

# **The Role of ADRs in the Development and Integration of Emerging Equity Markets**

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# Motivation

- Enjoyed reading the paper. Great work, as always!
- Three goals:
  - Measure the dynamics liberalization
  - Effects on local market development
  - Effects on integration of world equity markets
- The three goals are important topics, which are generating significant work on this area

# Comments

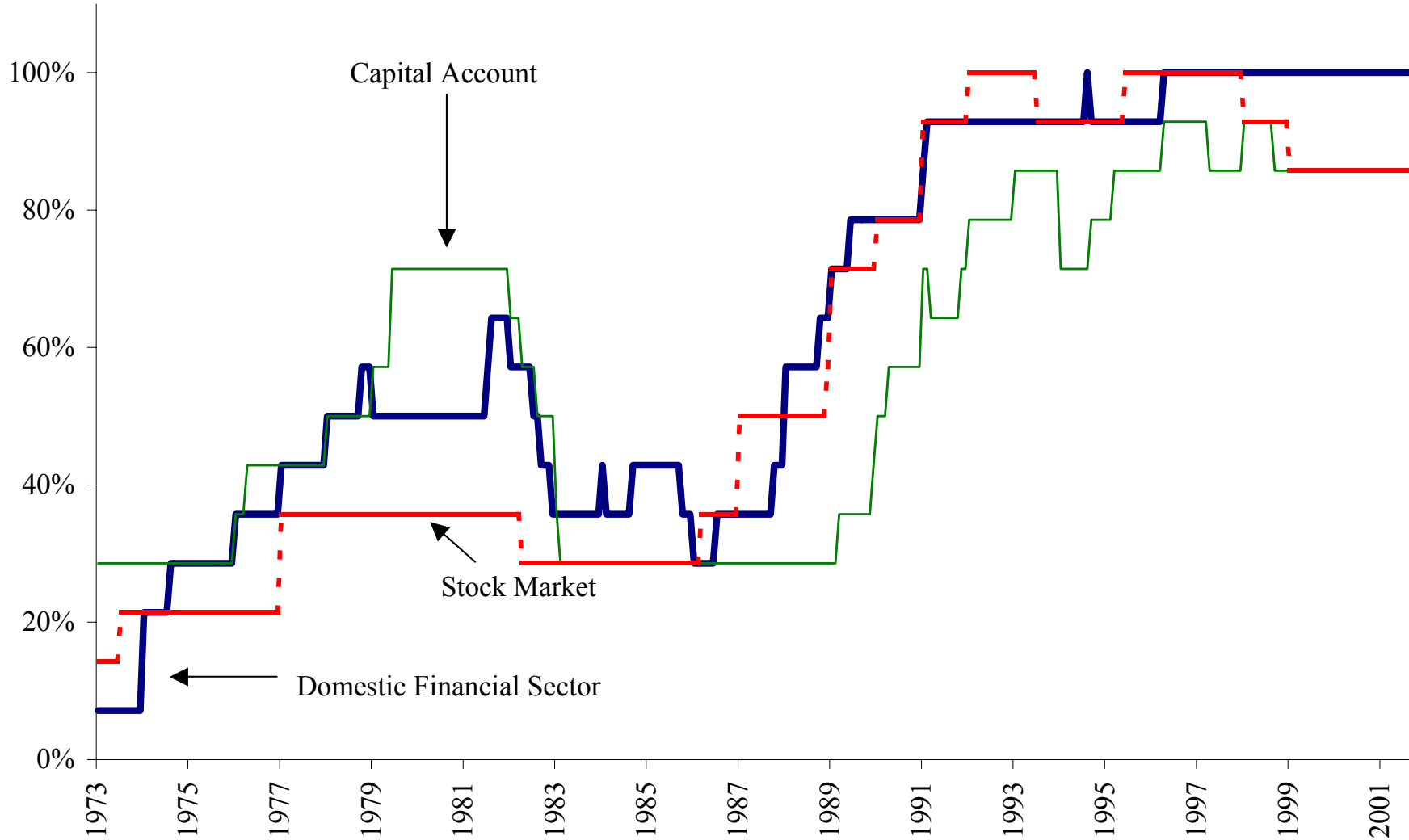
1. Market liberalization as a process
2. Data on ADRs
3. ADRs and local market development
4. ADRs and financial integration
5. Conclusions

# Financial liberalization as a process

- Most of existing literature use events, i.e. “liberalization dates”
  - Bekaert et al. and others
- Growing interest in liberalization as a process, including reversals and reforms after liberalization
  - Edison & Warnock (2001)
  - Kaminsky & Schmukler (2002)
  - Others
- Financial liberalization is a process

# Measures of financial liberalization

Proportion of Asian and Latin American Countries with Partial Liberalization

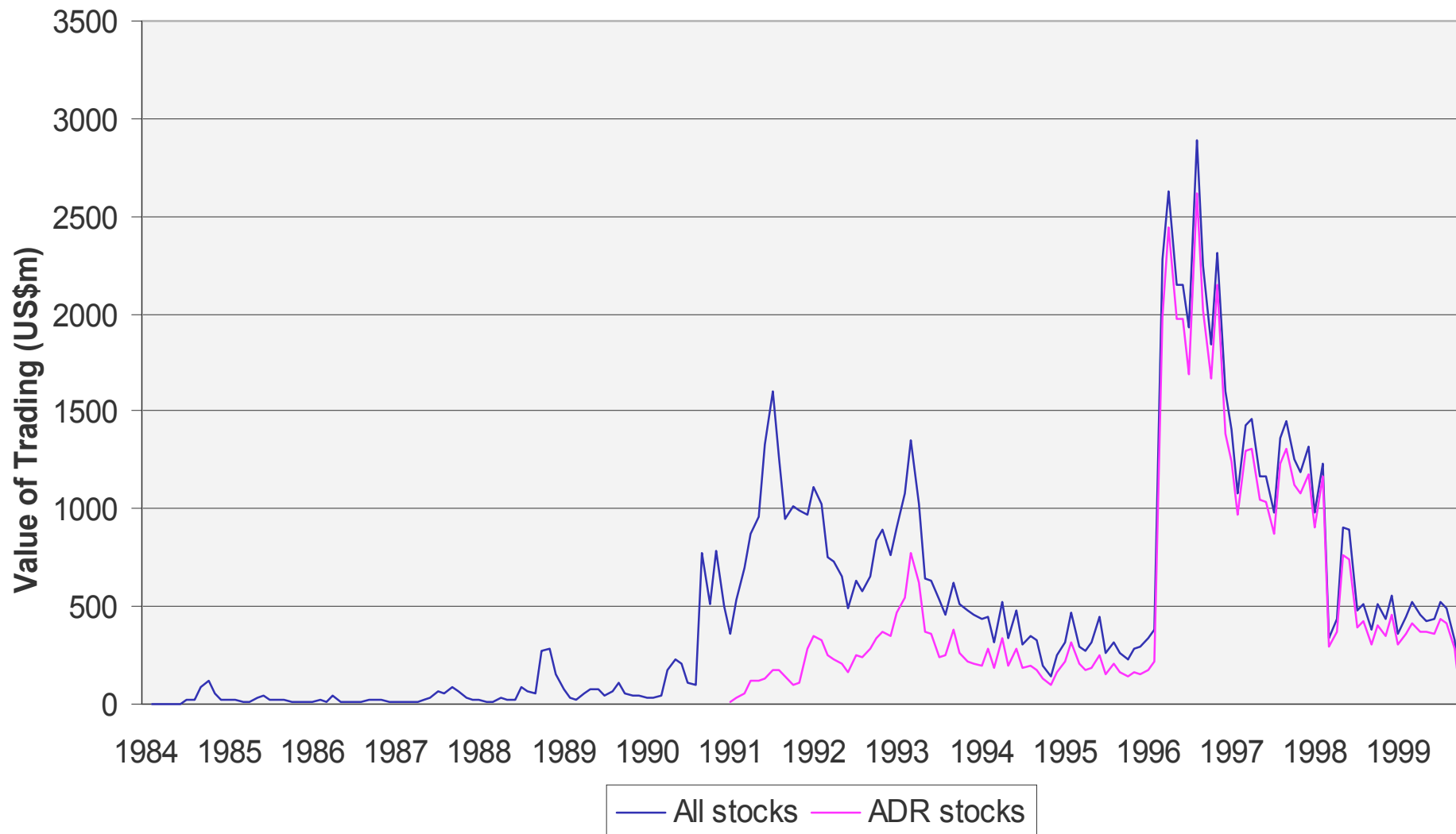


# Data on ADRs and local activity

- Great data, carefully used, but some intrinsic limitations
  - ADRs give partial picture of internationalization
    - ✦ Liberalization of various parts of financial system
    - ✦ Geography (Pagano et al., Smith & Sofianos)
    - ✦ Cross listings
    - ✦ Other instruments (country funds, mutual funds)
    - ✦ Foreign investors go to local markets
    - ✦ Domestic investors in foreign markets
  - Levels of ADRs
    - ✦ Treatment when program changes
    - ✦ Importance of different programs
  - EMDB covers 70% of market capitalization

# Data on Argentine local activity

## Argentina

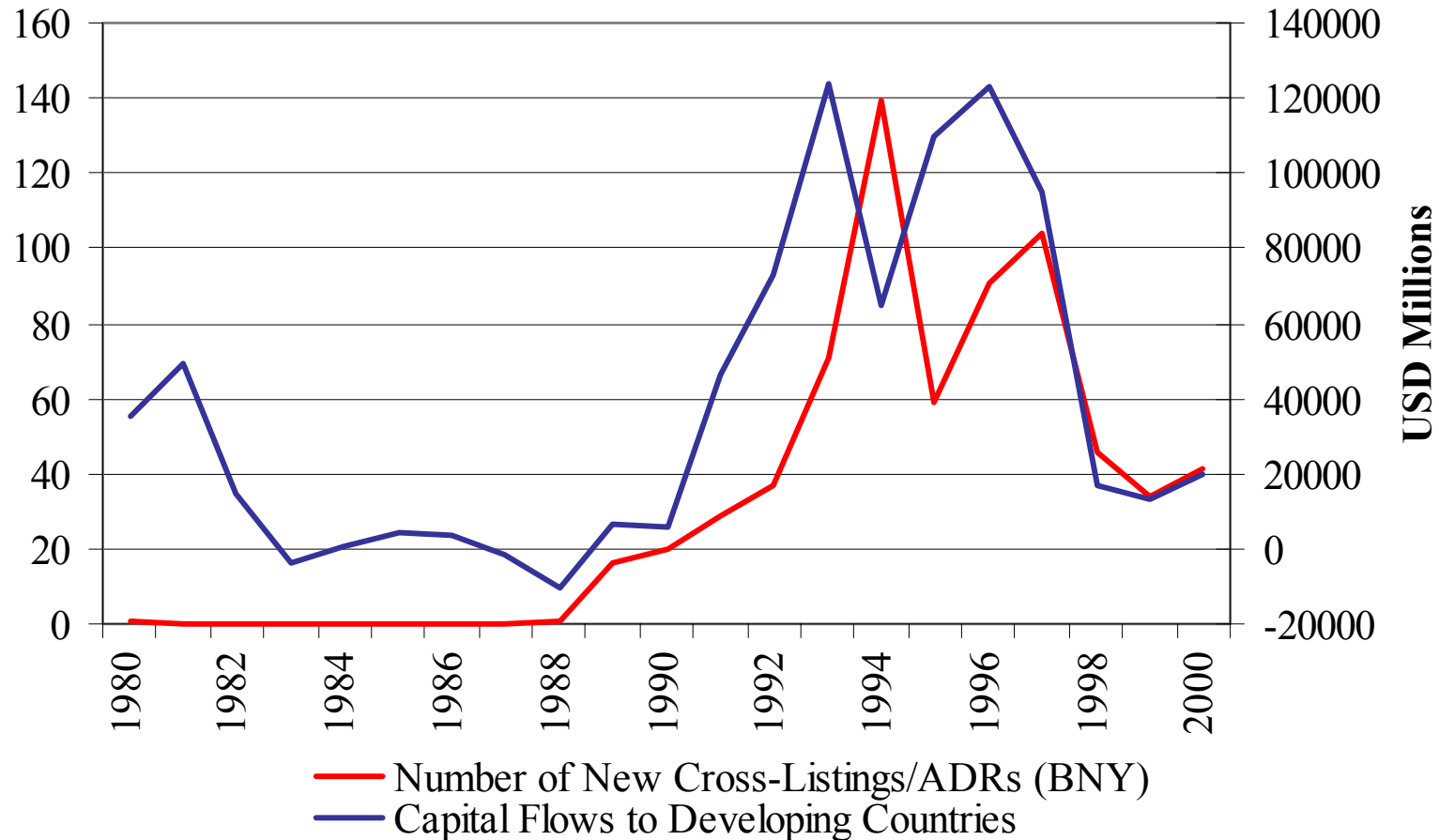


# ADRs and local market development

- Market development (MCAP, NUM, TOR, K. flows) function of ADR activity (MCAP, NUM, VOL share)
  - Total, ADRs vs. non-ADRs, level of ADR
- Methodology
  - Sometimes hard to get overall effect
    - ✳ Results by country
    - ✳ Different specifications and variables
  - Capital flows: measure, endogeneity (Edison & Warnock, Calvo et al.), by type
- Results
  - Related results (Moel 2002, Hargis 1998, others )

# ADRs and local market development

## Developing Countries



27 developing countries are included in the graphs (Claessens, Klingebiel, and Schmukler 2002).

# ADRs and local market development

## Growth of ADR Activity on Measures of Stock Market Development Moel (2001)

Variable	Non-ADR Firms		All Firms
	MKTGDP	TURNOVER	NUMGDP *
NUMFRAC	-1.338*	-1.376*	-1.275*
MCAPFRAC	-3.312*	-0.9820	0.4400

\* Karolyi's variable is the number of publicly traded companies divided by GDP. While Moel's variable is the ratio of net listings per year divided by the number of listed companies.

Countries included in Moel's sample: Africa (4), Asia (11), Europe (6), and Latin America (7).

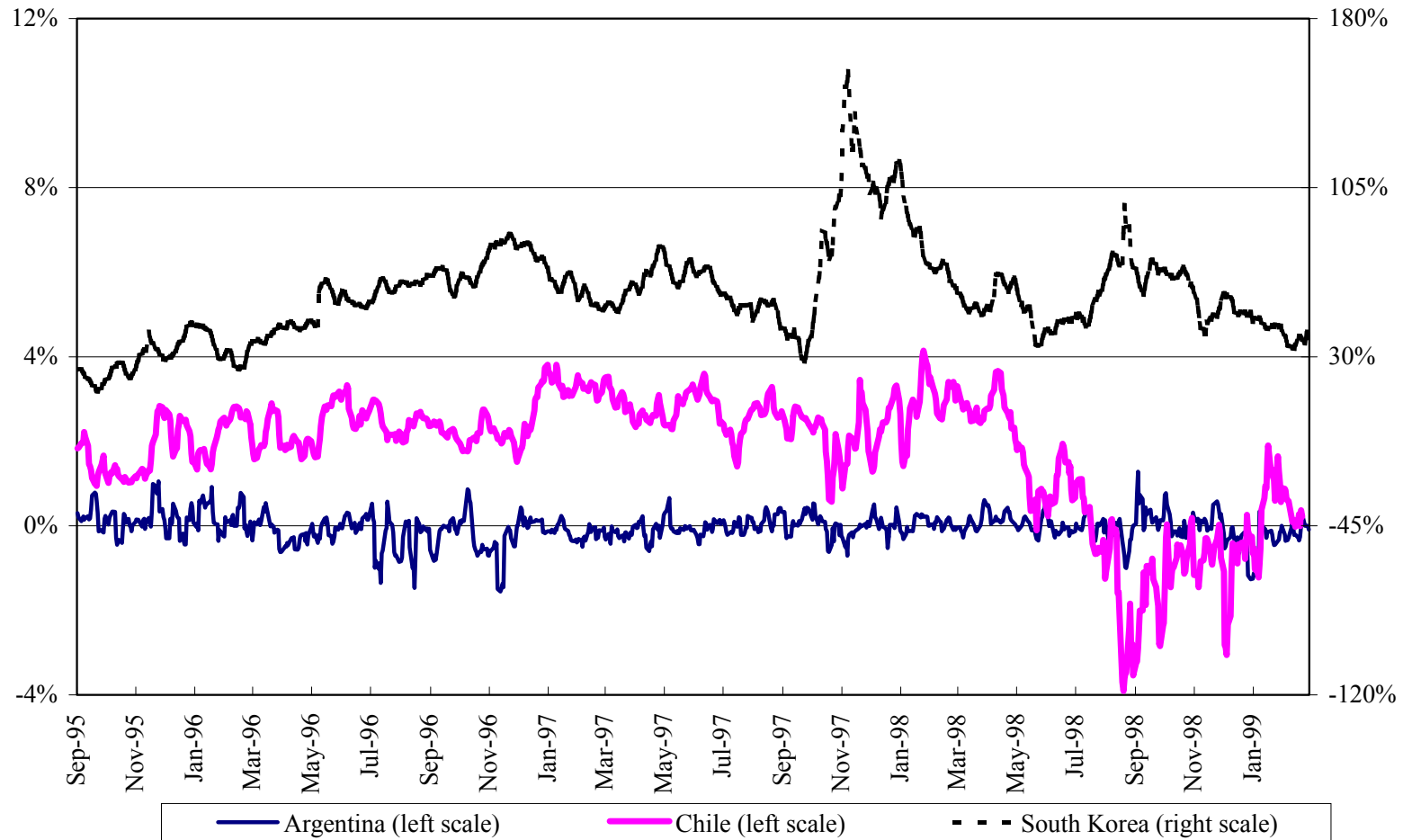
# ADRs and financial integration

- Integration and correlation with world markets  
function of ADR activity (MCAP, NUM, VOL share)
- Methodology
  - Nice features
    - \* Based on previous models
    - \* Measures of integration and conditional correlation
  - Definition of eligibility (EMDB index as alternative?)
  - Nature of test
    - \* Alaganar et al. (2001), Melvin, Auguste et al. (2002)
  - Non-ADRs instead of local market index
- Results
  - Explain integration measures for some countries

# ADRs Premia

## Argentina, Chile, and Korea

Capital Controls and ADR Premia



# ADR Premia

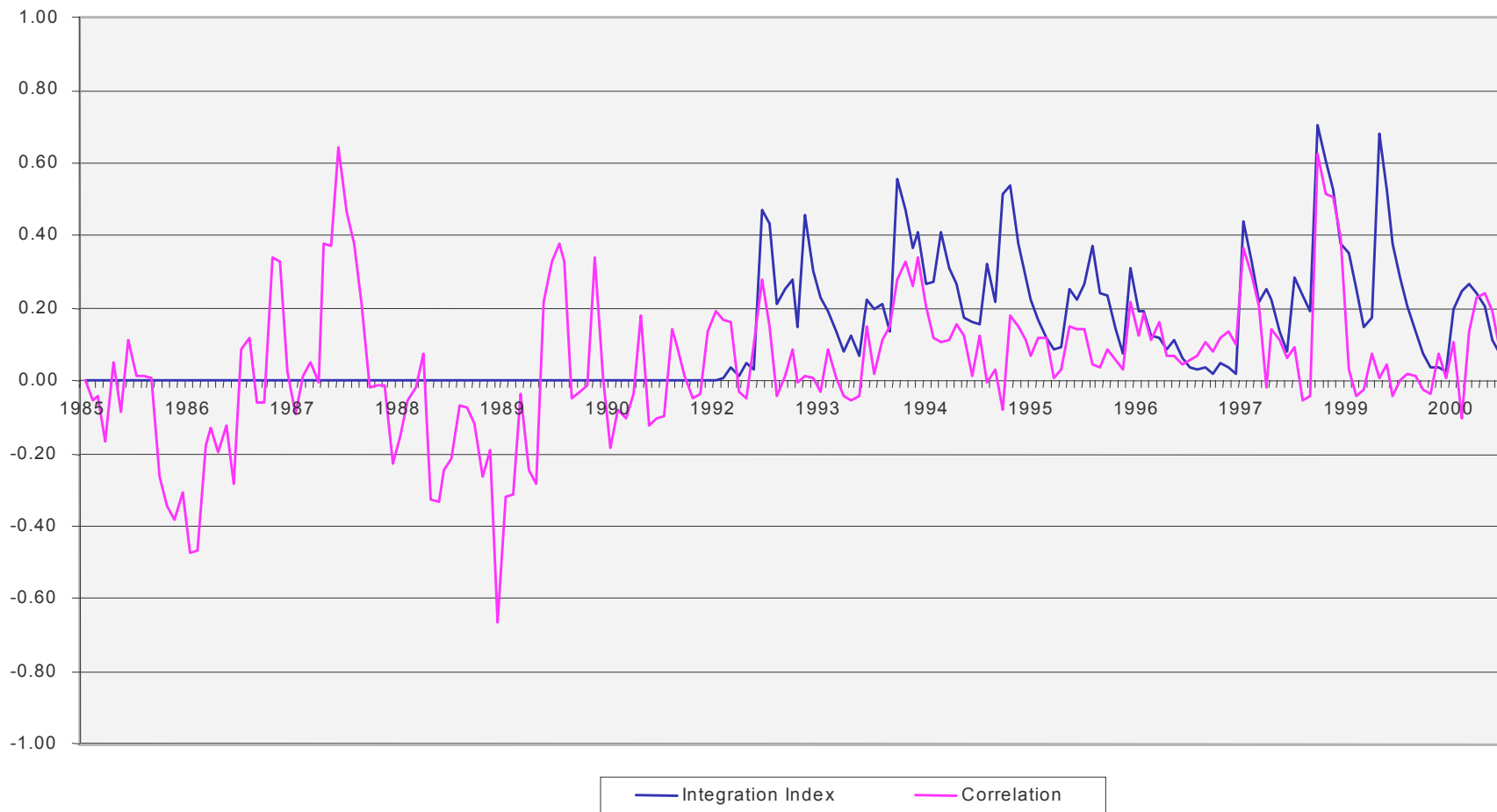
## Deviation Between Argentine Share Price and ADR Price (in pesos) -- Melvin (2002)



# Measures of integration: Argentina

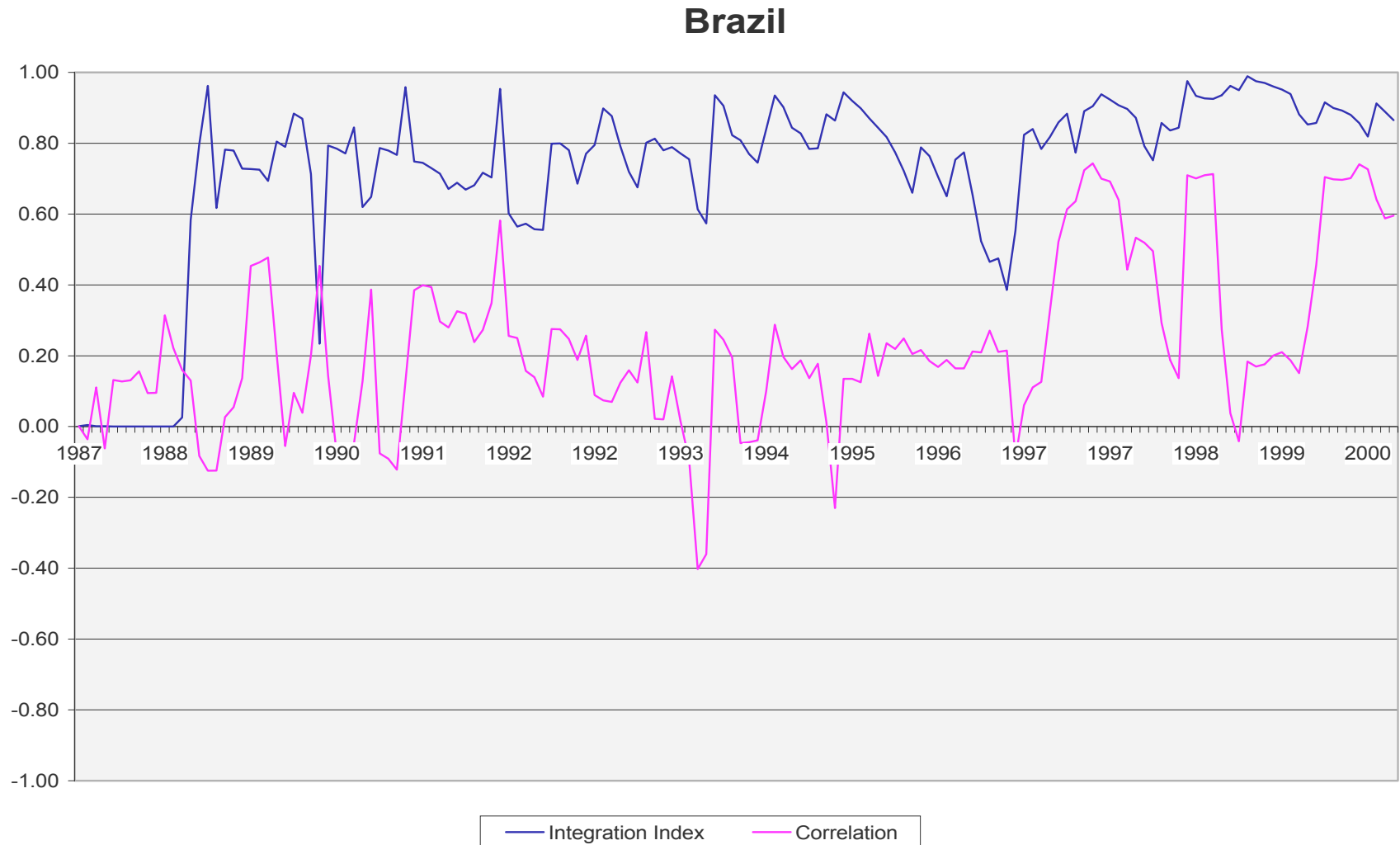
Mean integration=0.18, Mean fraction # ADRs=0.29

Argentina



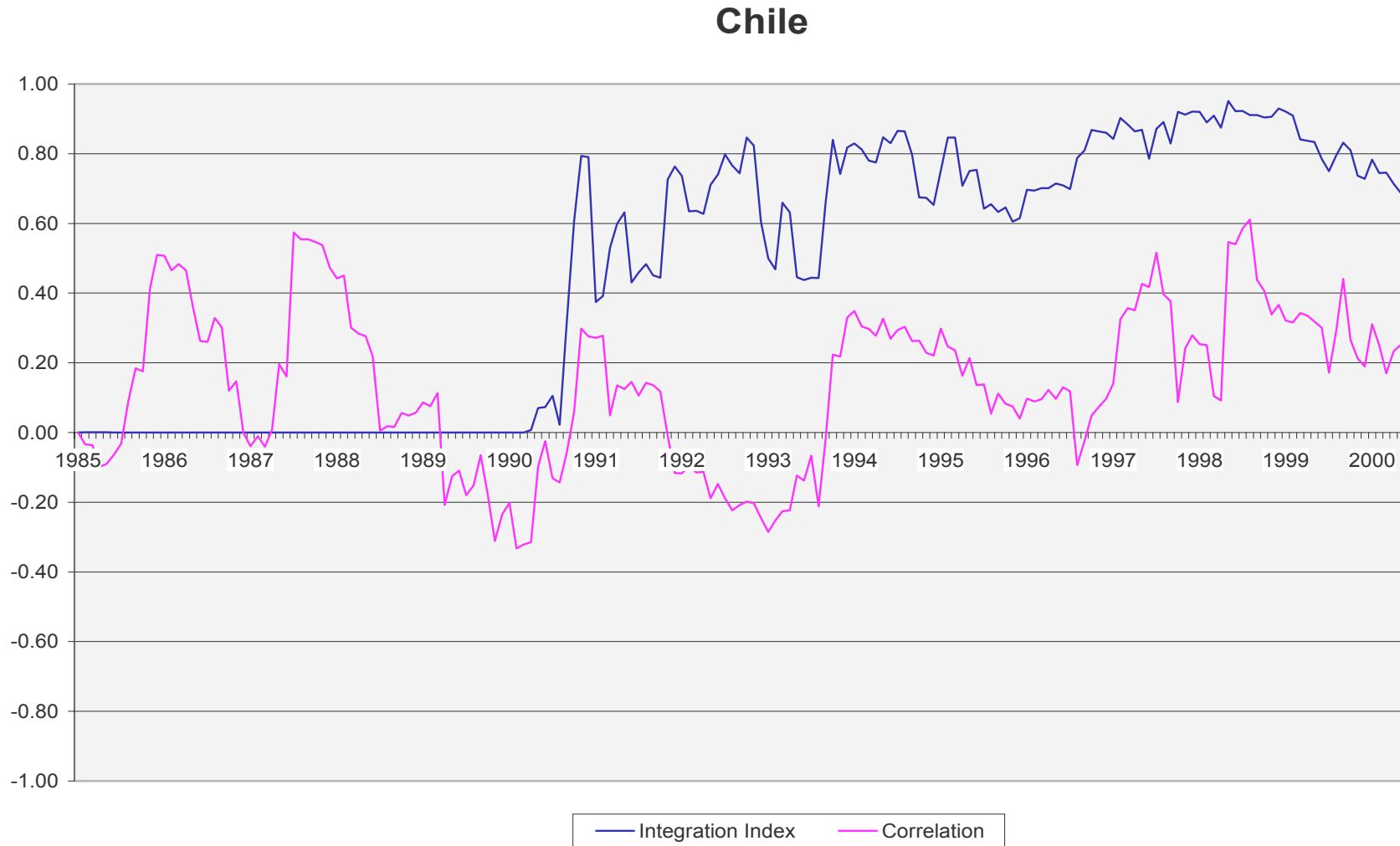
# Measures of integration: Brazil

**Mean integration=0.79, Mean fraction # ADRs=0.22**



# Measures of integration: Chile

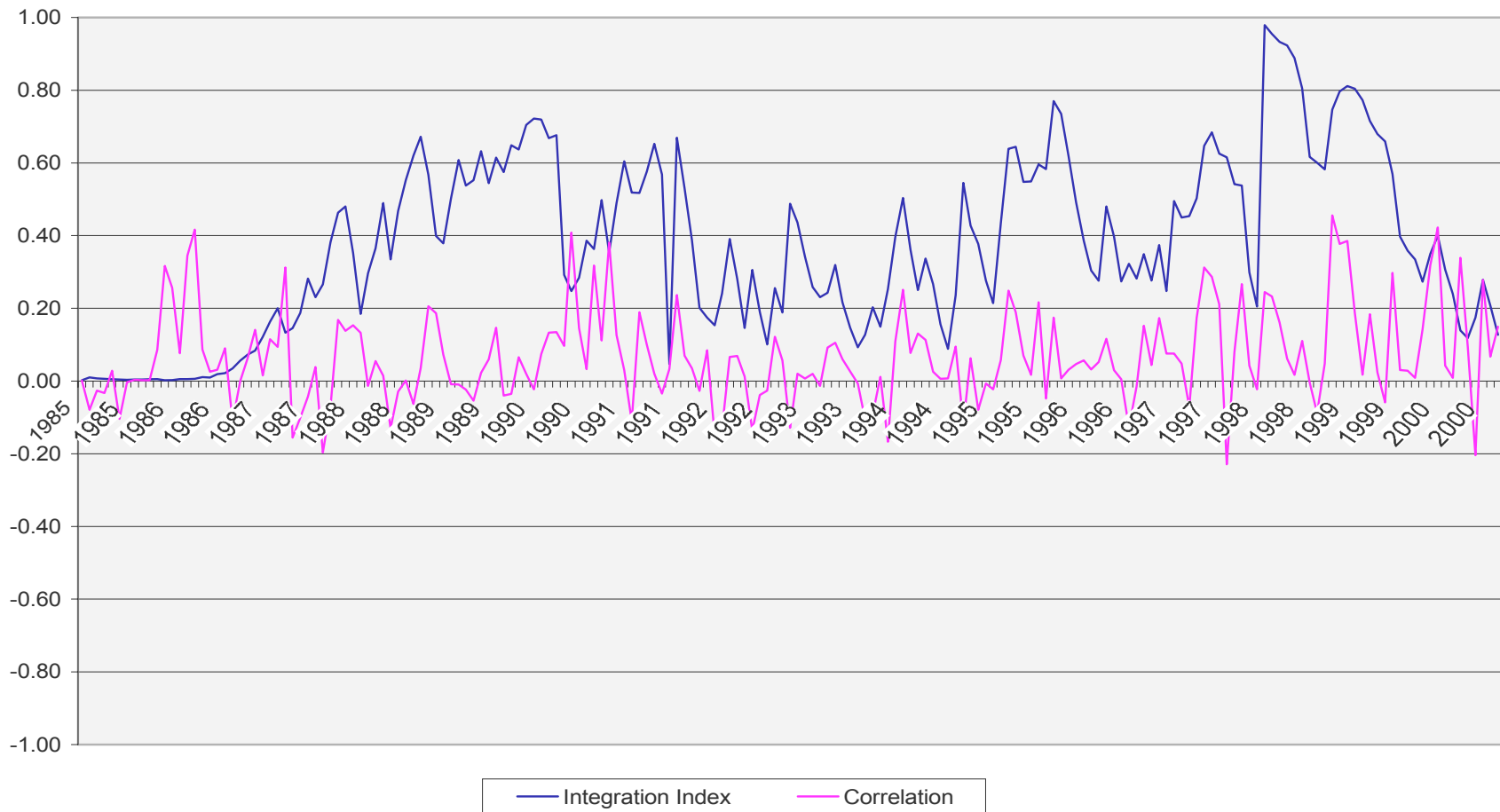
**Mean integration=0.67, Mean fraction # ADRs=0.25**



# Measures of integration: Korea

**Mean integration=0.43, Mean fraction # ADRs=0.06**

## Korea



# Conclusions

- Great work and promising line of research
- More explanations welcome
- On the dynamics of liberalization
  - Right approach
  - Where literature will continue to move
- On the effects on local market development
  - Results in perspective
  - More economic interpretation

# Conclusions

- On the effects on integration
  - More explanation on nature of test and results
  - Analyze capital controls measures
  - Maybe use same partition than in first part: non-ADRs
- Magnitude of results
- Net effect of financial liberalization
- Policy implications
  - Future of domestic stock markets