Demystifying government deficits and central bank financing

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Official Monetary and Financial Institutions Forum (OMFIF)
June 18, 2020

This presentation reflects solely the views of the authors

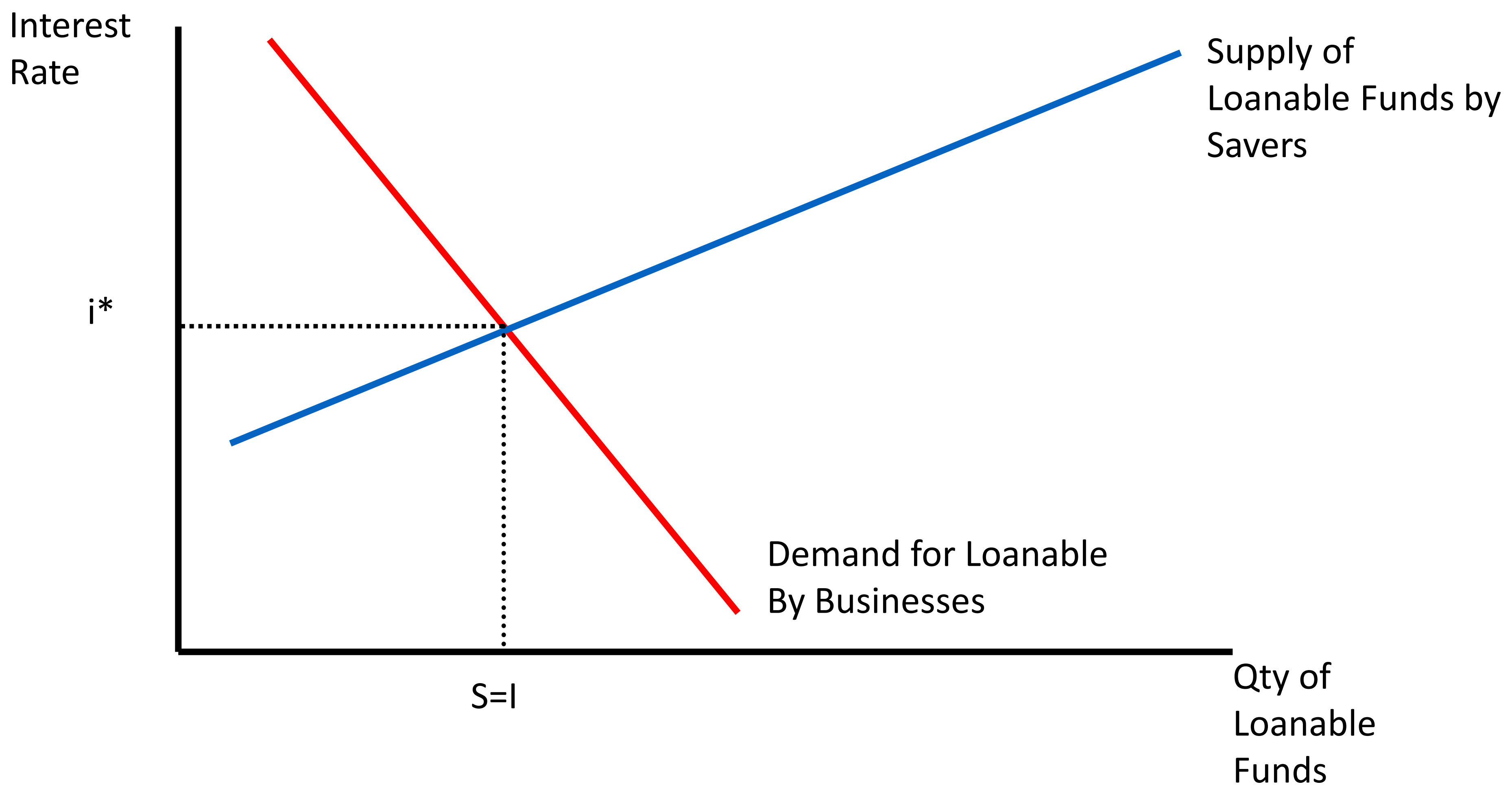
Structure of the presentation

1. **What are the primary misconceptions about domestic-currency government deficits?**
2. Are there inflationary dangers to central bank financing government deficits?
3. Won't larger deficits lead to unsustainable debt & currency depreciation?
4. What does all this mean for policy?

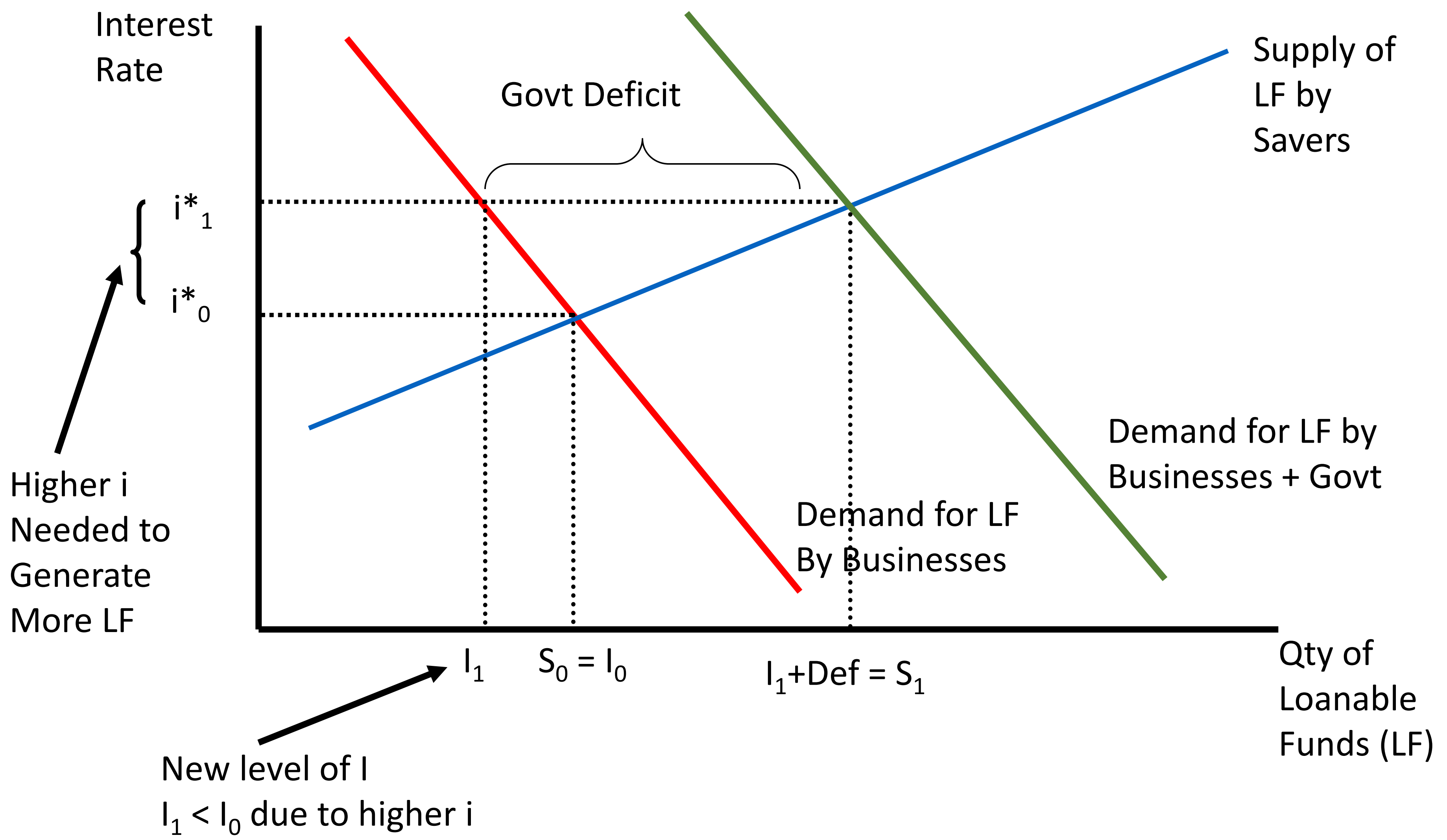
Government Deficits are unsettling to many

Commonly-Held Beliefs	Reality
Government Finances = Families' Finances (budget constraint)	• **Government finances (currency issuer) do not operate like yours or mine (currency users)** (and families borrow too!)
Deficits = Crowding Out (loanable funds model)	• **Government deficit = Non-government surplus** • From basic accounting, government deficit creates income for recipients; bond sales neither reduce this income nor return it to the government
Deficits = Higher Interest Rates (loanable funds model)	• By adding central bank reserves, **deficits put downward pressure on interest rates**, ceteris paribus • **Bond sales are monetary operations** to achieve central bank's interest rate target; the alternative is IOR • Central banks supply at least enough reserve balances to settle government bond auctions and necessarily drive interest rates on government debt in domestic currency regardless who owns it

Most people's view government deficits via Loanable Funds



Government deficits in the Loanable Funds view
Crowding out and interest rates



Do budget deficits lead to higher interest rates? Do Governments and private sector compete for funds (savings) –crowding out?

What's Wrong with the Loanable Funds View?

Loanable Funds	Reality
• Proposed in the gold standard and Bretton Woods fixed exchange rate system • Fixed supply of savings from which anyone can attempt to borrow • Competition for a finite pool of savings	• Government's own deficit supplies the dollars (baht, rupiah, pesos) that are needed to purchase the bonds • Government deficits always lead to \$-for-\$ increase in the supply of net financial assets held by the non-government sector • **It is the dealers who compete among themselves, not the Government**
• Borrowing is limited by access to scarce financial resources • Deficit pushes interest rate up	• Auctions require coordination between the Central Bank and Treasury • **Deficit pushes interest rate down (deficit fills the system with excess reserves)**

Bookkeeping: Government Deficit Directly Creates …

Government	
Assets	Liab/Equity
-100 Govt Account	-100 Net Worth

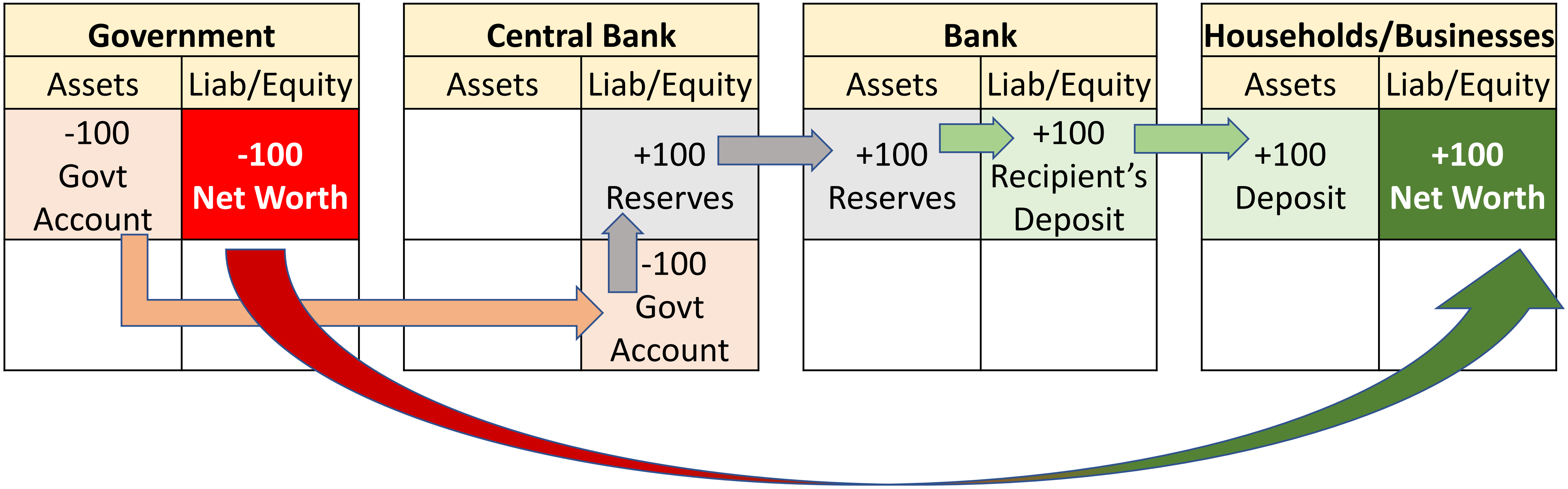
Central Bank	
Assets	Liab/Equity
	+100 Reserves
	-100 Govt Account

Bank	
Assets	Liab/Equity
+100 Reserves	+100 Recipient’s Deposit

Households/Businesses	
Assets	Liab/Equity
+100 Deposit	+100 Net Worth

Governments spend by electronically crediting the reserve balances of private Banks, which in turn credit the bank accounts of those receiving payments from the government. Our payments to the government go ‘the other way around’

Bookkeeping: Government Deficit Directly Creates …
A Private Sector Surplus



Fiscal deficits increase the aggregate supply of reserve balances

Government Deficit Increases Banks' Reserves Held in Accounts at the Central Bank

Government	
Assets	Liab/Equity
-100 Govt Account	-100 Net Worth

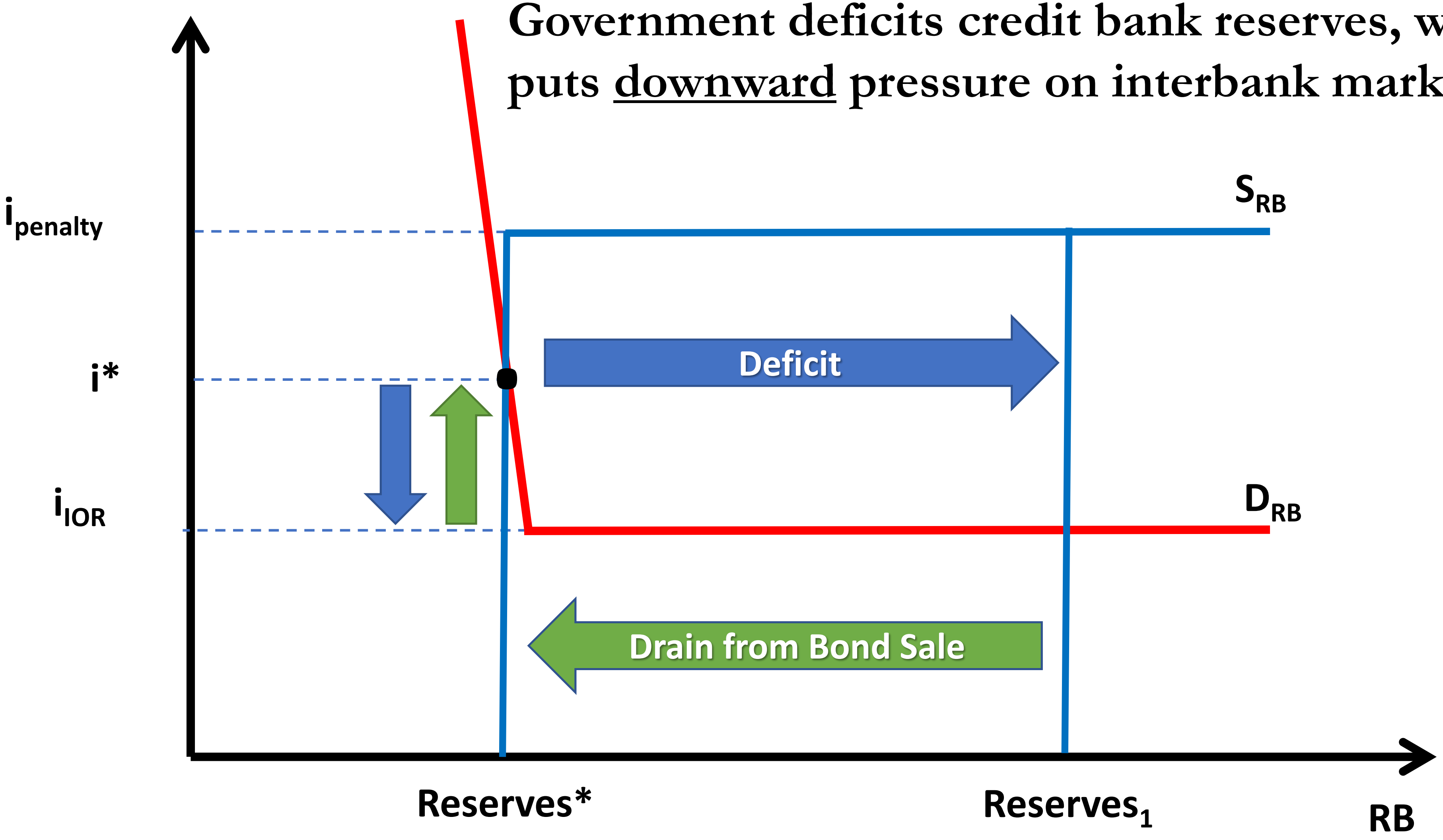
Central Bank	
Assets	Liab/Equity
	+100 Reserves
	-100 Govt Account

Bank	
Assets	Liab/Equity
+100 Reserves	+100 Recipient's Deposit

Households/Businesses	
Assets	Liab/Equity
+100 Deposit	+100 Net Worth

Deficits & the Central Bank's Interest Rate Corridor for Setting Its Interest Rate Target

Government deficits credit bank reserves, which puts <u>downward</u> pressure on interbank market rate



Issue bonds to drain excess reserve balances
Amount = Deficit
Trade Cash for T-bill

Government's own deficit supplies the dollars that are needed to purchase the bond

No change in the quantity of reserves in the system

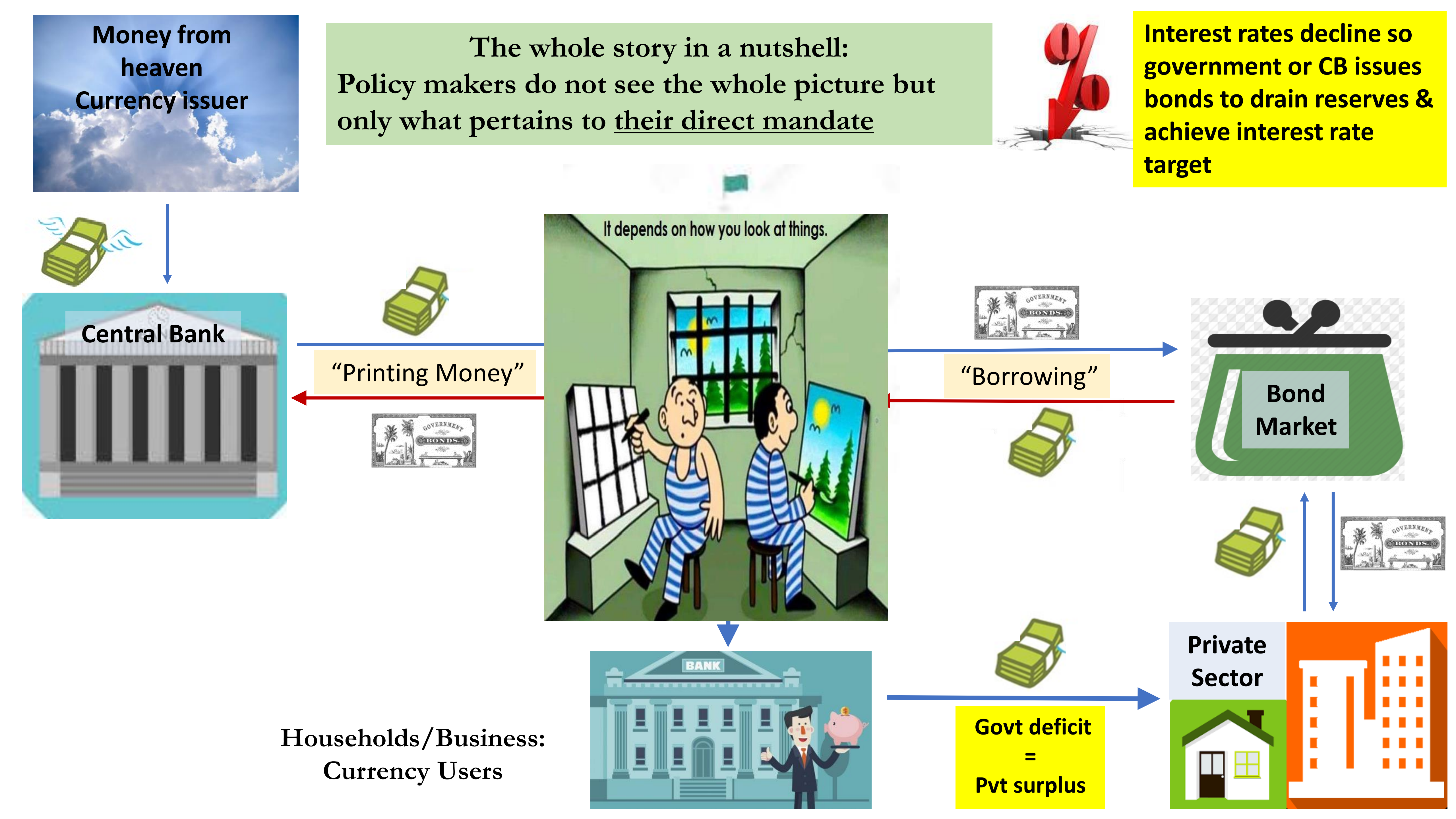
The reality of central bank-government operational interdependence. NO Crowding Out

- Deficits add to private saving (this is accounting)

- Deficits do not put upward pressure on interest rates. Opposite: they put downward pressure:

  - In a corridor framework for interest rate targeting, either the central bank or the government must sterilize the deficit's reserve add by offering an interest-bearing alternative (or paying interest on reserves at the target rate)

- IMPLICATION: domestic-currency government bond sales are functionally interest-rate maintenance operations, not financing expenditures (which has already happened)


Money from heaven
Currency issuer
The whole story in a nutshell:
Policy makers do not see the whole picture but only what pertains to their direct mandate
Interest rates decline so government or CB issues bonds to drain reserves & achieve interest rate target
Central Bank
"Printing Money"
GOVERNMENT BONDS
It depends on how you look at things.
"Borrowing"
Bond Market
BANK
Households/Business:
Currency Users
Govt deficit
=
Pvt surplus
Private Sector

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Government issues bonds vs. Central Bank buys Government bonds

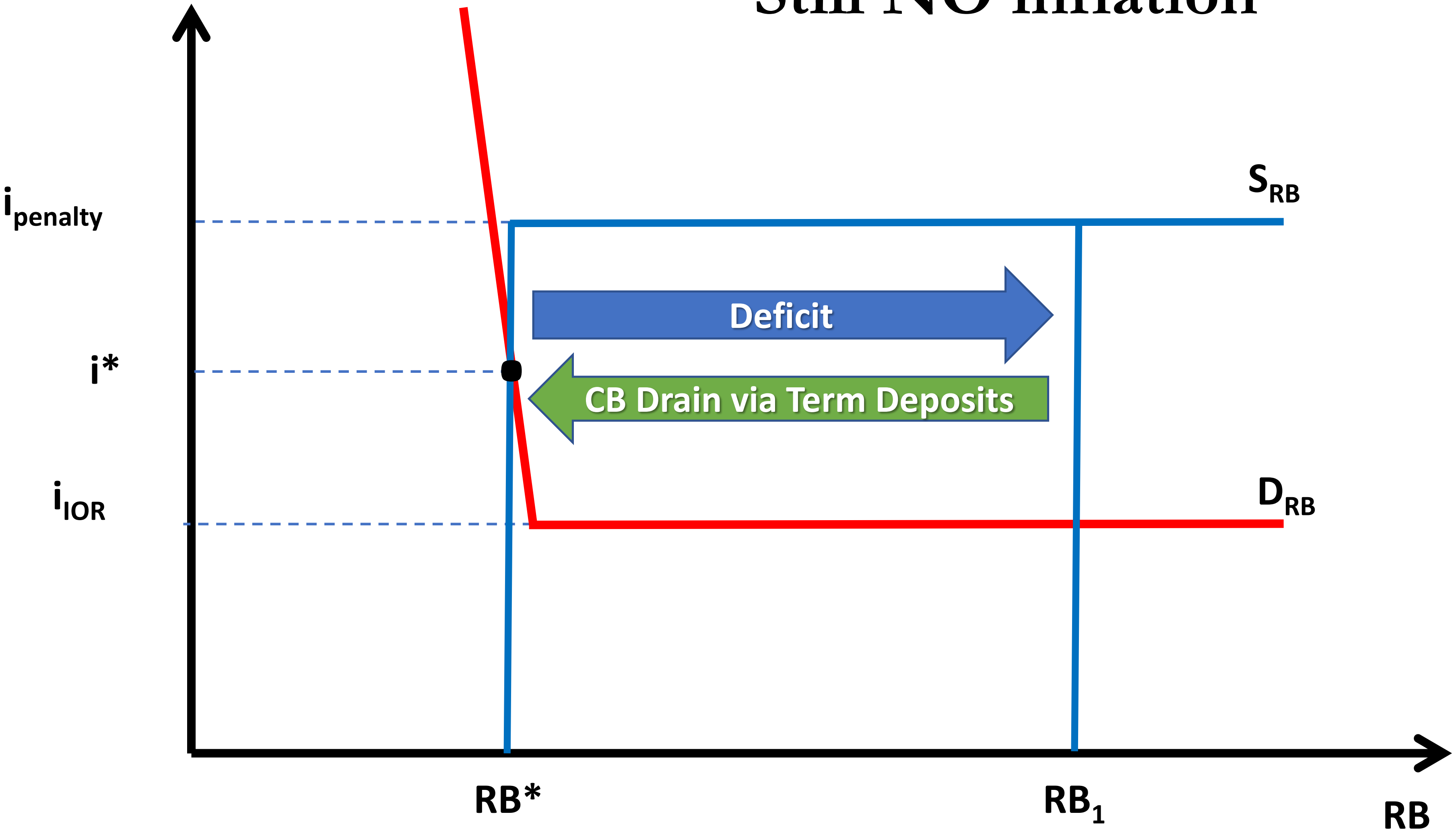
- We have shown above that when **Government issues bonds**, there are two operations : (i) Government spends (which creates excess reserves); (ii) Bond issuance to drain excess reserves…
  - …where does inflation come from? NO, not from here
  - Japan, US…? They live in a state of fiscal deficit. Or you mean hyperinflation, e.g., Zimbabwe?

- **What happens if instead the CB directly finances the Government (what people call monetization). Any difference?**

Government Deficit Adds Central Bank Reserves

Term Deposit Auction is a Monetary Policy Operation to Drain Reserves

Still NO inflation



The **government** didn't issue a bond to drain reserves the deficit creates …

So, the **central bank** issued **its own** interest-bearing liability

Government Bond Sales vs CB loan to Government

- **Government Bond Sales**
  - Interest rate on new debt = **T-bill rate** ≈ CB's target rate
- **CB Loan to Government**
  - Interest rate on new debt = **CB's term deposit facility** ≈ CB's target rate
- **CB Loan to Government vs Government Bond Sales: Does Not Matter**
  - Recipient of spending receives funds in either case
  - BTr still effectively pays interest ≈ CB's target rate in either case
  - Quantity of reserves banks hold at CB is the same in either case
- **No Difference of Macroeconomic Significance**
  - In either case, BTr can finance & refinance deficits at roughly CB's target rate

Where does inflation come from?

- A <u>deficit can be inflationary</u> because it is too big or poorly targeted, but <u>nothing</u> to do with how the deficit the was “financed”.

- Inflation can appear before full employment is reached if there are <u>supply side bottlenecks</u>; as a consequence of <u>migration</u> from the country side that puts upward pressure on the price of food and other necessities; <u>wages</u> increasing faster than productivity; or higher <u>markups</u>

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Unsustainability and currency depreciation

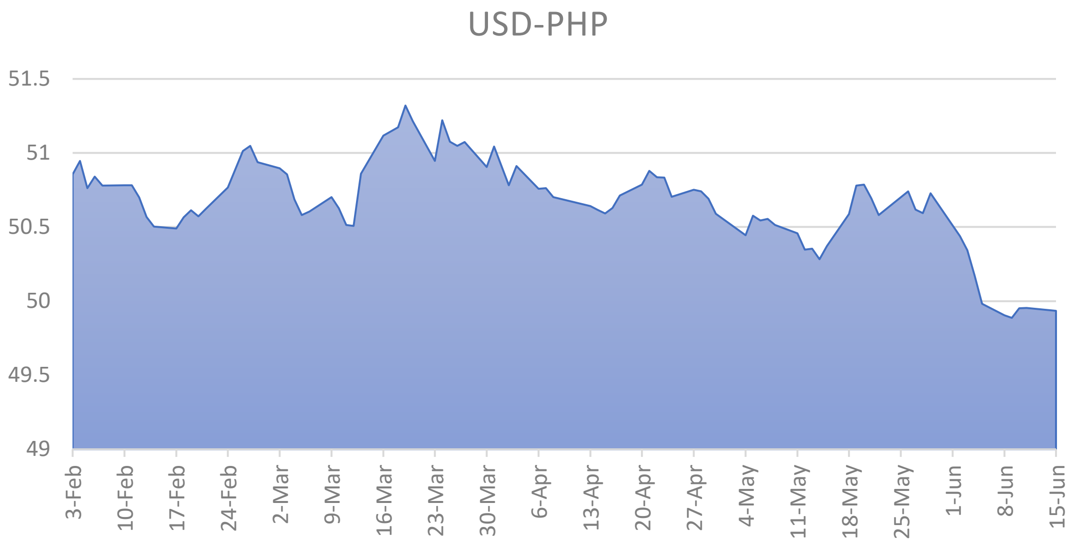
- Domestic-currency debt service is always a **policy variable**

- Yes, developing nations can experience currency depreciation, & central banks may raise rates to defend against this

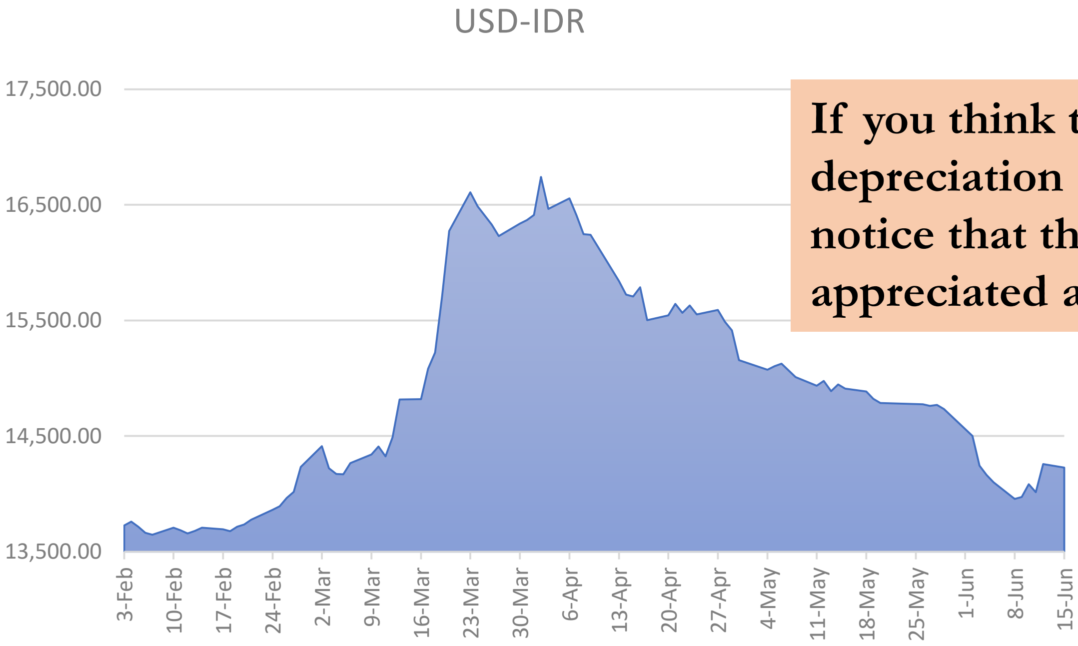
- However, the causality from an alleged loss of "credibility" to severe depreciation isn't so simple

Instability? This is not 1997-98

Daily Exchange Rate (Feb 3 – June 15, 2020)

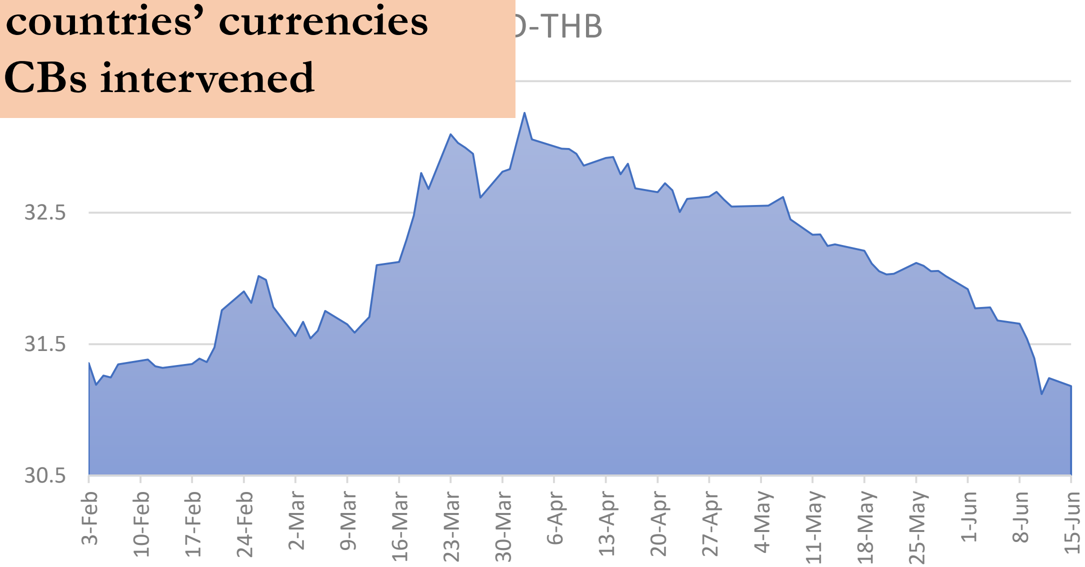


Source: Bangko Sentral ng Pilipinas



Source: Bank Indonesia

If you think that deficits automatically lead to depreciation and/or destroy reputation, then notice that these three countries' currencies appreciated after their CBs intervened



Source: Bank of Thailand

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Summing Up: in today's financial system…

- **Fiscal deficits (domestic currency):**
  - create a private sector surplus…
  - do not lead to interest rate increases…
  - …do not crowd the private sector
  - are inflationary only if too large or poorly targeted (not method)

- **Future generations burden? It depends….**
- **"Debt":** why wouldn't you want risk-free assets for savers or as collateral?

- The problem (in today's crisis) is not the fiscal deficit !

- What is the real problem the crisis may lead to? **The health of the private sector (signal of crisis): absent a significant C/A surplus, governments will need to run a deficit. Do not be scared**

Conclusions

- **Misconceptions** about how central banks and governments operate on a daily basis lead to concerns about "how to pay for" deficits governments are running today.

- Treasury-central bank **coordination** implies that budget deficits do not lead to higher interest rates (crowding out) and so-called "printing money" does not directly create inflation.

- Today's deficits and debt-to-GDP ratios are **political choices**—if you think that what is acceptable in your country is 0% deficit & 25% debt/GDP, then set those limits and see what happens.

We have not said that:

- All deficits are good and carry no inflation risk

- Domestic currency debt does not need to be serviced—just "print money"

- There are no caveats for developing economies that have legitimate concerns about currency depreciation

- We can trust governments' fiscal policy decisions

Thank you for your attention

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