

## **PART 3: OFFICIAL DOLLARISATION**

### **Full and complete dollarisation: a very recent idea**

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The traditional fix vs. flex debate

Optimal currency areas

### **Costs and Benefits of Official Dollarisation (overview)**

Costs: seigniorage

losing a domestic central bank as a lender of last resort.

losing flexibility in monetary and exchange rate policy

technical costs

Benefits: disappearance of devaluation risk

economic Integration

fiscal and distributional benefits

## **Conclusion**

## **Full and complete dollarisation: a very recent idea**

when Carlos Menem who was president of Argentina proposed to officially replace the Peso with the US dollar in 1999

Ecuador (2000) → a way to cope with a widespread political and financial crisis rooted in massive loss of credibility in its political and monetary institutions)

El Salvador (2001) → after years of an unofficial peg, as a result of an internal debate, and in a context of stable macroeconomic fundamentals)

## What official dollarisation means:

The **domestic monetary base**, (all local currency coins and notes in circulation plus the vault cash reserves of banks) would be redeemed for USD or EUR bills at some predetermined conversion rate and then destroyed

**All contracts** denominated in local currency would be transformed into contracts in USD or EUR (in particular, local currency bank deposits), also at predetermined conversion rates (which may, but do not necessarily, equal the rate for coins and bills).

→ **the local currency would be completely replaced** by the USD or EUR, not just by a dollar or euro equivalent.

**dollarisation would be unilateral. (no U.S. gov or ECB permission).**

→ as a consequence, give up any power to conduct independent monetary policy and would implicitly accept the monetary policy decisions of the U.S. Federal Reserve or the ECB.

**Alternatively:** try to **negotiate a Treaty of Monetary Association** with the USA or the EMU.

Such a treaty would entitle the dollarising country to some transfers from the U.S. government (and, ultimately, from the U.S. taxpayer) as compensation for the loss of monetary policy independence.

→ Official Dollarisation ≠ European Monetary Union:

- Euro area groups developed countries that differ in its very nature from developing small open
- all countries within EMU preserve some influence (albeit limited) over monetary policy → unilateral dollarisation ≠ currency unions
- the Euro is allowed to float against other major reference currencies → the rigidity of the new arrangement is only restricted to the loss of flexibility within the group.

## **There is a great myth about dollarisation.**

the debate on full dollarisation suffers from a lack of relevant experiments

main experience: **Panama**, (dollarised since 1904).

### **Dollarised countries are very small**

- only 17 independent countries are officially dollarised or have two currencies (more if territories and dependencies are included)
- many are city states fully integrated to their neighbours' economies (e.g. Andorra, Monaco, Lichtenstein)
- The total population of all of these countries put together (39 million inhabitants) is similar to the population of Spain or Poland.
- Average GDP does not exceed USD 3.6 billion (2002).

Ecuador, Guatemala, El Salvador and Panama, alone account for 93 % of GDP and 88 % of the total population.

## Independent Countries Officially Dollarised or Having a Dual Currency (Jan. 2005)

Countries	Population 2002	GDP* 2002	Legal Currency	Local coins	Since
Andorra	73 000	1,2	Spanish peseta and French franc replaced by the Euro		2002 (euro) 1278 (franc and peseta)
East Timor	857 000	0,2	U.S. dollar		2000
Ecuador	13 100 000	24,3	U.S. dollar	x	2000
El Salvador	6 500 000	13,0	U.S. dollar Progressive disappearance of the colon		2001
Guatemala	12 000 000	23,2	Dual currency : American dollar and the quetzal		2001
Kiribati (Gilbert Islands)	82 000	0,1	Sterling pound replaced by the Australian dollar		1979 (Australian dollar) 1943 (Sterling pound)
Liberia	3 300 000	0,5	Dual currency : American dollar and Liberian dollar		1945
Liechtenstein	31 000	0,7	Suisse Franc		1921
Marshall Islands	61 000	0,1	U.S. dollar		1944
Micronesia	120 000	0,2	U.S. dollar		1944
Monaco	32 000	0,8	French franc replaced by the Euro	x	2002 (euro) 1865 (franc)
Nauru	11 000	0,1	Australian dollar		1914
Palau	19 000	0,2	U.S. dollar		1944
Panama	2 900 000	9,5	U.S. dollar	x	1904
San Marino	26 000	0,1	Italian lira replaced by the Euro	x	2002 (euro) 1897 (lira)
Tuvalu (Ellice Islands)	11 000	0,0	Australian dollar		1892
Vatican City	1000	0,0	Italian lira replaced by the Euro	x	2002 (euro) 1929 (lira)

(Minda 2005)

**these small countries don't collect a lot of data, so that it is difficult to know much about their economic record.**

Edwards (2001, NBER wp 8274), 1970-1998 period

- GDP growth has been significantly lower in the dollarised countries than in non-dollarised ones.
- inflation has been statistically lower under dollarisation
- no statistical difference in the behaviour of fiscal deficits or current account balances across dollarised or non-dollarised nations

### **Panama:**

- inflation has been statistically lower in Panama,
- no significant difference in growth
- the median fiscal deficit has been statistically higher in Panama than in the rest of Latin American nations.
- almost permanently under the tutelage of the International Monetary Fund
- U.S. interest in maintaining the Canal Zone free of political turmoil

BUT: very small number of observations for the dollarised group, low quality of data  
→ results subject to stronger caveats than usual, should be interpreted with care.

## The traditional fix vs. flex debate

full dollarisation  $\approx$  "extra-fix"

main implications of the Mundell-Fleming-Dornbusch model:

→ in order to minimize output fluctuations:

fixed exchange rates if nominal shocks are the main source of economic disturbance

flexible exchange rates if real shocks are the main source of economic disturbance

→ "incompatibility triangle":



more open capital accounts  $\Rightarrow$  monetary policies cannot be aimed both at maintaining stable exchange rates and smoothing cyclical output fluctuations due to real shocks



## Optimal currency areas

The role of the nominal exchange rate as an instrument to isolate the economy against real shocks is at the centre of the optimal currency area approach to monetary integration.

### The traditional Optimal Currency Area (OCA) theory (1960s)

→ trade gains-shock insulation trade-off

<b>Benefits:</b>	<b>Costs:</b>
<ul style="list-style-type: none"> <li>○ <i>reduction in transaction costs between member countries as a result of the use of a common currency,</i></li> <li>○ proportional to the degree of economic integration (trade flows) within the union (McKinnon).</li> </ul>	<ul style="list-style-type: none"> <li>● <i>loss of the nominal exchange rate as an adjustment mechanism against real macroeconomic shocks that alter the equilibrium real exchange rate vis à vis the rest of the union.</i></li> <li>● less important the higher the degree of factor (labour and capital) mobility within the region (Mundell), and the higher symmetry of shocks between member countries (Kenen).</li> </ul>

- eliminate any legal restriction to **labour mobility** in a currency union, but there are other barriers such as culture or language (Euro zone).
- in the absence of factor mobility, a develop scheme of **fiscal transfers** between member countries.
- the union can **float against other currencies** → shocks elsewhere in the world will entail some sort of disequilibria only to the extent that its effect differs across member countries
- OCA criteria may be endogenous

### in the particular case of **unilateral dollarisation**

- priority to credibility and financial fragility issues, not to OCA considerations
- no relaxation of the existing legal impediments to labour migration.
- adopting the currency of a country with a much higher per capita income makes labour integration even less likely.
- Asymmetric response to shocks
- OCA considerations still play an important role at the time of choosing the right reference currencies, (EUR for Eastern European economies, USD for most Latin American economies)

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## **Costs and Benefits of Official Dollarisation (overview)**

Most are relative costs and benefits which depend on:

- the initial situation (esp. de facto dollarisation)
- the benchmark:
  - Currency board (how hard to fix unilaterally)
  - Monetary Unification
  - Central Bank (and more or less managed float)

Involve:

- Seigniorage revenues and other fiscal issues
- Monetary policy flexibility and credibility
- Lender of last resort function
- Risks and interest rates

## Costs: seigniorage

adopting a foreign currency  $\Rightarrow$  losing seigniorage

Conventional analysis of the cost of adoption of foreign currency (Fischer 1982) has focused on the **gross costs** of official dollarisation.

- a one-time **stock cost** in terms of the initial amount of new currency that has to be acquired
- a continuing **flow cost** in terms of seigniorage revenues forgone

The **gross stock cost** is the cost of initially obtaining the dollar notes and coins necessary to replace national currency in circulation.

**In the 1970s:** domestic-currency notes and coins in circulation are **8 %** of GNP (approximately the average for 1976, according to Fischer 1982)

$\rightarrow$  prohibitively costly.

$\rightarrow$  the case for national money seemed firmly established.

### Since then:

financial, technological and information innovation  $\Rightarrow$   $\downarrow$  share of currency in GDP.

high level of de facto dollarisation  $\Rightarrow$  low seigniorage revenue

in seven Latin American countries in the 1991-97 period this ratio has been **4.6%**.

The **flow cost** of dollarisation is the continuing loss of seigniorage year after year.  
 → measured as the change in reserve money in a given year (in percent of GDP).  
 or the revenue derived from the interest on exchange reserves

<b>Estimated Stock vs. Flow Costs of Official Dollarisation in Selected Latin American Countries, 1991-97</b>			
<b>Country</b>	<b>Period</b>	<b>Stock cost: currency / GDP</b>	<b>Flow cost: <math>\Delta</math>reserve money / GDP</b>
Argentina	1991-96	3.7 %	0.5 %
Brazil	1994-96	2.1 %	1.3 %
Bolivia	1991-97	4.6 %	1.4 %
Ecuador	1992-97	12.2 %	7.4 %
El Salvador	1991-96	4.1 %	2.3 %
Mexico	1991-97	3.3 %	0.8 %
Peru	1991-97	2.1 %	2.5 %
<i>Average</i>		4.6 %	2.3 %

Source: Bogetic (2000)

BUT: is the *present* level of seigniorage revenue a correct measure of “flow cost” of dollarisation? (Chang and Velasco 2000)

dollarise in order to lower inflation rate

→ *present* level of seigniorage  $\neq$  revenue the *opportunity* cost of dollarisation

→ one should focus on the seigniorage revenue that would have been earned at the new, lower inflation rate

An officially dollarised country could recapture seigniorage through an agreement with the country issuing the currency it

→ the ***flow cost*** of dollarisation will be less than the gross flow cost

→ Namibia and Lesotho, which are bimonetary rather than officially dollarised, have such a seigniorage sharing agreement, with South Africa.

## **Costs: losing a domestic central bank as a lender of last resort.**

When there is a domestic currency that can be printed freely, the central bank always has the ability to meet liquidity demand by lending cash to the banking sector.

Officially dollarised system (or a currency board arrangement)

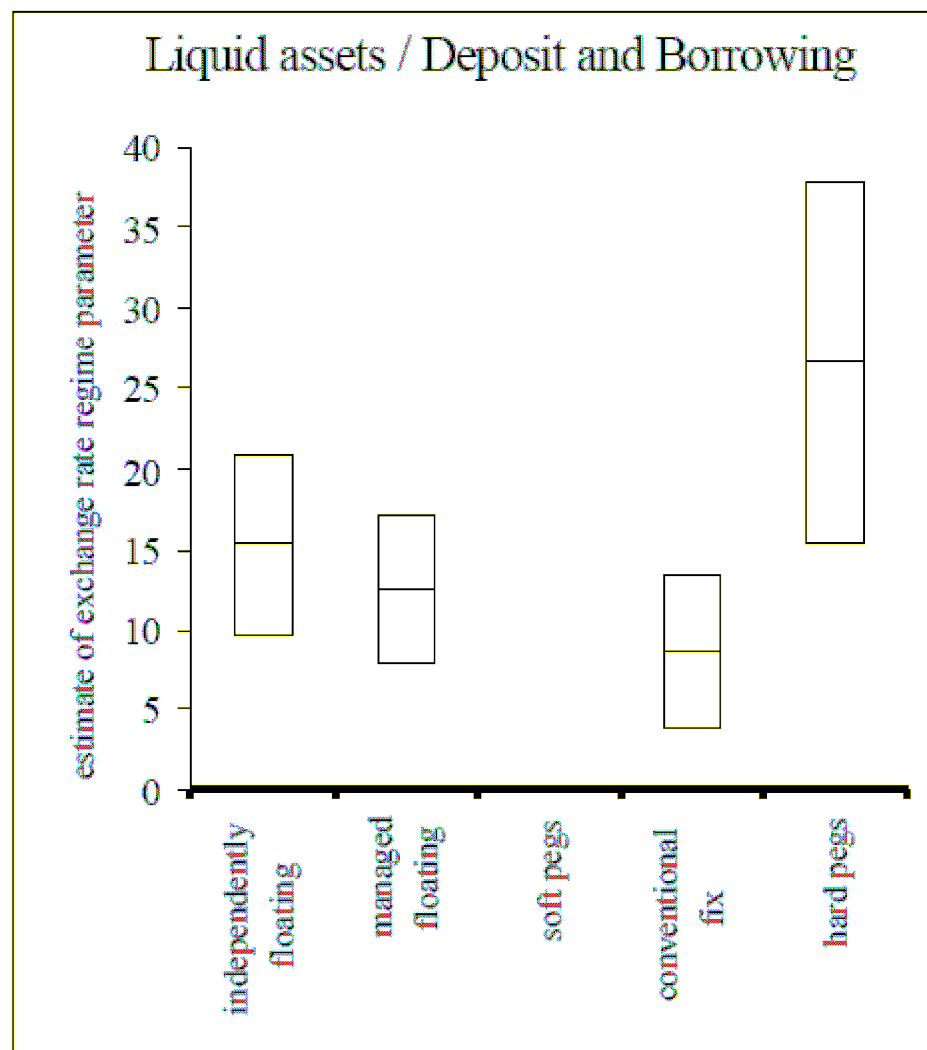
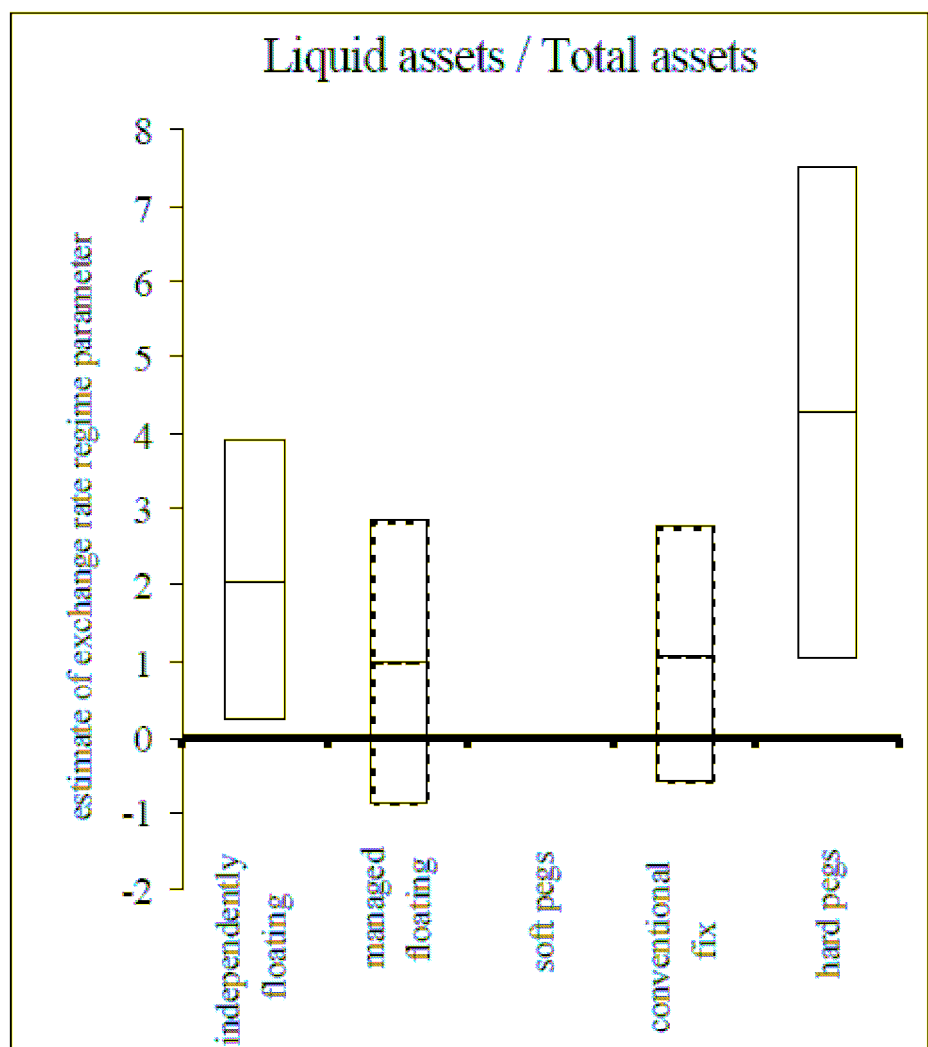
→ no ability to print currency → no unlimited resources to lend

→ **more frequent and/or more severe bank runs?**

- Prompt domestic banks to arrange appropriate credit lines from foreign banks.
- Accumulate reserves before official dollarisation (possibly as part of a seigniorage sharing arrangement).
- central banks in industrialized countries do not generally perform LLR function by printing currency: they borrow instead.
- LLR might be a cause of crises (moral hazard)
- lender of last resort might not be able to take the “right” action in times of crisis because of heavy political pressure → dollarisation is a kind of commitment



# Banks in OD or CBA keep relatively more liquid assets in self-protection



Bunda & Desquilbet (2003)

## **Costs: losing flexibility in monetary and exchange rate policy**

the national government cannot devalue the currency or finance budget deficits by creating inflation because it does not issue the currency.

**the option value of issuing fiat debt** (which can be defaulted on through inflation) is too high to surrender (Sims 2001).

But

→ both sovereign debt and private debt in emerging market economies are often partly dollarised already

→ “tying one’s hands” because of past misuse of flexibility

**linking business cycles in the dollarising country to those in the country whose currency it uses (EU, USA...).**

OCA argument

BUT: extensive de facto dollarisation ⇒ possible contractionary effects of devaluation.

## Technical costs

- converting prices, computer programs, cash registers, and vending machines, from domestic currency to the foreign currency chosen.
- revising contracts

→ one-time expenses that will vary considerably from country to country.

## **Benefits: disappearance of devaluation risk**

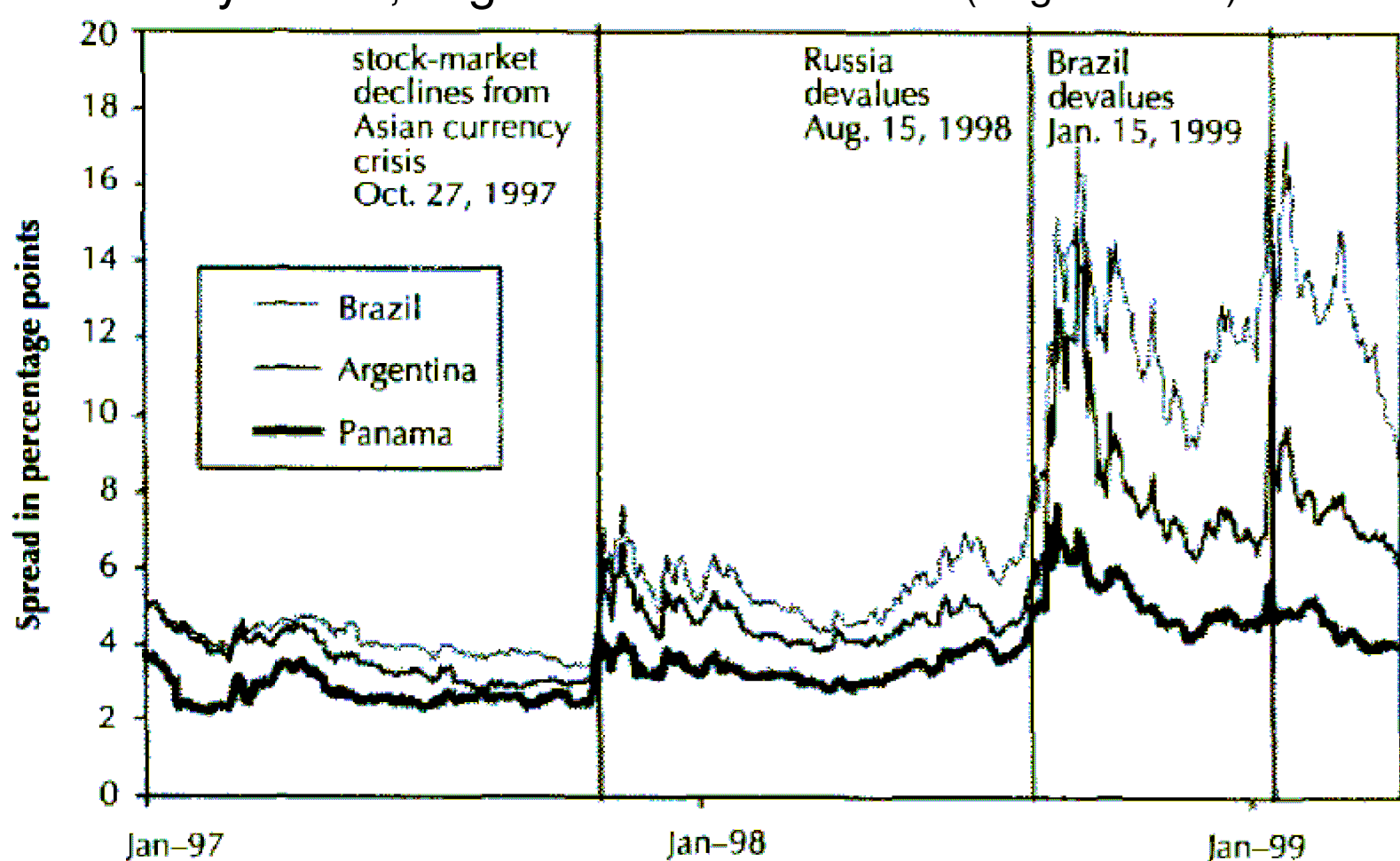
dollarisation ⇒ elimination of the national currency  
⇒ elimination of the risk of devaluation  
⇒ reduction of country risk premiums  
⇒ lower interest rates

because of

- elimination of default risk due to currency mismatches and liability dollarisation
- elimination of default risk due to capital controls that the government might impose in order to defend the value of the national currency in case of speculative attack

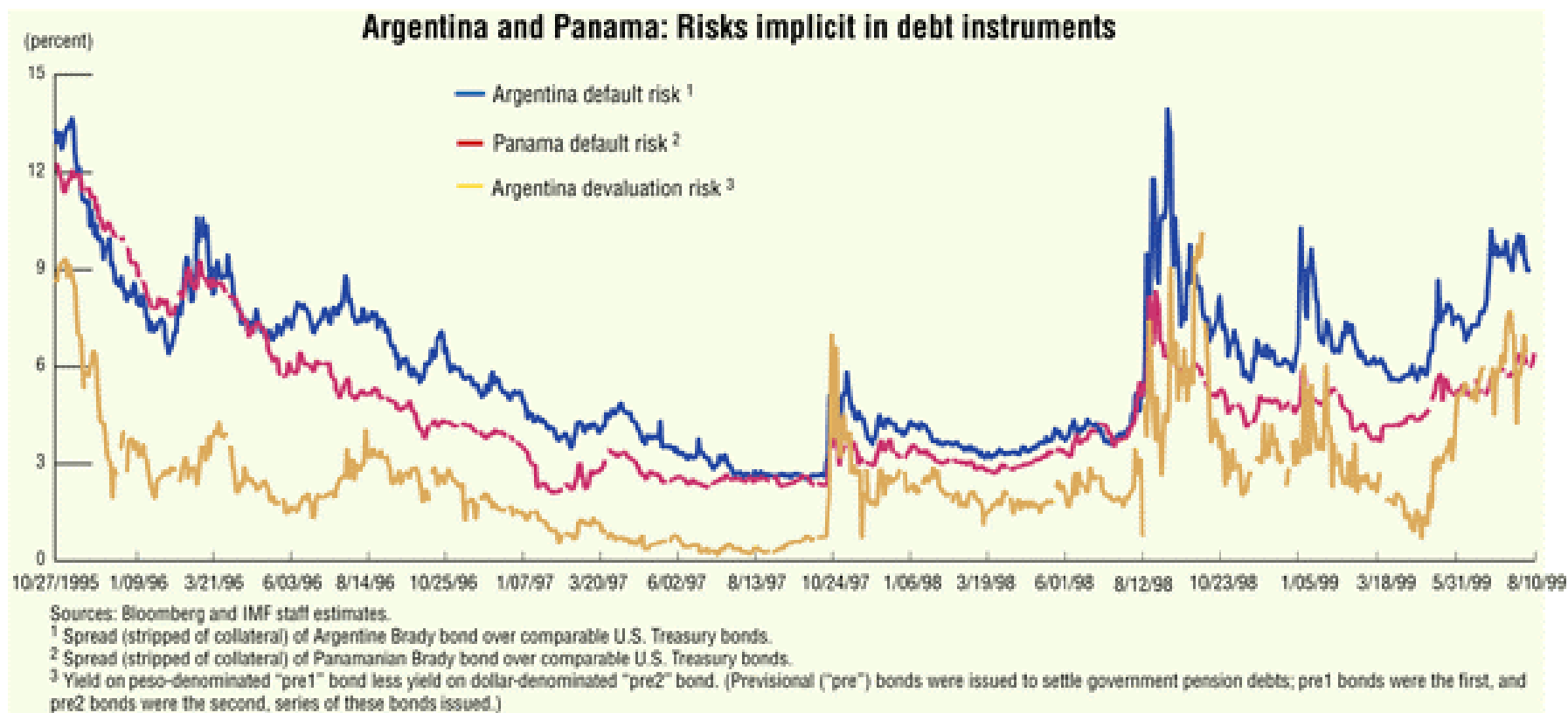
see government USD bonds spreads of Brazil (with a central bank), Argentina (with a currency board), and Panama (fully dollarised country with no central bank) over and above the U.S. Treasury bonds.

## Spread versus US Treasury securities for USD government Bonds issued by Brazil, Argentina and Panama (Bogetic 2000)



→ “To the extent that this differential is, indeed, due to Panama's fully dollarized system, full dollarization would also reduce the country risk and, therefore, the cost of foreign borrowing to a dollarizing country” (Bogetic 2000)

## Sovereign risk and devaluation risk move together.



- no *causal* link from devaluation risk to sovereign risk, or vice versa.
- *common factors*: e.g., contagion general "flight to quality" by investors (originally unrelated to fears of devaluation) would raise both the measured risk of default and the risk of devaluation.

→ Dollarisation can help reduce risk premiums, but only to a limited extent.

(Berg and Borensztein 2000)

Panama's cost of capital in international markets has not been the lowest in Latin America.



Fig. 1. Sovereign bonds spreads: Chile and Panama, 1999–2001.

Edwards (2001)

## Benefits: Economic Integration

→ increased level of **trade integration** of the dollarising economy with the U.S. Economy / of the euroising economy with the Euro-zone

because of: reduced transactions costs

the elimination of uncertainty about exchange rates.

(endogenous OCA criteria)

increased trade is the *primary* benefit of joining a currency union (or dollarising).

→ increased level of **financial integration** between the dollarising country and the United States / the euroising economy and the Euro-zone

changes in supervisory and regulatory policies → changes incentives of financial intermediaries → higher levels of investment and financial integration.

(e.g. Dollarisation can make long-term financing available where it currently is not)



## **Benefits: fiscal and distributional benefits**

- **dollarisation may improve government finances**

- increasing real revenue:  
↓ inflation  $\Rightarrow$  ↓ loss of purchasing power of taxes assessed now but paid later (an Olivera-Tanzi effect).
- fostering fiscal discipline by eliminating the government's power to create inflation
- ↓ external cost of borrowing by reducing currency and country risks

- **favourable distributional benefits.**

the young, financially sophisticated, and wealthy are often better able to preserve and expand their wealth during periods of high inflation than are the old (such as pensioners), the poor, and, generally, people living on fixed incomes.

(time, knowledge, effort, minimum threshold level of transaction or investment in interest bearing securities)

→ OD ends the redistribution of wealth that arise during high inflations.

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- official dollarisation is not a miracle cure for monetary, financial and fiscal instability
- initial conditions matter a lot, especially de facto dollarisation

The debate has changed since the Argentine crisis in 2002.

→ From fear of floating to optimal floatation (Edwards 2001)

→ **De-dollarise** (Ize and Levy-Yeyati 2004, 2005)

### **1- revise regulation so as to fully internalise the risks of dollar intermediation and provide more room for monetary policy**

- gradually improve the central bank's capacity to conduct an independent and sound monetary policy (inflation targeting)
- Prudential reform (tightening prudential norms on dollar loans to the non tradable sector)

### **2- promote the use of the peso (and peso-based substitutes to the dollar)**

- stabilize peso interest rates and enhance the transparency of monetary policy;
- switch public debt management from dollars towards to price-indexed peso-denominated instruments (to help deepen the local currency markets).

### **3- involve International Financial Institutions**

- de-dollarise IFI lending
- make de-dollarisation part of the standard conditionality