How do government deficits help stabilize a “poker economy”?

An Introduction to the Sectoral Balances Model

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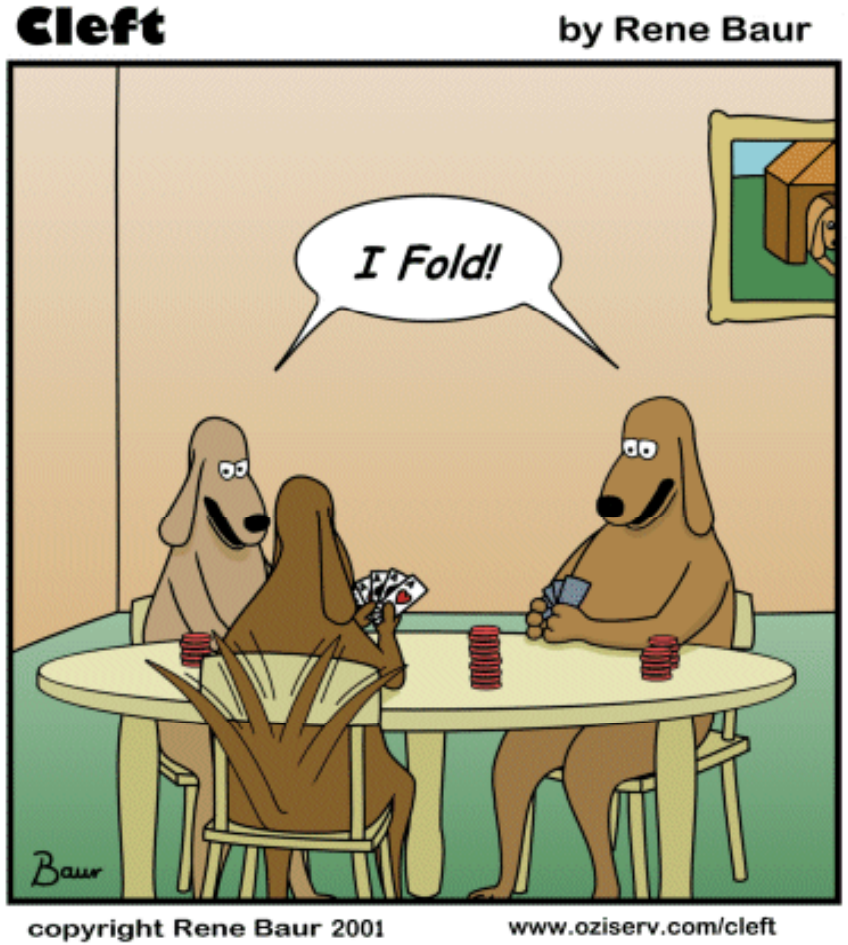
What's a poker economy?

- It is an economy in which the decisions to produce and to invest are driven by the desire to accumulate financial wealth which cannot be produced, but, rather, may only be acquired through balance-sheet offsetting transactions - i.e. financial wealth must be won from others.

Key features of a poker economy

- Financial **gains are at the same time** financial **losses** looked at from different points of view**.***
- **Production** of use values **is a byproduct of zero-sum financial games.**
- **Participants are not equally able to sustain losing financial balances over time.**
- **No self-correcting tendencies** drive the economy to full employment.
- **Self-reinforcing dynamics** in which participants respond to frustrating financial results by reducing expenditures (which are losses to them but gains to others) produce instability.

A Literal Poker Economy



A Literal Poker Economy

- There are **players** who **play against each other trying to accumulate chips.**
- **Chips represent a claim on the casino** and, therefore, only the casino can issue new chips.
- A **casino is sovereign if chips are denominated in terms of chip-values** only.
- Players' **wealth (financial stocks) may be composed of chips** previously won from the casino (or from another player who won them from the casino…) **or chip-denominated IOUs** issued by other players.*
- **Players win** chips **by causing other players to lose chips** in games **or by receiving interest** on chip-denominated IOUs.

A Literal Poker Economy

- At the end of each game (and after many games), **aggregate winnings must be exactly offset by aggregate losses**.

- Though the **financial gain for society (casino and players) as a whole is zero, there is a real gain** in the form of the poker games that are played (the economy's real output).

- The value of the games produced and "sold" in the economy (**GDP**) is **given by aggregate winnings/aggregate losses** during the year.

A literal Poker Economy

- As frequent losers run out of chips, they are forced to **borrow** in order to keep playing.
- With **lending and borrowing**, victors **may expand** their chip-denominated **wealth beyond** the limit imposed by **the casino's total outstanding debt** (chips held by players).
- **Frequent losers** may find it increasingly hard to borrow, be **forced to leave the world of poker and default** on their outstanding debt. Lenders' wealth is (at least partially) destroyed and willingness to lend may fall sharply.

A Literal Poker Economy

- When players are **denied access to poker games due to insufficient chips/chip-denominated credit**, the **economy underperforms**.
- A **sovereign casino can always expand real production** (number of games) **by injecting more chips into the economy** (by increasing its losses to players or by sponsoring chip-deprived players).

Capitalism as a poker economy

$Y \equiv C + I_r + G + (X-M) \equiv C + S + T$

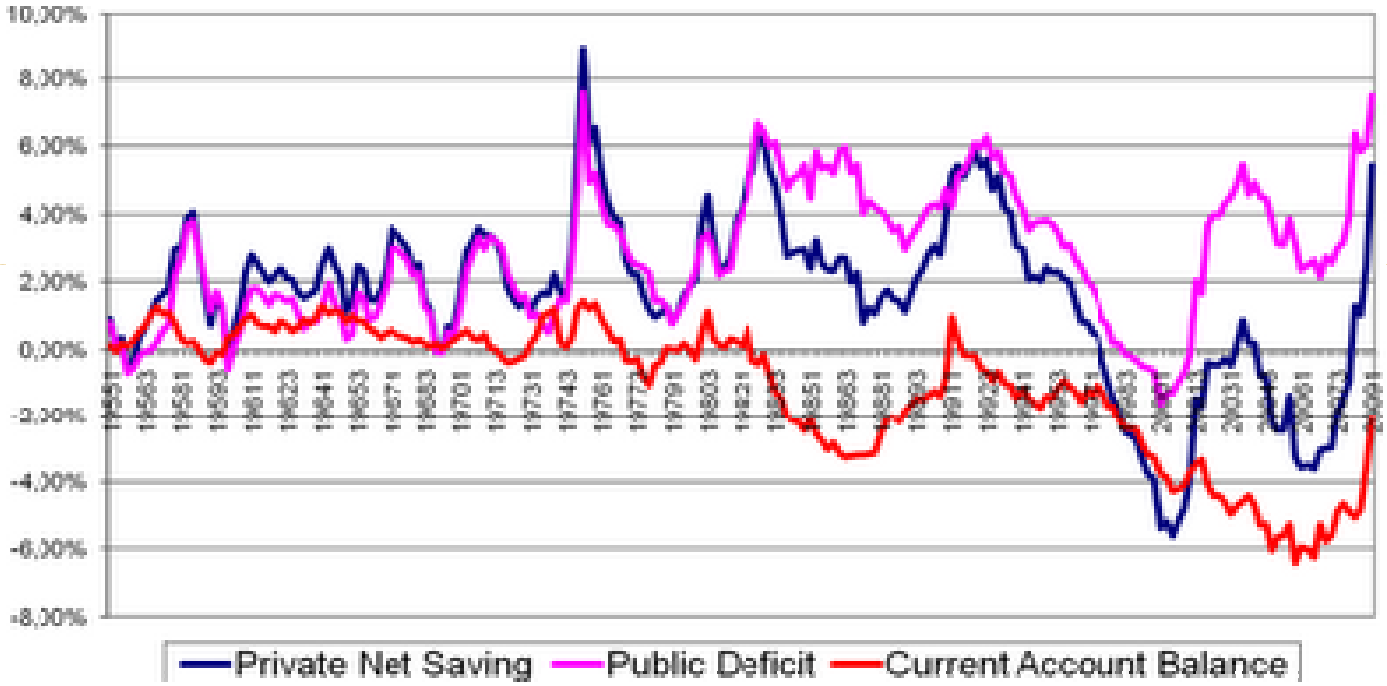
"losses" = $C + I_r + G + X$

"winnings" = $C + S + T + M$

The sectoral balances are given by:

$$(S-I_r)+(T-G)+(M-X) \equiv 0$$

The Sectoral Balances as a percent of GDP

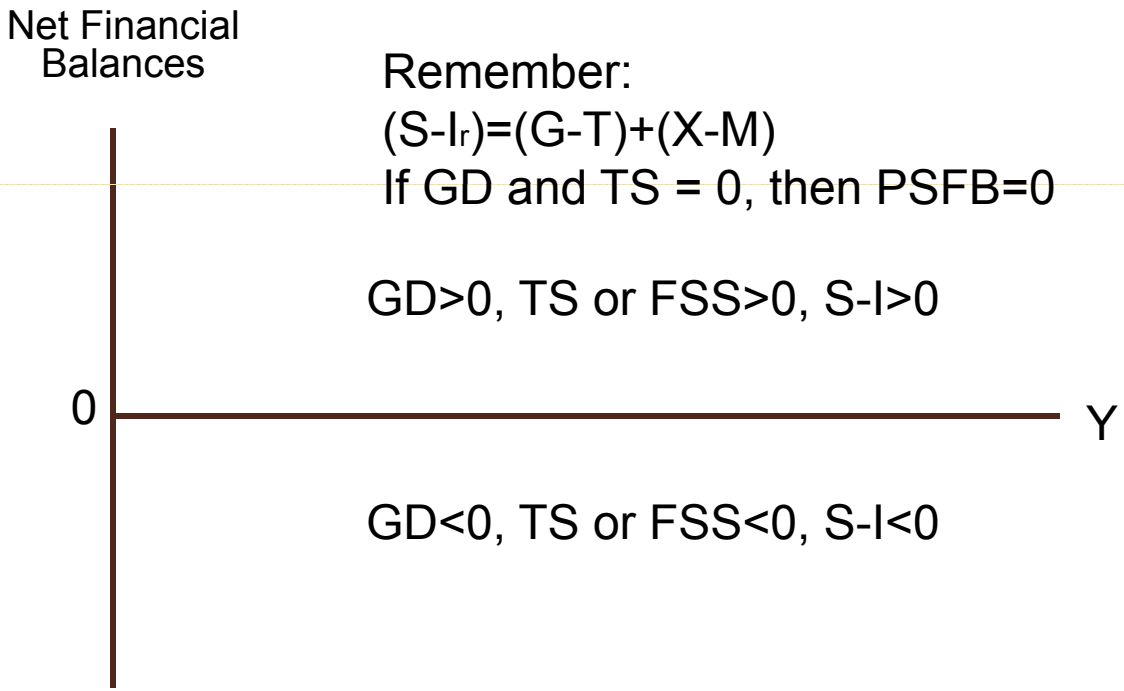


By **Scott Fullwiler** at http://neweconomicperspectives.blogspot.com/2009/07/sector-financial-balances-model-of_17.html

It really works: (S-I) = (G-T)+(X-M) !

The Sectoral Balances Model

The Domestic Private Sector

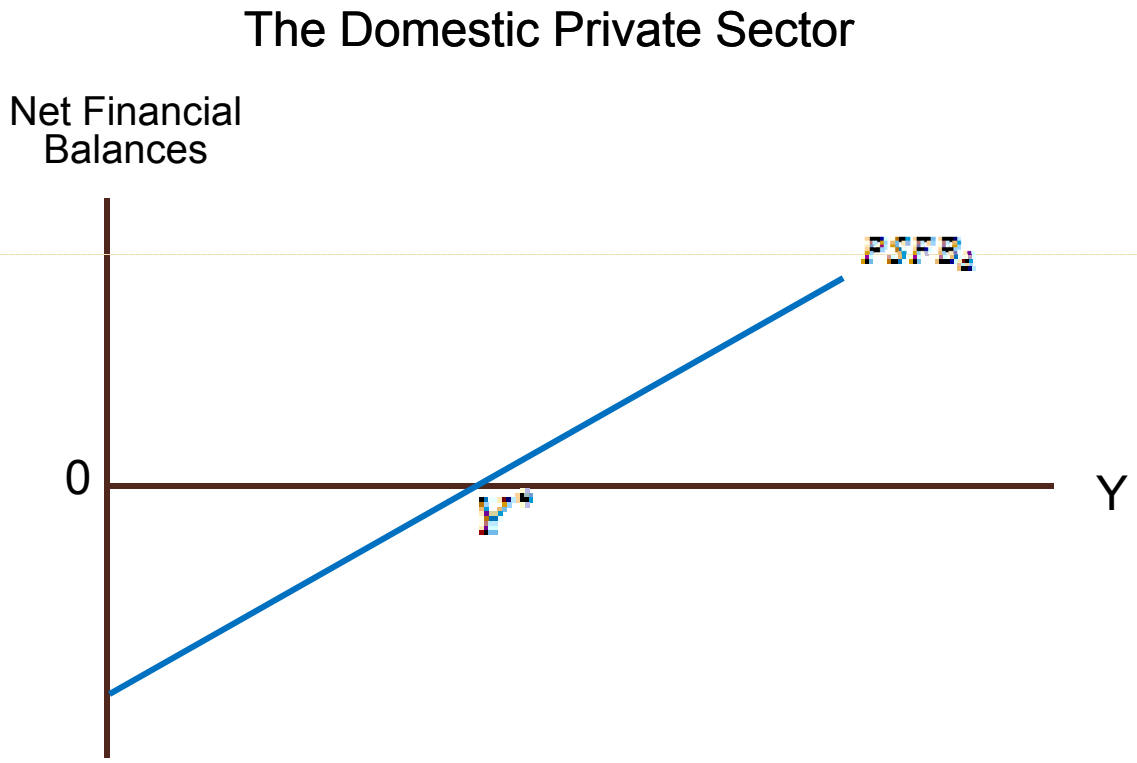


Where $PSFB_d = S - I_p = -a + (1-b).Y - I_p$

$I_p = f(LP, MEK)$

$a = f(LP)$

The Sectoral Balances Model



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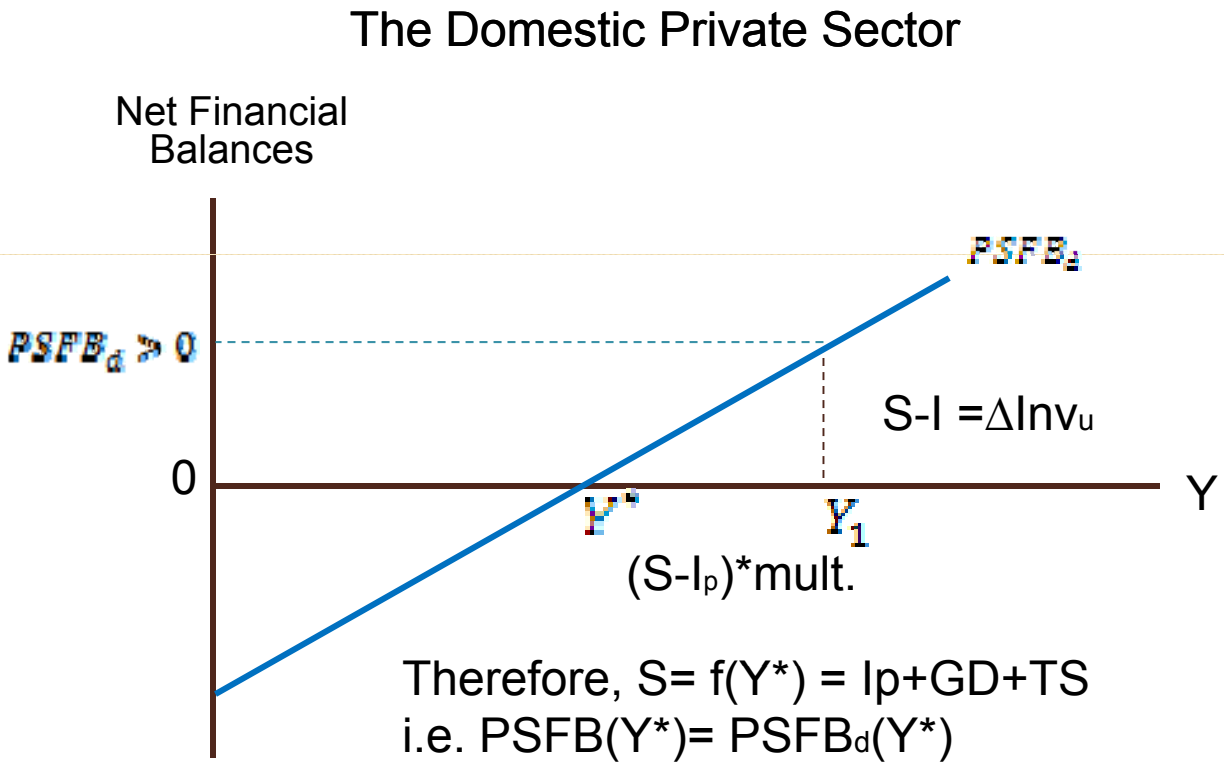

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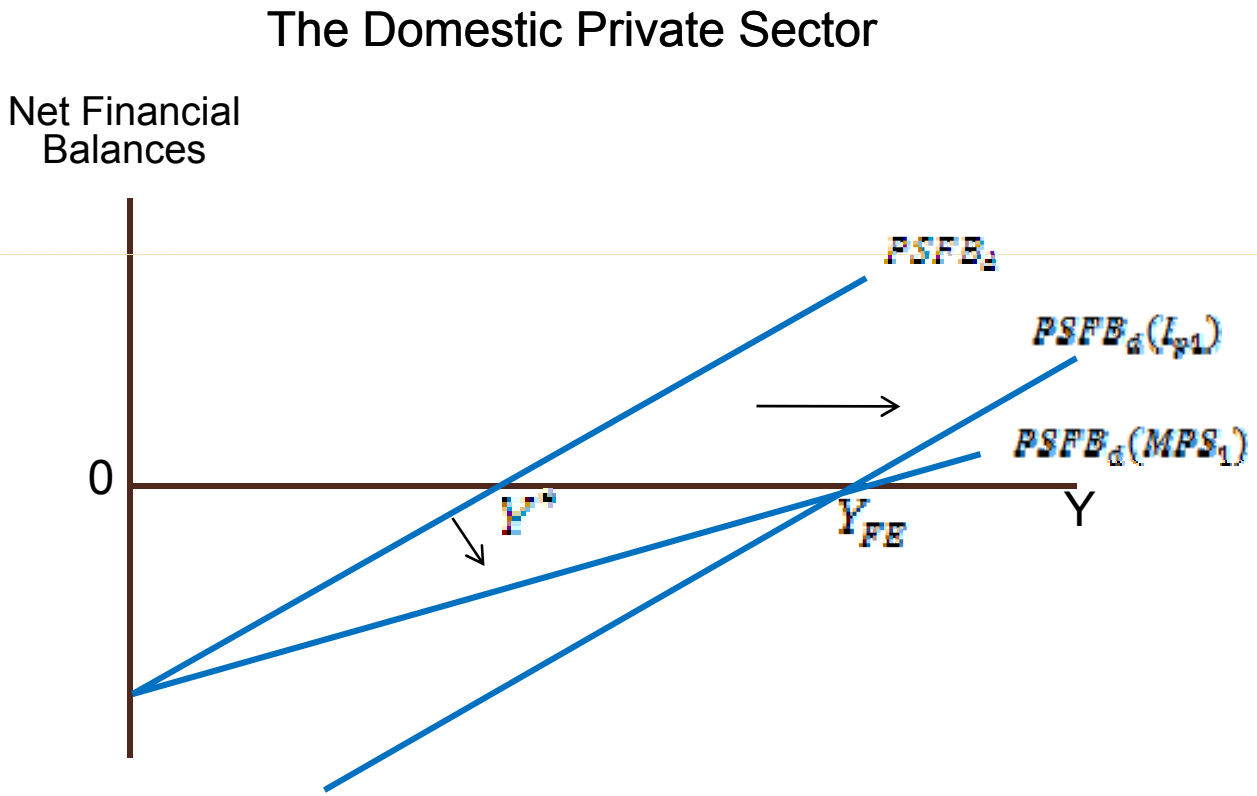

Where $PSFB_d = S - I_p = -a + (1-b).Y - I_p$

$I_p = f(LP, MEK)$

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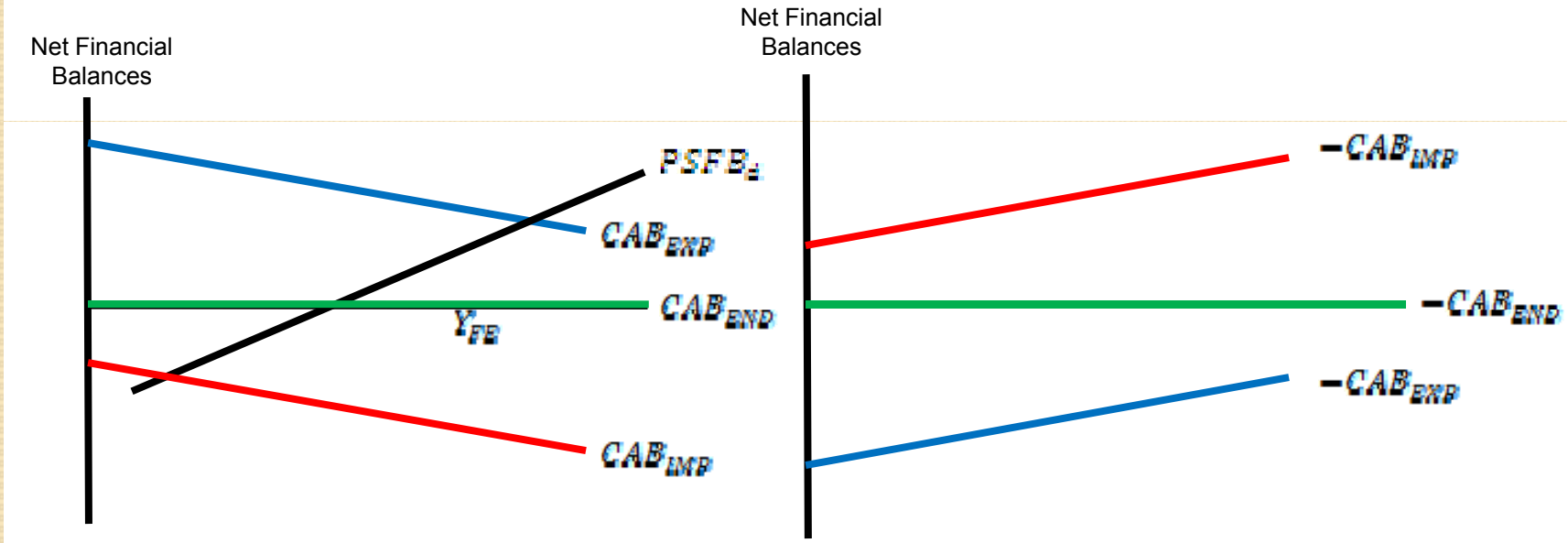
Complications of an Open Economy

The Trade Balance and Net Savings by the Foreign Sector

3 examples of CAB lines: (1) appreciated fixed ER, (2) neutral and (3) depreciated fixed ER.



Where

$$CAB = X - M$$
$$X = x + \theta ER$$
$$M = m - \omega ER + \mu Y$$

Purely endogenous CAB

$$x + ER^{*} = m - \omega ER^{*} + \mu Y = X = M \wedge CAB = 0$$

Stock determinants of CAB (via ER)

$$K_{IN}, K_{OUT}, PCB_{DOM}, SCB_{FOR}$$

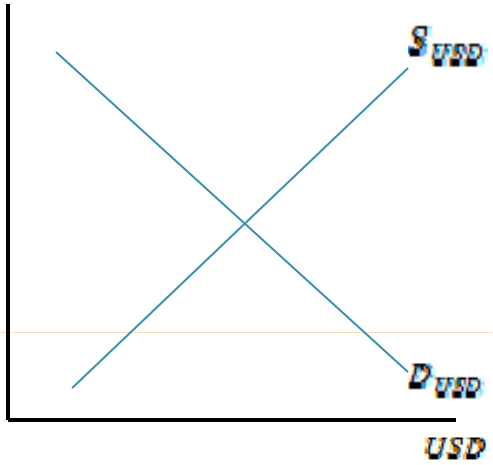
$$CAB = x + \theta ER - m + \omega ER - \mu Y$$

Where

$$-CAB = M - X$$

Appendix: Math Underneath the CAB lines for Brazil

$$ER = \frac{BRL}{USD}$$



$$S_{USD} = K_{IN} + X + SCB_{FOR}$$
$$D_{USD} = K_{OUT} + M + PCB_{DOM}$$
$$X = x + \theta ER$$
$$M = m - \omega ER + \mu Y$$

Finding ER^*:

$$K_{IN} + X + SCB_{FOR} = K_{OUT} + M + PCB_{DOM}$$
$$K_{IN} + x + \theta ER^* + SCB_{FOR} = K_{OUT} + m - \omega ER^* + \mu Y + PCB_{DOM}$$

$$ER^* = \frac{K_{OUT} - K_{IN}}{\theta + \omega} + \frac{PCB_{DOM} - SCB_{FOR}}{\theta + \omega} + \frac{m - x}{\theta + \omega} + \frac{\mu Y}{\theta + \omega}$$

→ Zero-CAB exchange rate.

Influenced by interest rate differentials

Influenced by policy decisions of CBs.

Substituting ER back into CAB: $CAB = (K_{OUT} - K_{IN}) + (PCB_{DOM} - SCB_{FOR})$

Therefore, CAB is determined by KAB and CB policy only. A sloped CAB may be the result from a fixed ER policy.

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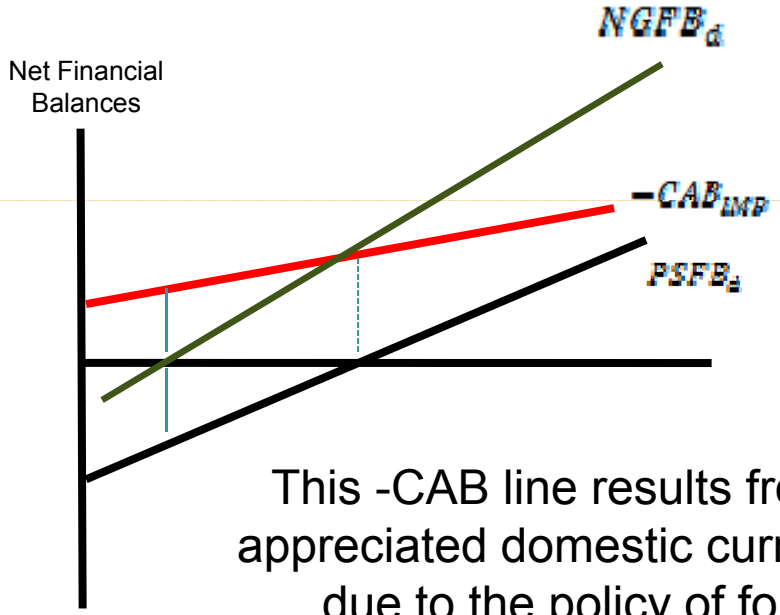
The Sectoral Balances Model

The non-Government Sector



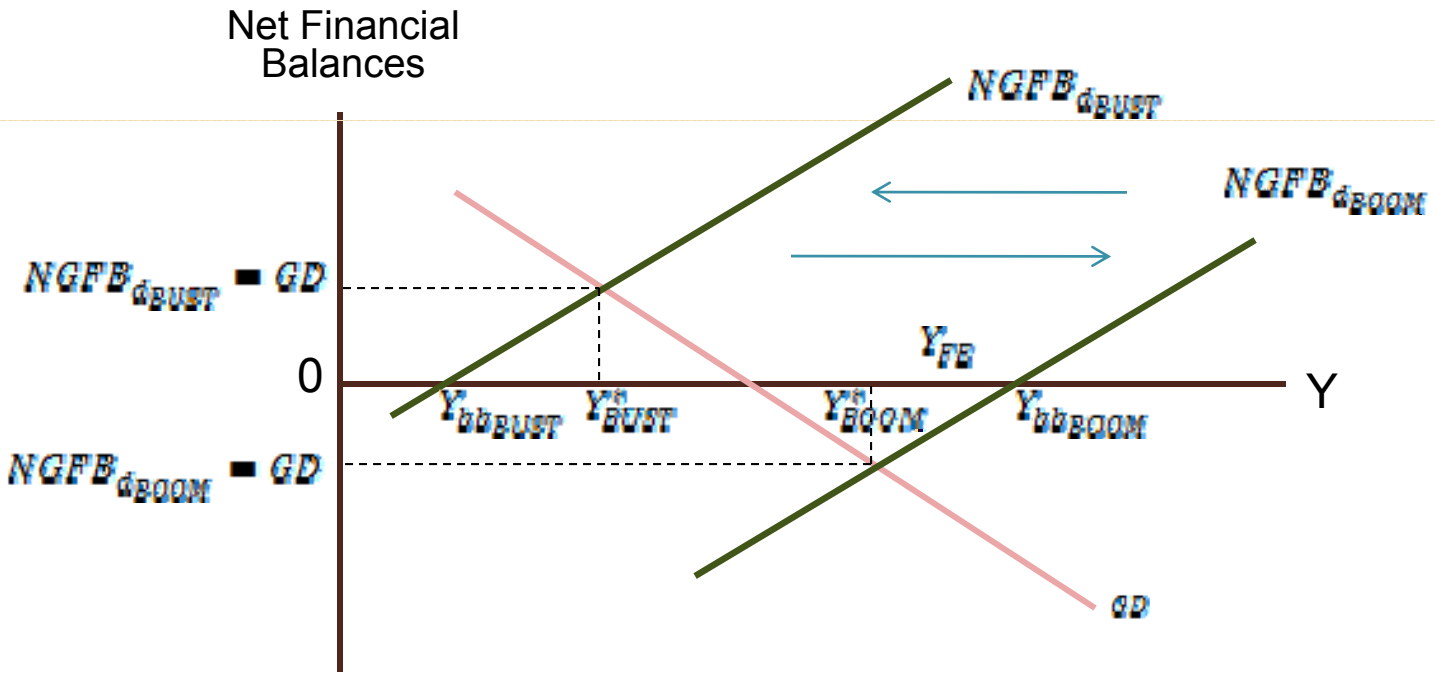
This -CAB line results from artificially appreciated domestic currency, perhaps due to the policy of foreign CBs.

Where

$$NGFB_d = (S - I_p) + (M - X) = a + (1 - b)Y - I_p + m - \omega ER + \mu Y - x - \theta ER$$

The Stabilizing Role of Government Deficits and the FIH

The Government Deficit

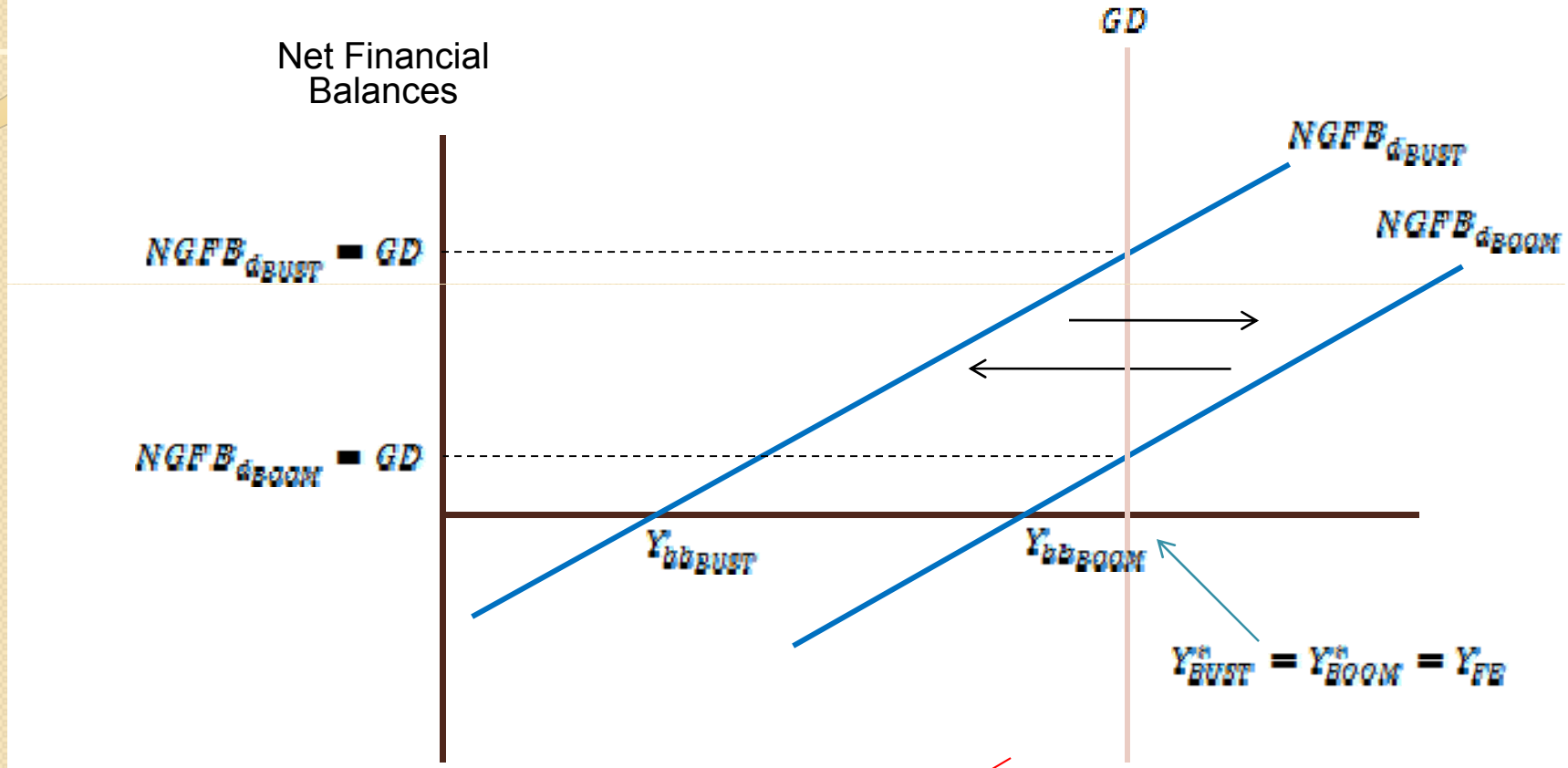


Where

$$GD = G - T = (g - \Omega.Y) - (t + \lambda.Y)$$

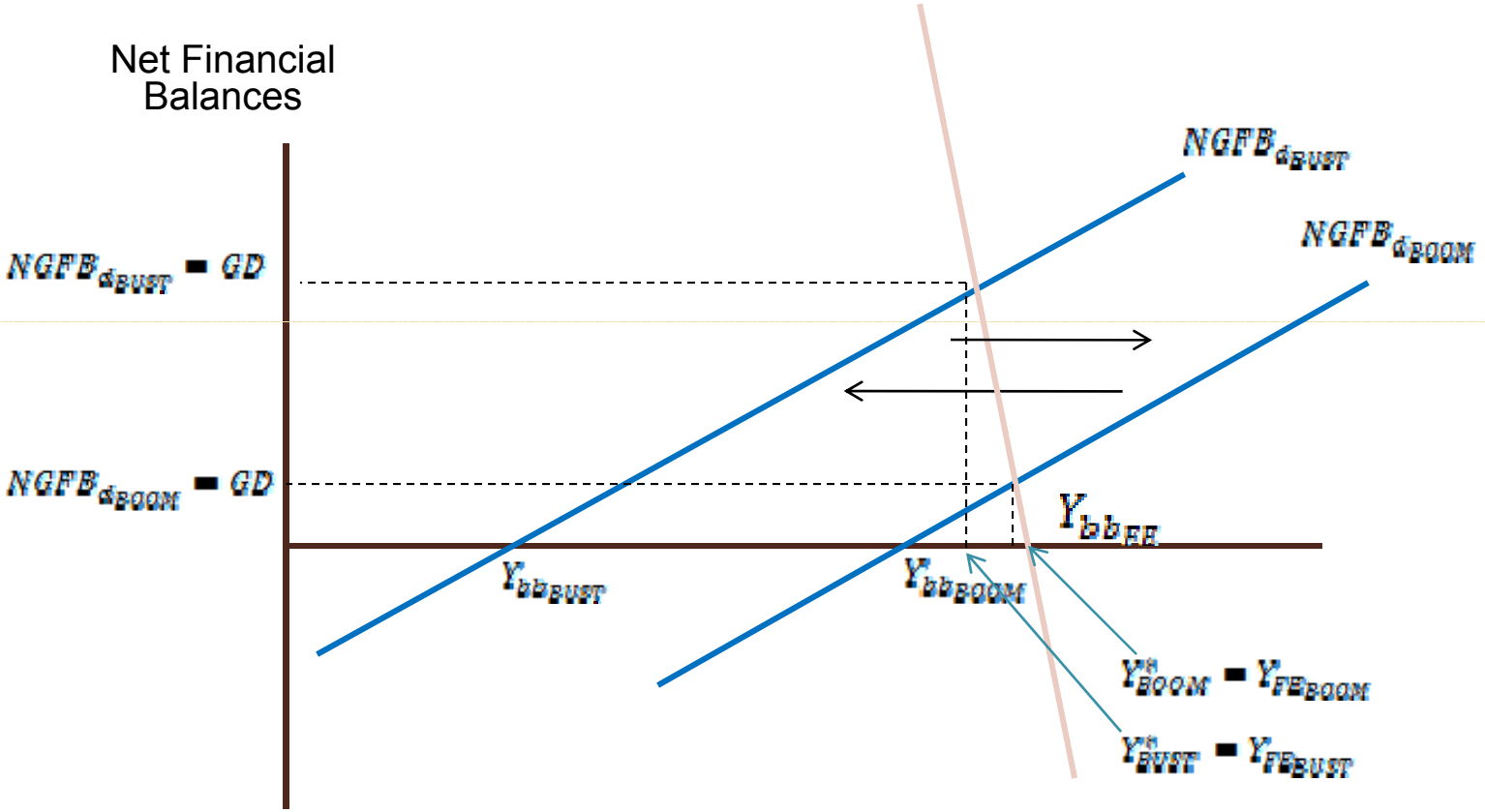
$$NGFB_d = (S - I_p) + (M - X) = -a + (1 - b)Y - I_p + m - \omega ER + \mu Y - x - \theta ER$$

Stabilizing an Unstable Economy through Functional Finance



$$GD = G - T = (g - \Omega.Y) - (t + \lambda.Y)$$

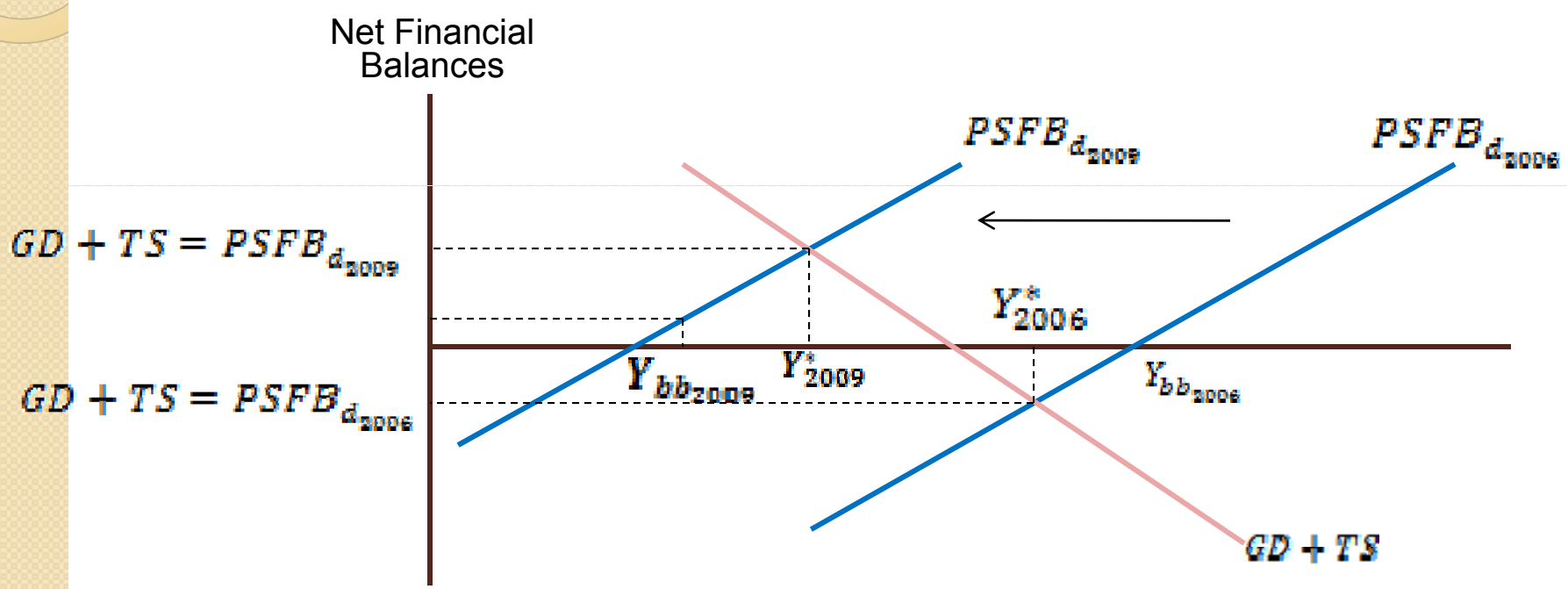
Stabilizing an Unstable Economy with JG/ELR Policies



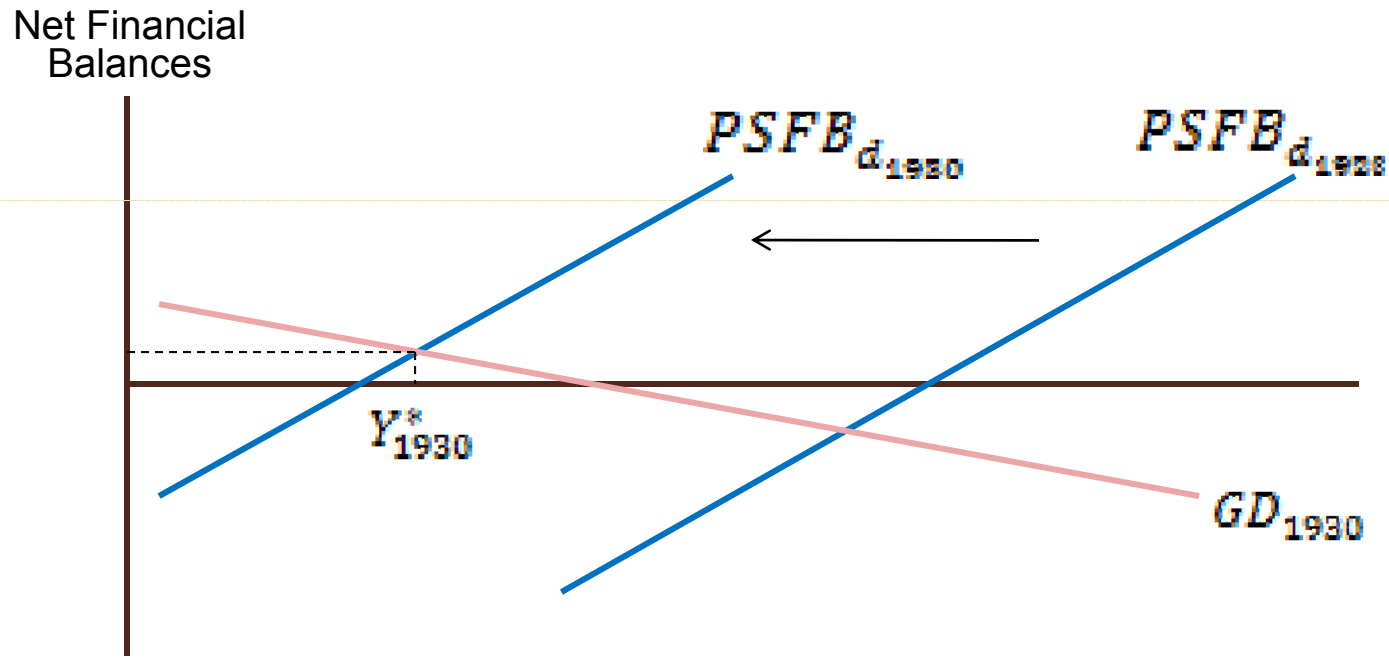
$$GD - G - T - \left(g - \frac{W_{min}}{W_{av}}.Y\right) - (\iota + \lambda.Y)$$

In order for slope to be independent of W_{av} , we may chose to set $W_{min} = \varphi W_{av}$

What Happened in 2008?

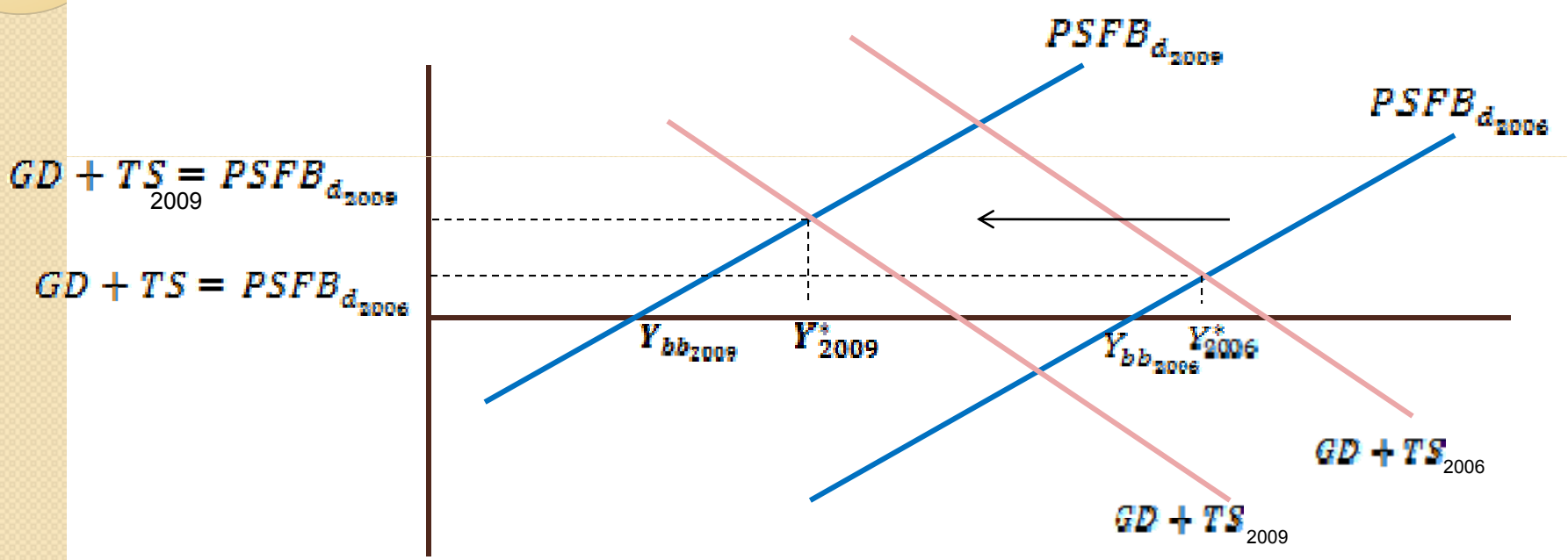


What Happened in 2008?



A less income elastic GD causes income fluctuations to be more violent following a financial crisis. In 1929, the GD line was not nearly as steep as in 2008.

In Brasil and in other developing countries...



$Y_{US} \downarrow \rightarrow X\downarrow$, $LP_{US}\uparrow \rightarrow I_P \downarrow$, Fin. Volat.$\uparrow \rightarrow LP\uparrow \rightarrow I_P$ e a $\downarrow$

Thank You Very Much!

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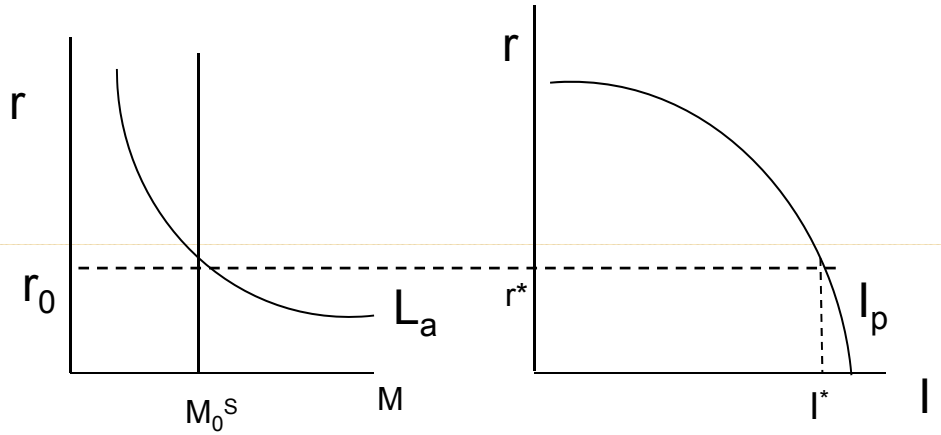
Post Keynesian Economics vs. IS-LM Keynesianism

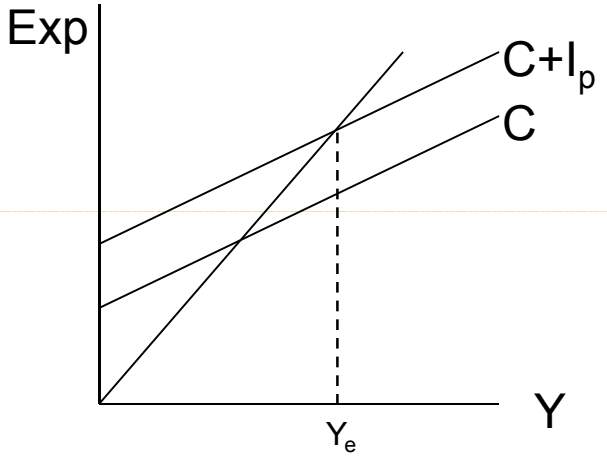
- The **economy cannot self-correct via price adjustments** and there is no inherent tendency towards full employment.
- Economic **fluctuations** often create s**elf-reinforcing** dynamics.
- **Stocks and flows** must be analyzed sequentially.
- Recognize that every **money flow adds to a party's money balances and reduces another's**.
- The structure of **debt matters.**

Post Keynesian Economics
vs.
IS-LM Keynesianism (1)

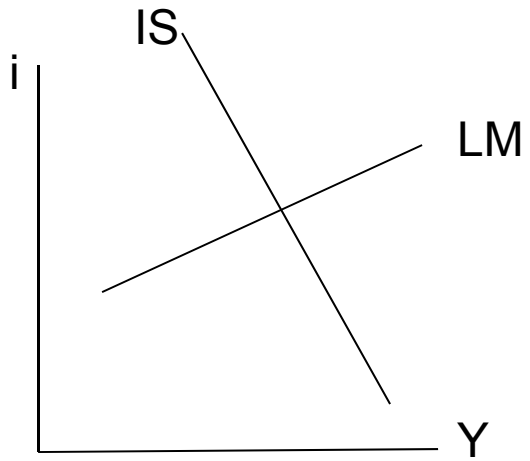


$r = f(M^s, L_a)$

$I = f(r, MEC)$



$Y_e = f(MPC)$



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Some Behavioral Assumptions

The Domestic Private Sector:

$C = a + b.Y$ (1) and $S = - a + (1 – b).Y$

$I_p = f(LP, MEK)$, $a = f(LP)$

The Foreign Sector (Current Account):

$M = m + \mu.Y$, $X = f(\Pi , Y_{foreign})$ (2)

and $m = f(\Pi ,LP)$

The Government:

$G = g – \Omega.Y$ and $T = t + \lambda.Y$