

# Demystifying government deficits and central bank financing

**Jesus Felipe, Asian Development Bank (jelipe@adb.org)**

**Scott Fullwiler, University of Missouri-Kansas City (scottf@umkc.edu)**

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*This presentation reflects solely the views of the authors*

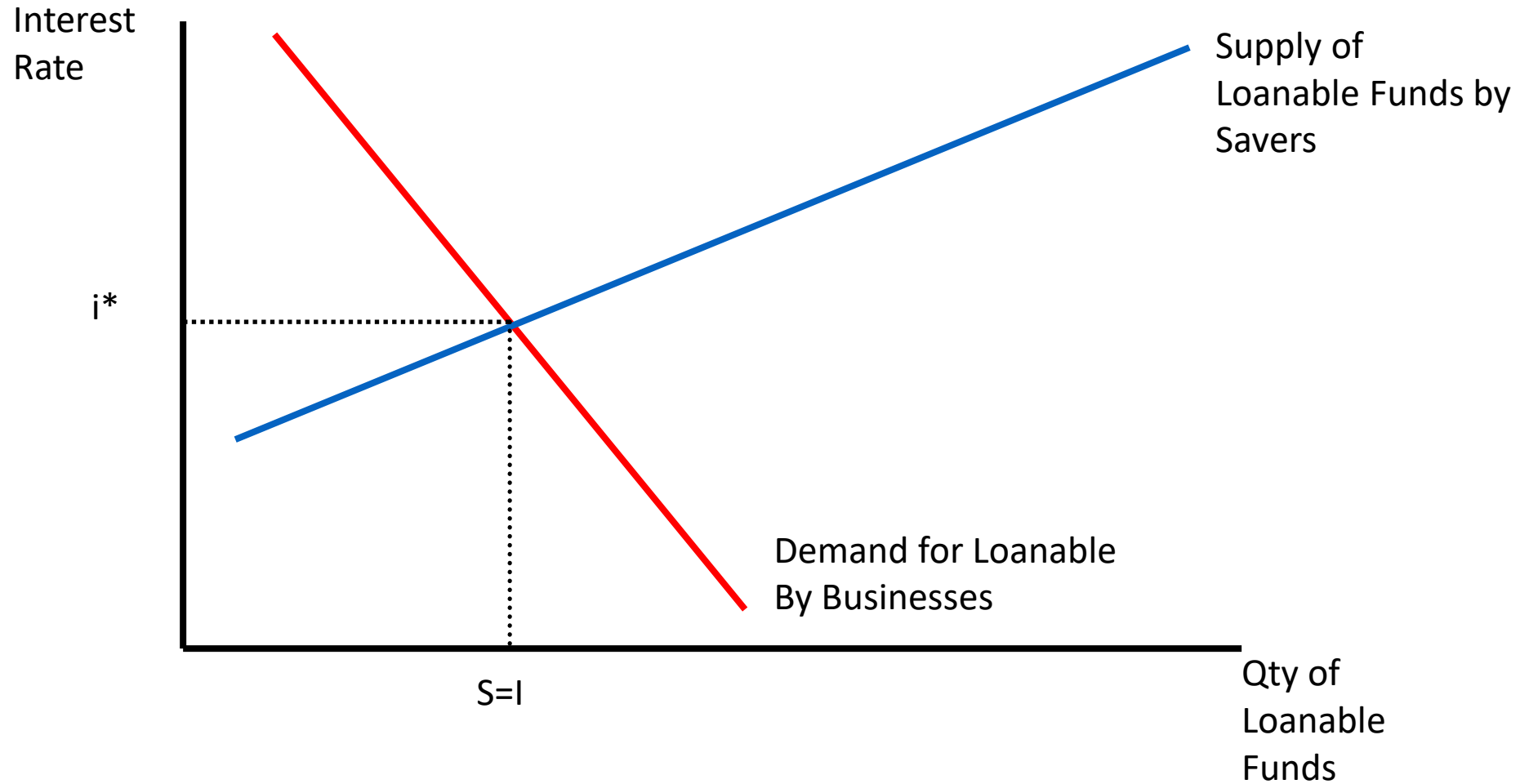
# Structure of the presentation

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

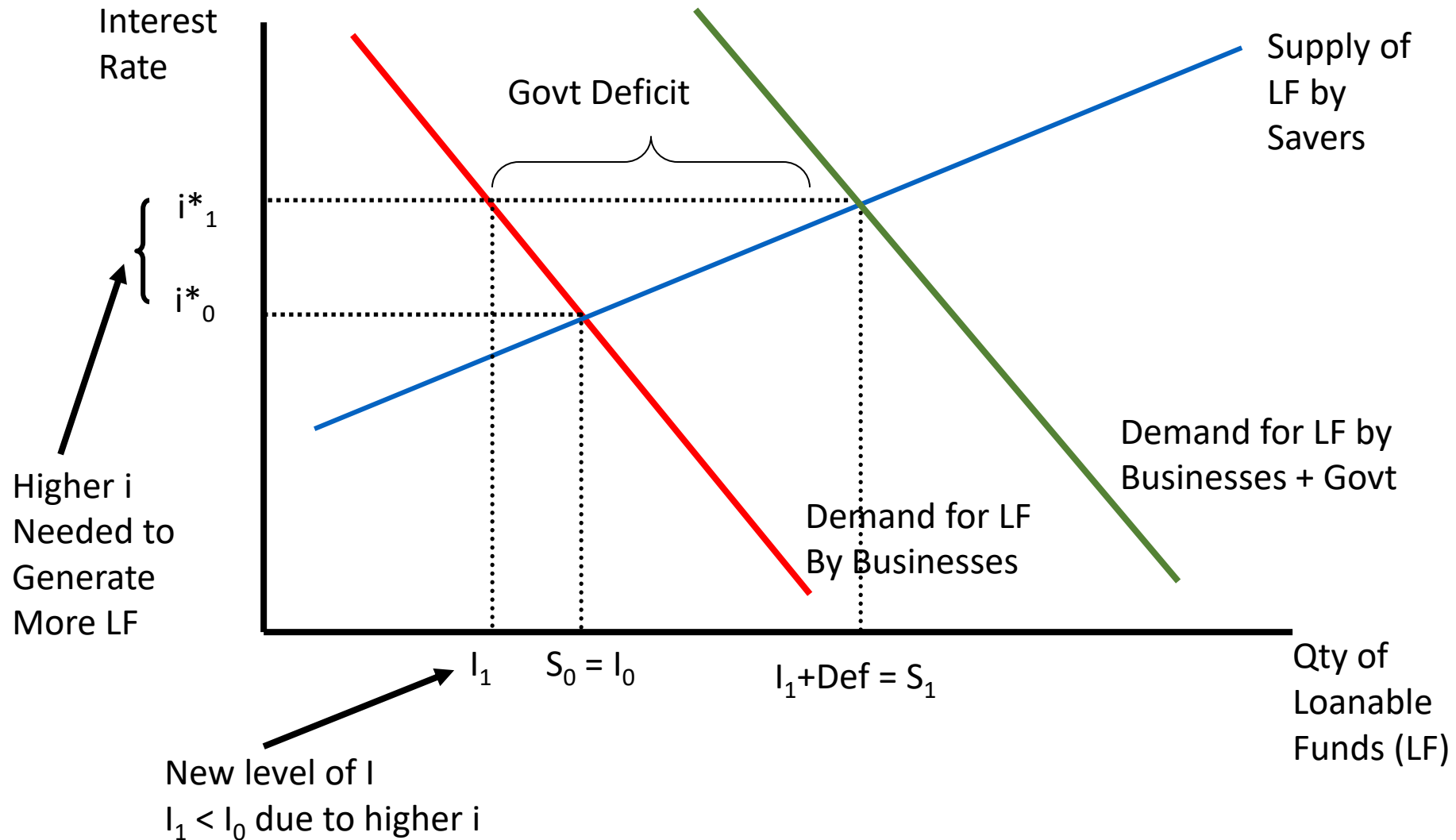
Commonly-Held Beliefs	Reality
Government Finances = Families' Finances (budget constraint)	<ul style="list-style-type: none"><li>• <b><u>Government finances (currency issuer) do not operate like yours or mine (currency users)</u></b> (and families borrow too!)</li></ul>
Deficits = <u>Crowding Out</u> (loanable funds model)	<ul style="list-style-type: none"><li>• <b><u>Government deficit = Non-government surplus</u></b></li><li>• From basic accounting, government deficit creates income for recipients; bond sales neither reduce this income nor return it to the government</li></ul>
Deficits = <u>Higher Interest Rates</u> (loanable funds model)	<ul style="list-style-type: none"><li>• By adding central bank reserves, <b><u>deficits put downward pressure on interest rates</u></b>, ceteris paribus</li><li>• <b><u>Bond sales are monetary operations</u></b> to achieve central bank's interest rate target; the alternative is IOR</li><li>• 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</li></ul>

# Most people's view government deficits via Loanable Funds



# Government deficits in the Loanable Funds view

## Crowding out and interest rates



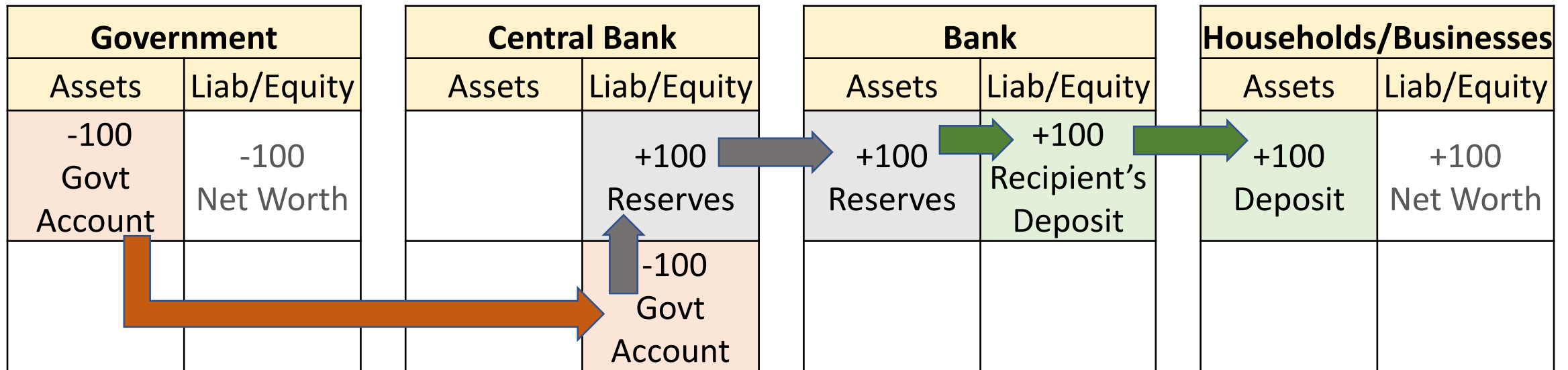
# Do budget deficits lead to higher interest rates? Do Governments and private sector compete for funds (savings) –crowding out?



# What's Wrong with the Loanable Funds View?

Loanable Funds	Reality
<ul style="list-style-type: none"><li>• Proposed in the gold standard and Bretton Woods fixed exchange rate system</li><li>• Fixed supply of savings from which anyone can attempt to borrow</li><li>• Competition for a finite pool of savings</li></ul>	<ul style="list-style-type: none"><li>• Government's own deficit supplies the dollars (baht, rupiah, pesos) that are needed to purchase the bonds</li><li>• Government deficits always lead to \$-for-\$ increase in the supply of net financial assets held by the non-government sector</li><li>• <b>It is the dealers who compete among themselves, not the Government</b></li></ul>
<ul style="list-style-type: none"><li>• Borrowing is limited by access to scarce financial resources</li><li>• Deficit pushes interest rate up</li></ul>	<ul style="list-style-type: none"><li>• Auctions require coordination between the Central Bank and Treasury</li><li>• <b>Deficit pushes interest rate down (deficit fills the system with excess reserves)</b></li></ul>

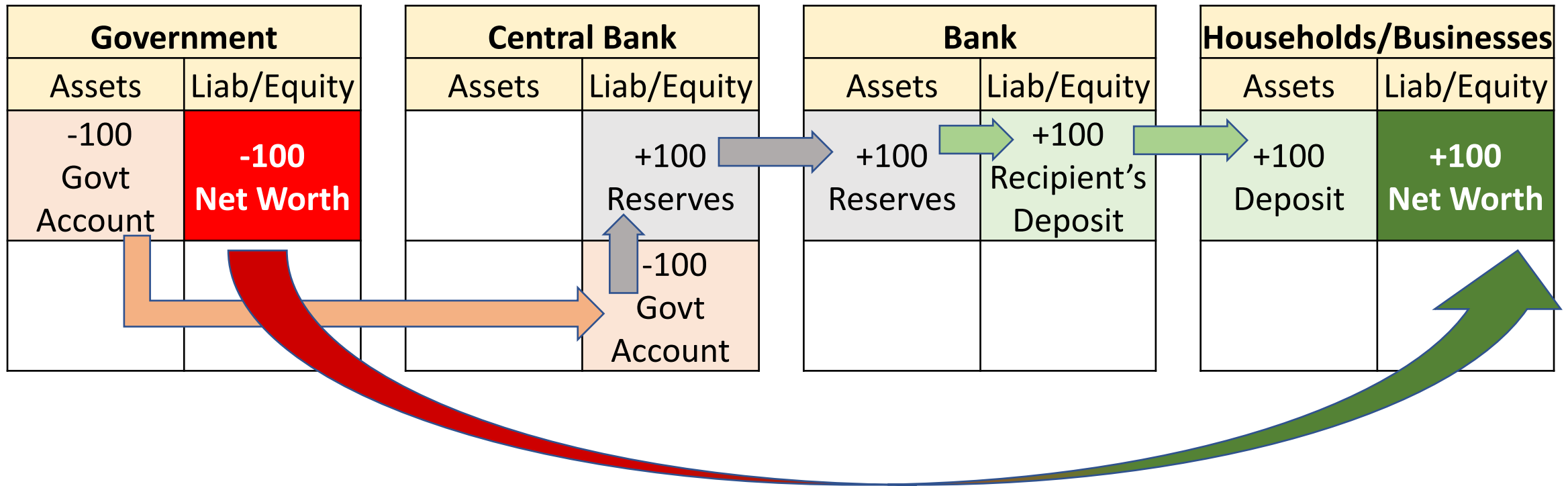
# Bookkeeping: Government Deficit Directly Creates ...



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

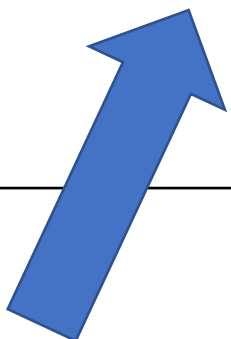


Fiscal deficits increase the aggregate supply of reserve balances

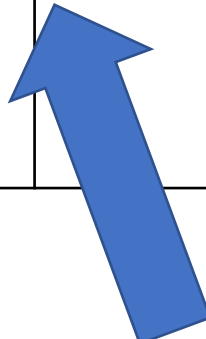
# Government Deficit Increases Banks' Reserves Held in Accounts at the Central Bank

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

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

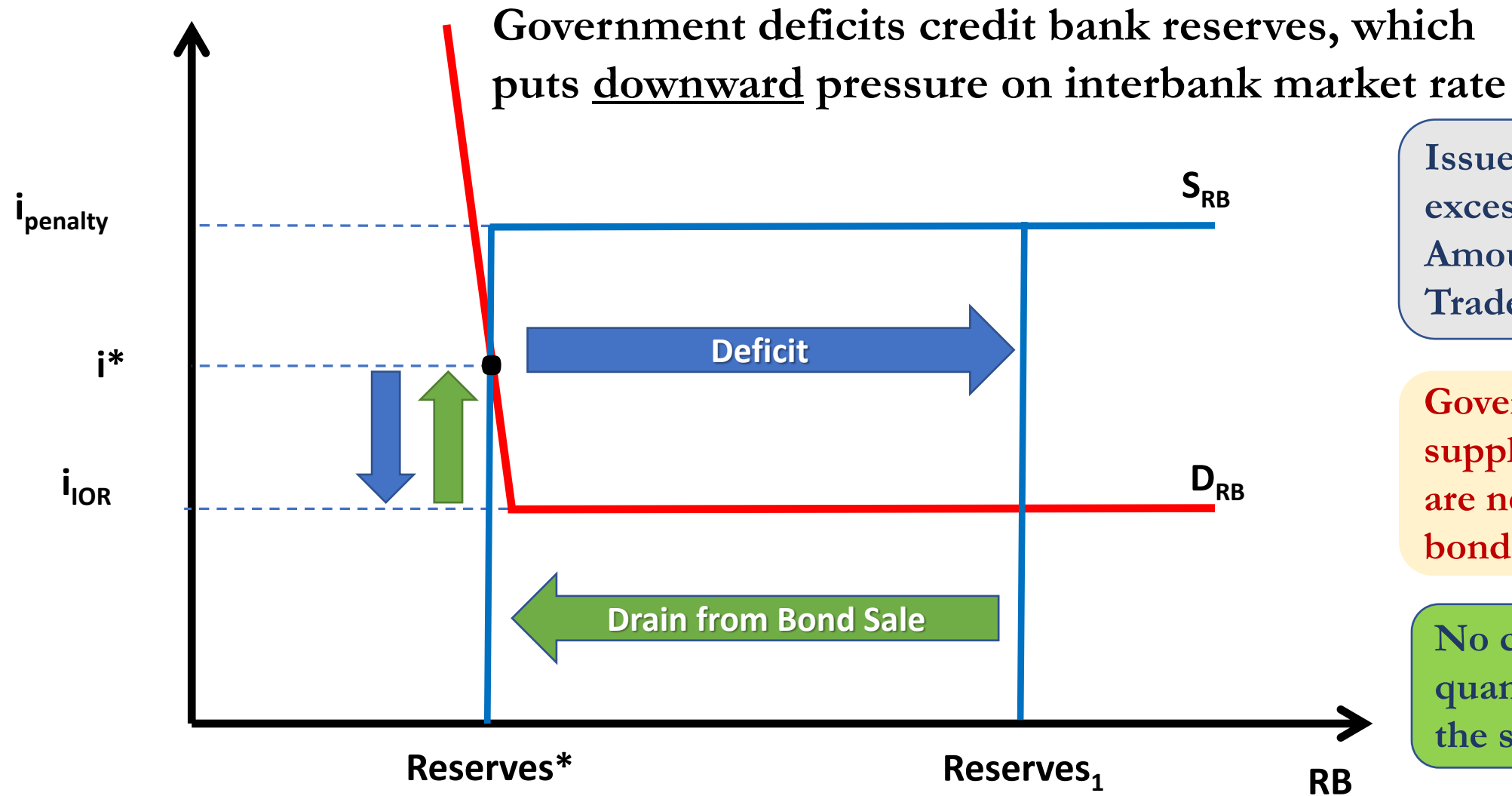


Bank	
Assets	Liab/Equity
+100 Reserves	+100 Recipient's Deposit



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

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



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**

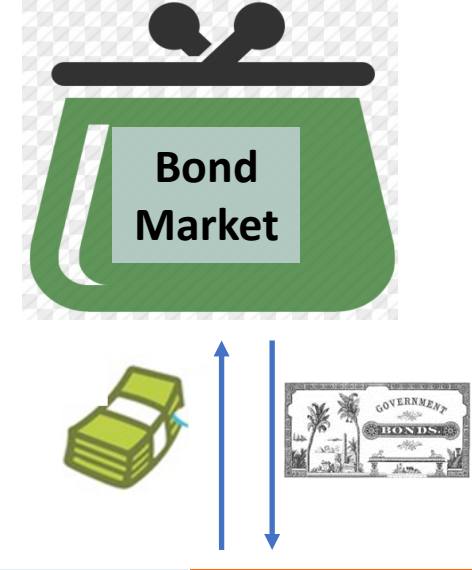
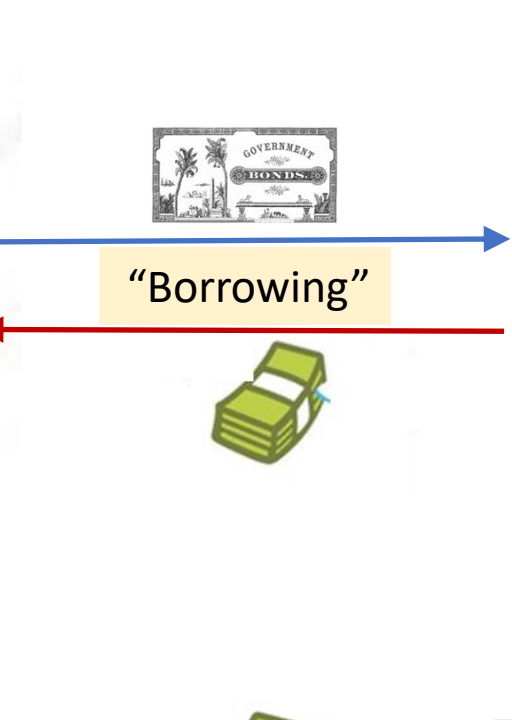
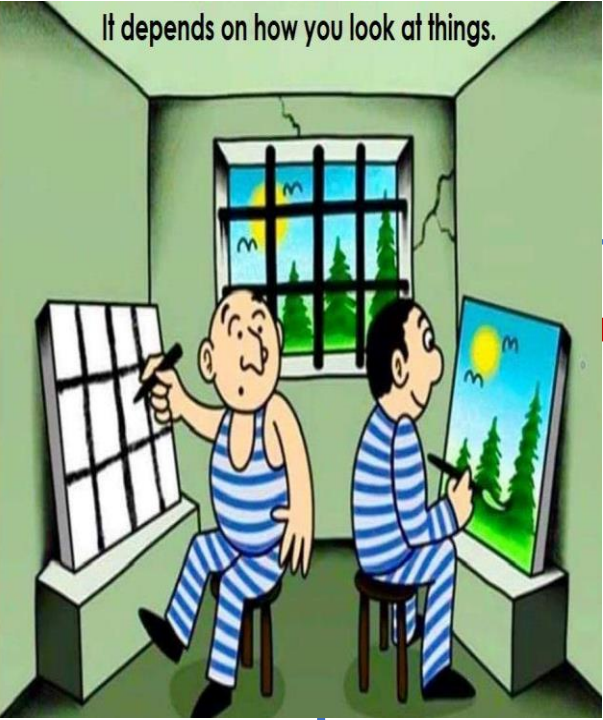
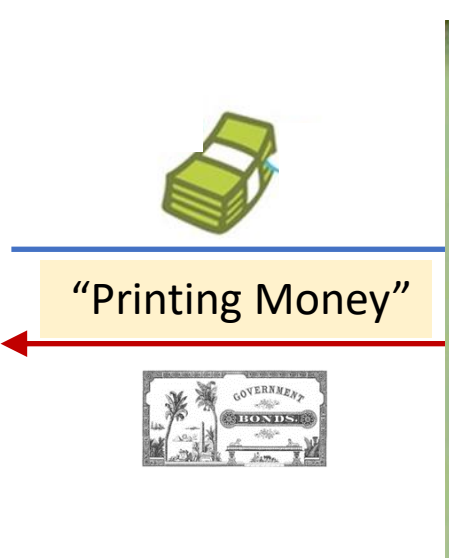
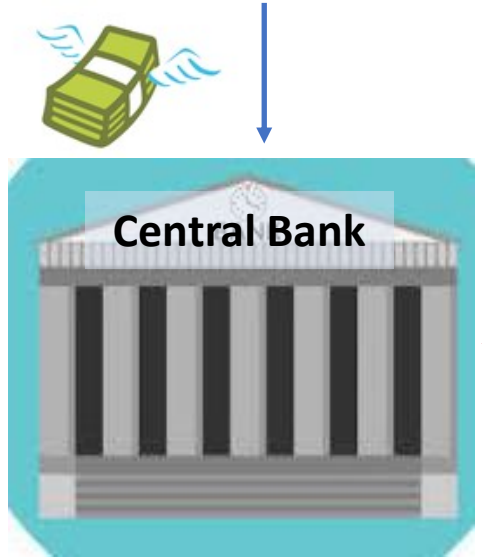
- Deficits add to private saving (this is accounting)
- Deficits do not put upward pressure on interest rates. Opposite: they put downward pressure:
  - In a corridor framework for interest rate targeting, either the central bank or the government must sterilize the deficit's reserve add by offering 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

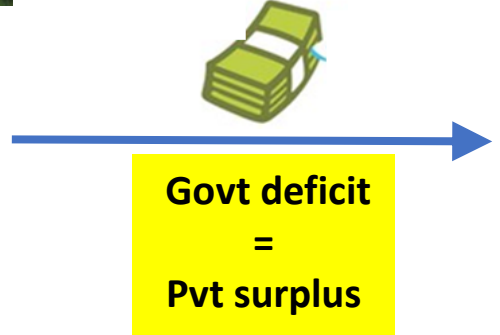
The whole story in a nutshell:  
Policy makers do not see the whole picture but only what pertains to their direct mandate



Interest rates decline so government or CB issues bonds to drain reserves & achieve interest rate target



Households/Business:  
Currency Users



# Structure of the presentation

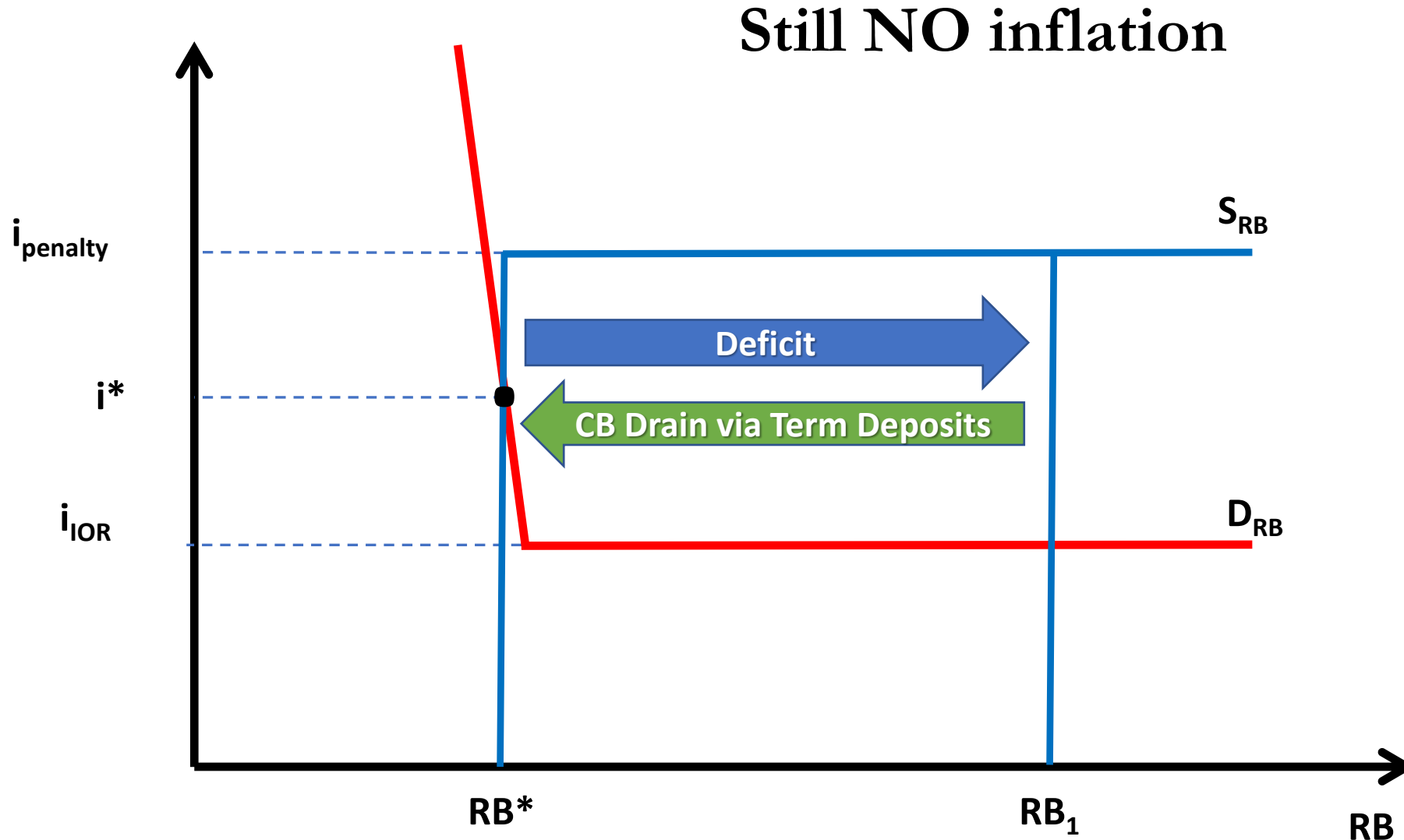
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# Government issues bonds vs. Central Bank buys Government bonds

- 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



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  $\approx$  CB's target rate
- **CB Loan to Government**
  - Interest rate on new debt = CB's term deposit facility  $\approx$  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  $\approx$  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 deficit can be inflationary because it is too big or poorly targeted, but nothing to do with how the deficit the was “financed”.
- Inflation can appear before full employment is reached if there are supply side bottlenecks; as a consequence of migration from the country side that puts upward pressure on the price of food and other necessities; wages increasing faster than productivity; or higher markups

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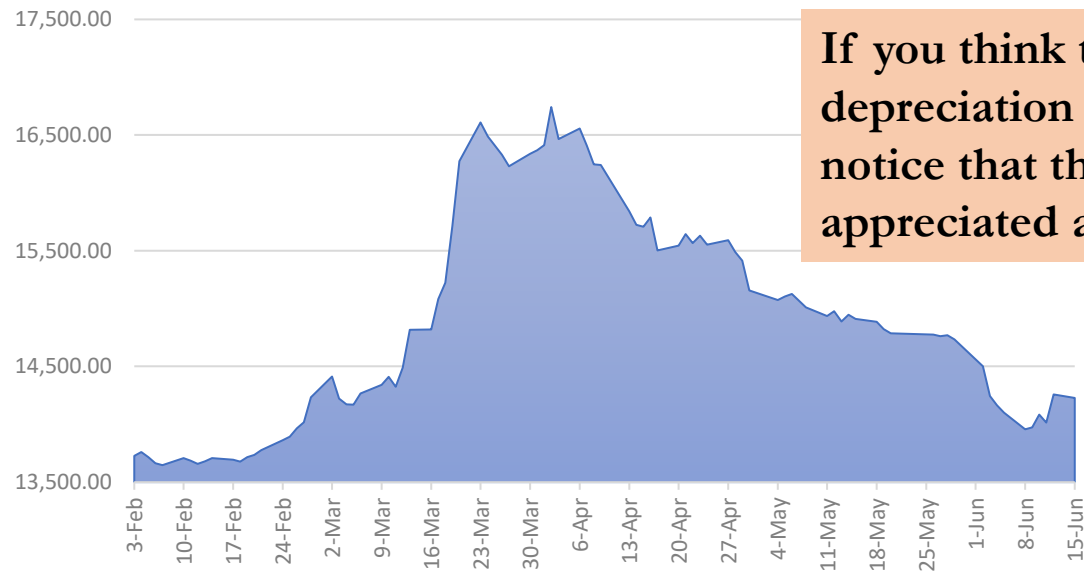
# Unsustainability and currency depreciation

- 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

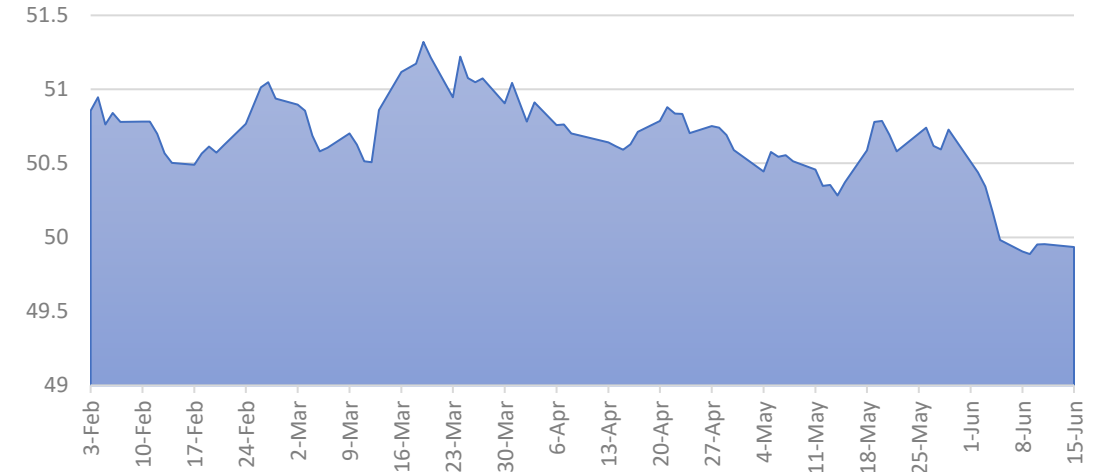
## Daily Exchange Rate (Feb 3 – June 15, 2020)

USD-IDR



Source: Bank Indonesia

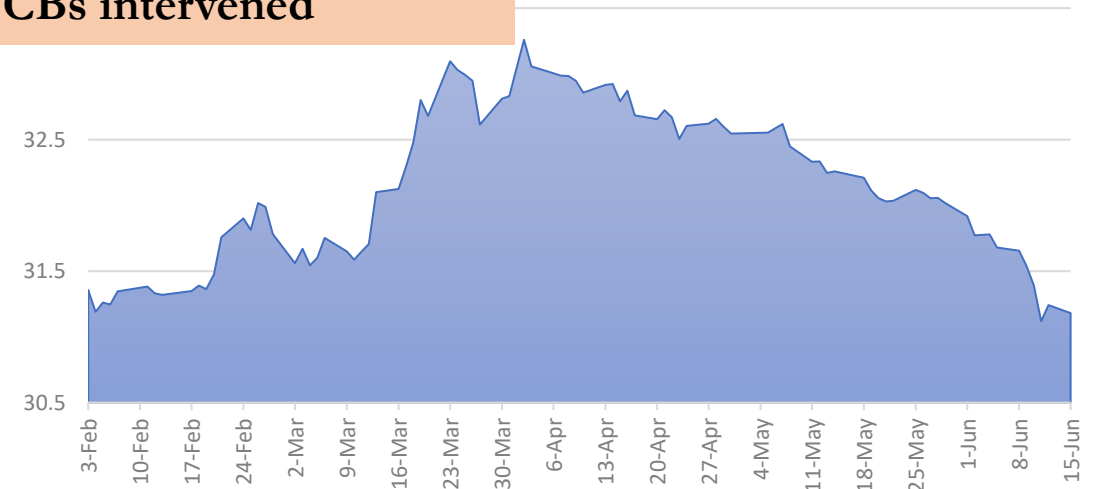
USD-PHP



Source: Banko Sentral ng Pilipinas

**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**

USD-THB



Source: Bank of Thailand

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# Summing Up: in today's financial system...

- Fiscal deficits (domestic currency):

- create ...
- do not ...
- ...do r...
- are infl...



- Future ge...

- “Debt”: v...

- The probl...

- What is th...

d)

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re

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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