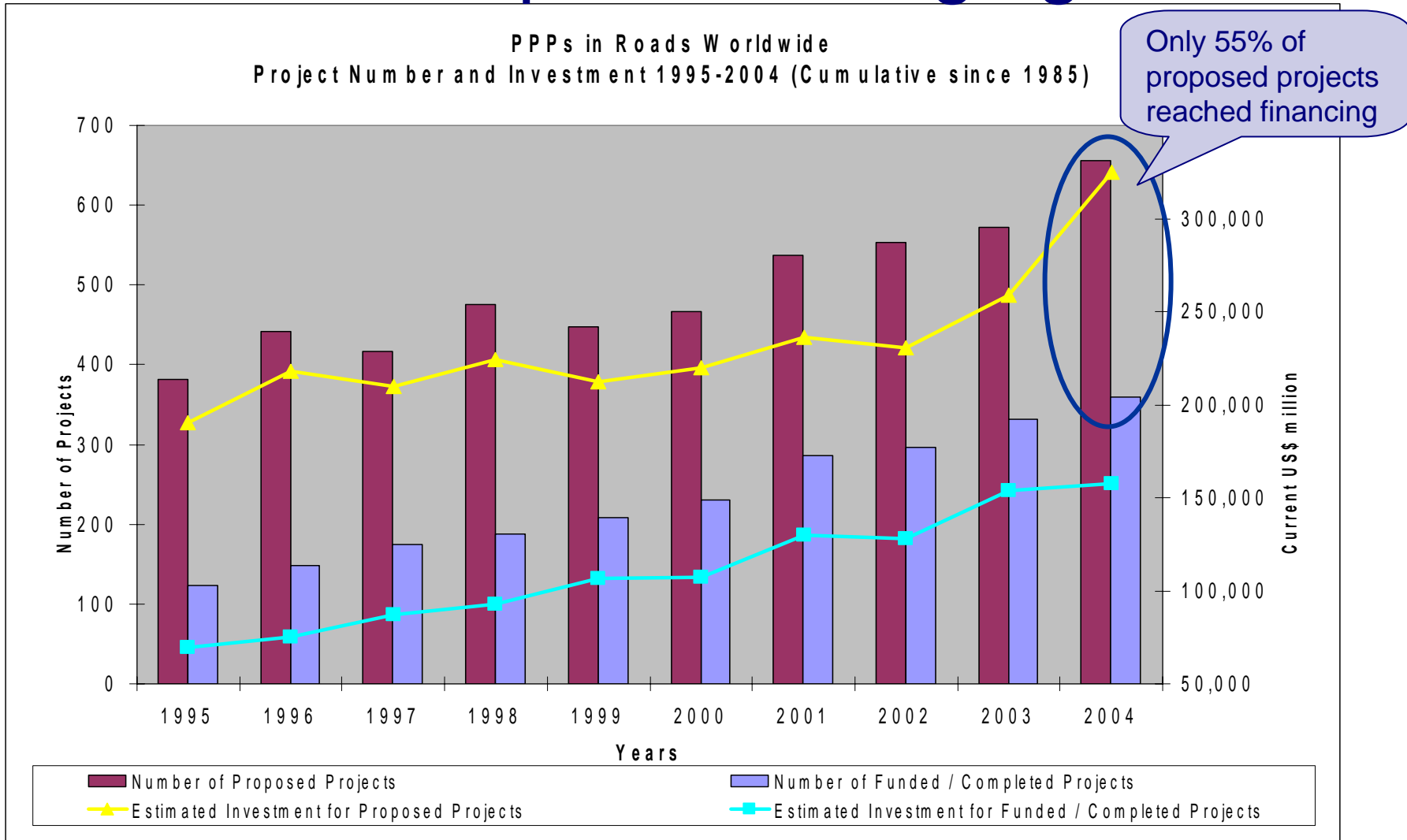
International Experience and Lessons for Success

Transport Forum, March 29, 2006

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PPPs becoming a global business across developed & emerging markets



Source: Public Works Financing-Major Project Survey 1995-2004

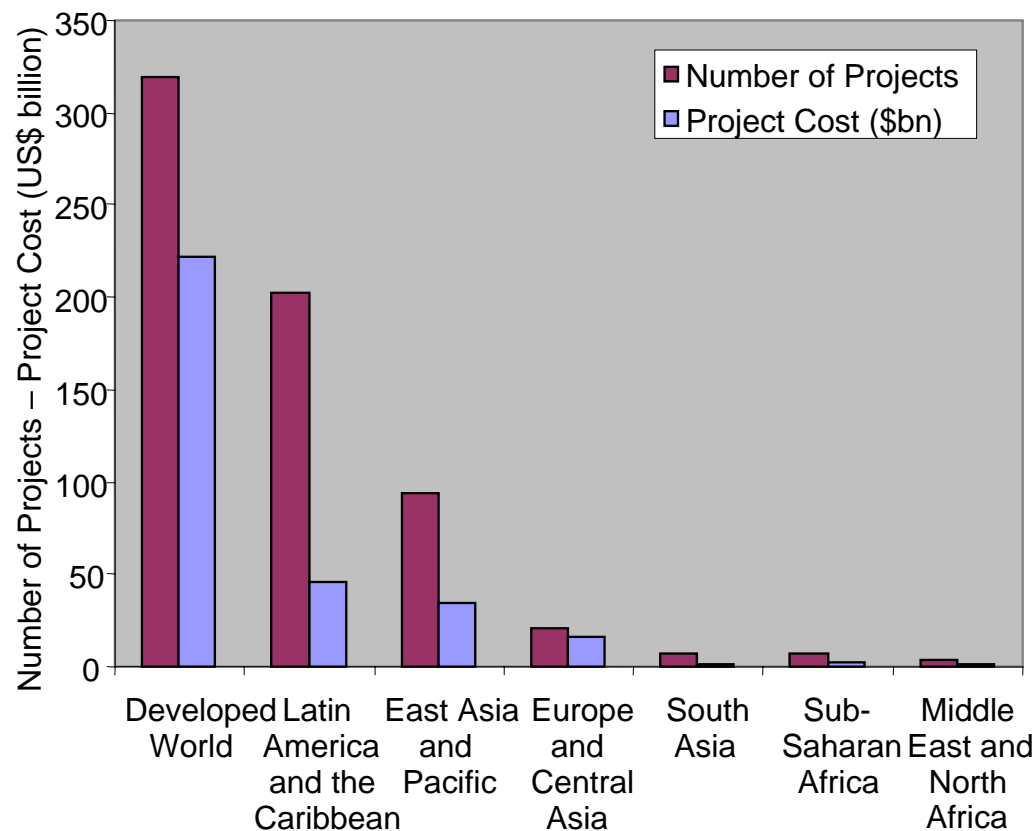
... yet anchored in selected group of OECD and developing countries...

Top Countries: PPPs in Highways











Cumulative sum of # projects & estimated costs since 1985

Country	Number of Projects	Project Cost (US\$ billion)
United States	74	42.7
United Kingdom	37	30.5
China	53	21.6
Spain	47	21.1
Mexico	78	20.4
Italy	3	18.5
Germany	34	17.1
Republic of Korea	18	16.2
Japan	1	14.4
Greece	11	11.8
Brazil	44	11.4
France	8	10.2
Portugal	15	9.8
Australia	12	8.6
Malaysia	18	7.8
Canada	22	7.7
Russia	2	6.6
Chile	24	6.3
Argentina	20	3.7
Ireland	14	3.0
Denmark	1	2.7
South Africa	6	2.3
Czech Republic	2	2.2
Indonesia	6	2.1
Thailand	3	2.1

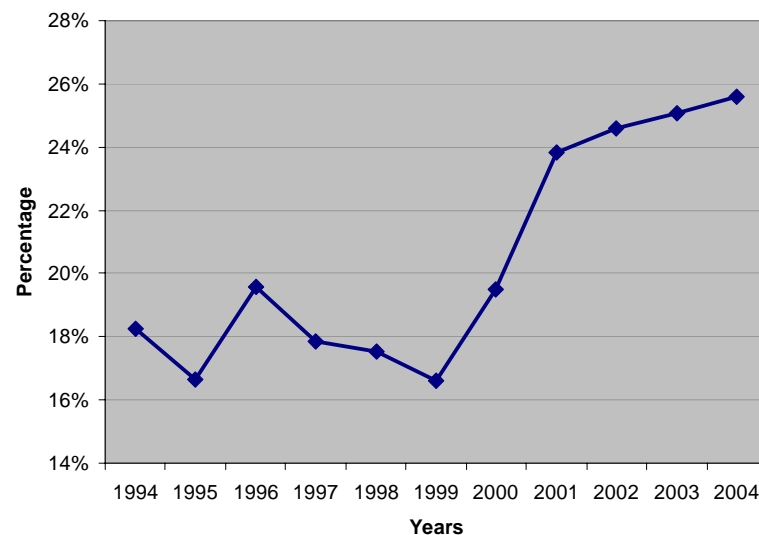
Regional distribution



... and highly influenced by few global concessionaires or sponsors

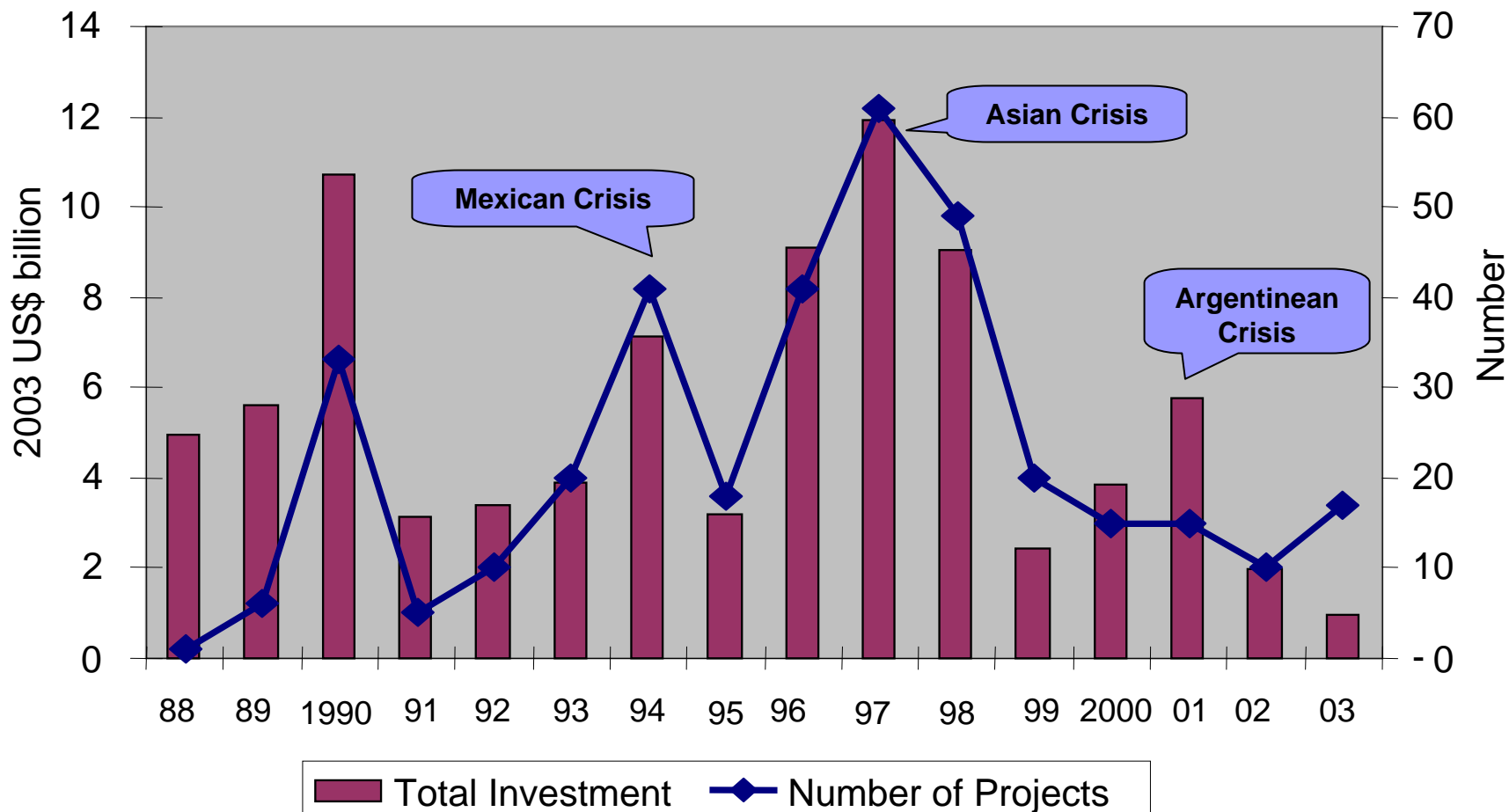
Top 10 Transportation Developers 2004 Active ownership role in PPPs 1985-2004		PPP Projects under contract	Awarded
ACS Dragados 		45	18
MIG / Macquarie Bank 		23	4
Laing / Equion 		21	1
Ferrovial / Cintra 		20	14
Sacyr Vallehermoso 		19	13
Albertis / La Caixa 		19	2
FCC 		17	8
OHL 		17	1
Cheung Kong Infrastructure 		16	22
Vinci / Cofiroute 		15	19

Concentration of Projects in Top 10 Transport Sponsors 1994-2004
Proposed and Underway



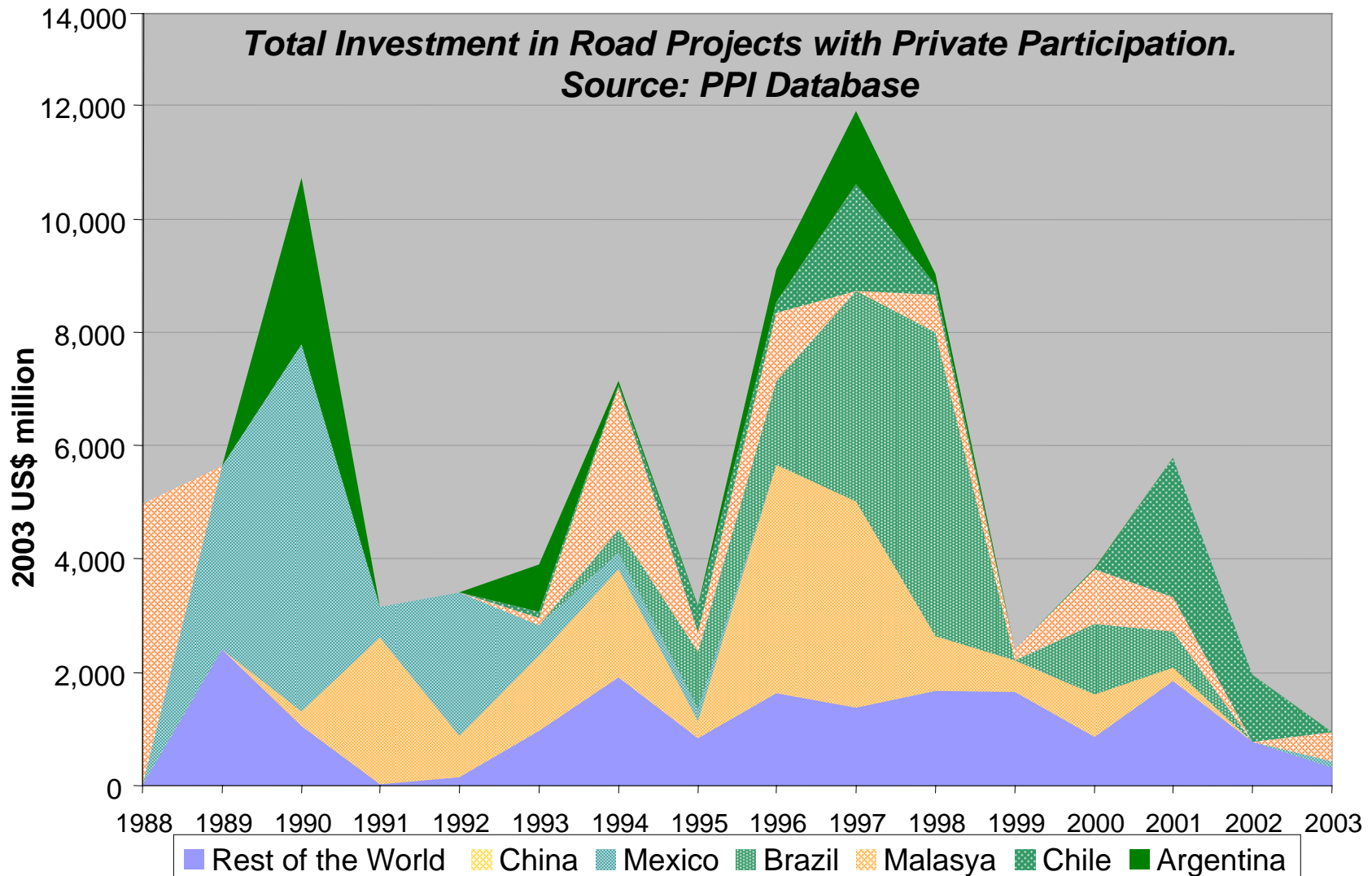
Rise & fall in developing countries shows vulnerability in era of financial shocks

Total Investment in Road Projects with Private Sector Participation 1988-2003



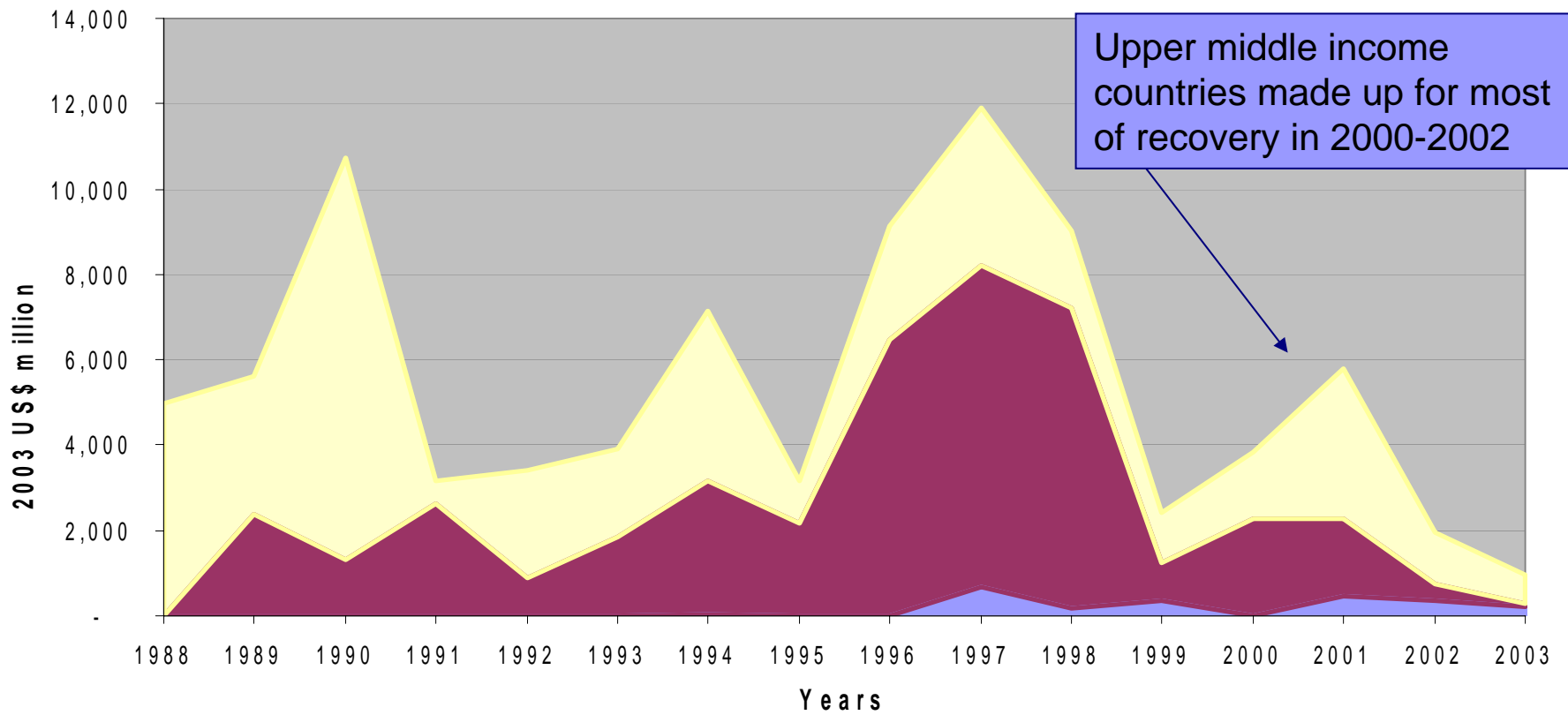
Source: PPI Database

...but also reflects impact of project activity within key countries...



... with most of the investment going to Middle Income Countries

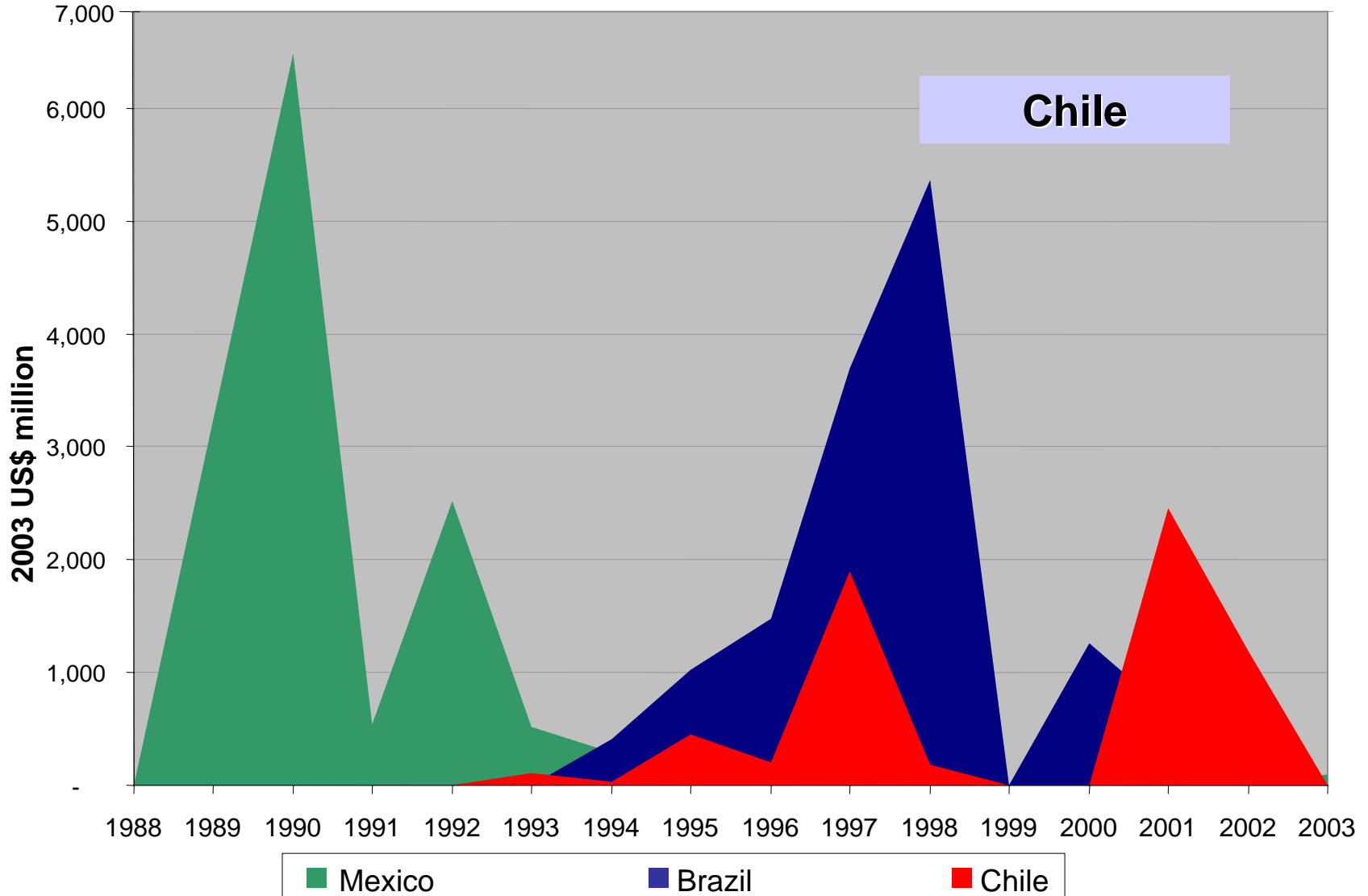
Total Investment in PPP Projects in Roads by Income Levels



Low Income Lower Middle Income Upper Middle Income

Source: PPI Database

Insights on performance of few programs



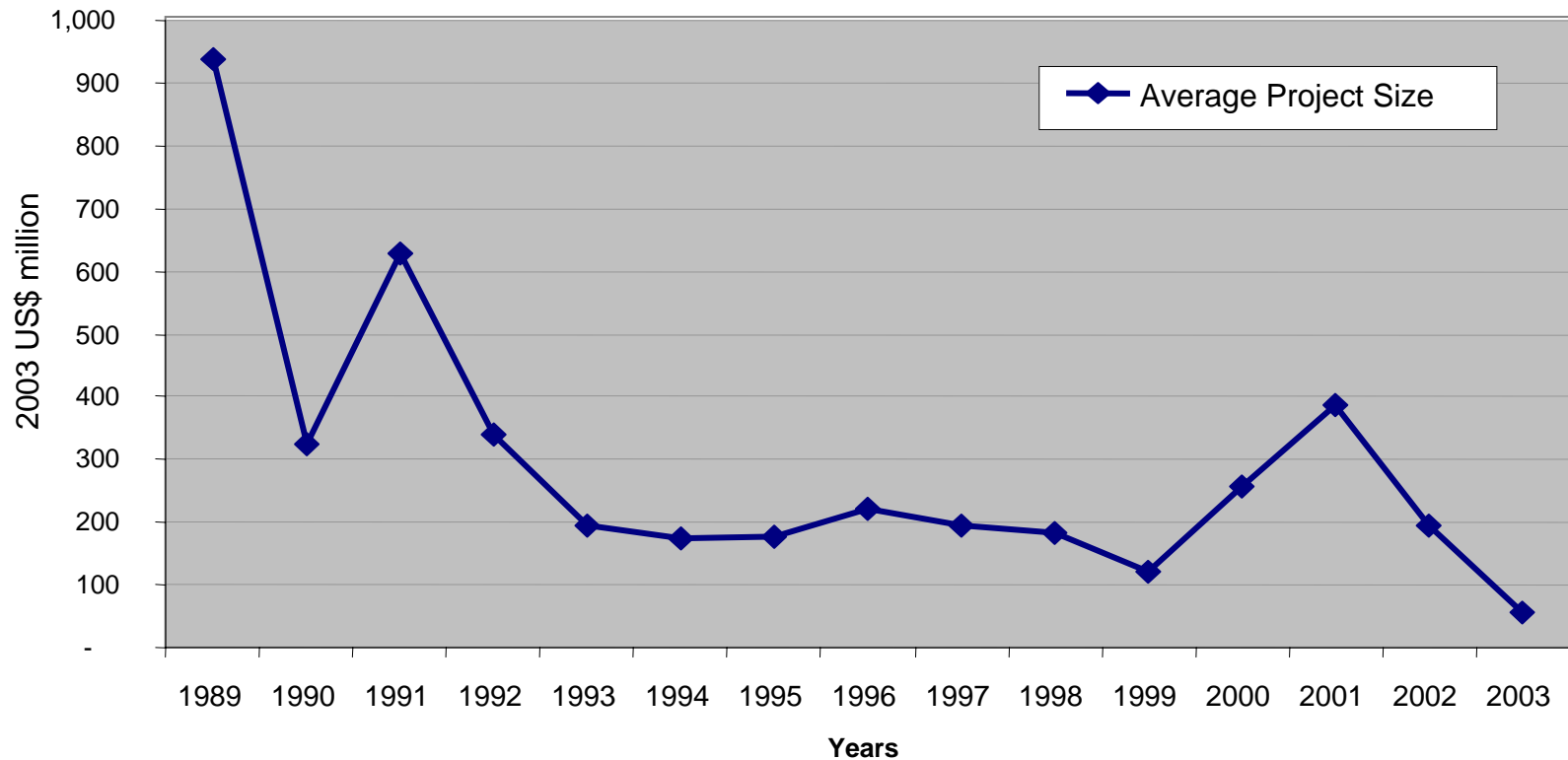
Total Investment in Road Projects with Private Participation. Source: PPI Database

PPP projects in highways have suffered from optimism bias

- Forecasting errors from inability to obtain good data or incorrect assumptions in models
 - price elasticity of traffic to tolls;
 - substitute services/intensified competition;
- Political commitment at too early a stage
 - before appraisal at sufficient depth to allow graceful exit
 - project timelines inconsistent w/sound bidding practices
- Downplaying vulnerability of PPP projects to changing political, financial, economic context
 - failure to identify/value political and social costs (eg., toll increases)

PPP projects are becoming smaller reflecting financial constraints

... and also that bigger projects already done in more active countries



Source: PPI Database

Structured project finance has come a long way, but not yet for all ...

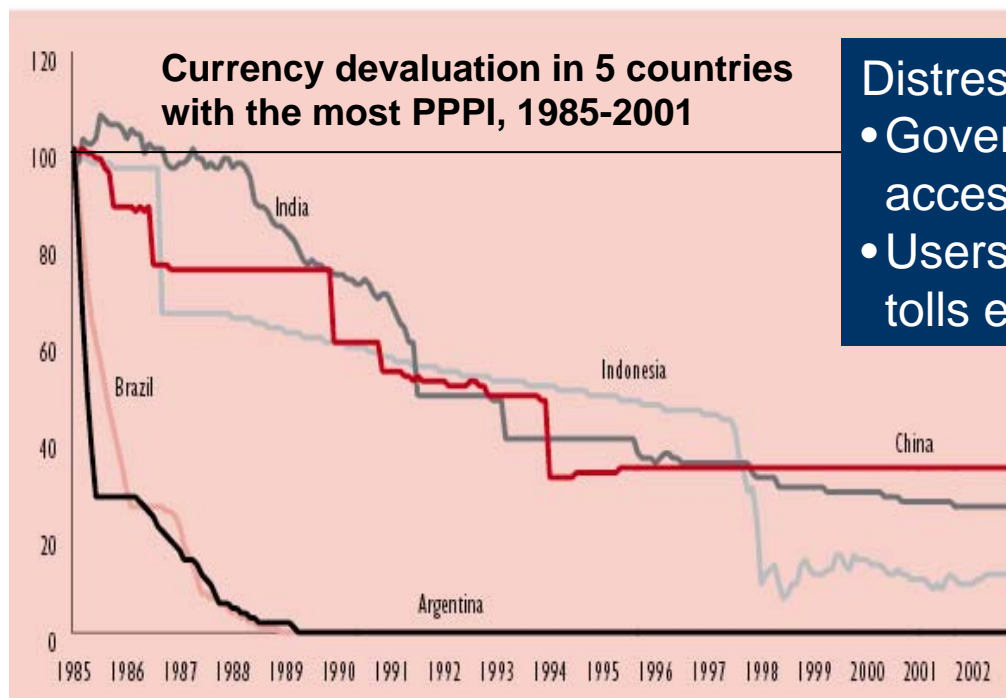
- Fashioning the finance to specific project needs -- with risks and returns borne not by sponsor alone but by different types of investors-- is buzzword
 - mezzanine finance;
 - monoline insurance broadens access to capital markets
 - interest rate and foreign exchange hedging increasingly critical as projects become more finely balanced
- but available only for certain projects/countries
 - mostly projects with investment grade credit rating;
 - no realistic opportunities for hedging in many countries;
 - contractual complexity/financial rigidity not always favored by sponsors/allowed by project economics

Financing tightens suddenly in emerging markets due to crises

- In a global business, financial crises led to:
 - increase in cost of capital, sovereign risks/spreads
 - reduction in projects IRR
 - increase in uncertainty with regards to both
- ... exposing weaknesses in both project finance structures and regulatory frameworks:
 - high tariffs attract political interventionism
 - drop in demand increases pressure for renegotiation
 - mismatch between risks and returns exacerbated by currency volatility and reliance on hard currency debt
 - governments left with costly contingent liabilities they can't honor on time

Worsening of regulatory environment during crises erodes support for PPPs

- “pass through” formulas that transfer exchange risk to users fail in midst of abrupt devaluations --and turn exchange risk into political or regulatory risk



Distressing results of crises:


- Governments breach contracts, affecting access to capital markets.
- Users must cope with steep increases in tolls eroding long-term support for PPPs.

Currency depreciation against the US Dollar in 174 countries (1976-2001)	Current average depreciation rate (%)	Volatility (%) ¹
All Developing Countries	16	22
East Asia and Pacific	10	20
Europe and Central Asia	23	31
Latin America and the Caribbean	23	33
Middle East and North Africa	6	14
South Asia	8	13
Sub-saharan Africa	16	27
OECD	2	11

Measured as the Standard deviation of current depreciation

Source: Gray, P. & Irwin, T., *Exchange Rate Risk*

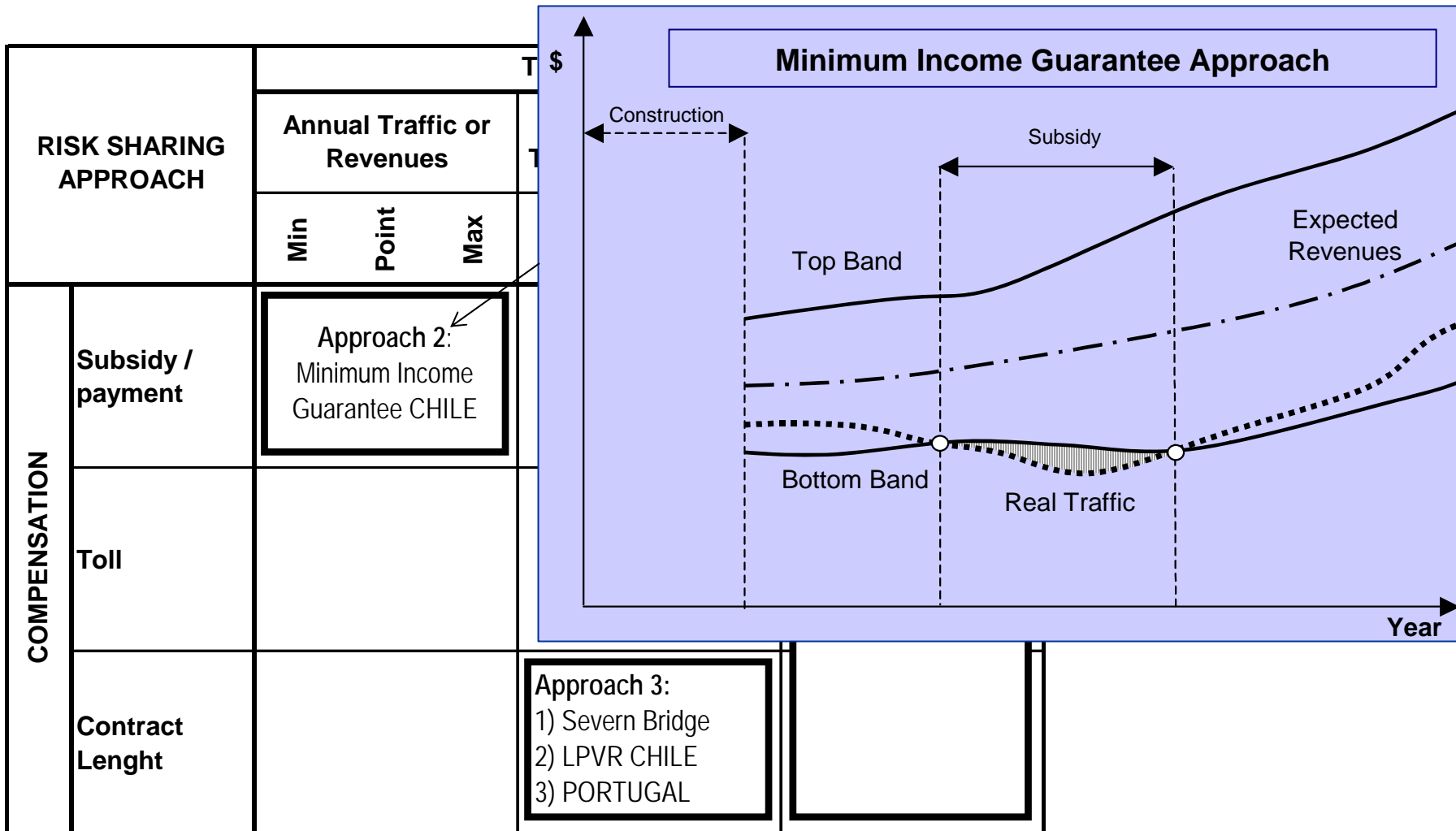
Approaches to traffic risk mitigation -- no conclusive evidence of what's best

RISK SHARING APPROACH		TRIGGER VARIABLE					
		Annual Traffic or Revenues			Accumulative Traffic or Revenues		Profits / IRR
		Min	Point	Max	Min	Point	
COMPENSATION	Subsidy / payment	Approach 2: Minimum Income Guarantee CHILE					
	Toll 						Approach 1: Highway concessions in FRANCE and SPAIN
	Contract Length				Approach 3: 1) Severn Bridge 2) LPVR CHILE 3) PORTUGAL		

Economic & Financial Equilibrium Clauses:

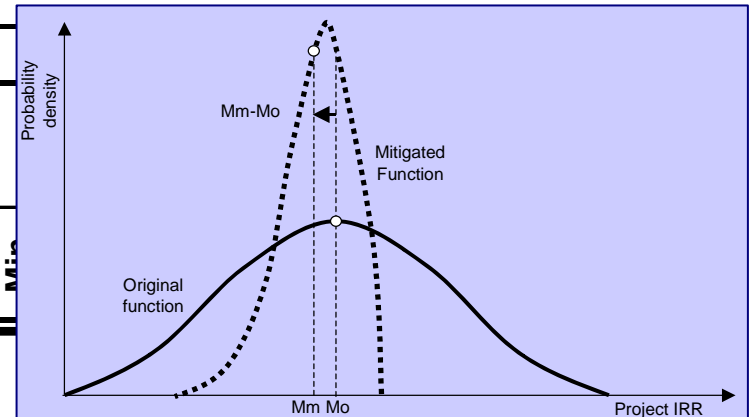
- asymmetric information;
- poor control of costs (“goldplating”);
- unclear renegotiation if procedure to restore equilibrium not defined

Approaches to traffic risk mitigation -- no conclusive evidence of what's best

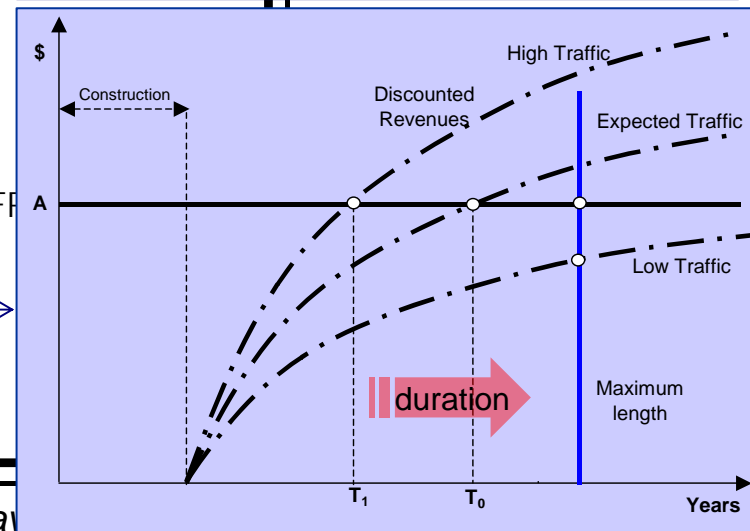


Approaches to traffic risk mitigation -- no conclusive evidence of what's best

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Risk profile mitigation with LPVR



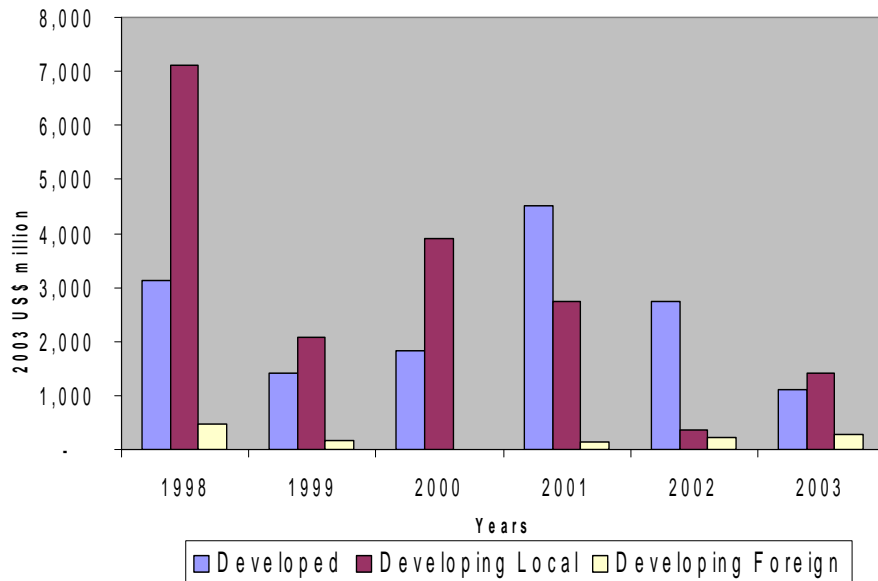
Source: Jose Vasallo, 2005 "Traffic Risk Mitigation in highway"

Stronger alignment between PPP objective & compensation mechanism

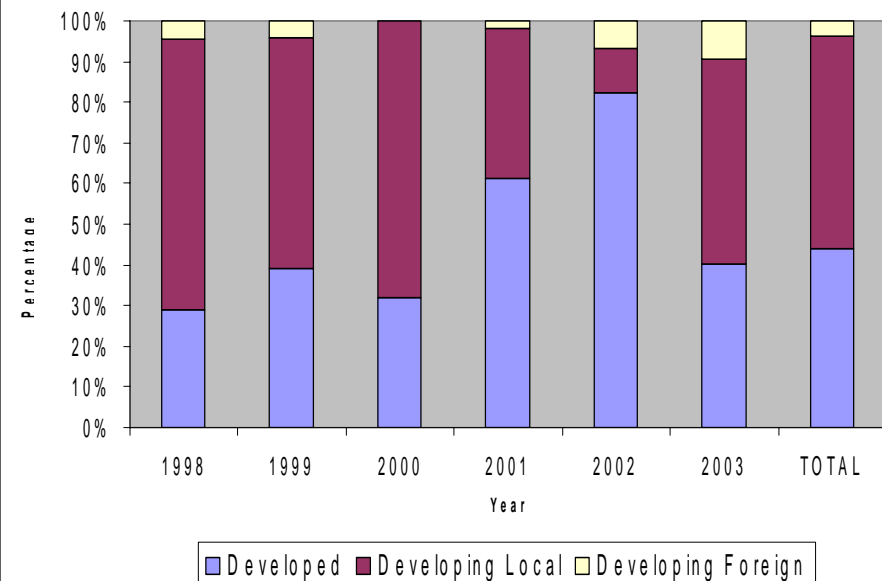
- New thinking about the transfer of volume risk and whether the premium paid outweighs benefits
 - UK – from shadow tolls to payments based on combination of service availability and performance
 - availability payment, 2000; active management payment, 2002
 - NAO critical of shadow tolls given operator is unable to influence demand
 - Focus of compensation mechanism on establishing necessary degree of risk allocation in project to induce appropriate performance by private sector
 - However, some new schemes based on government payments scheduled along operational period becoming increasingly common where tolling and up-front public financing not feasible

A mix of foreign and local sponsors compete aggressively to win contracts

Private Investment by Type of Investor
Transport Sector 1998-2003



Share of Private Investment by Type of Investor
Transport Sector 1998-2003



Source: *Developing Country Investors and Operators in Infrastructure –Phase 1 Report, PPIAF, 2005*

- often overly aggressive concessionaires bid too low with expectation to renegotiate contract conditions as soon as possible

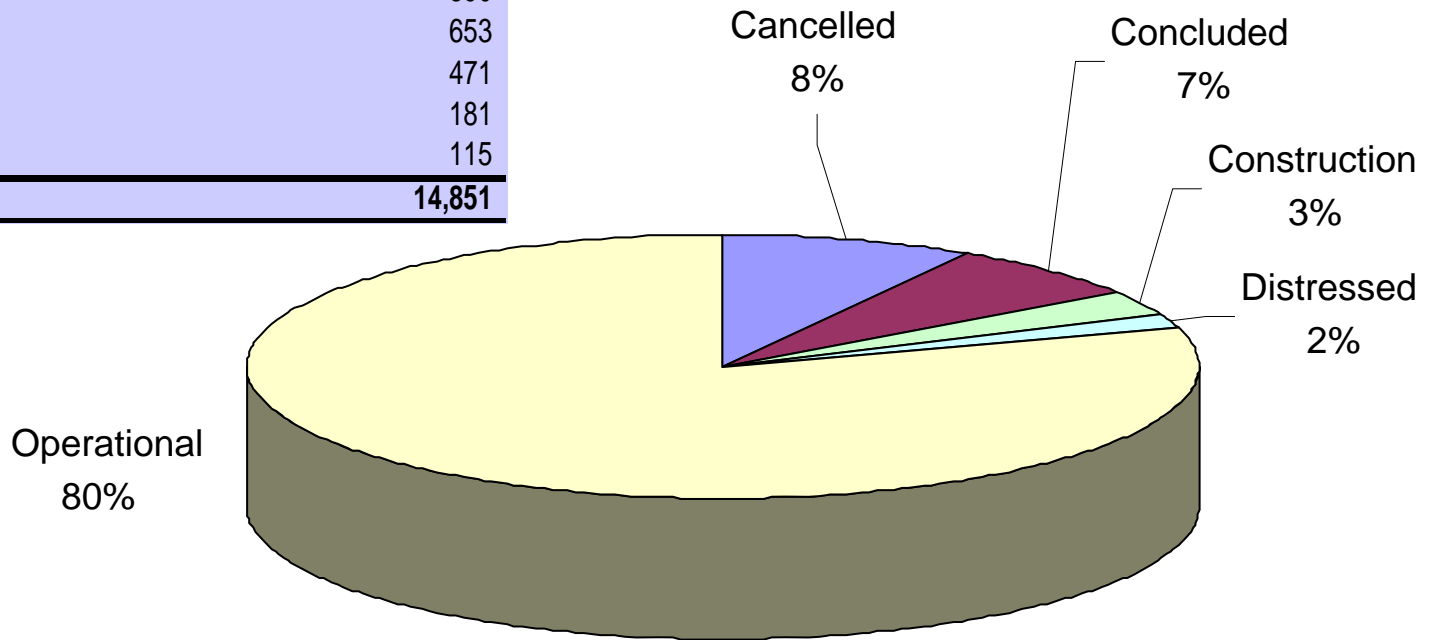
Bottom line, few cancellations but opportunistic renegotiations the rule...

Cancelled Projects 1984-2003

Country	Total Investment 2003 US\$ million
Mexico	11,003
China	1,538
Thailand	890
Indonesia	653
Hungary	471
Argentina	181
Lao PDR	115
Grand Total	14,851

Number of Projects 1990-2003

Source: PPI Database



- Statistics mask high incidence of renegotiations

Despite slowdown, PPPs remain an attractive option for many governments

- Some key areas for WB attention:
 - tools to bring legitimacy to PPP approaches and project selection and make informed decisions about risk allocation at both policy and project level
 - impact of PPP programs on road sector funding
 - proper accounting, management and funding of contingent liabilities to effectively address public risk
 - pragmatic approaches to building institutional and regulatory capacity to better deliver on “third P”
 - instruments to address financial market constraints (w/ due attention to two sides of “creative financing” coin)



Many thanks...
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