

# U.S. Holdings of Emerging Market Equities: A Security-Level Analysis



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# Disclaimer



- The views in this paper are solely the responsibility of the authors and should not be interpreted as reflecting the views of the Board of Governors of the Federal Reserve System or the IMF, or of any other people associated with the Federal Reserve System or the IMF.

# Outline



- Goals
- Details on the security-level data
- Lit review
- Preliminary summary statistics
- Research Plan

# Goal of Study



- To examine the portfolio equity holdings of U.S. investors in nine emerging markets using security-level data.
- The explanatory variables are as follows:
  - firm-level financial data from Worldscope
  - country-level variables
  - firm-level investable weight from EMDB
  - cross-listings on U.S. exchanges (dummy)

# Security-Level Holdings Data: Benchmark Surveys of US Portfolio Investment Abroad

- March 1994 and Dec 1997 benchmark surveys
- Surveys conducted jointly by Treasury and Fed
  - Reporting to the survey mandatory under authority of International Investment and Trade in Services Survey Act
  - 1997 survey part of CPIS
- Security-level data
  - Confidential, with penalties for unauthorized disclosure, but may be used by certain employees for analytical/statistical purposes
  - 370,000 (equity) records in 1997 survey
  - commercial database used to aid in cross-checks
  - data cleaned by FRB/Treasury staff for 18 months

# Holdings Data (cont.)



- Data come primarily from large custodians
  - US custodians and end investors
    - | with >\$20m in foreign securities held or owned required to report
    - | who used US custodian report only amount and custodian name
    - | who used foreign custodian or kept custody submit detailed reports
  - holdings of private investors--who were not directly surveyed--also captured if through US mutual or pension funds or entrusted to US custodian
    - | survey will miss small investors that invest directly in foreign market and use foreign custodian

# Relevant Literatures



- Home Bias
- Cross-Listings
- Capital Controls

(Abridged lit reviews follow.)

# Home Bias Literature



- Using firm-level data in **one** country
  - | Japanese equities -- Kang and Stulz 1997
  - | Swedish equities -- Dahlquist and Robertsson 2001
  - | important characteristics:
    - large, manufacturing, low leverage, high return on assets, low book-to-market, low dividend yield, high current ratio, foreign listing
- Using country-level data across **many** markets
  - | U.S. holdings -- Ahearne, Grier, Warnock 2000
  - | important role for cross-listings, capital controls have only second-order impact

# Cross-Listing Literature



## ■ Types of firms that cross-list

- Pagano, Roell, Zechner (forthcoming) -- European firms that cross-list are
  - | large, high ratio of foreign sales, recently privatized, high growth, low book-to-mkt

## ■ Implications of cross-listing

- Doidge, Karolyi, Stulz (2001)
  - | Evidence of cross-listing premium (q ratios)
- Lang, Lins, Miller (2002)
  - | information content of cross-listing

# Capital Controls Literature



- We'll focus on a narrow capital control --- restrictions on foreign ownership of equities
  - security-level data behind the measure in Edison and Warnock 2001
  - investability ratio for firms with multiple securities in IFC index is weighted average

# Coverage for the 9 EMEs (1997)

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## Mkt Cap

Total	WS	IFC
\$767b	\$764b	\$519b (68%)

## US Holdings

Total	WS	IFC
\$100b	\$84b	\$80b (80%)

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Note: We limit our analysis to IFC firms.

\$10b of lost holdings due to Brazil.

# Summary Statistics

## (Handout: Tables 1-4)



- Within the 9 EMEs, U.S. investors overweight the mining (oil) and transportation/communication sectors, and underweight all other sectors, including manufacturing.
- Bivariate relationships suggest that U.S. investors prefer firms that are large, have high book-to-market ratio, have high investability ratio, and are closely held (??).
- Cross-listed firms tend to be larger and are less underweight in U.S. portfolios.
- Multivariate regressions suggest that firms less underweight in U.S. portfolios are large, have low DY, and are cross-listed.
  - Investability is significant only w/out cross-listing variable.

# Dependent Variable



- Variable of interest is  $y$ , the weight of the security in US portfolios relative to the weight of the security in world market capitalization (minus 1)
  - $y=0$  security's weight in world market and US investors' portfolios identical
  - $y>0$  security overweighted in US portfolios
  - $y<0$  security underweighted in US portfolios
  
- vast majority have  $y<0$ ; this is the home bias

# Research Plan



- Cross-listings are clearly important.
  - At least two ways to deal with them.
- Account for selectivity bias
  - | as in Doidge, Karolyi, and Stulz (2001)
- Regression of changes from 9403 to 9712
  - | Most firms that cross-listed from these countries did so between the survey dates.



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Some Comments on U.S. Holdings of Emerging  
Market Equities: A Security-Level Analysis

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Vincent Reinhart

*Director, Division of Monetary Affairs*

*Board of Governors of the Federal Reserve*

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April 26, 2002



# 1. Describe the data

- ◆ The security-level data are an important resource, but they may never wind up in the public domain
  - Provide sufficient summary statistics not results only specific to the maintained hypothesis
- ◆ Tell us what's missing
  - Both from the perspective of the U.S. investor and the emerging market

## 2. Are there one or two observations per security?

- ◆ The choice of 1997 to sample was an accident of fate
  - That may distort changes
- ◆ Emphasize the panel dimension

### 3. Home bias is about holding, not investing

◆ The IFC investable index may be more about investing, as it screens on

- Market size
- Liquidity

◆ Holdings may be more general,

- FDI
- Local mutual funds
- Domestic firms with EME exposure

#### 4. May want to control using “political science” variables as well (Reinhart and Rogoff, a)

- ◆ Rule of law
- ◆ Frequency of conflict
- ◆ Debt levels
- ◆ Average level of inflation as a measure of distortion

## 5. Is it just the current level of controls that matter?

- ◆ Capital market reforms are the prototypical case of time inconsistency
- ◆ Argentina reformed but now discriminated
  - What happens going forward?
- ◆ This raises the issue of the endogeneity of controls

## 6. Could some market prices be used as instruments as well?

- ◆ Dual exchange rate premia (Reinhart and Rogoff, b)?
- ◆ Debt spreads?