

A Virtuous Cycle in Local Currency Bond Markets?

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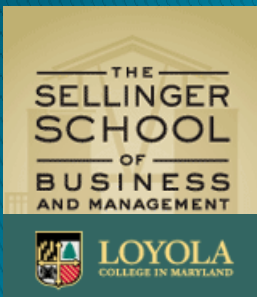
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World Bank Roundtable Conference and Workshop

Gemloc Advisory Services: Developing local currency bond
markets in emerging economies – May 29-30, 2008

Overview

- ▶ Recent surge in local bond market development
 - Particularly in Emerging Markets – reduced reliance on foreign currency debt.
- ▶ How have cross–border investors responded?
 - Difficult to assess on a global scale – limitations of CPIS data, but U.S. participation figures are available.
 - Returns have been very attractive from U.S. investors’ perspective.
 - U.S. investors have responded with a general portfolio shift away from developed into emerging markets.
 - Cross–border investors attracted to investor–friendly institutions and policies.
- ▶ Virtuous Cycle?

The Evolution of Local Currency Bond Market Development

	as % of GDP		as % of total issuance	
	2001	2006	2001	2006
U.S.	136	161	98	97
Euro Area	99	141	90	91
Japan	108	158	99	99
Emerging Mkts	28	33	75	83
Latin America	18	20	51	67
Asia	37	43	90	92
Europe	20	21	64	72

Source: Data underlying BIS Tables 14B (domestic bonds) and 16A (international bonds). 2001 data was previously published in Burger and Warnock (2006).

Determinants of Local Currency Bond Market Development

- ▶ Burger and Warnock 2006; Claessens, Klingebiel, and Schmukler 2007; BIS 2007; among others.
- ▶ “It’s not original, just sin”
 - Emerging markets are **NOT** predestined to rely on foreign currency debt.
 - Creditor–friendly policies – e.g. low and stable inflation is associated with local currency development.
 - Importance of Institutional factors – rule of law, creditor rights, etc.

Investor Behavior

- ▶ How have global investors reacted to developments in local currency bond markets?
- ▶ How will global investors react to future events?
- ▶ Data constraints limit our ability to answer these questions. Broadest survey of cross-border investment (CPIS) is particularly ill-suited to analyze participation in local currency markets.

Two Problems with CPIS Data

- ▶ Problem #1: Data quality is questionable.
 - Very few countries follow the best practices that are necessary to properly identify important characteristics of cross-border holdings.
- ▶ Problem #2: CPIS data provide no information on currency denomination, which is vital for bonds.
 - Are cross-border bond investors truly holding local currency bonds, or do they seek foreign bonds issued in their home currency?

A Glimpse at CPIS Problem #1:

2006 CPIS-Reported Euro Area Equity Holdings in Luxembourg

	% Foreign Portfolio	% Lux Market
Austria	22	24
Belgium	41	138
Finland	14	17
France	14	122
Germany	43	329
Greece	30	5
Ireland	5	35
Italy	57	381
Netherlands	9	66
Portugal	23	8
Spain	33	74
sum		1201
memo: US	0	20

A Glimpse at CPIS Problem #2

- ▶ “X prefers Y’s local currency bonds”
- ▶ “Y tends to issue bonds denominated in currency X”
- ▶ Cannot differentiate between these two statements using CPIS data.
 - Until countries begin reporting the currency composition of bond holdings, CPIS data on cross-border investment in bonds will be unable to distinguish between these statements.

CPIS bond holdings are related to the currency composition of issuance.

Dependent Variable: Portion of country i 's foreign bond portfolio invested in country j 's bonds (CPIS data)		
Issuance	Portion of country j's bonds denominated in currency i	0.057 (0.010)
Imports	Portion of country i 's imports that originate from country j	0.672 (0.000)
Exchange Rate Volatility	Nominal volatility between the currencies i and j	-15.5 (0.575)
N = 1271 Adjusted R ² = 0.725		

Double fixed effects with full sets of source and destination dummies.
 p -values in parentheses.

What is the researcher to do?

- ▶ CPIS data are not equipped to investigate holdings in local currency bond markets.
- ▶ A few countries do collect security-level information (including currency denomination) on cross-border holdings.
 - Example: U.S. Treasury and Federal Reserve benchmark surveys conducted end-2001 and end-2006.
- ▶ Before analyzing 2006 survey we review returns data from perspective of US investor.

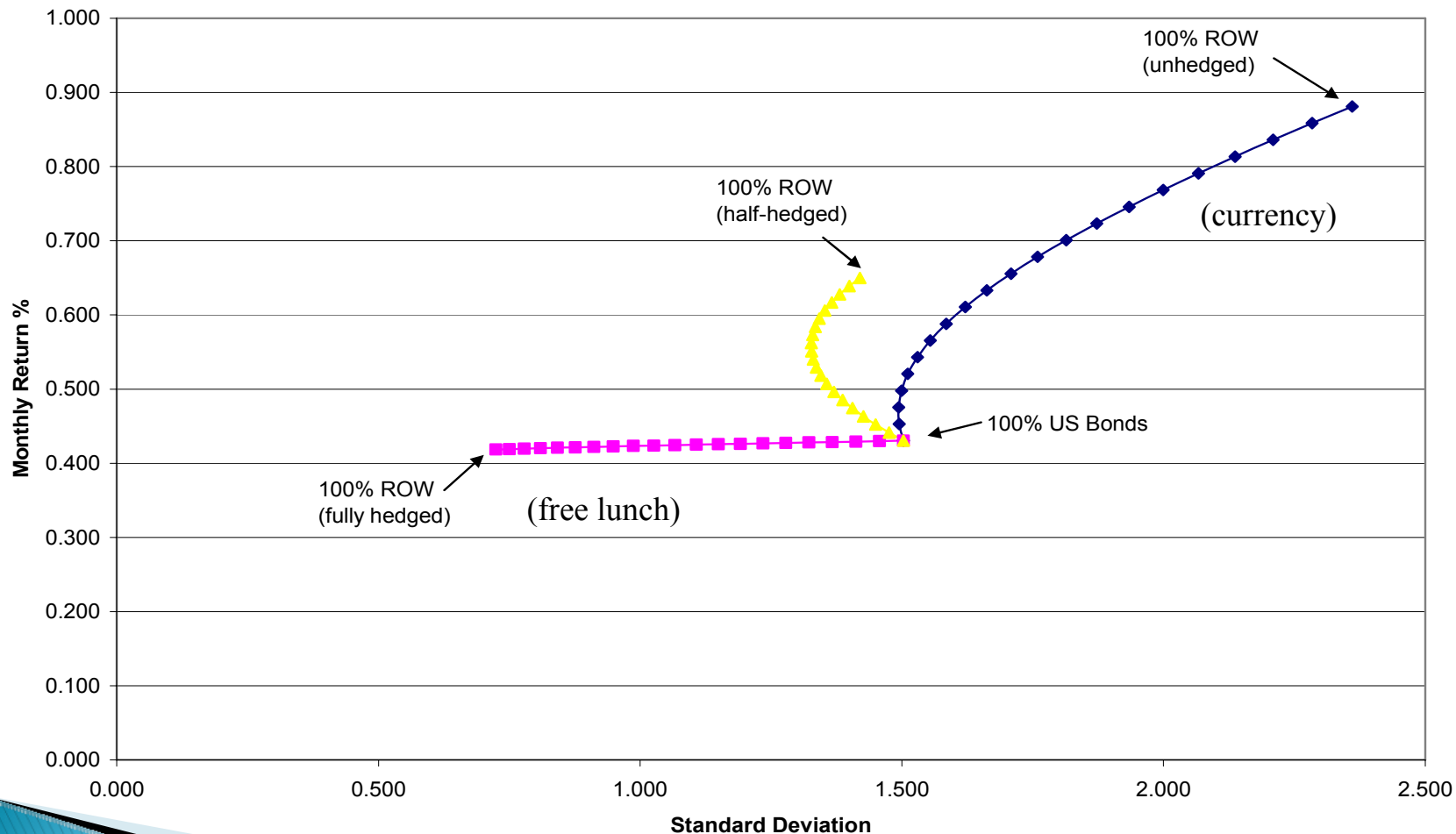
Recent period exhibits attractive returns for U.S. based investors – especially in emerging markets.

		Mean (%)	Variance	Skewness	Correlation with US
Jan 98–Dec 01	US	0.52	1.89	-0.21	
	GBI (ex-US)	0.11	6.10	0.08	0.49
	EMEs	-0.03	58.7	-0.94	0.12
Jan 02–Nov 06	US	0.43	2.26	-0.59	
	GBI (ex-US)	0.81	6.97	0.15	0.56
	EMEs	1.17	3.96	-0.25	0.27

Monthly USD returns. Source: JP Morgan GBI Indexes. For EMEs, latter period uses GBI-EM but for earlier period no local currency index existed. Authors calculated returns based on EMBI/JACI plus currency returns and averaged across 20 EMEs.

Return-Risk Tradeoffs for US investors, 2002-2006: Free lunch for hedged returns, unhedged high risk high reward

Figure 2: US - ROW Bond Portfolios
2002 - 2006



U.S. investors have increased portfolio weights on local currency bonds in emerging markets.

	Holdings as Percentage of Local Currency Issuance	
	Dec. 2001	Dec. 2006
Developed Markets	1.20	0.94
Euro Area	1.35	0.71
Japan	0.48	0.57
Emerging Markets	0.14	0.69
Latin America	0.15	2.03
Emerging Asia	0.04	0.21

Determinants of Cross-Border Investment

- ▶ Is the portfolio shift toward emerging markets a temporary or permanent phenomenon?
- ▶ What attracts/deters cross-border investors?
 - Crisil 2008 Investability Indicators allow analysis of institutional factors and policies
- ▶ Returns-chasing behavior by international investors?

Gemloc Investability Indicators

- ▶ Capital Controls
 - ▶ Liquidity and efficiency
 - ▶ Regulatory Quality and Creditor Rights
 - ▶ Market Infrastructure
 - ▶ Taxation
 - ▶ Domestic Investor Base
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- ▶ Crisil 2008 provides for 20 Gemloc countries.
We supplement for industrial countries.

Determinants of U.S. Holdings

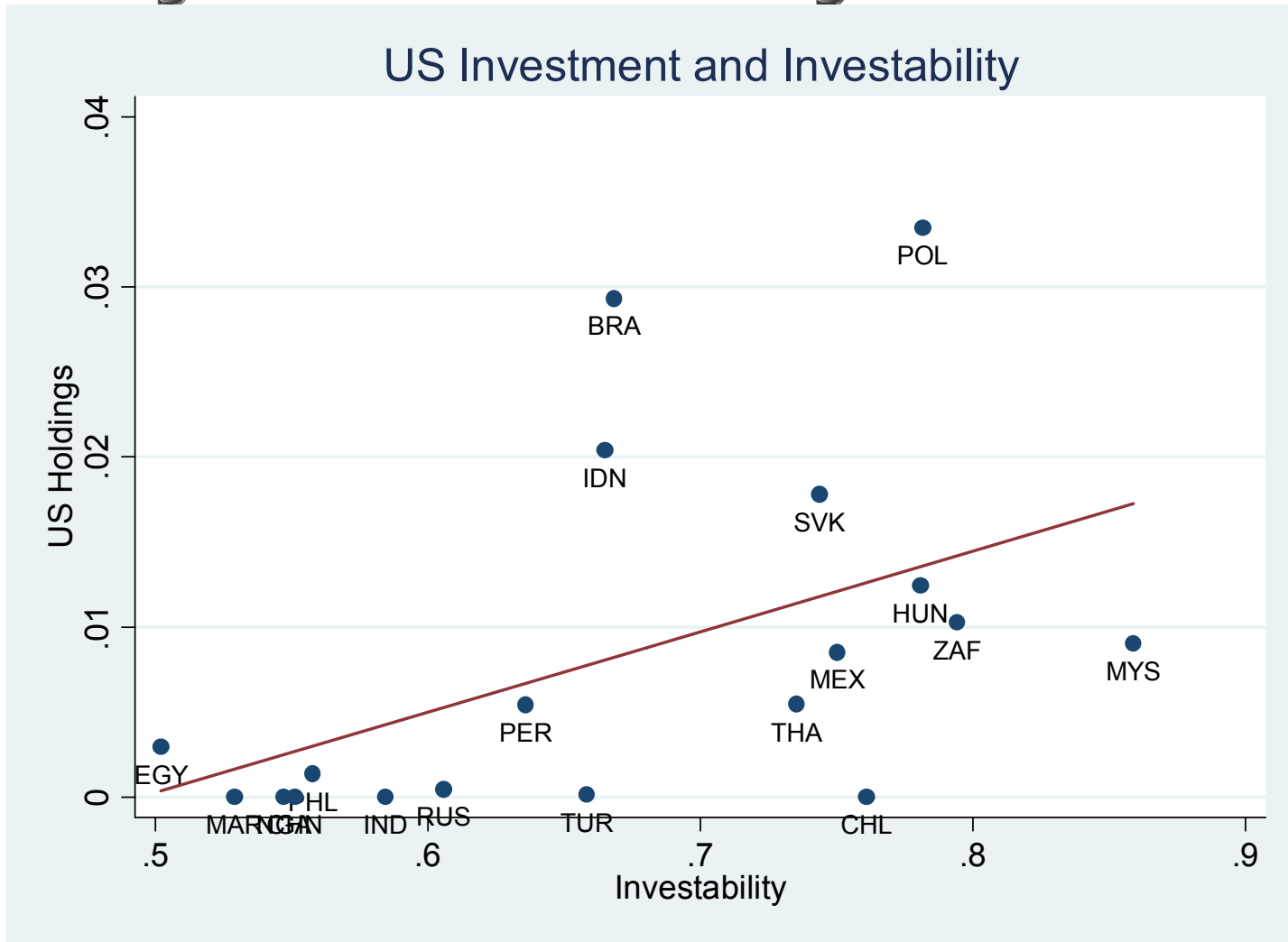
(Dependent variable = U.S. holdings as % of LC outstanding, end-2006)

RHS Variable	Coef.	(t-stat)
Composite Investability	0.196***	(2.28)
Capital Controls	0.109*	(1.86)
Liquidity and efficiency	0.115*	(1.93)
Regulatory / Creditor Rights	0.282***	(2.83)
Market Infrastructure	0.150*	(1.85)
Taxation	0.22	(1.33)
Domestic Investor Base	0.215*	(1.80)

***significant at 1% level

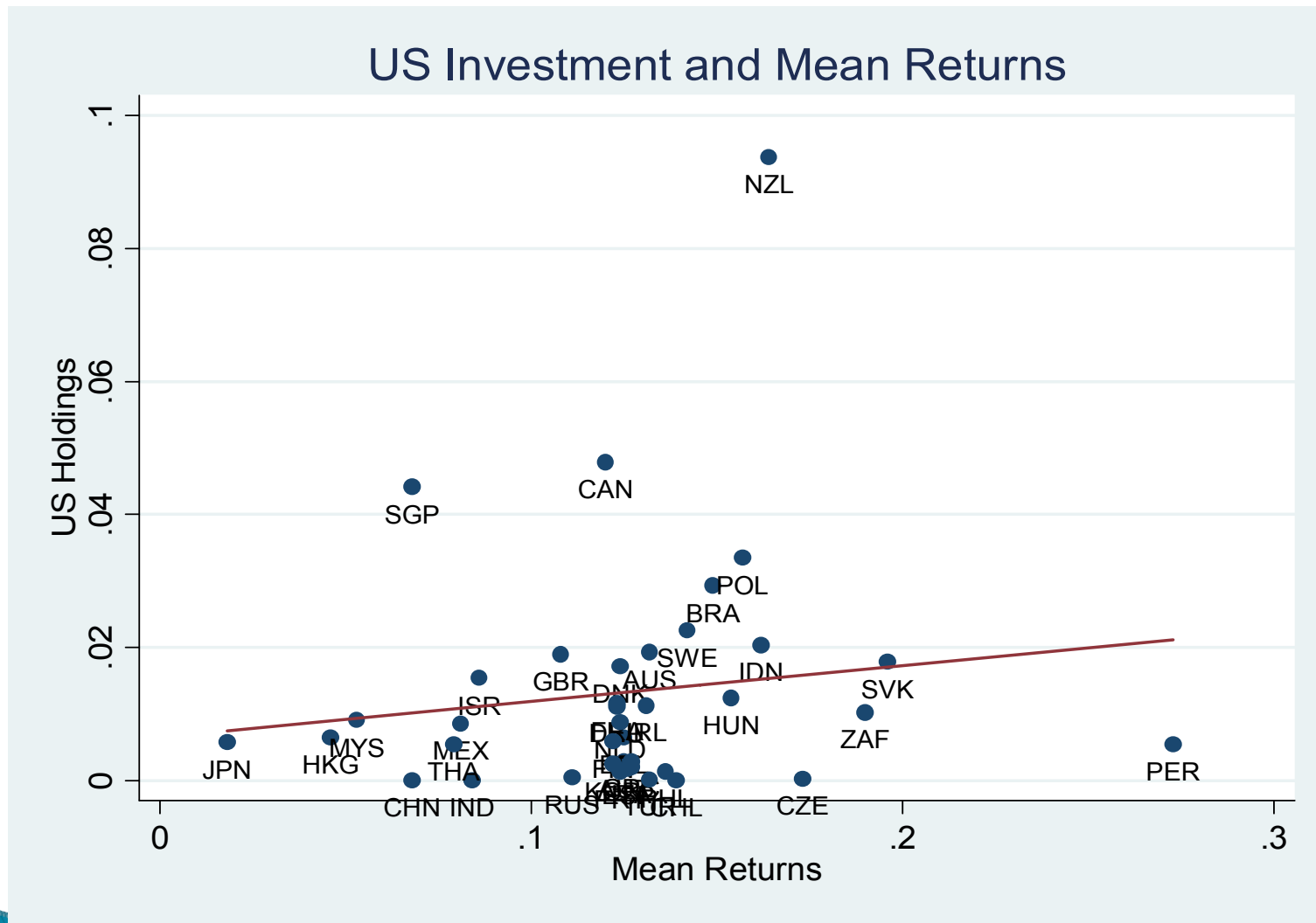
* significant at 10% level

The relationship between Investability and US Holdings also holds among GEMX countries.



$R^2 = 0.24$

We find no evidence that U.S. investors discriminated based on past returns.



$R^2 = 0.02$

Summing Up

- ▶ 2001–2006 saw substantial development of local bond markets and reduced reliance on foreign currency issuance – especially in emerging markets.
- ▶ From U.S. investor perspective, cross–border local currency bonds offered attractive returns.
- ▶ U.S. investors responded by increasing holdings of local currency bonds in emerging markets.
- ▶ U.S. investors favored countries where investor–friendly institutions and polices have been established.

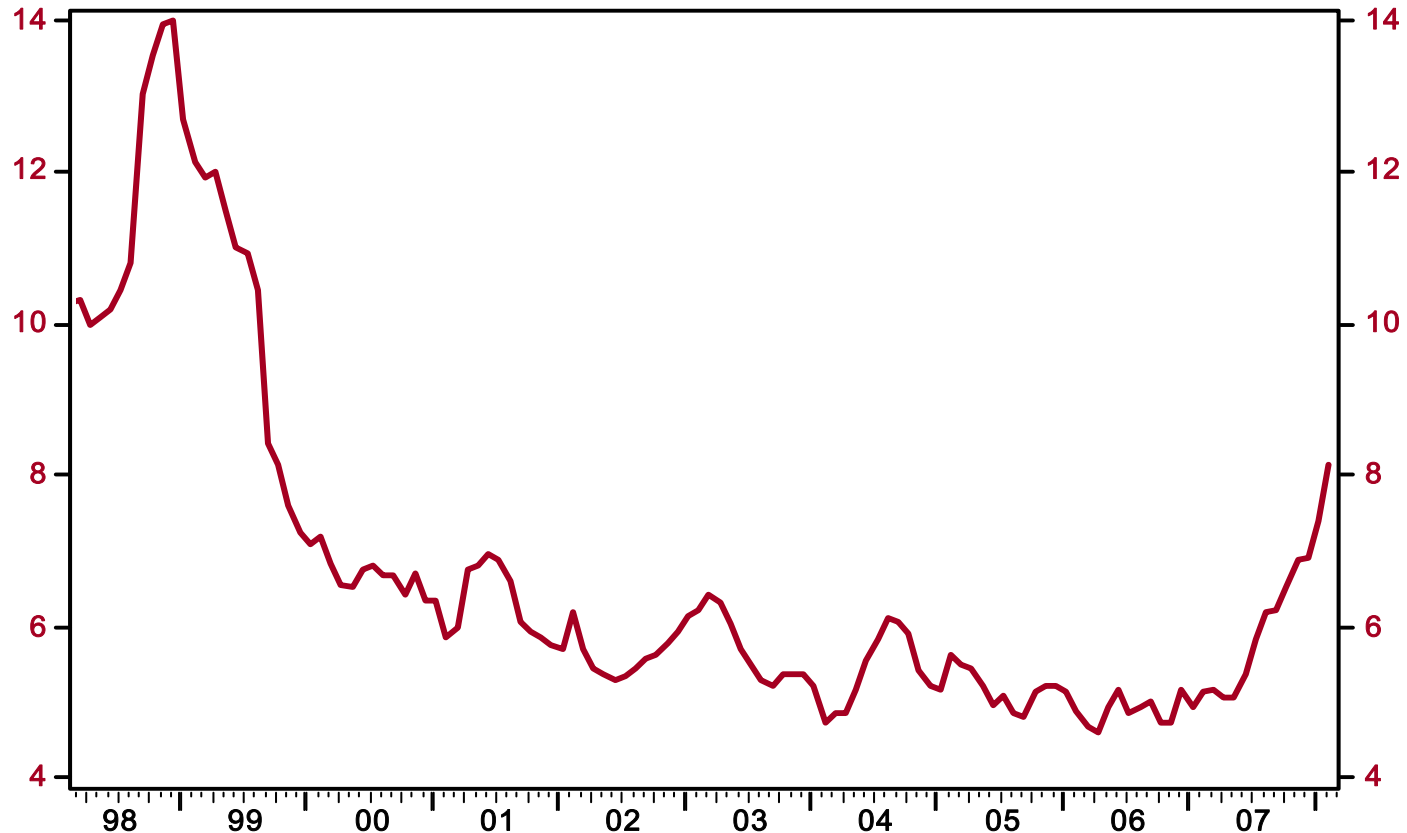
A Virtuous Cycle?

- ▶ Development of local markets and increased foreign participation should be mutually reinforcing.
- ▶ Factors that attract foreign investors are also critical for local market development.
- ▶ Countries that can attract foreign investors into local bond markets can borrow without relying on foreign-currency-denominated debt and are therefore less susceptible to currency mismatches.
- ▶ Foreign investors could broaden the investor base and add liquidity to secondary markets.

But beware of looming inflation...

Dev Ctys: Consumer Prices

% change over previous year, NSA



Source: International Monetary Fund /Haver Analytics

Thank You.

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