Developing domestic bond markets: Why do we care and the role of South-South cooperation

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Conference on Deepening Financial Sector Reforms and Regional Cooperation in South Asia
New Delhi, November 2008

Outline

- Why do we care?
- Some facts about debt composition and the development of domestic bond markets in developing countries
- How do we build bigger bond markets?
- Regional financial cooperation

Debt Composition Matters!

- The "Economics 101" debt dynamics equation tells us that the change in the stock of debt is equal to the budget deficit

$$DEBT_t - DEBT_{t-1} = DEFICIT_t$$

- This equation can be used to decompose the growth rate of the Debt-to-GDP ratio

$$\Delta d = i \times d - pb - (g + \pi) \times d$$

Debt Composition Matters!

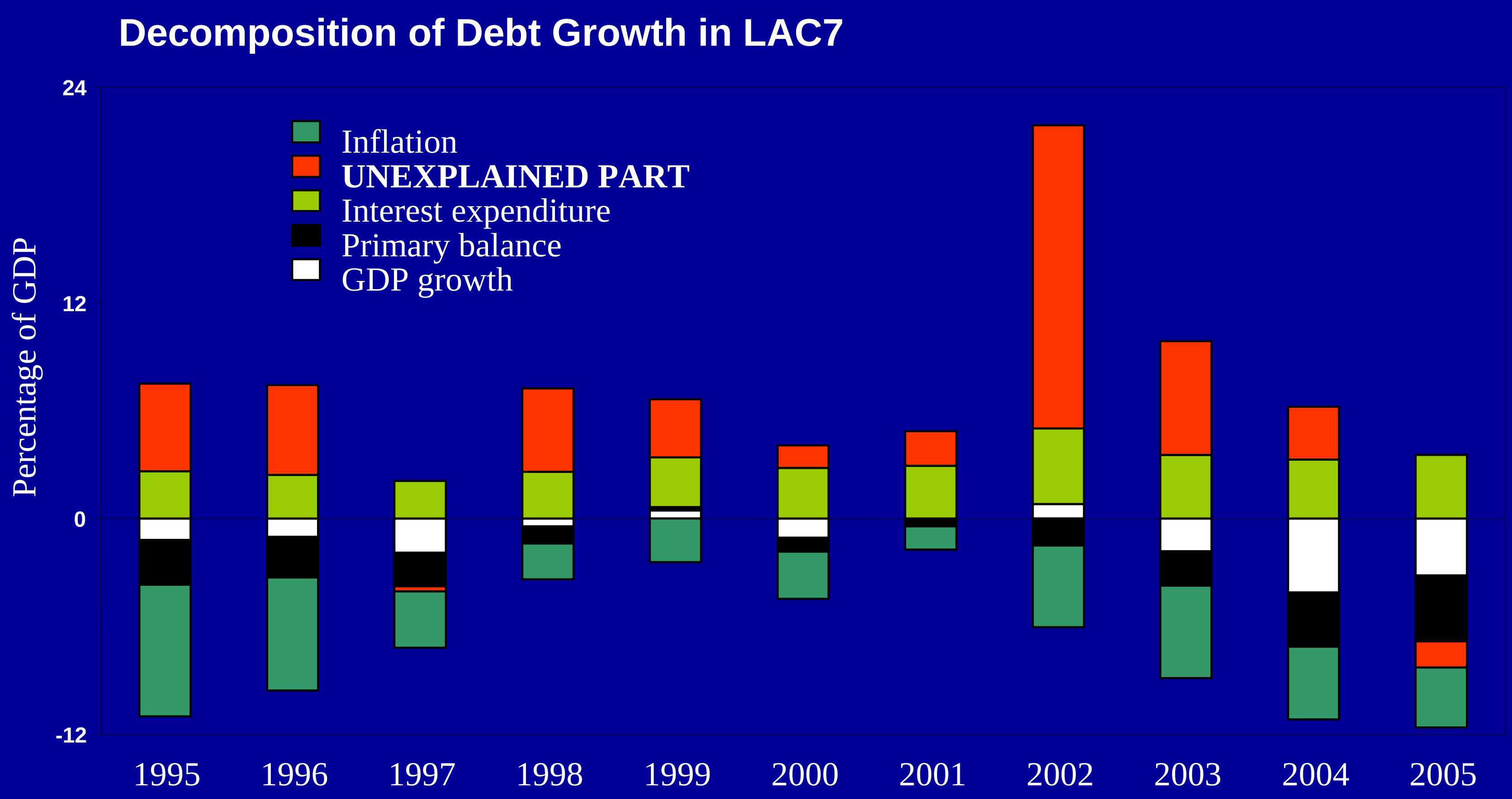
- The “Economics 101” debt dynamics equation tells us that the change in the stock of debt is equal to the budget deficit

$$DEBT_t - DEBT_{t-1} = DEFICIT_t + SF$$

- This equation can be used to decompose the growth rate of the Debt-to-GDP ratio

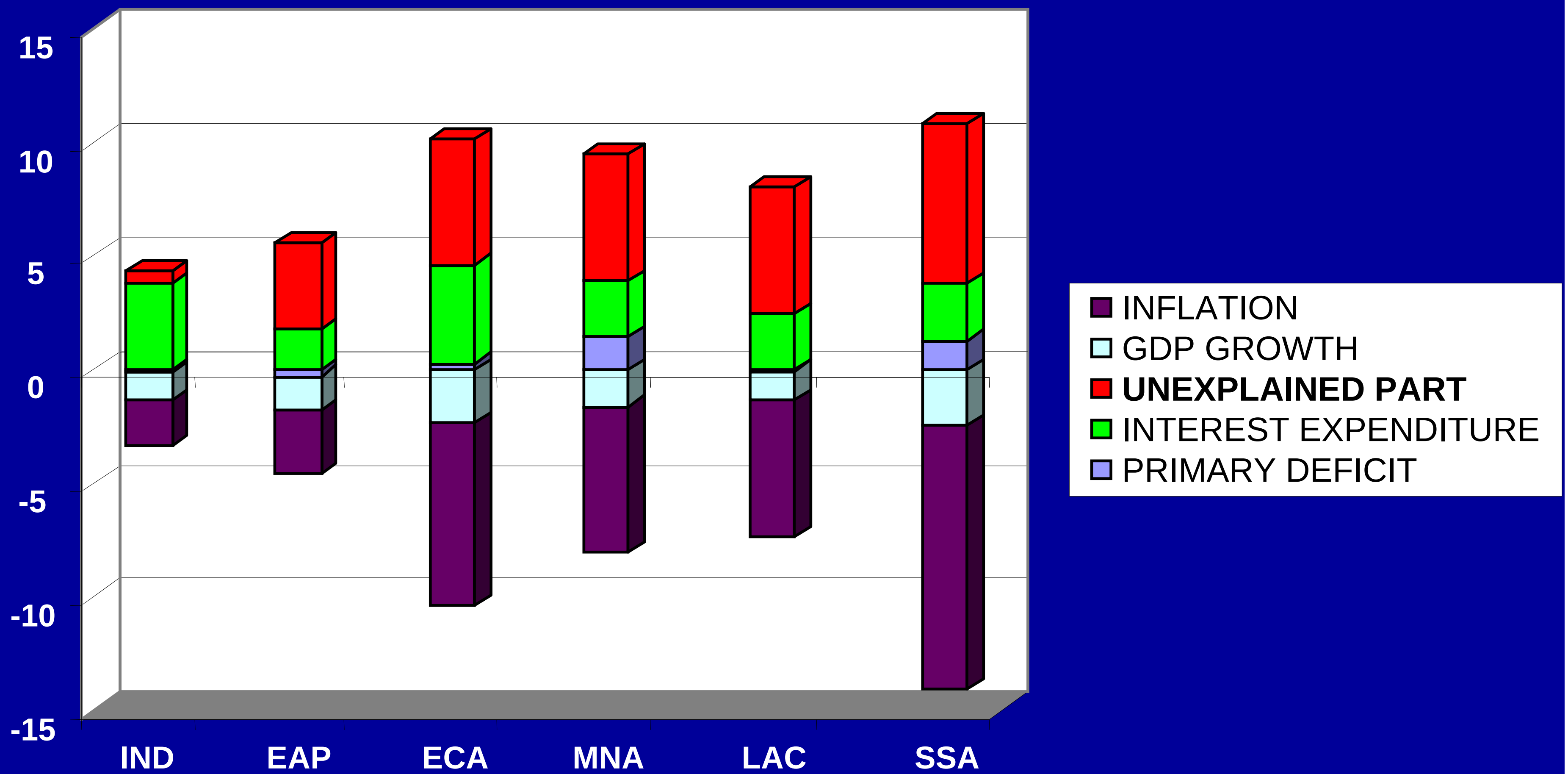
$$\Delta d = i \times d - pb - (g + \pi) \times d + SF$$

The Unexplained Part of Debt



Source: Campos, Jaimovich, and Panizza (2006).

The Unexplained Part of Debt



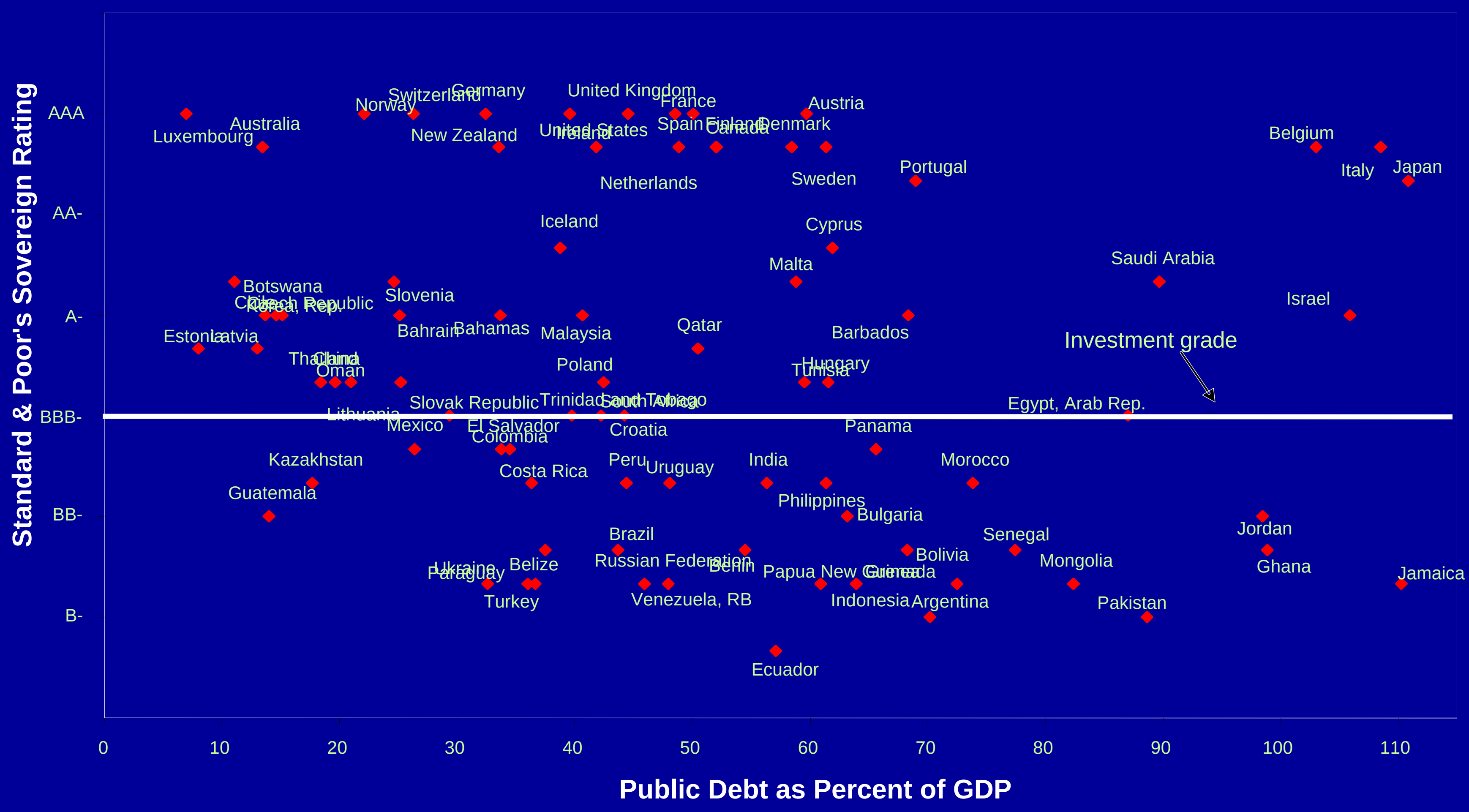
Source: Campos, Jaimovich, and Panizza (2006).

The Unexplained Part of Debt

- What explains the “Unexplained part of debt”
  - Skeletons
    - Fiscal policy matters!
  - Banking Crises
  - Balance Sheet Effects due to debt composition

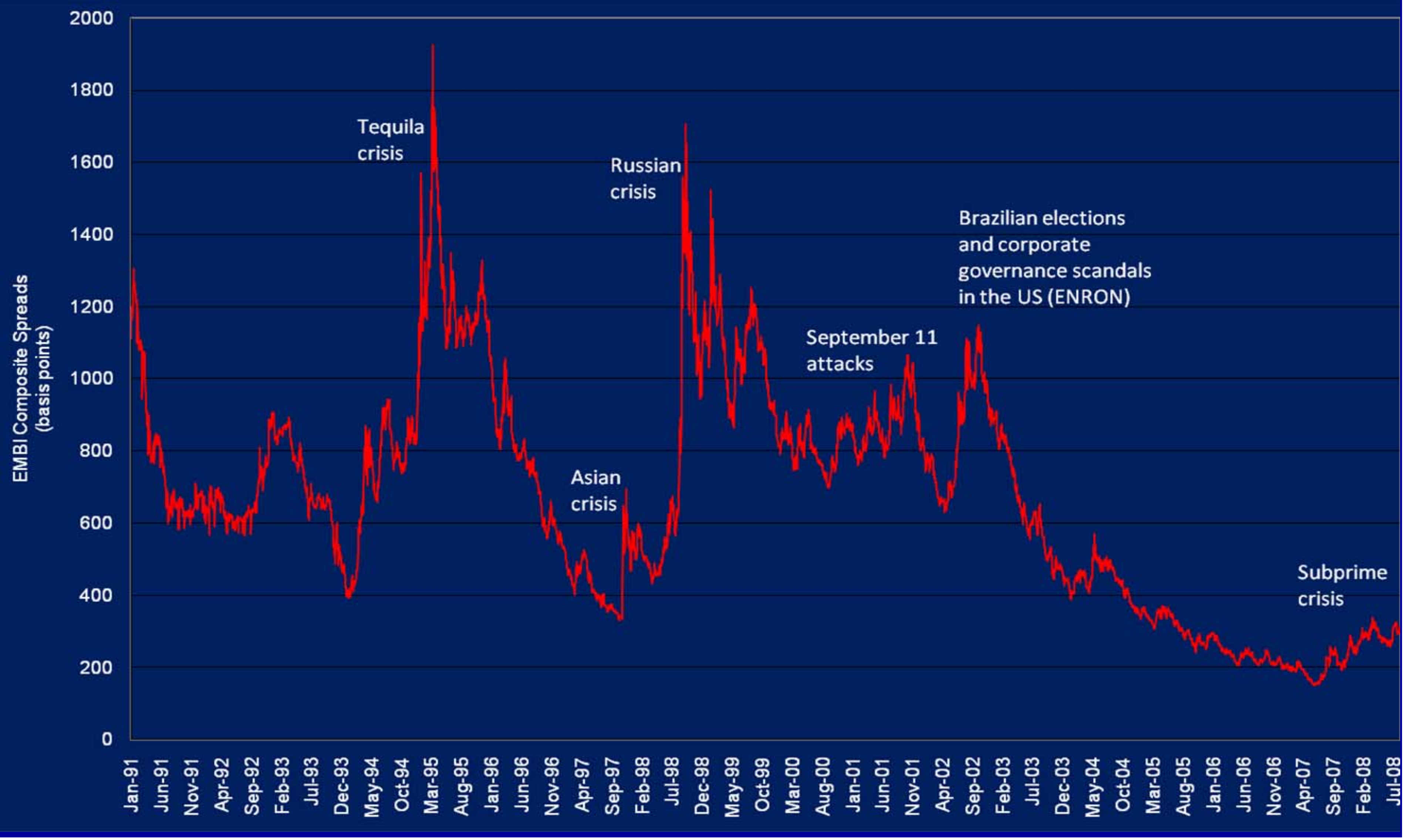
Debt Composition Matters!

Public Debt and Sovereign Rating (1995-2005)



***Source*: Jaimovich and Panizza (2006) and Standard and Poor's**

The international market is volatile…



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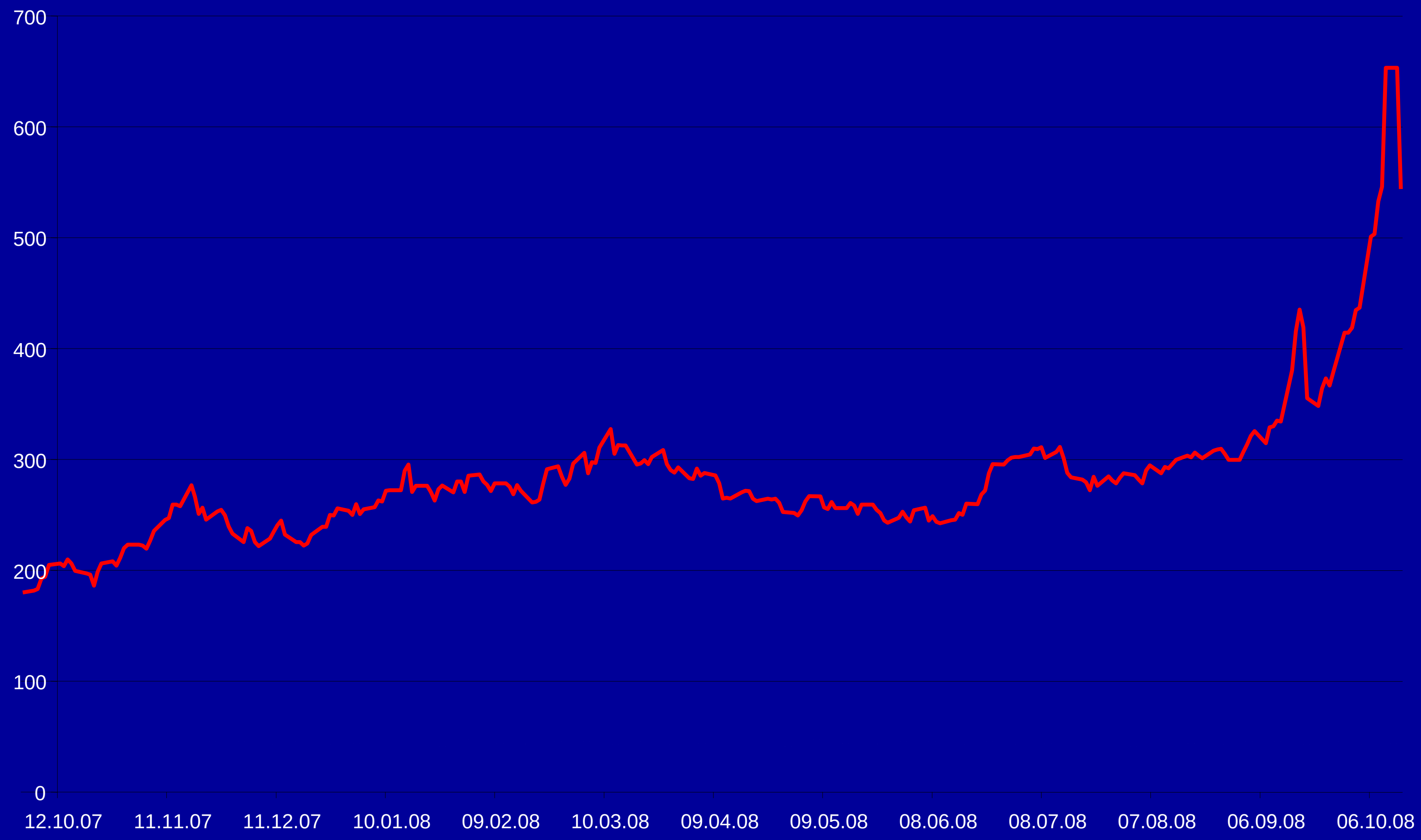

The case for innovative debt instruments

- Innovative debt instruments can increase risk-sharing and reduce vulnerabilities for the borrower
  - Equity-like instruments
    - GDP indexed bonds
    - CAT bonds
  - International bonds denominated in emerging market currencies
    - Single currency
    - In a basket of currencies
  - Dedollarize official lending

Why doesn't the market develop such financial innovations?

- *Coordination problems linked to the need of a "critical mass" and standards for new instruments.*
  - Simultaneous issuance by many parties makes new instruments more appealing
    - Establishing a new asset class generates positive externalities.
  - For financial instruments where payments are due contingent to certain conditions, it is crucial to have verifiable standards for whether those conditions are met.
    - For example, the market for credit default swaps took off as soon as the standards for a "credit event" were properly defined and became broadly accepted
- *The highly competitive structure of financial markets.*
  - Private financial institutions are unable to maintain a monopoly over the provision of a new instrument
- *Signaling.*
  - Individual countries may fear that issuing innovative instruments is perceived as signs of weakness
- *Political economy*

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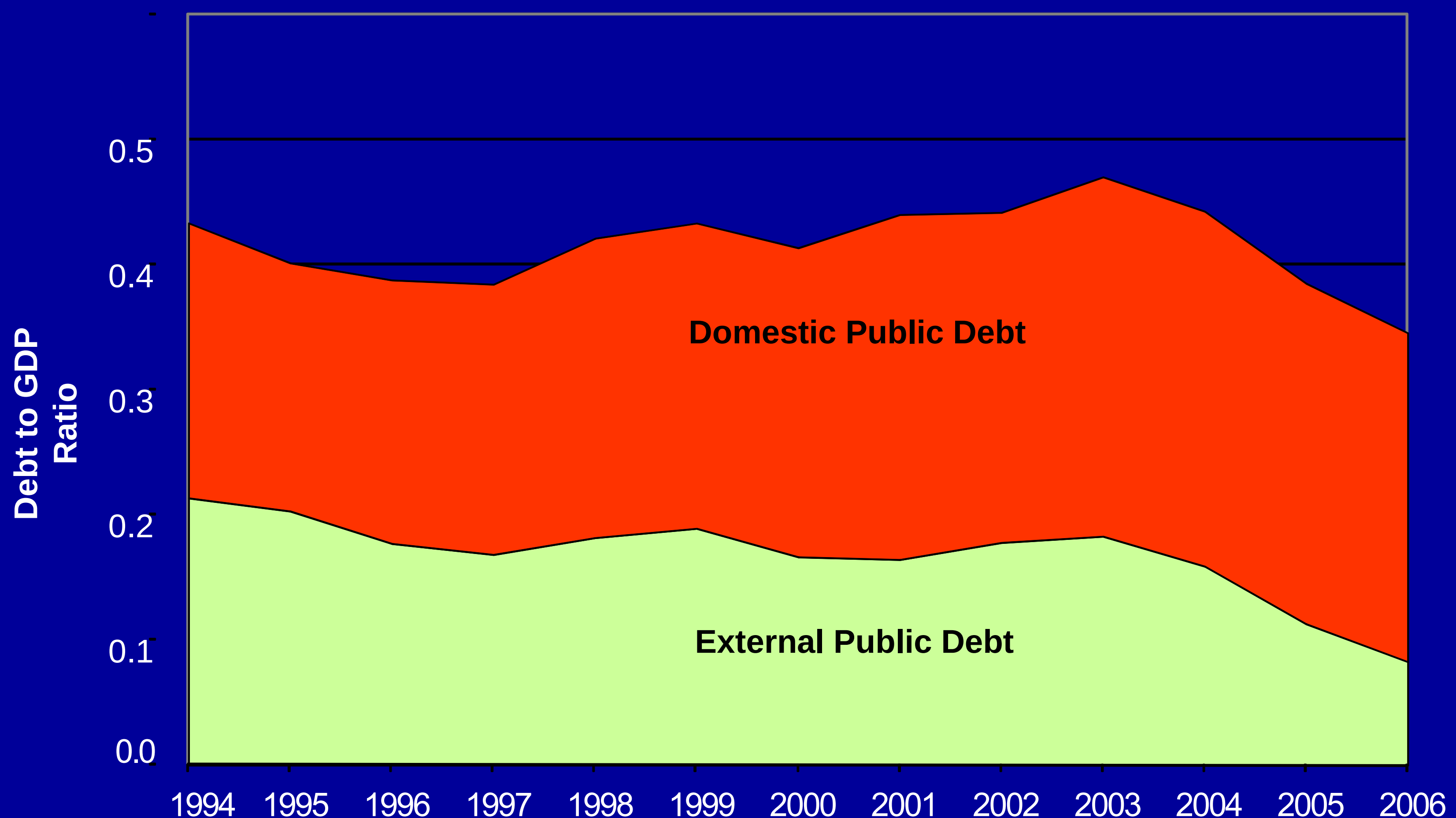
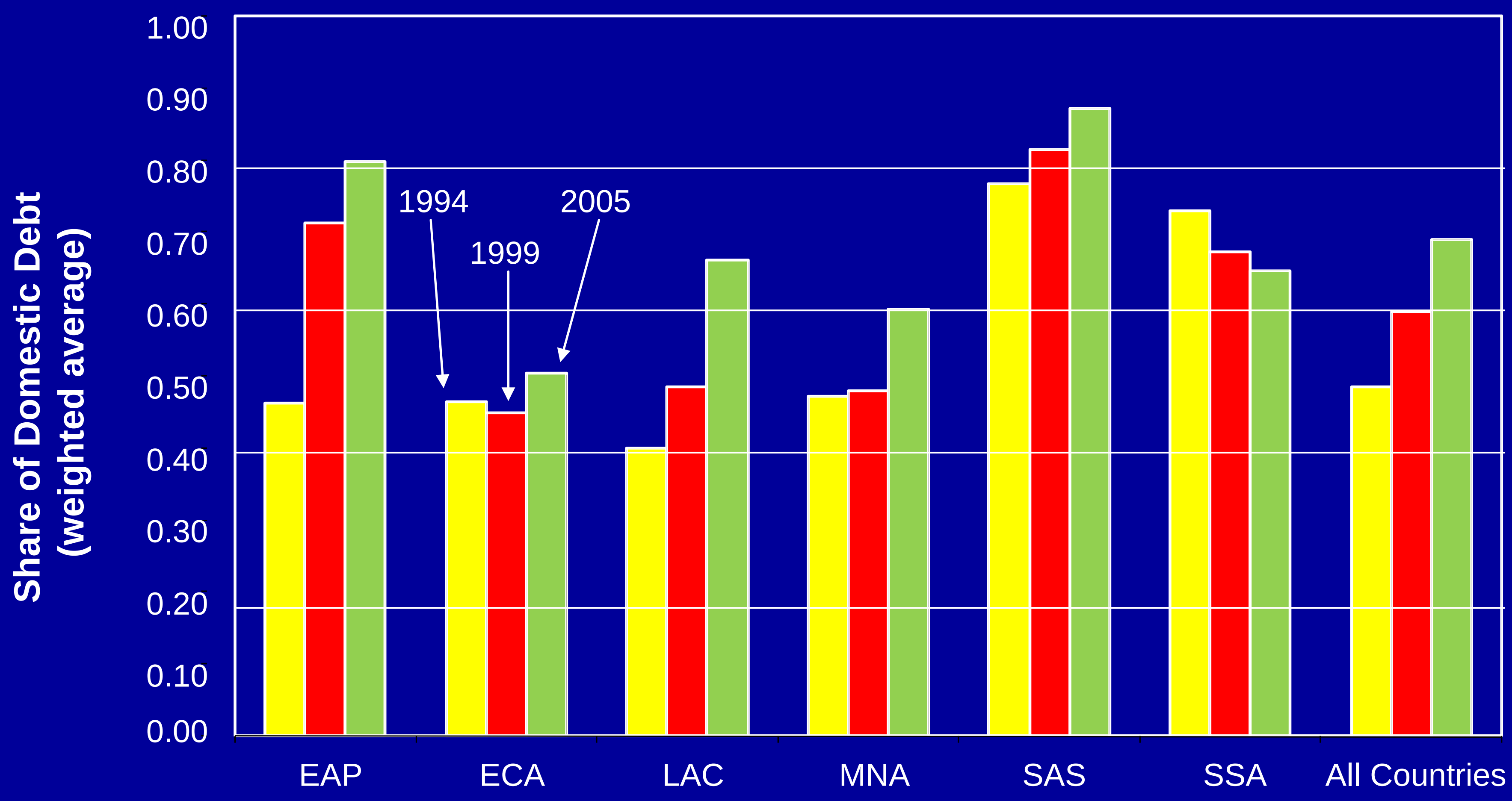
Governments have been changing their debt structure…



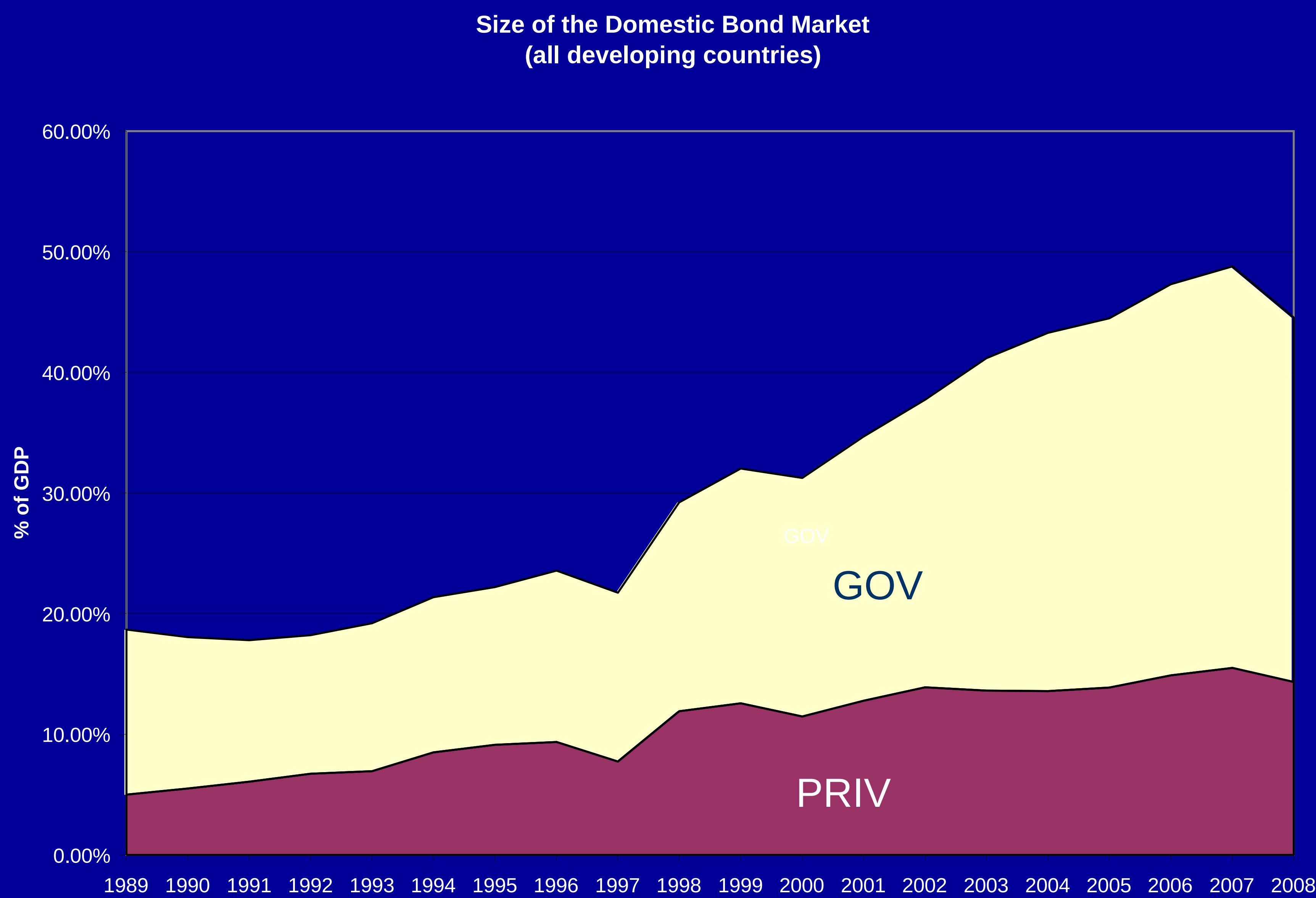
Source: Panizza (2008)

…in all regions…



Source: Panizza (2008)

…and developing domestic bond markets



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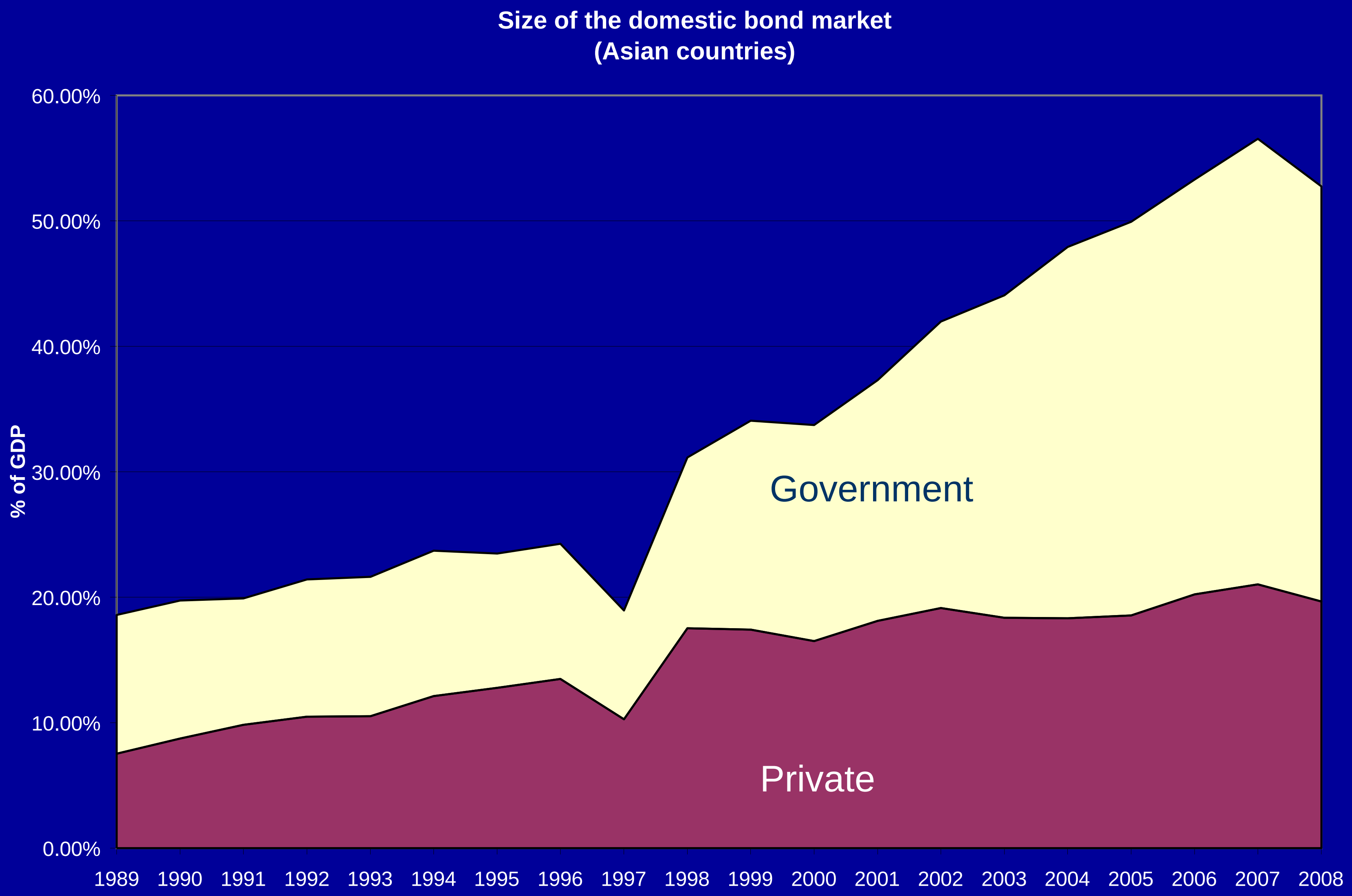

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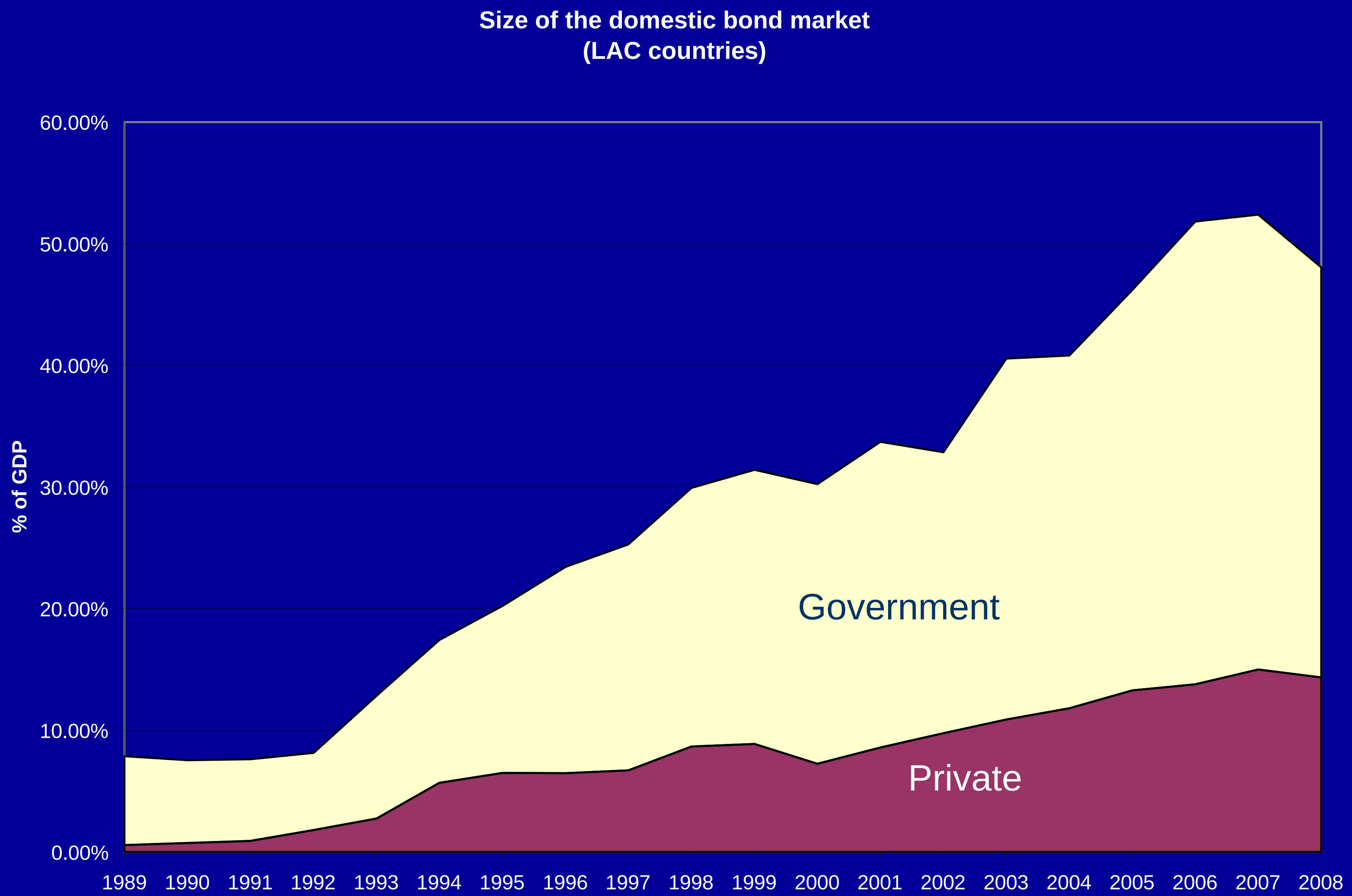
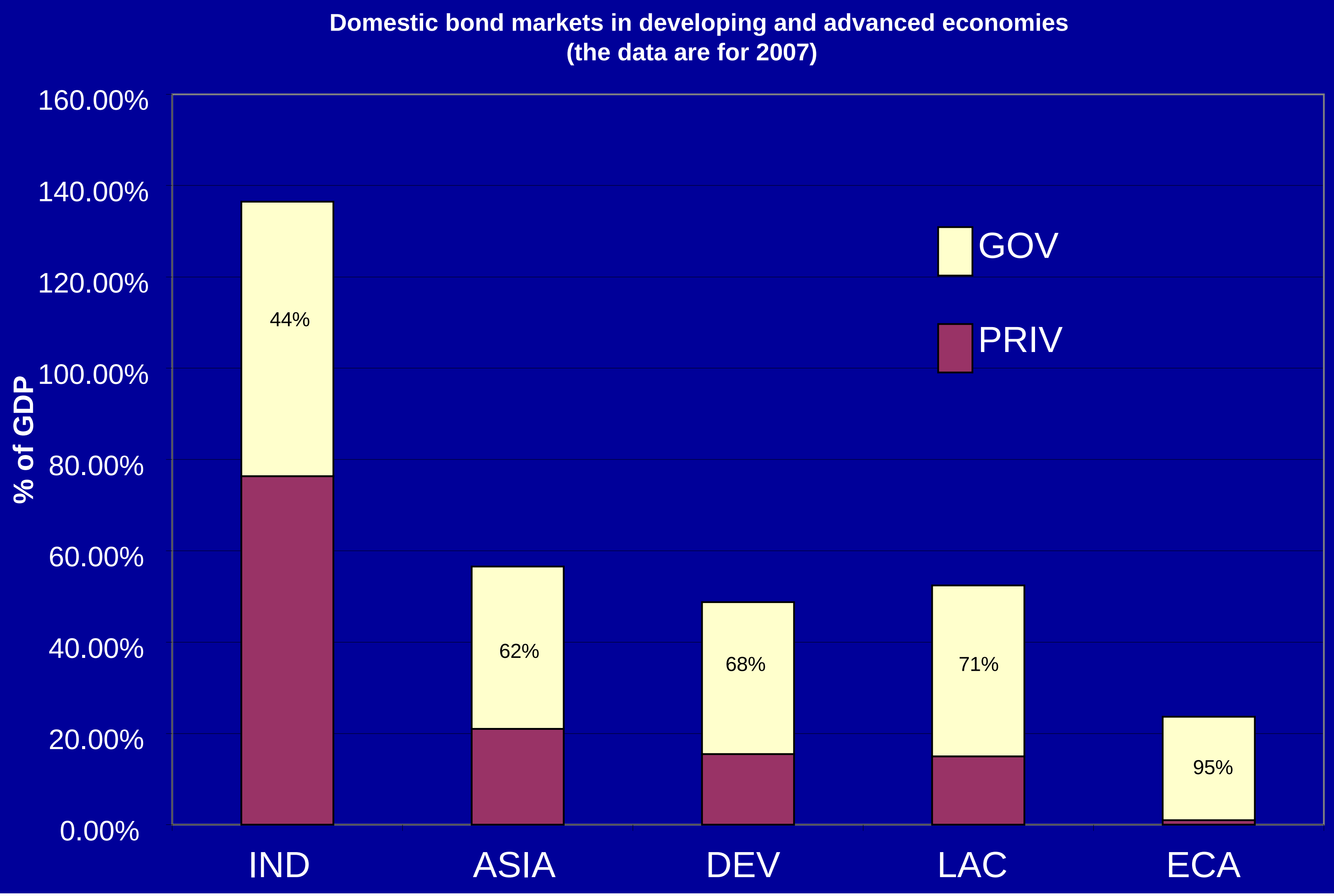


So, is everything well?

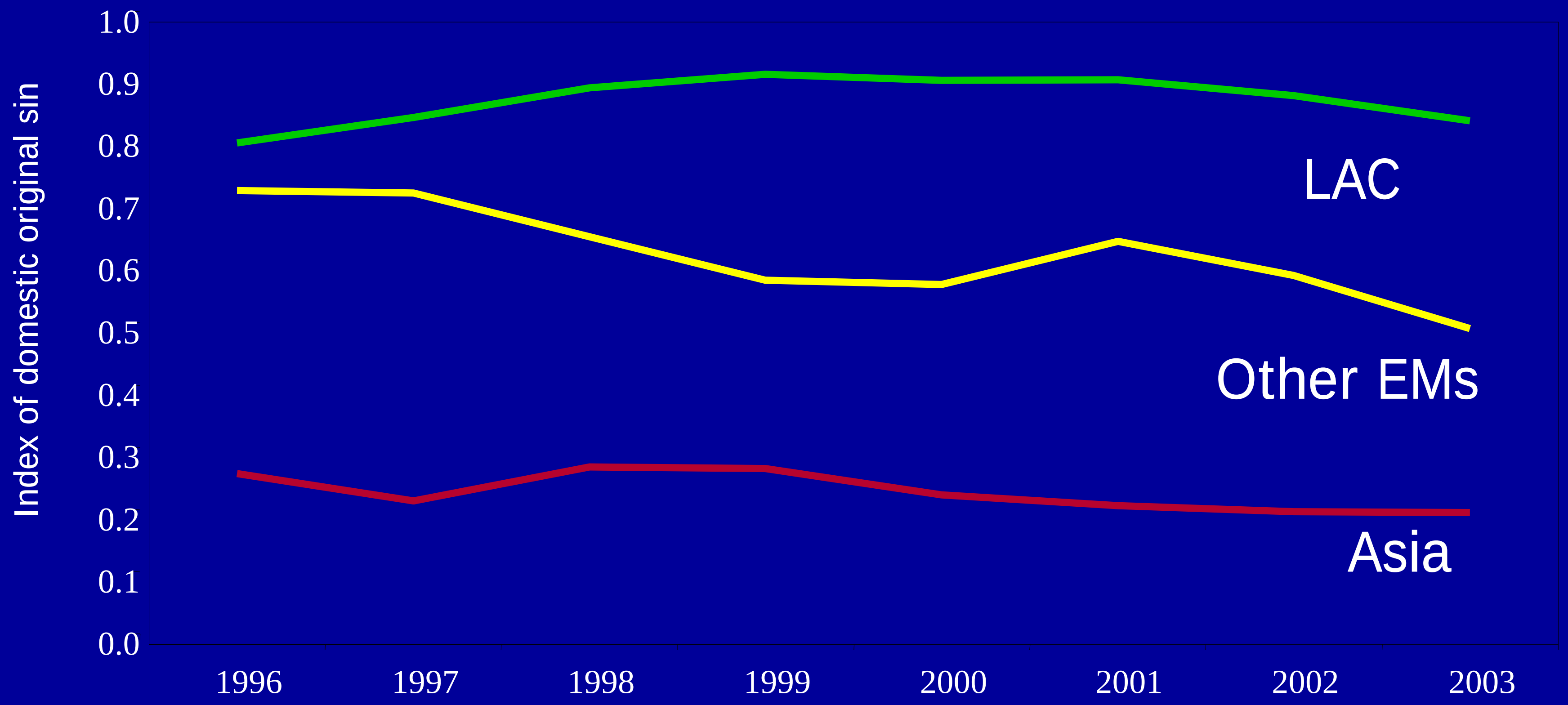
- Not really!

Bond markets remain small and are dominated by the government



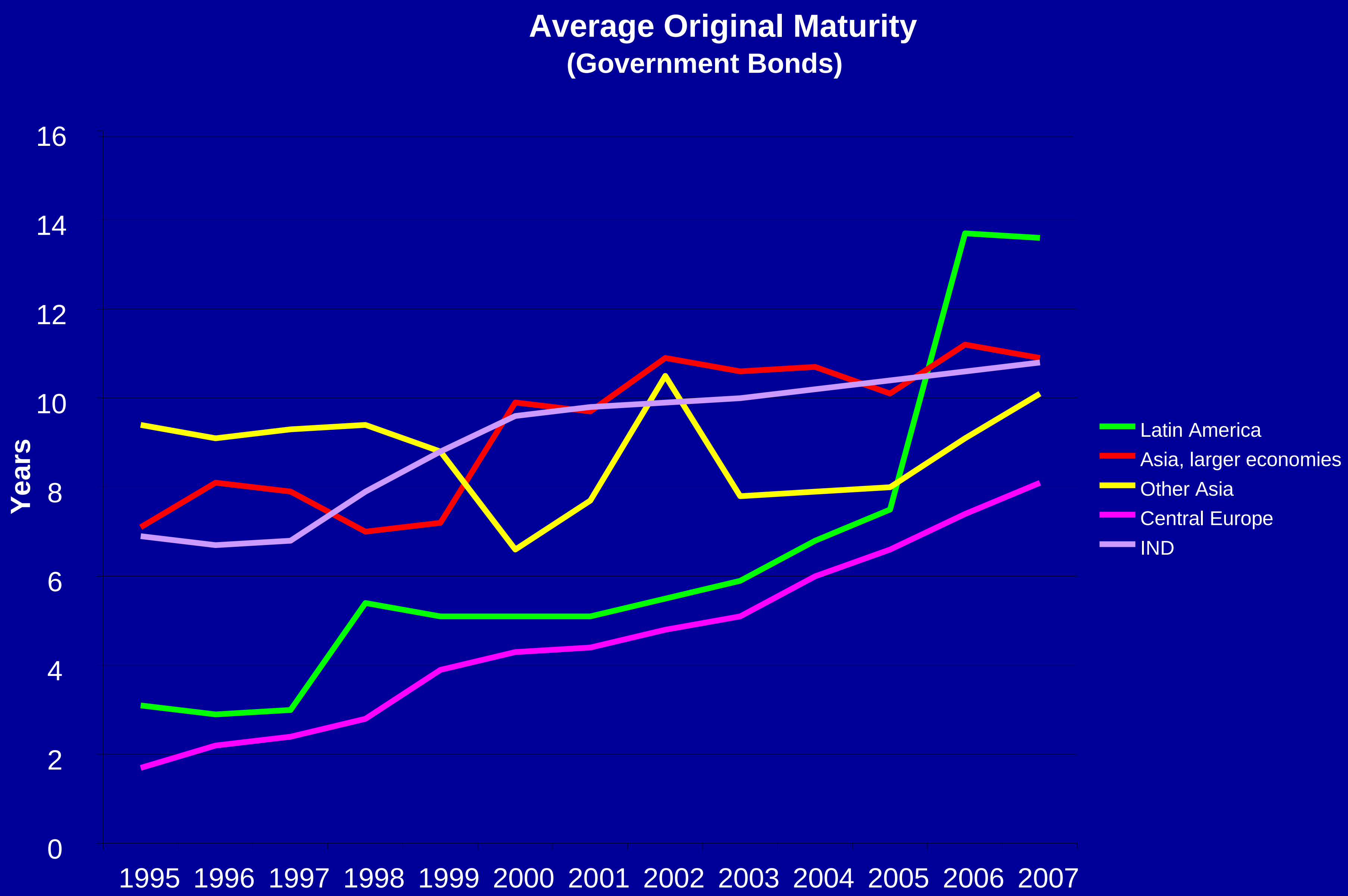
They are also “sinful”…but less so in Asia

Domestic Original Sin in Emerging Regions

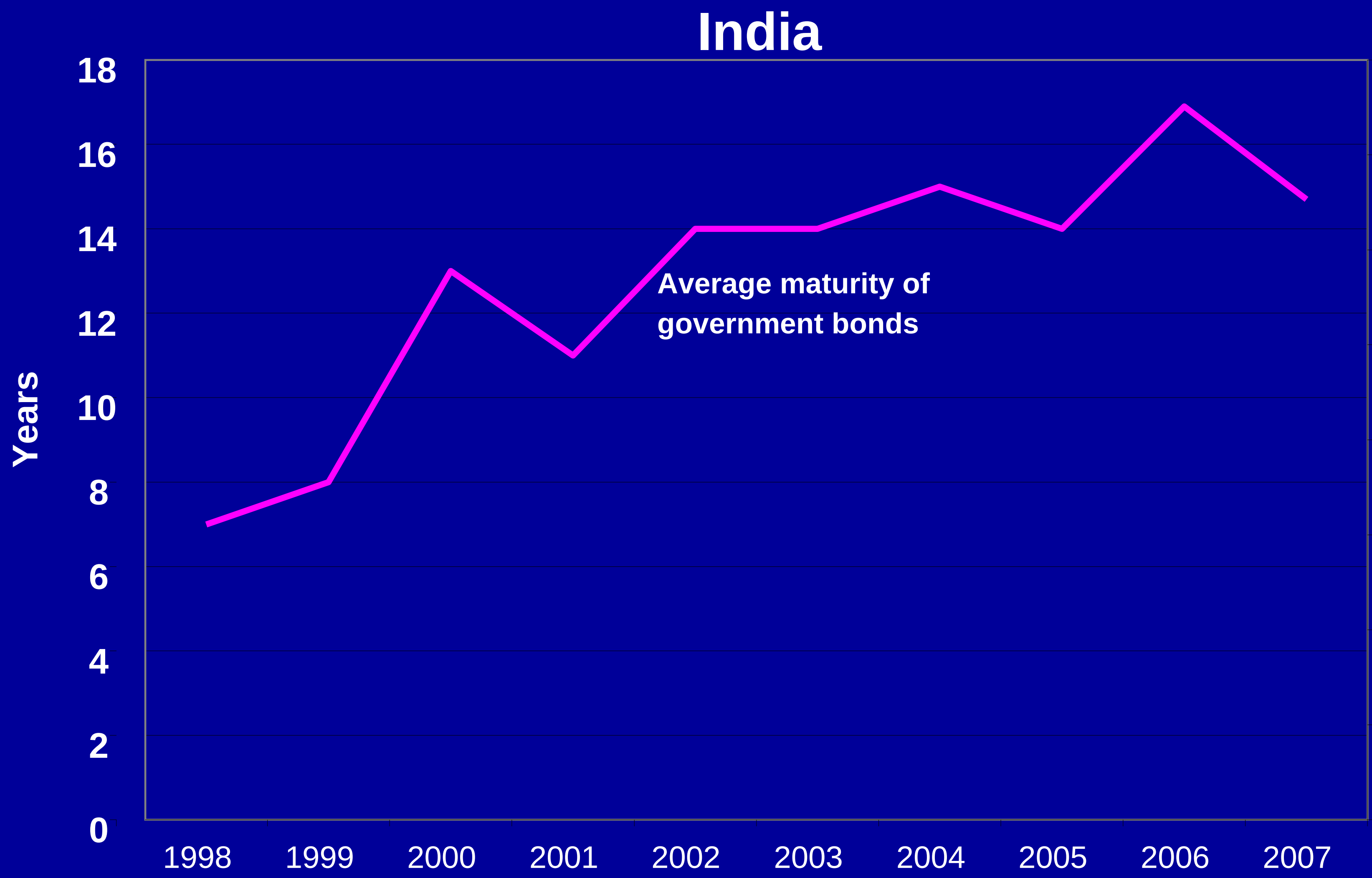


Note : Original sin is measured as share of domestic debt which is short term, denominated in foreign currency, or indexed to prices or the interest rate. "Latin America" includes: Argentina, Brazil, Chile, Colombia, Mexico, and Venezuela. "Asia" includes: China, India, Indonesia (from 1998), Korea, Malaysia, Philippines, and Thailand. "Other emerging markets" includes: Czech Republic, Israel, Hungary, Poland, Russia, and Turkey.

Maturities are lengthening…



…but what is the “true” maturity of government bonds held by banks?



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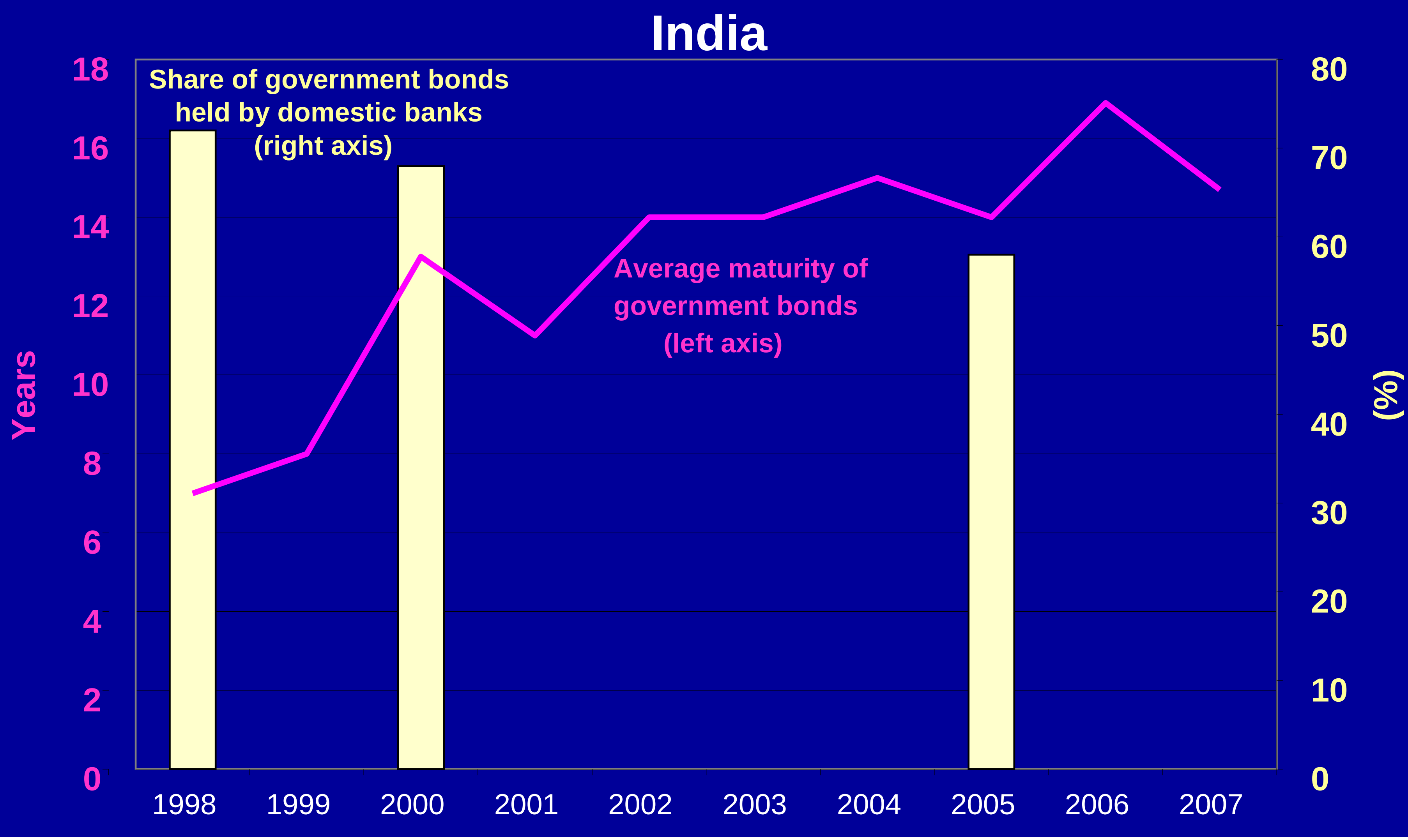

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How do we get bigger bond markets? A view from the market

- An ADB survey found that market participants want:
  - More transparency
    - Pre and post trade information
      - Publish a govt. bonds issue calendar and publish the outcome of the auction
    - More intraday pricing transparency
    - More consistent secondary market pricing
  - More hedging products
    - Better access to credit derivatives
  - A larger and more diversified investor base
    - SIZE MATTERS!

How do we get bigger bond markets? Evidence from cross-country regressions

- Research* has shown that key factors include:
  - Good macro policies
  - Corporate governance
  - Good market infrastructure
- These are like motherhood and apple pie..
- ...and EMs took important steps in this direction.
- But are these steps enough?

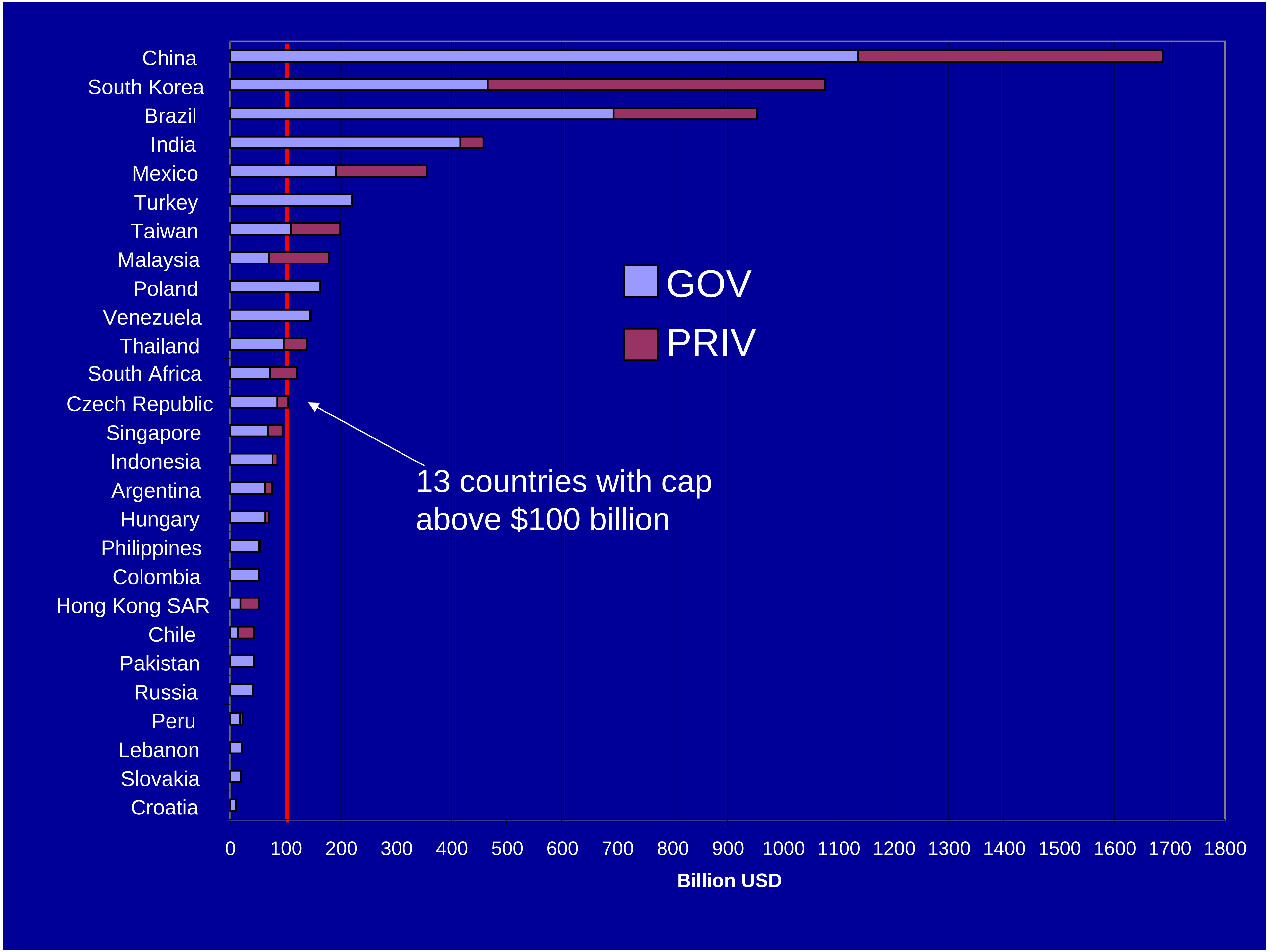
*Burger and Warnock (2003), Claessens Klingebiel and Schmukler (2003), Borensztein, Eichnegreen and Panizza (2006)

How do we get bigger bond markets? Evidence from cross-country regressions

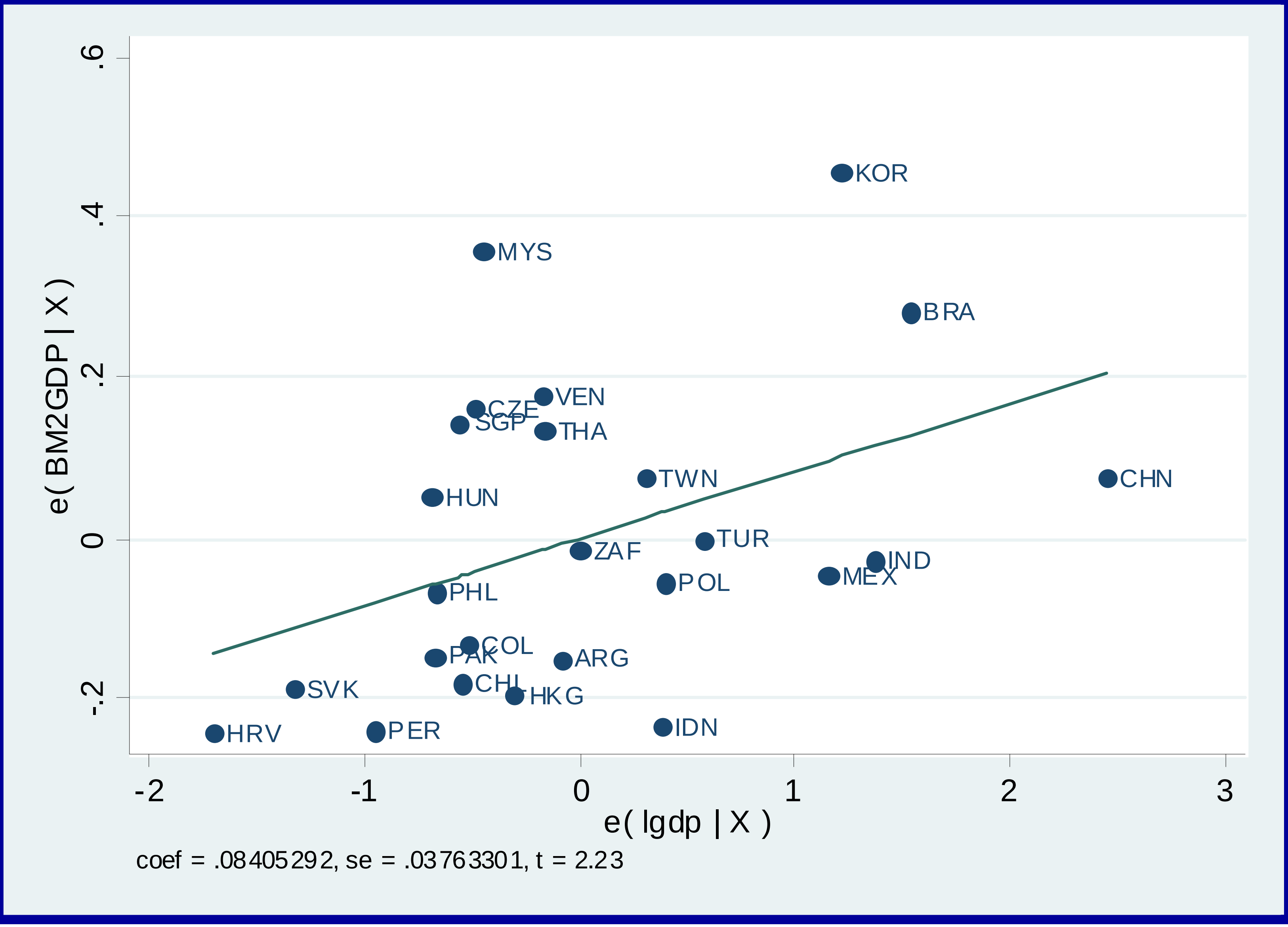
- Borensztein Eichengreen and Panizza showed that a relatively small set of variables explains:
  - 70% of the difference in bond market development between LAC and the advanced economies
  - 90% of the difference in bond market development between Asia and the advanced economies
- Can we just work on these variables and catch up with the advanced economies?

How do we get bigger bond markets? Evidence from cross-country regressions

- Not Really
  - Some variables are impossible to change
    - Legal origin
  - Others are just proxies of economic development
    - GDP per capita
      - Not so easy to change
- One key variable is market size
  - McCauley and Remolona (2000) suggest that a market capitalization of $100 billions is required for a deep and liquid bond market
    - Probably more now
  - Few EMs meet this requirement


China
South Korea
Brazil
India
Mexico
Turkey
Taiwan
Malaysia
Poland
Venezuela
Thailand
South Africa
Czech Republic
Singapore
Indonesia
Argentina
Hungary
Philippines
Colombia
Hong Kong SAR
Chile
Pakistan
Russia
Peru
Lebanon
Slovakia
Croatia
GOV
PRIV
13 countries with cap above $100 billion
0 100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500 1600 1700 1800
Billion USD

Country size matters



Summing up

- Both market participants and economists who run cross-country regressions think that size matters
- Catch 22: the markets are small because they are illiquid and they are illiquid because they are small

But how do you expand market size?

- Institutional investors can help
  - However, they help for size but not for liquidity
  - … and they can be raided
- Don't let people go outside (AKA capital controls)?
  - …mmm
- Some countries are just not big enough and financial integration across developing countries remains small
  - Lack of liquidity seems to be the culprit in Asia (Garcia-Herrero, Yang, and Wooldridge, 2008)
- Regional cooperation may help

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Regional financial cooperation The Asian experience

- Crisis management
  - Bilateral Swap Arrangement (BSA) under the Chiang Mai Initiative promoted by Asean+3
    - Still lacks surveillance and monitoring system and hence it is still dependent from the IMF
- Exchange rate cooperation and monetary integration
  - The first objective is the development of a Asian Currency Unit (ACU)
    - So far, only research mostly promoted by ADB, ASEAN+3,
- Development of regional bond markets
  - The Asian Bond Market Initiative (ASEAN+3)
  - The Asian Bond Fund 1&2 (EMEAP)
  - Issue local currency bonds in the international market (ADB)

Too many players

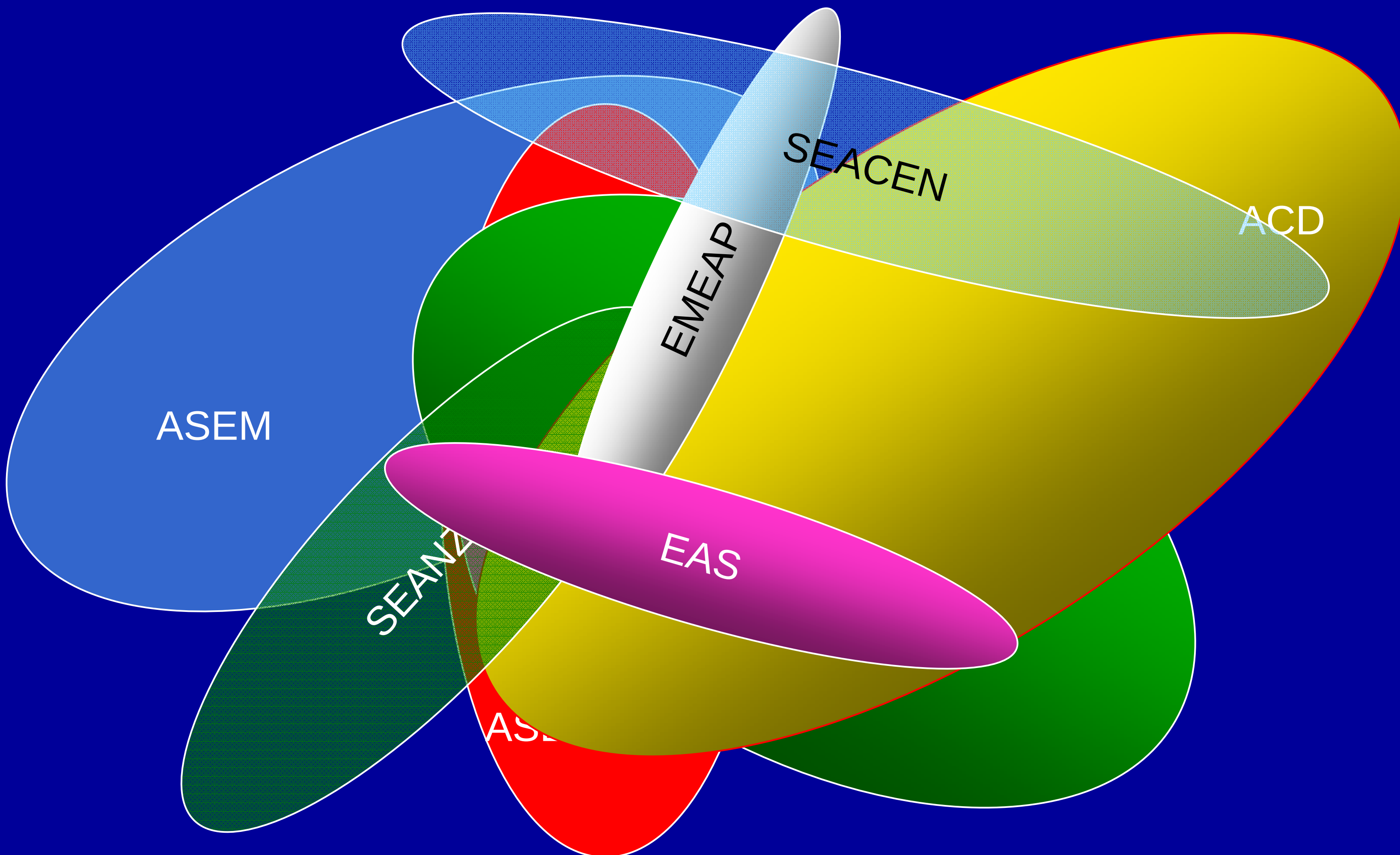
9 DIFFERENT FORA

- 1956 SEANZA (20 COUNTRIES)
- 1966 SEACEN (16 COUNTRIES)
- 1967 ASEAN (10 COUNTRIES)
- 1991 EMEAP (11 COUNTRIES)
- 1994 APEC (21 COUNTRIES)
- 1997 ASEM (43 COUNTRIES)
- 1999 ASEAN+3
- 2002 ACD (30 COUNTRIES)
- 2005 EAS (16 COUNTRIES)

Often without a permanent secretariat and sometimes with conflicting objectives

	EMEAP (1991) 11	SEACEN (1996) 16	SEANZA (1956) 20	ASEAN (1967) 10	ASEAN+3 (1999) 13	APEC (1994) 21	ASEM (1997) 43	EAS (2005) 16	ACD (2002) 30
AUS	x		x			x		x	
BGD			x						x
BRN		x		x	x	x	x	x	x
BTN									x
BUR		x		x	x		x	x	x
CAN						x			
CHL						x			
CHN	x		x		x	x	x	x	x
FIJ		x				x			
HKG	x		x			x			
IDN	x	x	x	x	x	x	x	x	x
IND			x				x	x	x
IRN			x						x
JPN	x		x		x	x	x	x	x
KHZ									x
KMR		x		x	x		x	x	x
KOR	x	x	x		x	x	x	x	x
KWT									x
LAO				x	x		x	x	x
MEX						x			
MON		x	x				x		x
MYS	x	x	x	x	x	x	x	x	x
NPL		x	x						
NZL	x		x			x		x	
OMN									x
PAK			x				x		x
PER						x			
PHL	x	x	x	x	x	x	x	x	x
PNG		x	x			x			
QAT									x
RUS						x			x
SAU									x
SLA		x	x	x	x		x	x	x
SNG	x	x	x	x	x	x	x	x	x
TAJ									x
THA	x		x	x	x	x	x	x	x
TWN		x				x			
UAE									x
USA						x			
UZB									x
VNM		x		x	x	x	x	x	x
27 EU							x		

The spaghetti bowl of Asian financial cooperation



The Asian Bond Markets Initiative

- AMBI was endorsed by ASEAN+3 finance ministers at their meeting in Manila in August 2003
- Set of working groups with the objective of:
  - Promoting the creation of securitized debt instruments
  - Promoting the creation of credit guarantee mechanisms
  - Promoting the issuance of bonds denominated in local currency by non-residents
  - Strengthen rating Agencies and information dissemination

The Asian Bond Funds

- Launched by EMEAP:
  - Executive Meeting of East Asia Pacific Central Banks
    - 11 CB: AUS, CHN, HKMA, IDN, JPN, KOR, MYS, NZA, PHL, SGP, THA
- The first time that central banks and monetary authorities earmark part of their reserves for joint investment
  - EMEAP worked with the IMF so that central bank holdings in bond funds qualify as international reserves
- Motivation:
    - "A lesson learnt from the Asian financial crisis is the importance of developing a deep and liquid domestic bond market to reduce corporate sector reliance on financing through short-term bank borrowing. At the same time, part of the high savings in Asia, which are mostly invested in assets of developed markets, have returned to the region in the form of bank lending and portfolio inflows. Such inflows tend to be volatile. Hence, to improve the efficiency of financial intermediation in Asia and to develop a source of long-term funding for Asian borrowers, the region needs to develop deep and liquid domestic bond markets" (EMEAP, 2006)

The Asian Bond Funds (ABF1)

- Asian Bond Fund 1 (ABF1) initiative
  - Launched at the EMEAP Meeting of June 2003
- Objective:
  - Catalyze the growth of Asian bond markets by allocating a portion of the reserves of regional central banks to the purchase of government and quasi-government securities
- The initial $1 billion of investment was devoted to Asian sovereign and quasi-sovereign issues of *dollar-denominated* bonds

The Asian Bond Funds (ABF2)

- Asian Bond Fund 2 (ABF2) initiative was announced by EMEAP in December 2004
  - Invest CB reserves in sovereign and quasi-sovereign bonds in *local currency*
- Objectives
  - Providing a low-cost and investment product in the form of passively managed index bond funds to broaden investor participation
  - Identifying impediments to bond market development in EMEAP economies and acting as catalyst for regulatory reforms and improvement in market infrastructure

The Asian Bond Funds (ABF2)

- Two types of funds
  - The Pan Asian Index Fund (PAIF) is a passively managed mutual fund (PAIF) operated by private sector managers and designed to track a Pan Asian index
    - The objective of the PAIF is to facilitate entry by retail and institutional buyers
      - Low cost (passively managed)
      - Increase liquidity (incentive to create a system of market makers)
        - » Asian investors tend to be of the buy and hold type
      - Diversification (a basket of countries provide better diversification than a single country)
  - A series of 8 national funds
    - The 8 funds aim at increasing the liquidity in the various domestic markets and promote integration across the markets

The Asian Bond Funds (ABF2)

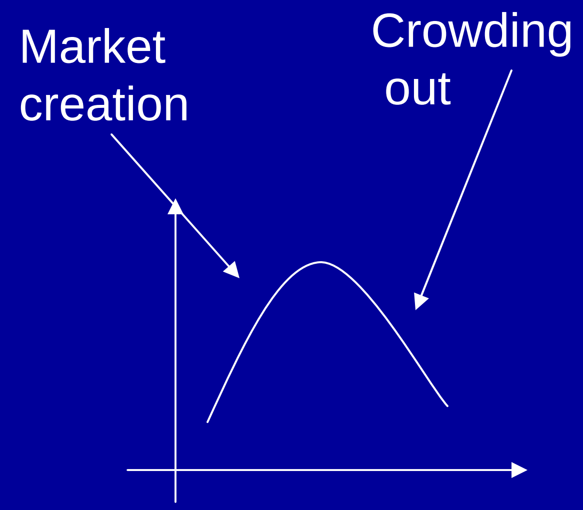
- The initial allocation is $ 2 billion
  - $1 billion for the PAIF and $1billion for the 8 national funds
- Two phases
- Phase 1: investment in ABF2 funds confined to EMEAP
  - Started in December 2004, funding was completed in April 2005
    - EMEAP investments are held through a BIS investment vehicle, this facilitates their use as international reserves
- Phase 2: Funds are offered to the public

The Asian Bond Funds (ABF2)

- So far, the focus has been on sovereign
  - Will there be the need for and ABF3 or will positive externalities be enough?

(a detour on the interaction between corporate and government bond markets)

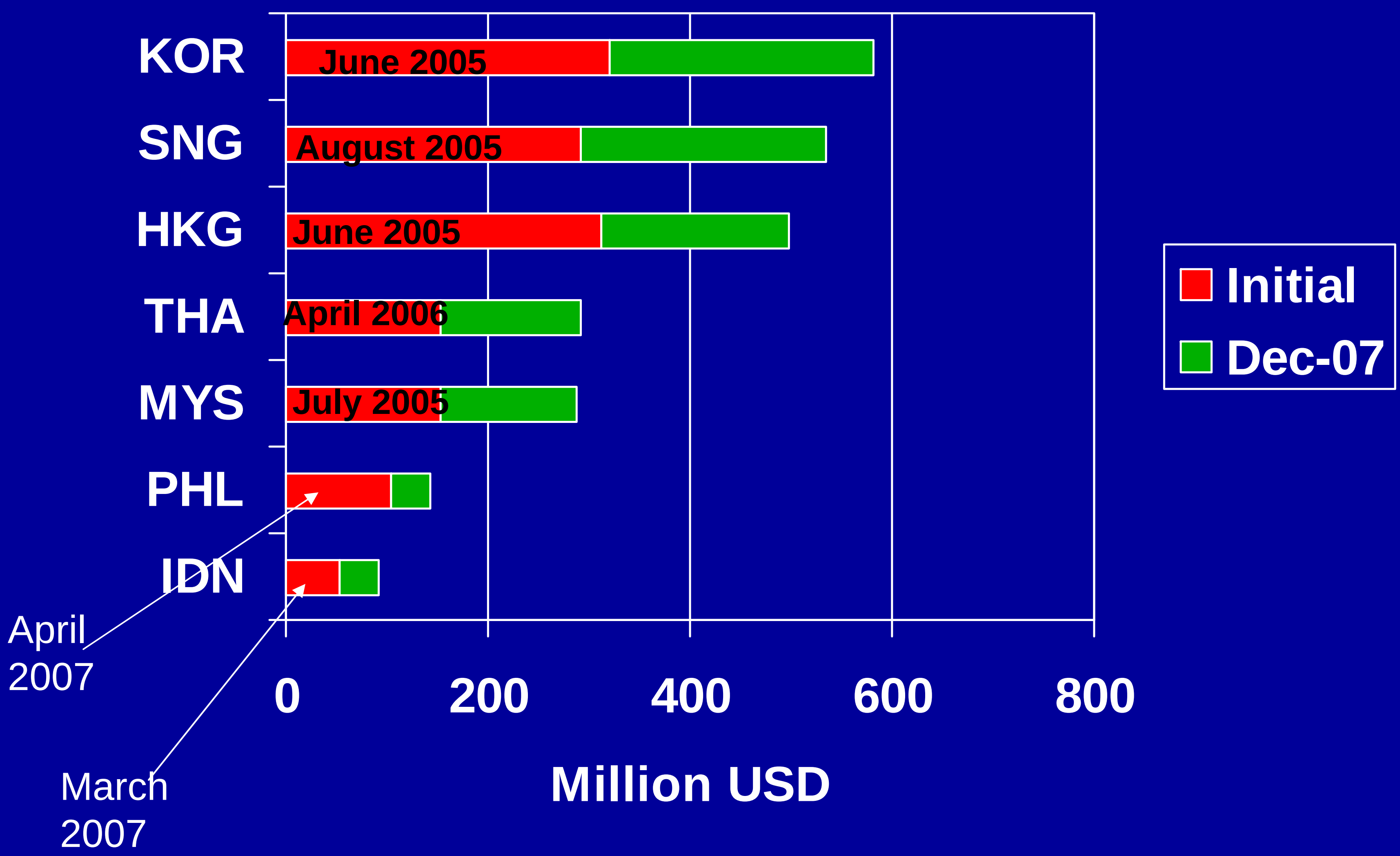
- Market creation
  - Benchmark curve
  - Minimum size required for developing trading infrastructures
- …or crowding out?
- No clear empirical evidence
  - Probably an inverted U



Where are they now?

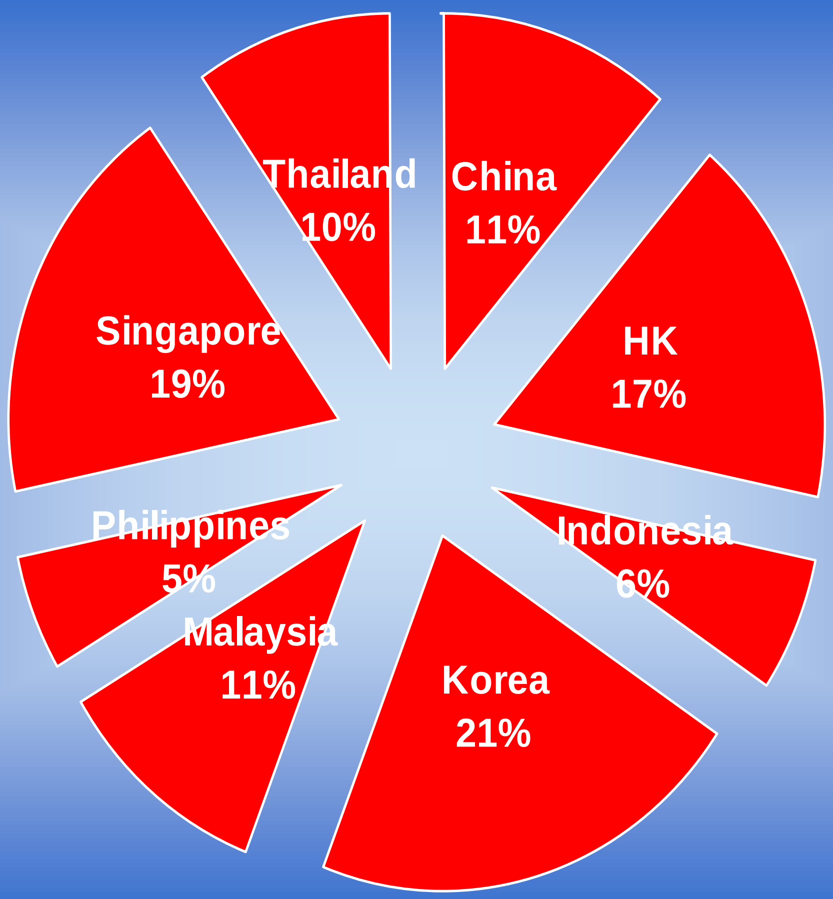
- The Pan-Asian fund started in July 2005 with USD 1 billion and at the end of June 2008 had assets for USD 1.76 billion
- As of December 2007, 7 of the 8 individual funds had been launched
  - They had total assets of approximately USD 1.4 billion

Where are they now?

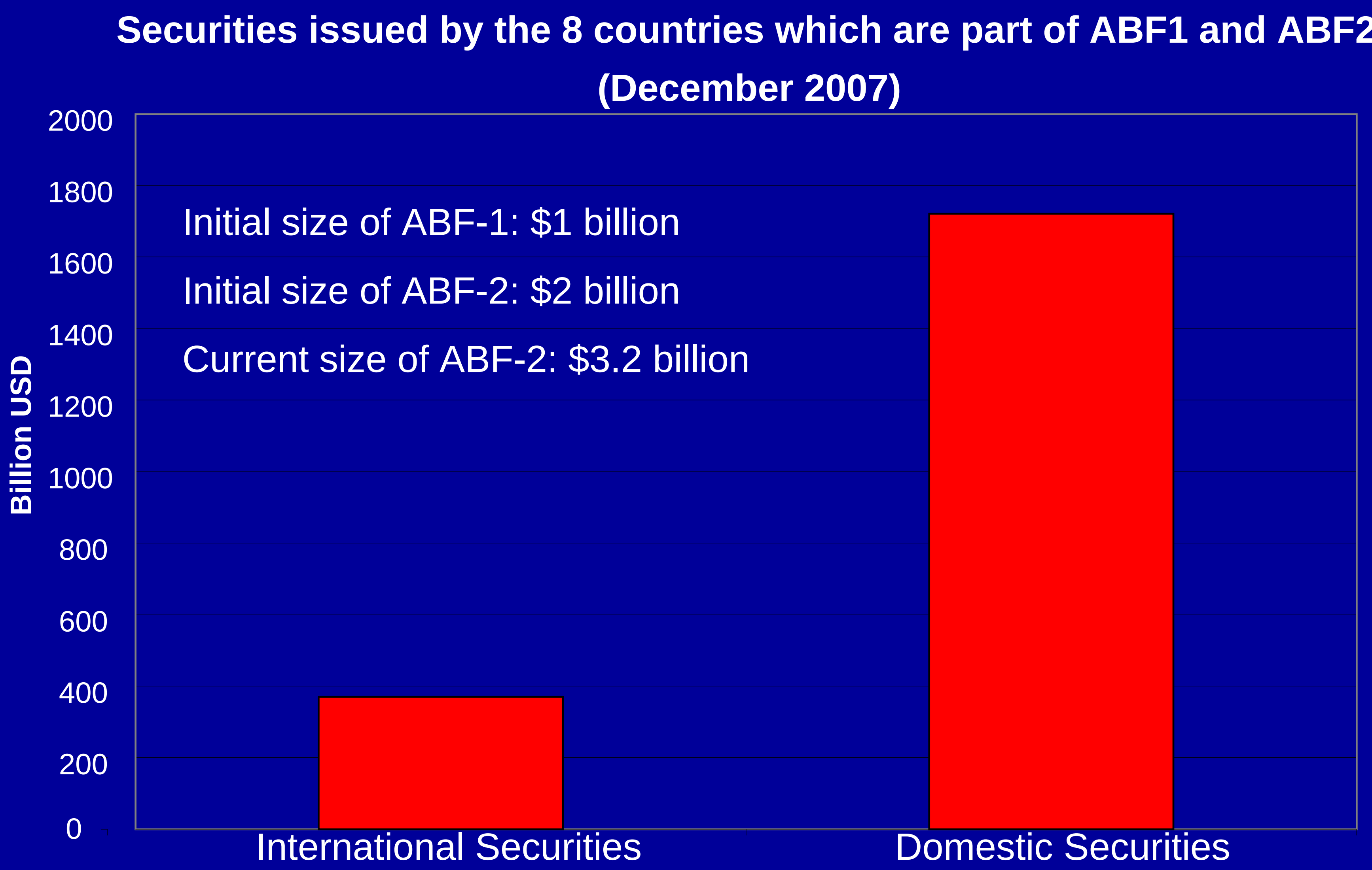


Source: Ma and Remolona (2008)

Allocation of PAIF



Is it enough?


Securities issued by the 8 countries which are part of ABF1 and ABF2
(December 2007)
Billion USD
2000
1800
1600
1400
1200
1000
800
600
400
200
0
Initial size of ABF-1: $1 billion
Initial size of ABF-2: $2 billion
Current size of ABF-2: $3.2 billion
International Securities
Domestic Securities

Is it enough?

- Size, is clearly not the key factor
  - Moreover, central banks don't trade much, so the funds are not likely to add liquidity
  - Moreover, ABF-I invests in dollar-denominated sovereign bonds and ABF-II invests in local-currency sovereign bonds
    - But these are the most developed segments of the market

So, what are they key factors?

- Learning by doing
  - Find out what the real impediment are by trying to do it
  - Catalytic role
    - Establish a benchmark
    - Provide an example for the private sector
- Strengthen creditors' rights
  - Improve and harmonize corporate governance and transparency
- Reduce constraints to market entry
  - Common rules on the access of non-resident to the local bond market
    - Several countries were forced to liberalize access to their market
  - No restrictions on the operation of foreign exchange futures markets
  - Develop derivative and hedging instruments

So, what are they key factors?

- Establish common regulations
  - Law harmonization
  - Similar supervisory structures
  - Homogenous tax treatment and market structure
  - Regional cooperation in supervision and information and data sharing
- Increase market transparency
  - Standardized and harmonized documentation
  - Improve data compilation and reporting
  - Improve price disclosure mechanisms
  - Common methodology to establish credit ratings
    - So that an A- rating from a Indonesian rating agency means the same thing as an A- rating from a Korean rating agency
  - Similar benchmark curves
- A network linking 8 markets may provide further impetus to regional integration
  - Create similar and integrated clearing and payment systems

Unintended consequence

- These are all measures aimed at reducing differences across local markets
- All these steps are equivalent to promoting capital account liberalization
  – both *de facto* and *de jure*
- This is not bad or good *per se*
  – But, we are usually told that the right sequencing is to strengthen the domestic financial system and *then* open the capital account
  – Here, we are opening the capital account in order to strengthen the financial system
- This part of the “collateral benefit” view of capital account liberalization
  – But do we have evidence supporting this collateral benefit view
- There is also the exchange rate issue

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