NOTES ON A GLOBAL BLITZ SUDDEN STOP

Guillermo Calvo

April 29, 2020

"Are you talking about the new normal of an hour ago, or is there a new new normal right now?"

HOWEVER, THERE ARE IMPORTANT PARALELLS WITH PREVIOUS CRISES

CASTING LIGHT ON CURRENT SITUATION

which I label Global Blitz Sudden Stop

GLOBAL BLITZ SUDDEN STOPS ARE SEVERE SYSTEMIC SUDDEN STOPS

THAT OCCUR IN THE BLINK OF AN EYE GENERATING FINANCIAL AND REAL PANDEMONIUM!

- **Global Blitz Sudden Stops, GBSS**, generate, mostly, **Flight to US Official Obligations** (**Flight to Quality**) because the **USD is the dominant global unit of account** and the USD global price level is expected to be stable. (This relates to the ***Price Theory of Money***).
- **Flight to Quality triggers Sudden Stops in the rest of the global economy**, especially in weak Emerging Market economies, EMs.
- **The global redirection of flows is, on the whole, assymetric and favorable to Advanced Markets.**

FLIGHT TO QUALITY

Two Sides of the Same Coin!

- **STRONGER CURRENCIES IN ADVANCED MARKETS**
  - **Deflation, Fisher's Debt Deflation/ Domestic-Debt Ballooning**
- **WEAKER CURRENCIES IN EMERGING MARKETS**
  - **Systemic Sudden Stop, Inflation**

FLIGHT TO QUALITY

Federal Funds and Treasuries

PANDEMONIUM IN US TREASURIES

- **As GBSS hits**, US real monetary balances and prices hardly react and, thus, **Flight to Quality swerves towards US Treasury Obligations**,
- At the same time, however, **EMs hit by Sudden Stop, sell international reserves, mostly US Treasuries**.
- This generated **price volatility and lowered Treasuries' liquidity.**
- **Triggering the intervention of the Fed, which in Lehman's and the present cases amounted to a <u>large infusion of base money</u> (M_0).**

PANDEMONIUM IN US TREASURIES

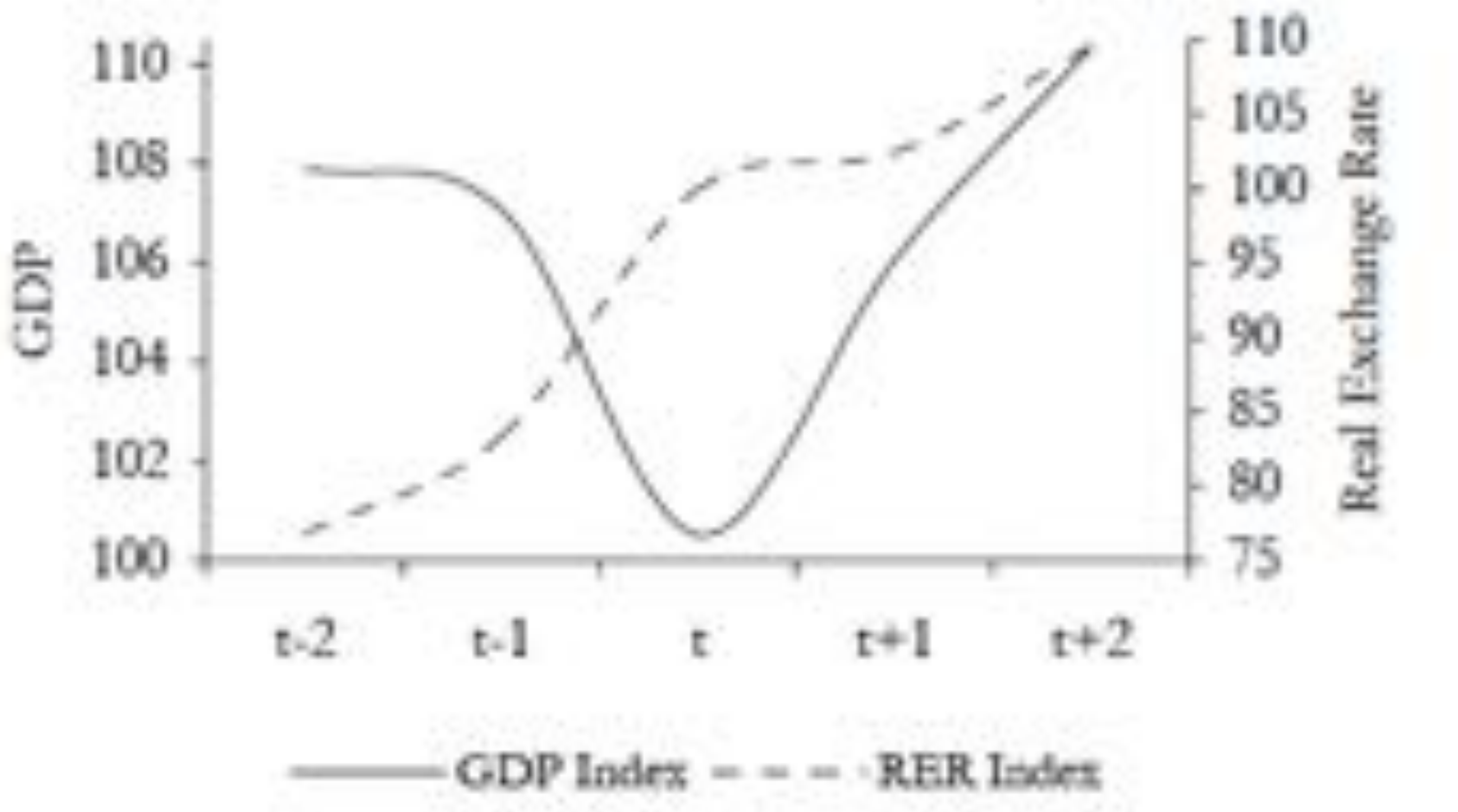
Volatility of 10-Year Treasury Notes

FEDERAL RESERVE: TOTAL ASSETS

EMERGING MARKETS

FLIGHT TO QUALITY

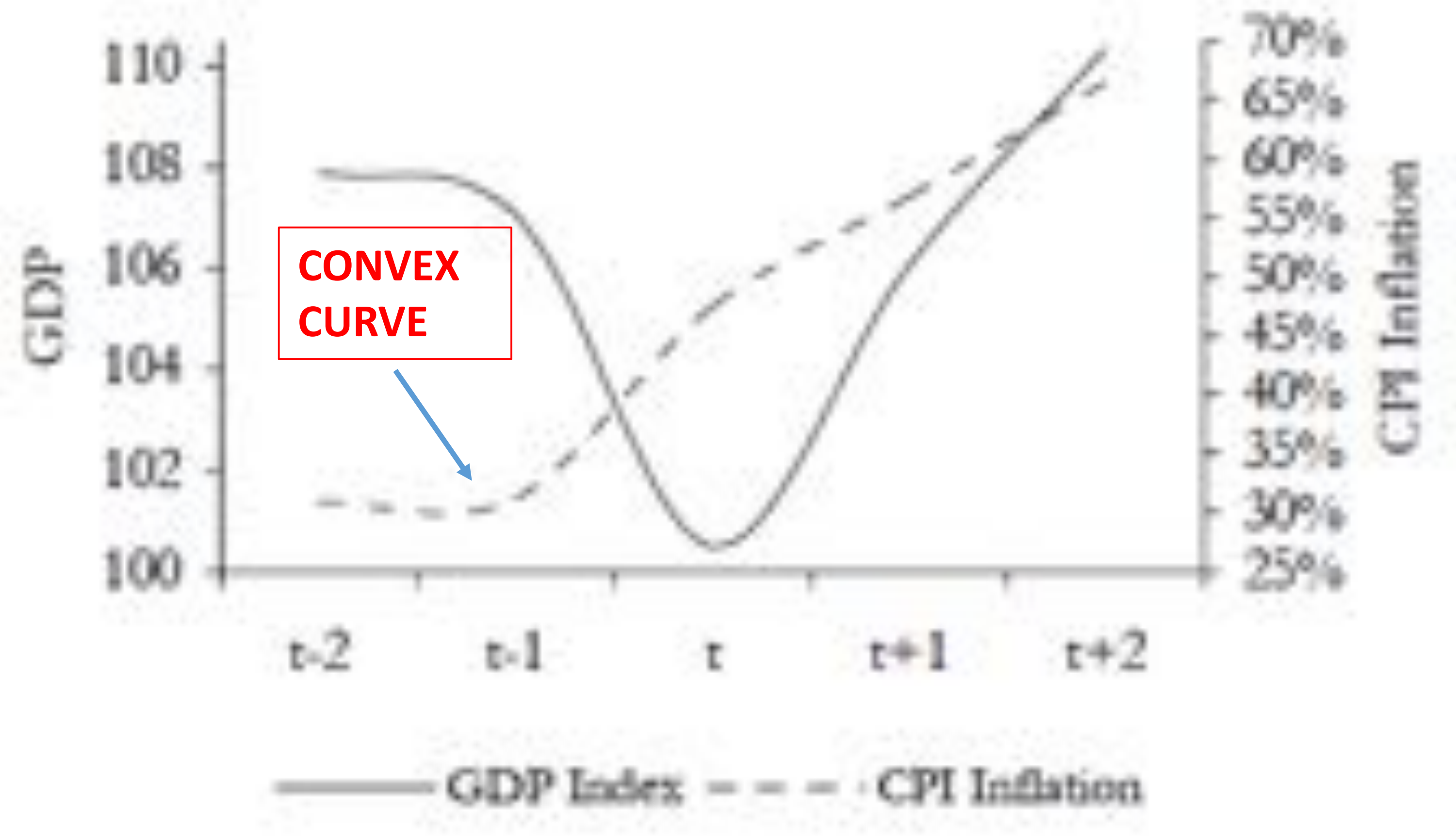
EM Systemic Sudden Stop and Real Devaluation



Source: G. Calvo, A. Izquierdo, E. Talvi, "Phoenix Miracles in Emerging Markets: Recovering without Credit from Systemic Financial Crises," NBER WP 12101, March 2006

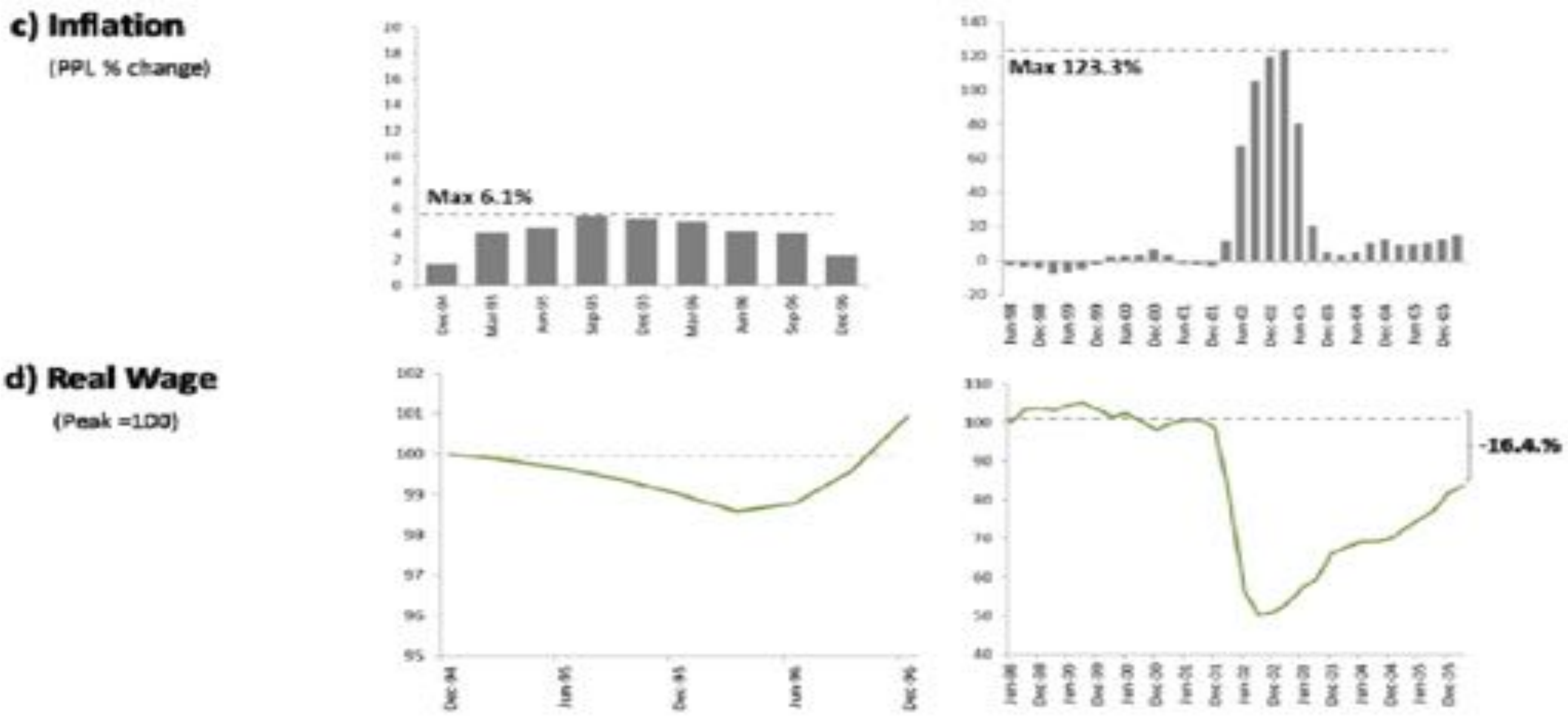
FLIGHT TO QUALITY

EM Systemic Sudden Stop and Inflation



Source: G. Calvo, A. Izquierdo, E. Talvi, "Phoenix Miracles in Emerging Markets: Recovering without Credit from Systemic Financial Crises," NBER WP 12101, March 2006

ARGENTINA: Inflation and Real Wage



Source: G. Calvo et. al., Jobless Recoveries During Financial Crisis: Is Inflation the Way out? NBER WP 19683, Nov. 2013

LESSONS AND CAVEATS

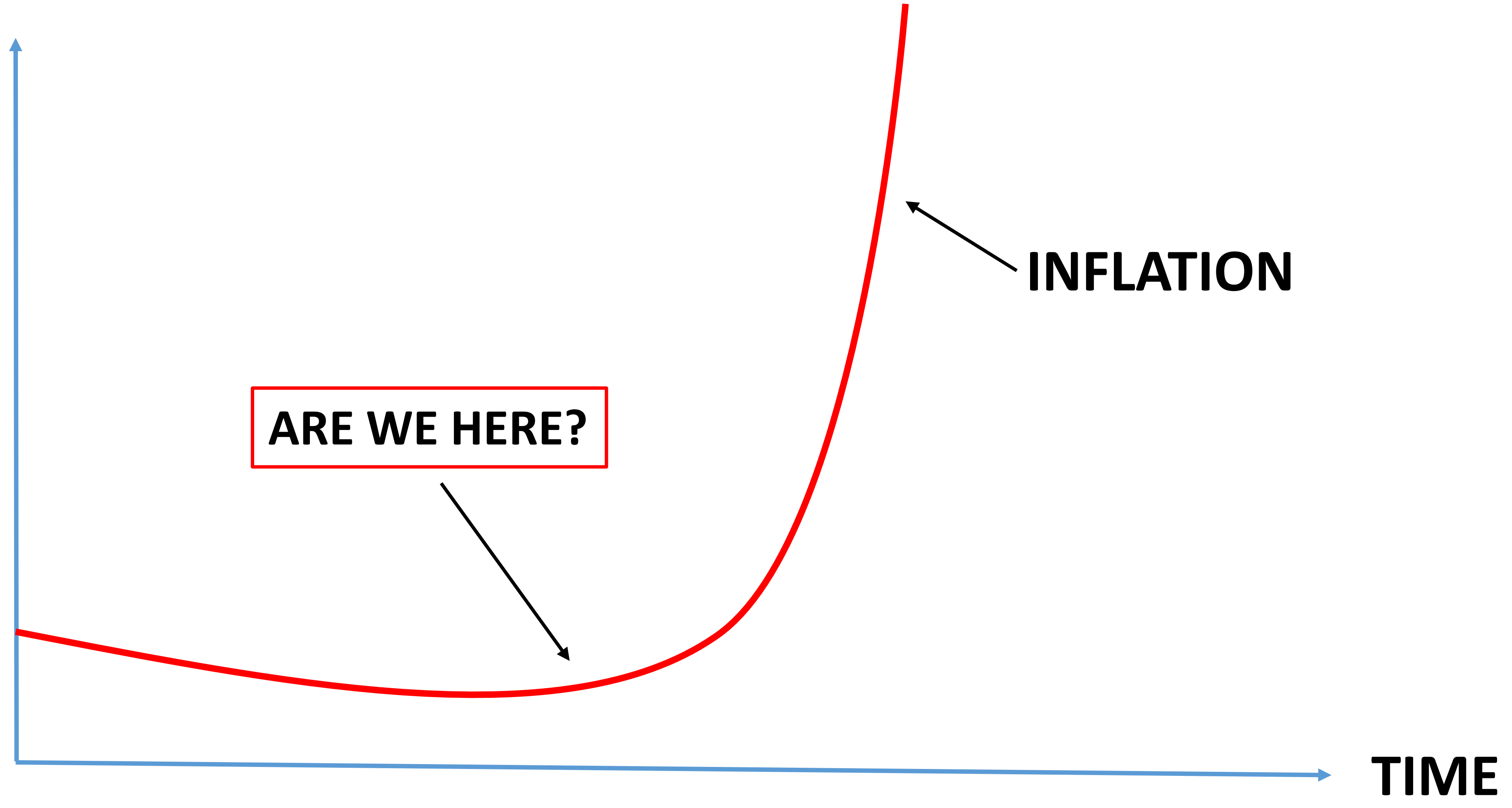
- **Inflation spikes** associated with Sudden Stops in previous episodes **did not give rise to high inflation**.
- Moreover, **inflation helped to recover full employment by means of real depreciation and lower real wages**.
- **However, covid-19 fiscal constraints, and Convex Inflation Curve may induce Helicopter Money and more pronounced Monetary Complacency.** (More on this below)

RISKS OF FEAR OF FLOATING

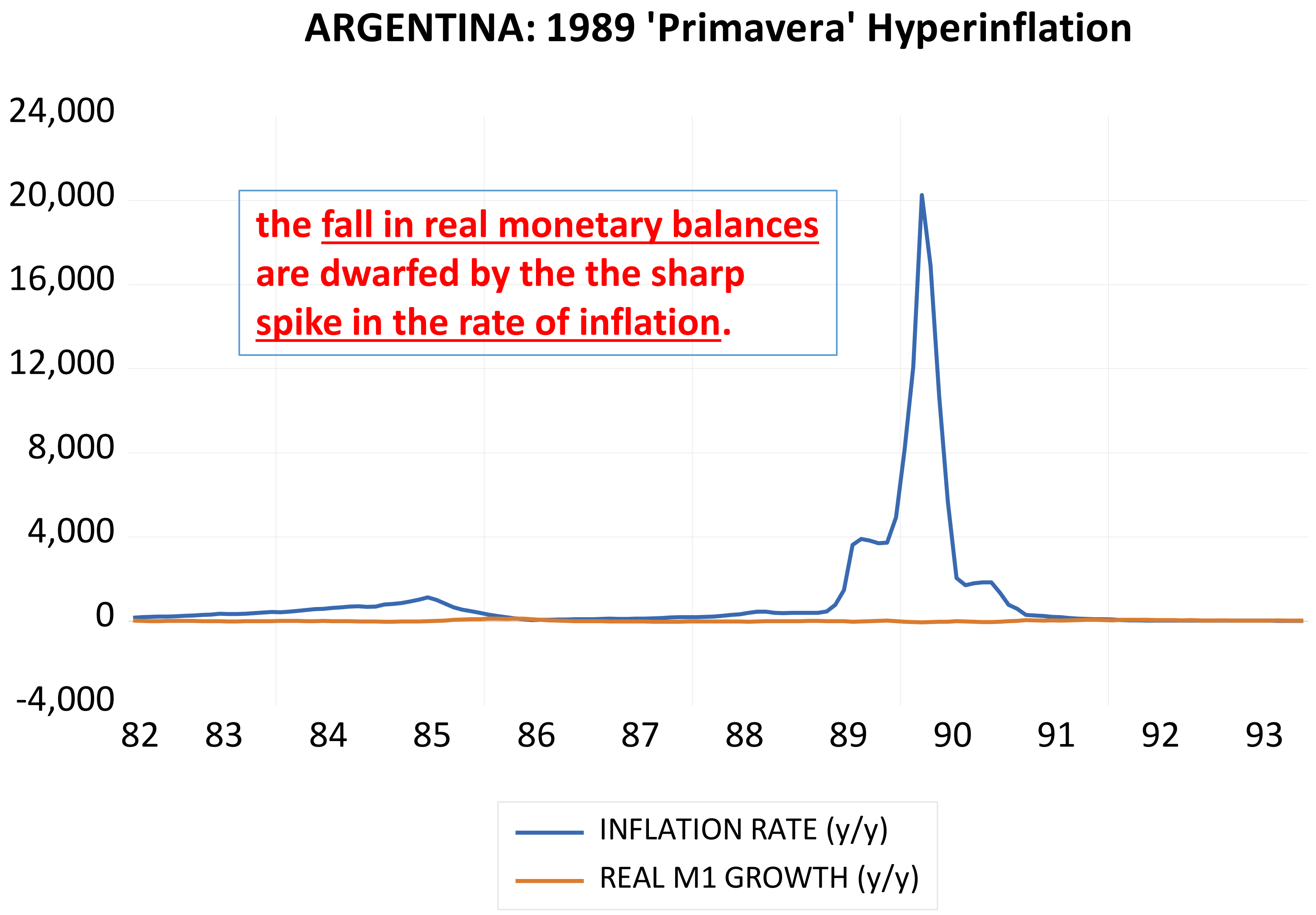
CAPITAL FLIGHT & BOP CRISIS

HYPERINFLATION

INFLATION TRAP 1: THE CONVEX CURVE !!



INFLATION TRAP 2: Interest-Bearing Money

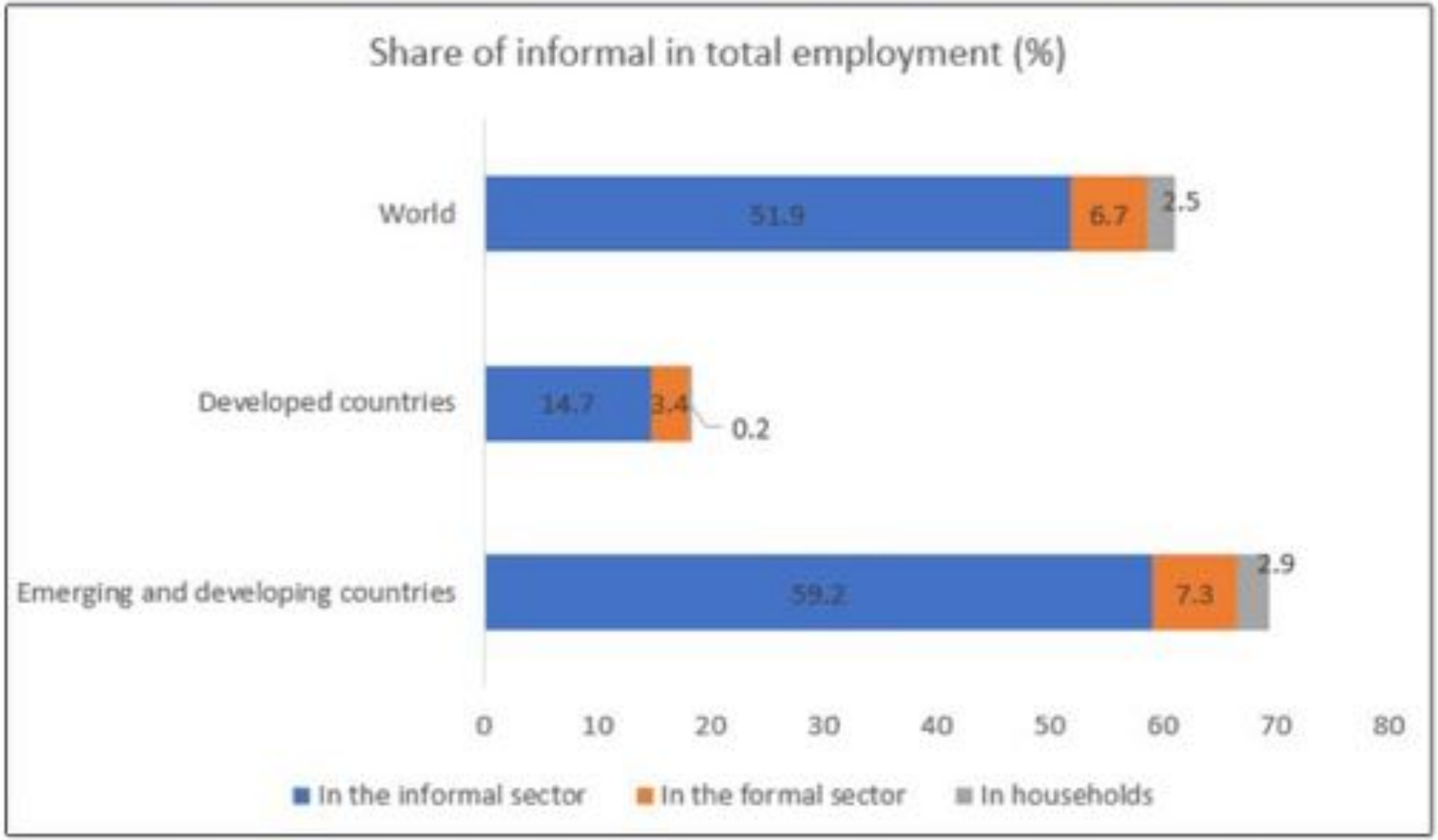


Source: BCRA, monthly observations

LOCKDOWN AND FISCAL POLICY IN EMs

- Massive unemployment and **sharp income redistribution against informal sector,** especially, **wage earners and SMEs**.
- **In the short run, Central Bank finance is the primary option**.
  - **Without fiscal space, this may give rise to**
    - **Controls on Capital Outflows,**
    - **Debt Default or**
    - **Interest-Bearing Money → Hyperinflation**.

Figure 1: Informal workers form the bulk of total employment across the world



Source for all figures: ***Women and Men in the Informal Economy: A Statistical Picture, Geneva: ILO, 2018.***

EMERGING MARKETS' BALANCING ACT

In general, EMs have small conventional fiscal space. Thus,

- **Seigniorage** is a convenient and possibly efficient instrument,
  - but it **runs the risk of causing hyperinflation**. **Beware of Inflation Traps!**
- **Fiscal policy** will involve **controversial income redistribution**
- **Seigniorage + Fiscal: (1) inflation spike that lowers real official obligations plus (2) transfers to the informal sector.**
  - **Warning: trade unions may throw a wrench in the works!**

INFLATION TARGETING

- **After the initial shakeups, it will be very important to keep inflationary expectations under control.**
- EMs will likely keep depending on seigniorage. Thus, falling into a **severe Inflation Trap could be devastating.**
- **It may destroy the domestic payment system**, interfering with, e.g.,
  - Firms' working capital
  - Domestic transfers to the informal sector that are likely to persist
- **IT need not be rigid but it has to be able to send a credible message about the target inflation rates** that the central bank and the rest of government are seriously committed to achieve.

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COMPLEMENTARY MATERIAL

BLITZ SUDDEN STOPS: Examples

These are cases in which SS happen in a blink of an eye, and can paralyze the payments grid. Hard to anticipate by policymakers!

- Repo interest rate spike in September 2019. See hyperlink.
- High volatility of T-Notes during Flight to Quality (see hyperlink), which prompted sizable Fed Currency Swaps, etc.
- Liquidity crunch on mortgage originators while they wait for Freddie Mac *et al* **guarantees**. See hyperlink.
- Liquidity crunch on recently US unemployed who do not have health insurance coverage until their unemployment is certified. See hyperlink.
- **Long lines of retirees in Argentina are formed to get cash from banks because many retirees are cyber-averse, and informal outlets do not accept credit/debit cards**. See hyperlink.

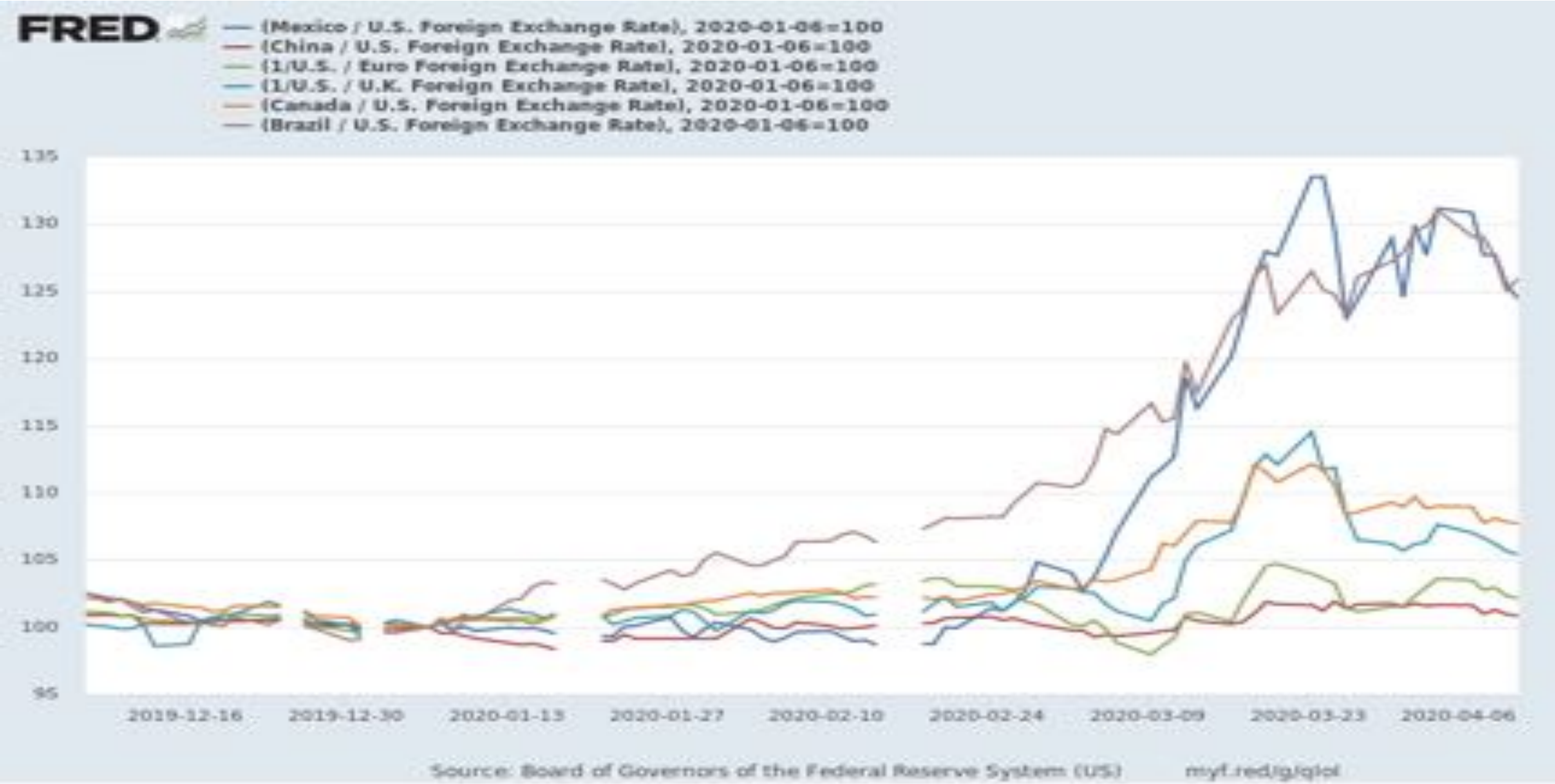
CURRENT ACCOUNT IN EMs (% GDP) 1998/2019

Country Group Name	Subject Descriptor	Units	Scale	Series-specific Notes	1998
Emerging and developing Asia	Current account balance	Percent of GDP			2.711
Emerging and developing Europe	Current account balance	Percent of GDP			-2.278
Latin America and the Caribbean	Current account balance	Percent of GDP			-4.026
Middle East and North Africa	Current account balance	Percent of GDP			-3.476
Sub-Saharan Africa	Current account balance	Percent of GDP			-3.021

Country Group Name	Subject Descriptor	Units	Scale	Series-specific Notes	2019
Emerging and developing Asia	Current account balance	Percent of GDP			-0.080
Emerging and developing Europe	Current account balance	Percent of GDP			-0.925
Latin America and the Caribbean	Current account balance	Percent of GDP			-1.947
Middle East and North Africa	Current account balance	Percent of GDP			-0.534
Sub-Saharan Africa	Current account balance	Percent of GDP			-3.694

INTERNATIONAL RESERVES (excluding China)

Source: World Bank and FRED. Countries: Australia, Brazil, Canada, Eurozone, India, Korea, Mexico, Poland, Saudi-Arabia, Turkey.


FRED
(Mexico / U.S. Foreign Exchange Rate), 2020-01-06=100
(China / U.S. Foreign Exchange Rate), 2020-01-06=100
(1/U.S. / Euro Foreign Exchange Rate), 2020-01-06=100
(1/U.S. / U.K. Foreign Exchange Rate), 2020-01-06=100
(Canada / U.S. Foreign Exchange Rate), 2020-01-06=100
(Brazil / U.S. Foreign Exchange Rate), 2020-01-06=100
135
130
125
120
115
110
105
100
95
2019-12-16
2019-12-30
2020-01-13
2020-01-27
2020-02-10
2020-02-24
2020-03-09
2020-03-23
2020-04-06
Source: Board of Governors of the Federal Reserve System (US)
myf.red/g/qIol

SELF-INFLICTED HYPERINFLATION
Interest-Bearing Money

FISCAL DEFICIT + INTEREST ON MONEY = $g + sm$ (1)

SEIGNIORAGE = $\pi m = \pi e^{-\gamma(\pi - s)}$ (2)

AT STEADY STATE: (1) = (2)

m=real monetary balances
s=interest rate on money
g=fiscal deficit
π=rate of inflation

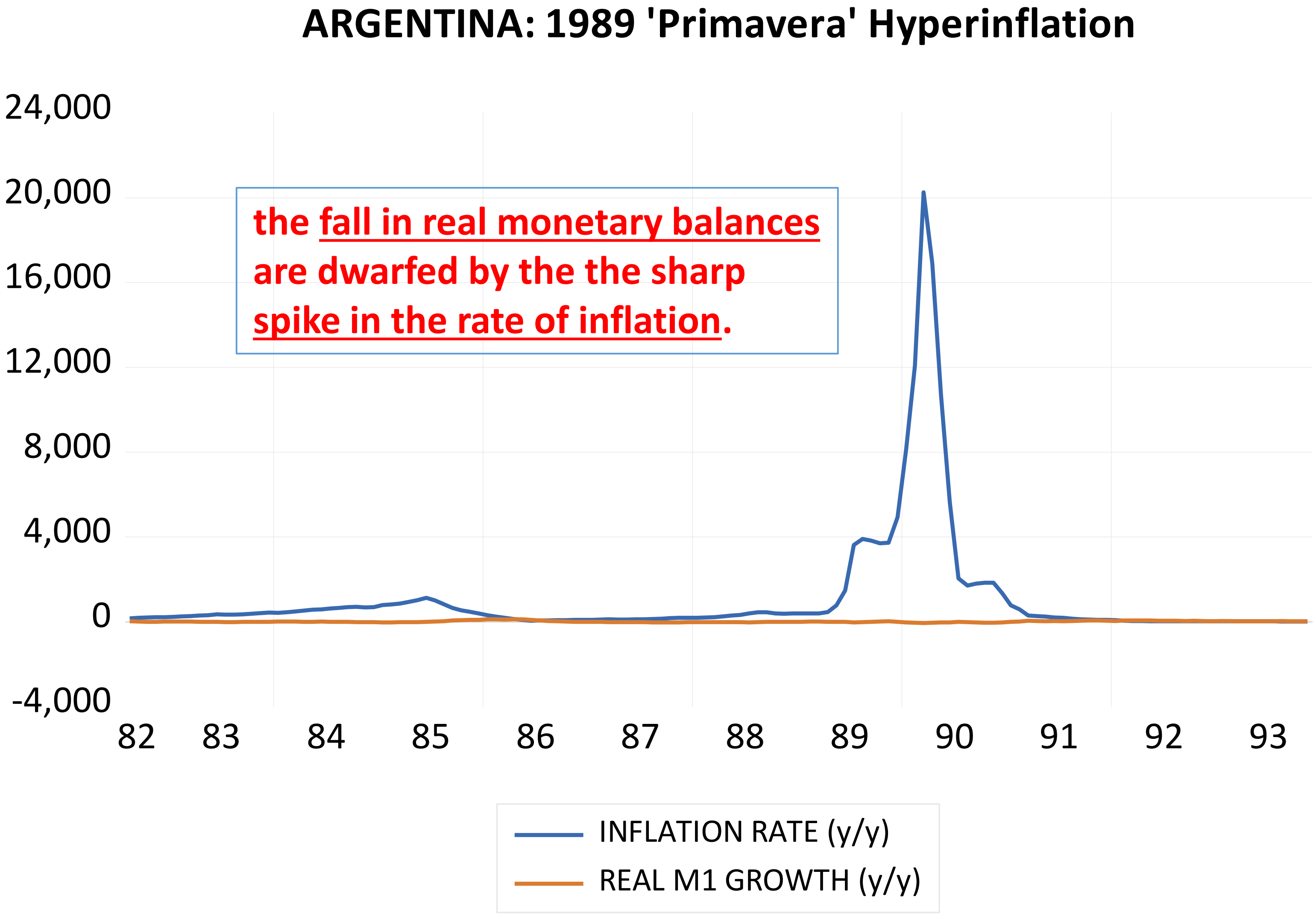
$$g = (\pi - s)e^{-\gamma(\pi - s)} \quad (3)$$

SUPPOSE THAT $\alpha = \pi - s$, solves equation (3), and $s = \theta\pi,\ 0 < \theta < 1$, then $\alpha = \pi(1 - \theta)$, and

$$\pi = \alpha/(1 - \theta) \to \infty, as\ \theta \to 1$$

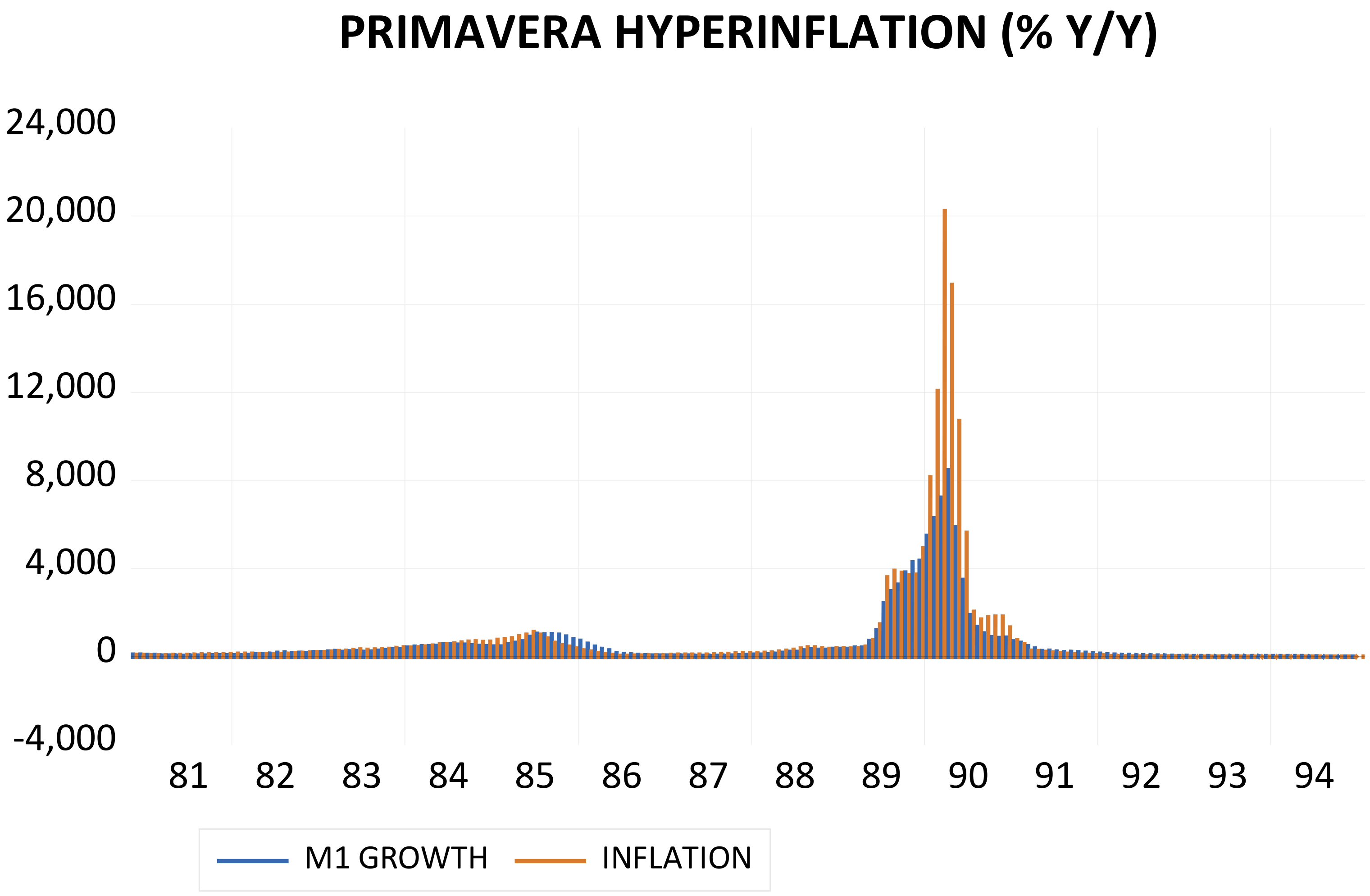
but $m = e^{-\gamma\alpha}$ is CONSTANT!!

INFLATION TRAP 2: Interest-Bearing Money



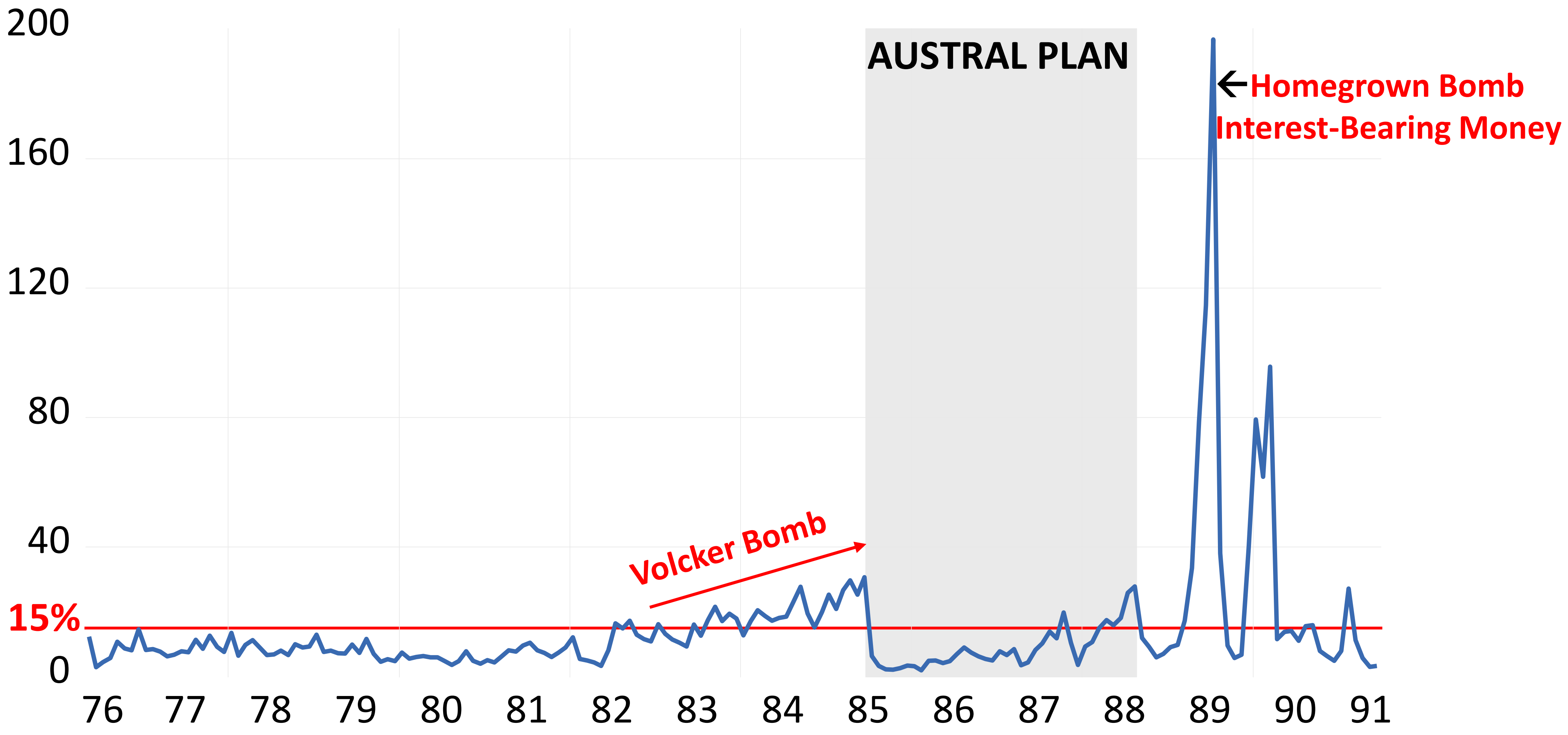
Source: BCRA, monthly observations

ARGENTINA: 1989 Hyperinflation



Source: BCRA, monthly observations

ARGENTINA HYPERINFLATION (m/m %)



Source: BCRA

CONCLUSIONS

- **Interest-bearing money can help to protect money holders from high inflation,**
- **But it might generate hyperinflation.**
- Inflation, per se, may not carry much cost under perfect foresight.
- However, if the demand for real monetary balances, *m*, or price setting are subject to random shows—not only $\pi \to \infty$, but, in addition, $\mathbf{var}\ \boldsymbol{\pi} \to \infty$**, which interferes with the effectiveness of the *payments system*, even under a clockwork labor market.**