MODERN MONEY: THE WAY A SOVEREIGN CURRENCY “WORKS”

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Fiscal Constraints

- President Obama: government is running out of money
- Unsustainable debt path
- Look at Euroland!
  - Sovereign debt crisis
  - Default risk
  - Bond vigilantes

St. Louis Fed

"As the sole manufacturer of dollars, whose debt is denominated in dollars, the U.S. government can never become insolvent, i.e., unable to pay its bills. In this sense, the government is not dependent on credit markets to remain operational. Moreover, there will always be a market for U.S. government debt at home because the U.S. government has the only means of creating risk-free dollar-denominated assets.“

Government can NEVER run out of Dollars; It can NEVER be forced to default; It can NEVER be forced to miss a payment; It is NEVER subject to whims of “bond vigilantes”.

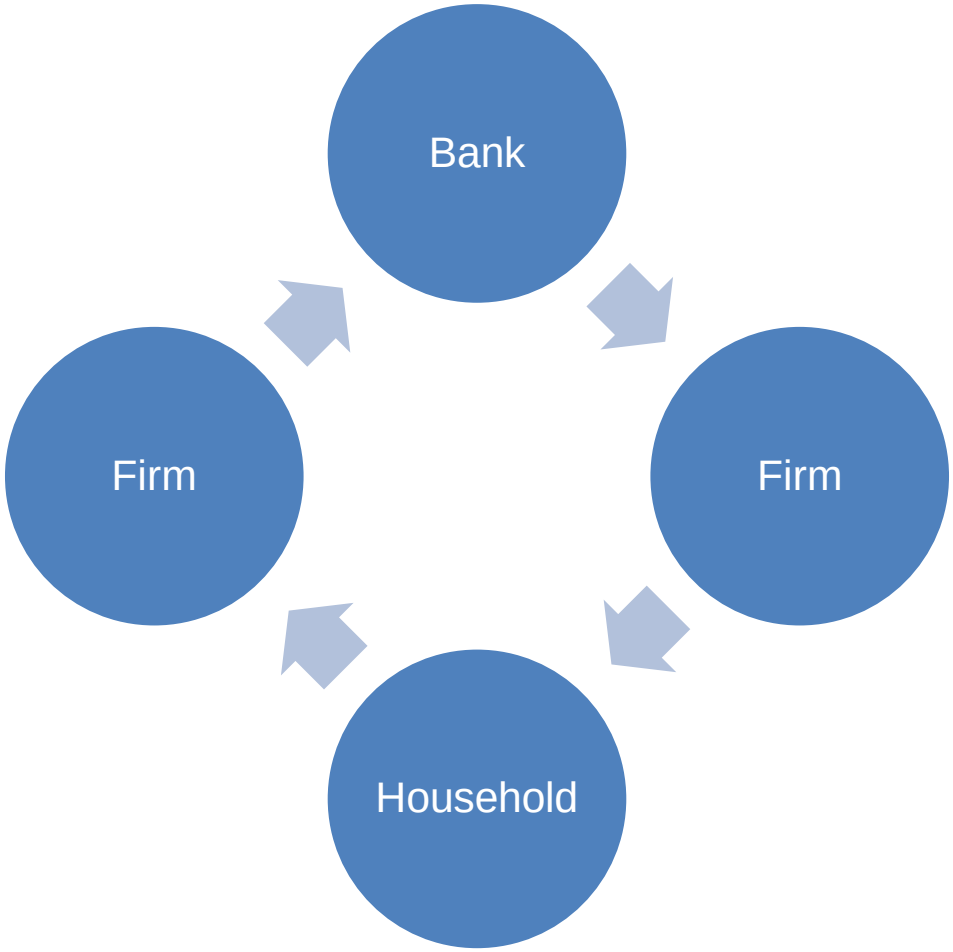
How to Reconcile

"*I think there is an element of truth in the* ***superstition that the budget must be balanced at all times****. Once it is debunked [that] takes away one of the bulwarks that every society must have against expenditure out of control. There must be discipline in the allocation of resources or you will have anarchistic chaos and inefficiency. And one of the functions of* ***old fashioned religion was to scare people by sometimes what might be regarded as myths into behaving in a way that the long-run civilized life requires****.*" (Samuelson)

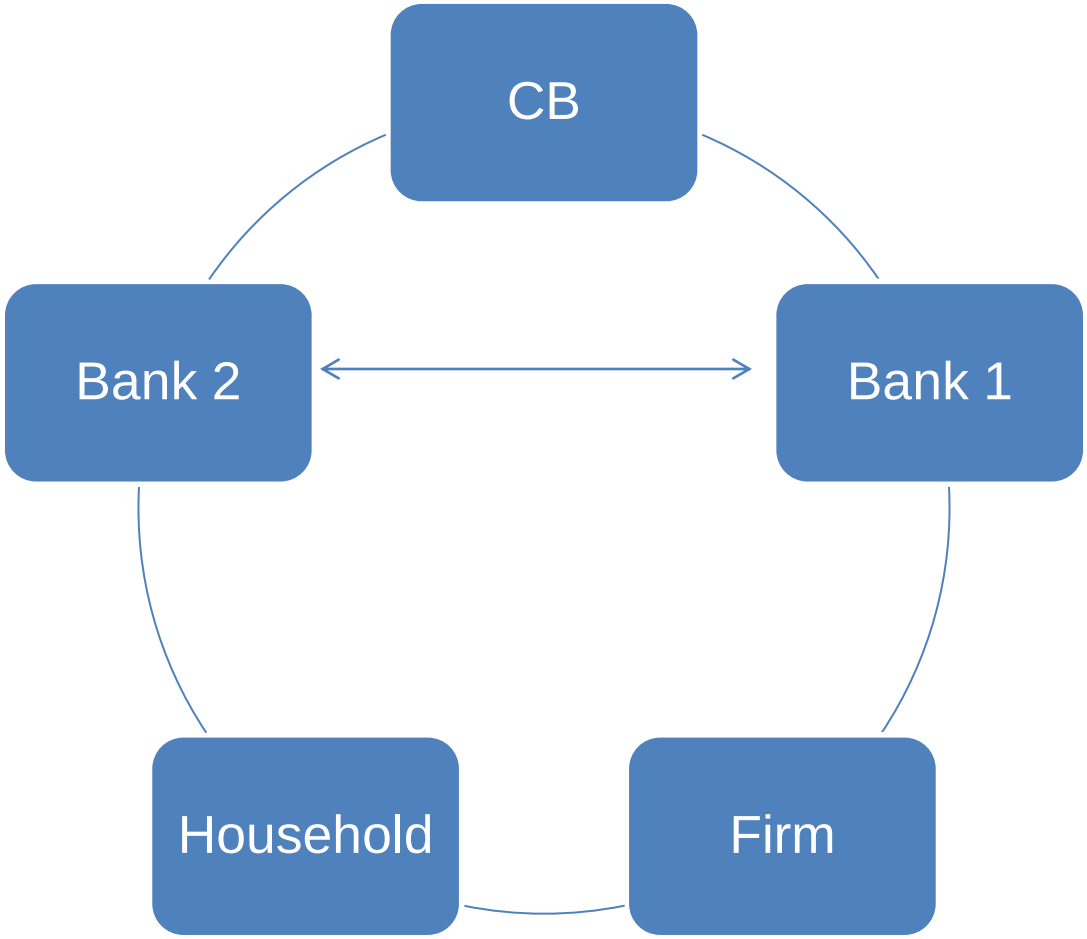
Necessity of balancing the budget is a myth, a superstition, the equivalent of that old-time religion.

So what is the truth? If economics is to rise above superstition, we need to know.

A Simple Model of Money: Single Bank



Simple Model: Multiple Banks



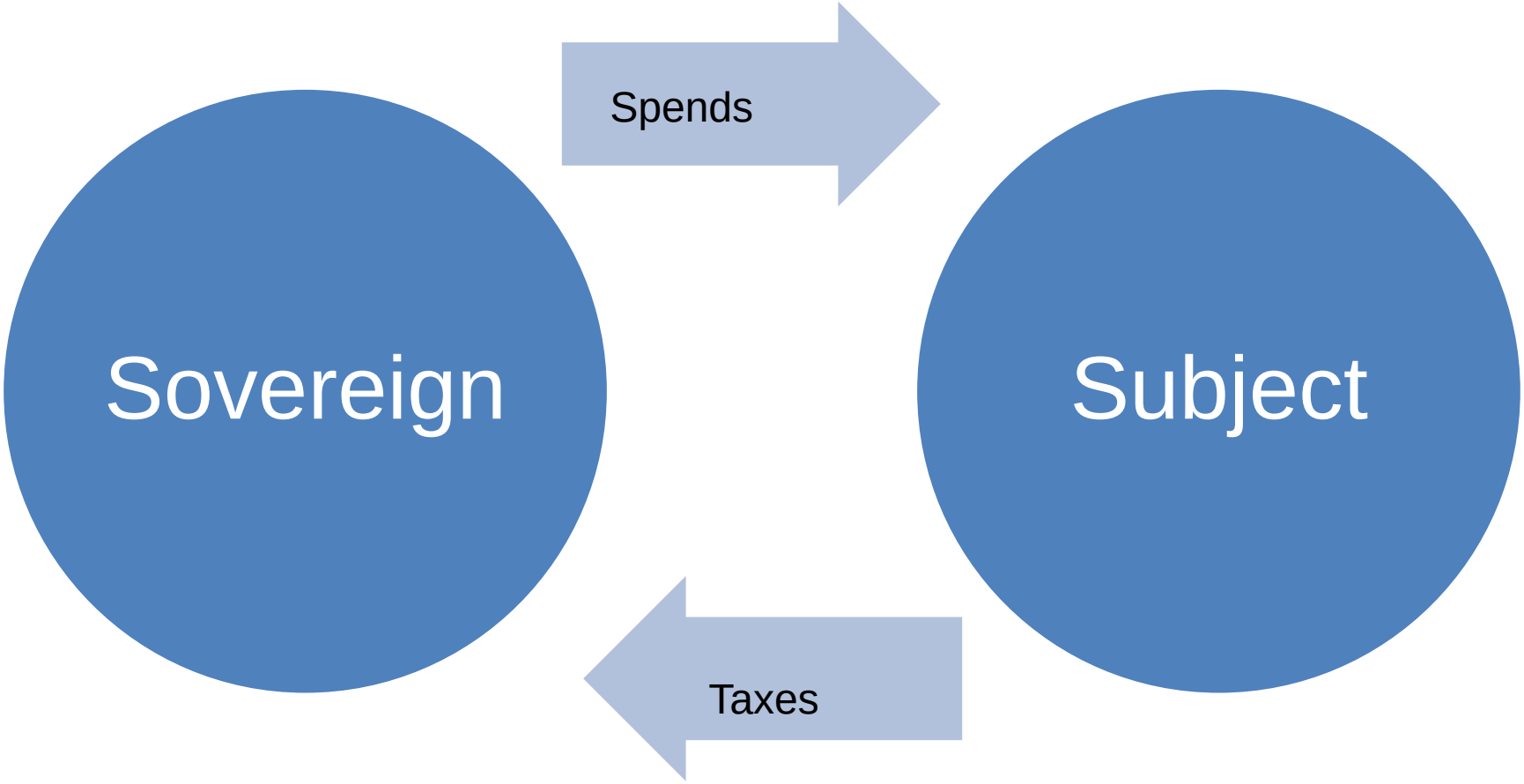
What Backs Up Our Money Today?

- Gold?
- US Dollar: “this note is legal tender for all debts, public and private”;
- Canadian Dollar: “this note is legal tender”;
- Australian Dollar: “This Australian note is legal tender throughout Australia and its territories.”
- UK Pound: “I promise to pay the bearer on demand the sum of five pounds”
- Fiat??? Nothing???

Alternative: Modern Money

- Use of currency and value of M are based on the power of the issuing authority, not on intrinsic value.
- State played central role in evolution of M.
  - From beginning monetary system mobilized resources
- One Nation, One Currency Rule
  - Separate currencies not a coincidence. Tied up with sovereign power, political independence, fiscal authority.
- TAXES DRIVE MONEY:
  - State imposes obligation, payable in state's own money thing IOU

Simple Model: Sovereign Currency Issuer



Domestic Currency

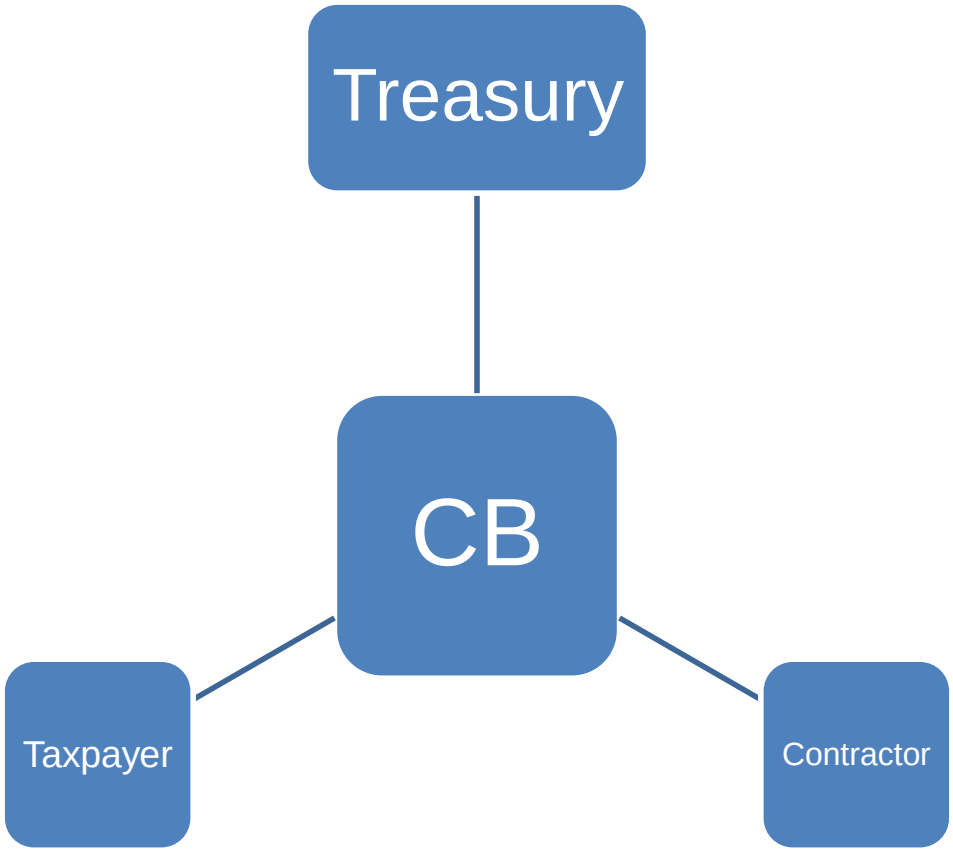
- Most nations adopt a domestic currency—IOU denominated in state money of account and issued by Government.
- Alternatives:

  i) pegged (convertible): least policy space

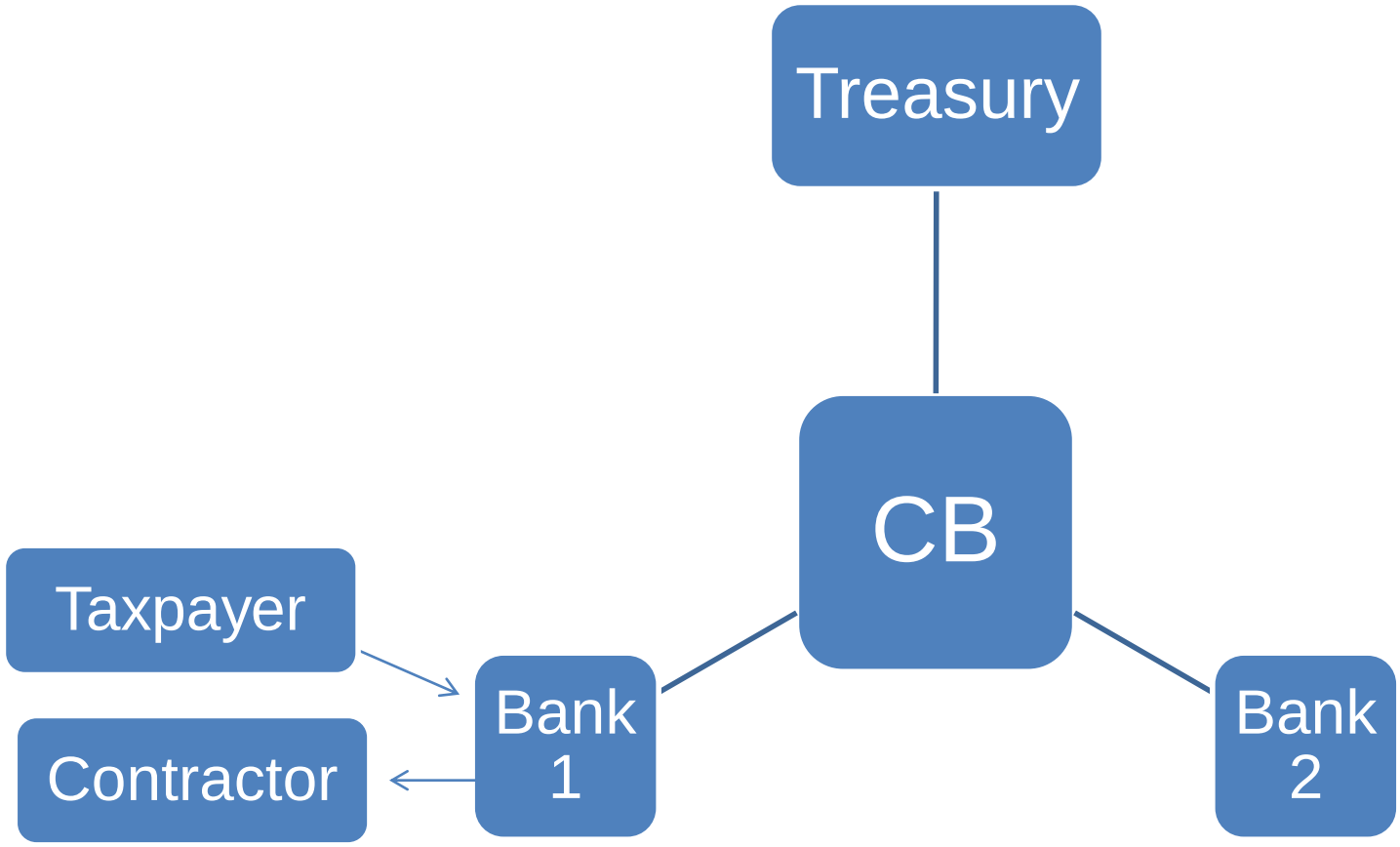
  ii) managed: more policy space

  iii) floating (nonconvertible): most policy space

Sovereign Currency w/CB



Sovereign Currency w/CB and Banks



How Government Spends its Own Currency: Keystrokes

- Spending → credits
  - Government credits bank's reserves; bank credits account of recipient
- Taxes → debits
  - Government debits bank's reserves; bank debits account of taxpayer
- Deficits → net credits
  - Government net credits bank's reserves; bank net credits account of recipient

Money as Scorekeeping

Bond Sales by Government: Why the Bond Vigilantes Cannot Dictate Terms

- Deficit spending → net credits reserves
- Excess Reserves → bid overnight rate down
  - To Fed's support rate (fed funds rate)
- Bonds: Interest earning alternative (IRMA)
  - Part of Monetary Policy, whether new issues or open market sales
  - (NB: Surpluses → net debits →OMP or Redemptions)

Self-imposed constraints

- Budgeting, debt limits
- Operational constraints:
  - Treasury writes checks on accounts at CB
  - CB prohibited from buying Treasury Debt new issues
  - Use of Special Depositories
  - Use of Tax and Loan accts

Central Bank Policy

- Money, Inflation, and Interest Rate Targets
- Consensus: central banks always operate on overnight interest rate
  - Accommodates Demand for Reserves
- Convertible vs. non-convertible currencies
  - Convertible: can lose control of interest rate (Greece)
  - Nonconvertible: controls overnight rate (Japan)

Implications of Alternative Currency Regimes

- Government is monopoly supplier of its currency; determines conditions of supply

i) floating: affordability is never an issue; consequences of too much spending include inflation, too few resources left for private sector, exchange rate depreciation

ii) managed: additional constraints—maintenance of foreign currency, run on currency, currency crisis

iii) pegged: additional constraint—default

NB: in all cases, there are always political constraints, operational constraints, myth, and misunderstanding

Principles of Functional Finance (Abba Lerner)

i. Government ***should*** spend more if there is unemployment

ii. Government ***should*** supply more money (reserves) if interest rates are too high

NB: Budgetary outcome, Debt outcome should never be primary consideration

Sovereign Currency: Summary

- Deficit spending creates private financial wealth
  - Note that CB operations do not; it buys government bonds or lends against collateral (helicopter drop is fiscal policy)
  - CB Lends; Treasury Spends
- Doesn’t matter whether bonds must be sold first—so long as CB accommodates reserve demand
- Doesn’t matter whether CB prohibited from buying new issues—roundabout through banks
- Doesn’t matter whether Treasury must have “money” in its acct at CB to spend—CB and banks cooperate

EURO: Non-Sovereign Currency

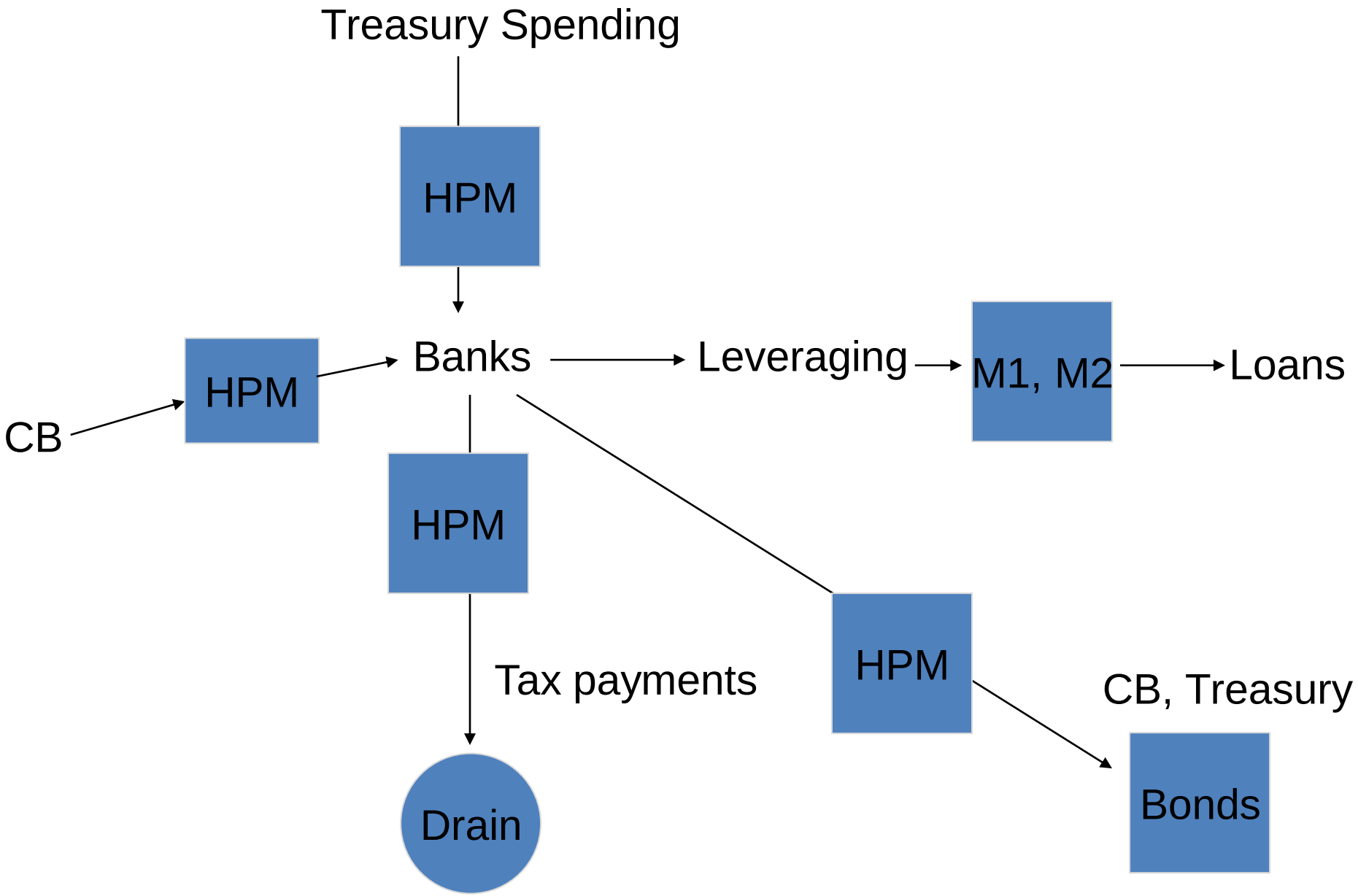
- Member states gave up own sovereign currencies
- Adopted a “foreign currency”, the Euro
- Much like a USA state: a user of the currency, not issuer
- Constrained in its spending: tax revenue, bond sales, willingness of ECB to lend
- Problem: no fiscal equivalent to Uncle Sam in Washington

What About Private Financial Institutions?

A. Leverage currency (high powered money)

B. Horizontal and Vertical aspects of money supply process

Vertical And Horizontal Money Supply



Conclusions

- Currency-issuing Government spends by crediting bank accts, taxes by debiting
- Can always “afford” to spend more
  - Issues: inflation, exchange rate effects, interest rate effects
- Sovereign currency gives more policy space
  - No default risk
  - Can control interest rates
  - Can use policy to achieve full employment

What I did and did NOT say

- I did say: Sovereign Government faces no financial constraints; cannot become insolvent in its own nonconvertible currency
  - But it can only buy what is for sale
- I did NOT say that Government ought to buy everything for sale
  - Size of Government is a political decision with economic effects
- I did NOT say that deficits cannot be inflationary:
  - Deficits that are too big can cause inflation
- I did NOT say that deficits cannot affect exchange rates:
  - Sovereign Governments let currency float; float means currency can go up and down

Thank you

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Appendix: Self-imposed constraints

- Budgeting, debt limits
- Operational constraints:
  - Treasury writes checks on accts at CB
  - CB prohibited from buying Treasury Debt new issues
  - Use of Special Depositories
  - Use of Tax and Loan accts

Consolidated Govt: simple case

- 1A. The government's spending credits bank accounts with reserve balances (HPM).
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- 2A. Banks credit the deposit accounts of the spending recipients. Result: Bank reserves increase, bank deposits increase, private sector net financial wealth increases. The change to the government's financial position is necessarily the opposite—its net financial wealth has been reduced (i.e., the equity on the liability/equity side of the government/central bank balance sheet has been reduced).
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- 3A. Finally, absent interest on reserve balances, the government/central bank issues bonds or offers time deposits to drain or otherwise replace the reserve balances (HPM) created by the deficit if they are not consistent with banks' demand for reserve balances at the targeted interest rate. This is the Horizontalist recognition that if actual reserves deviate from desired balances, the central bank must drain reserves to hit its interest rate target.

Implications of Govt Deficit: simple case

- (i) the government is not constrained in its spending by its ability to acquire HPM since the spending *creates* HPM as in 1A and 2A. Spending does not require previous tax revenues and indeed it is previous spending or loans to the private sector that provide the funds to pay taxes or purchase bonds.
- (ii) the issuance of bonds in 3A is not for financing purposes but for monetary policy purposes so that the targeted interest rate can be achieved. Alternatively, government can simply pay interest on reserves (which then serve the same purpose as bonds that pay interest).
- (iii) the government deficit did not crowd out the private sector's financial resources but instead raised its net financial wealth as in 2A. The "market" does not set interest rates on the debt, or at the very least the government has the option of always setting the rate on its own debt.

USA Case with Self-imposed constraints

- 1B. The Fed undertakes repurchase agreement operations with primary dealers (in which the Fed purchases Treasury securities from primary dealers with a promise to buy them back on a specific date) to ensure sufficient reserve balances exist for settlement of the Treasury's auction (which will debit reserve balances in bank accounts as the Treasury's account is credited) while also achieving the Fed's target rate. (Note that the point here is not that the Fed necessarily engages in operations that are equal to or greater than the auction, but that the operations ensure that sufficient balances circulate such that the auction settles without the effective federal funds rate for the day moving above the target rate. This requires that the balances already in circulation plus those added via operations are sufficient to settle the auction and enable banks to end the day with their desired positions at the target rate equal to actual positions.)
- 2B. The Treasury's auction settles as Treasury securities are exchanged for reserve balances, so bank reserve accounts are debited to credit the Treasury's account, and dealer accounts at banks are debited. Treasury auctions can only settle via reserve balances using the Fedwire clearing and settlement system.
- 3B. The Treasury adds balances credited to its account from the auction settlement to tax and loan accounts. This credits the reserve accounts of the banks holding the credited tax and loan accounts.

Self-imposed constraints, con't

- 4B. (Transactions 4D and 4E are interchangeable; that is, in practice, transaction E might occur before transaction D.) The Fed's repurchase agreement is reversed, as the second leg of the repurchase agreement occurs in which a primary dealer purchases Treasury securities back from the Fed. Transactions in A above are reversed.
- 5B. Prior to spending, the Treasury calls in balances from its tax and loan accounts at banks. This reverses the transactions in C.
- 6B. The Treasury deficit spends by debiting its account at the Fed, resulting in a credit to bank reserve accounts at the Fed and the bank accounts of spending recipients. This increases the net financial wealth of the private sector.

- As with the general—simple--case above, the analysis is much the same in the case of a deficit created by a tax cut instead of an increase in spending. That is, with a tax cut the Treasury's spending is greater than revenues just as it is with pro-active deficit spending.)

- **What MMT stresses is that regarding (i), (ii), and (iii) above, the end result is exactly as stated in the general case, even though with the procedures adopted due to the self-imposed constraint the transactions are now more complex and the sequencing is different.**

Case 1a: Government imposes tax liability and buys a bomb by crediting an account at a private bank

Government

Asset	Liability
+ Bomb	+ Reserves
+ Tax Liability	+ Net Worth

Private Bank

Asset	Liability
+ Reserves	+ Demand Deposits

Private Nonbank Entity

Asset	Liability
- Bomb + Demand Deposits	+ Tax Liability - Net Worth

Taxes are paid

Government

Asset	Liability
- Tax Liability	- Reserves

Private Bank

Asset	Liability
- Reserves	- Demand Deposits

Private Nonbank Entity

Asset	Liability
- Demand Deposits	- Tax Liability

Taxes are paid

Government

Asset	Liability
+ Bomb	+ Net Worth

Private Nonbank Entity

Asset	Liability
- Bomb	- Net Worth

Case 1b: Government deficit spends, creates private net financial assets

Government

Asset	Liability
+ Bomb	+ Reserves

Private Bank

Asset	Liability
+ Reserves	+ Demand Deposits

Private Nonbank Entity

Asset	Liability
- Bomb + Demand Deposits	

1 b. Government sells Bond to drain reserves

Government

Asset	Liability
	- Reserves + Bond

Private Nonbank Entity

Asset	Liability
- Reserves + Bond	

Final Position, Case 1b

Government

Asset	Liability
+ Bomb	+ Bond

Private Bank

Asset	Liability
+ Bond	+ Demand Deposits

Private Nonbank Entity

Asset	Liability
- Bomb + Demand Deposits	

Case 2: Government must sell bonds before it can deficit spend

Government

Asset	Liability
+ Demand Deposits	+ Bond

Private bank

Asset	Liability
+ Bond	+ DD Government

Government buys bomb, writing check on private bank

Government

Asset	Liability
- Demand Deposits + Bomb	

Private Bank

Asset	Liability
	- DD Government + DD Private

Private Nonbank Entity

Asset	Liability
- Bomb + Demand Deposits	

Final position, Case 2

Government

Asset	Liability
+ Bomb	+ Bond

Private Bank

Asset	Liability
+ Bond	+ Demand Deposits

Private Nonbank Entity

Asset	Liability
- Bomb + Demand Deposits	

Case 3: Treasury can write checks only on its central bank account; first sells Bond to private bank

Treasury

Asset	Liability
+ DD Private bank	+ Bond

Private Bank

Asset	Liability
+ Bond	+ DD Treasury

Treasury moves deposit to central bank account

Treasury

Asset	Liability
- DD Private bank + DD CB	

Central Bank

Asset	Liability
+ Loaned Reserves	+ DD Treasury

Private Bank

Asset	Liability
	- DD Treasury + Borrowed Reserves

Treasury buys bomb

Treasury

Asset	Liability
- Demand Deposits + Bomb	

Central Bank

Asset	Liability
- Loaned Reserves	- DD Treasury

Private Bank

Asset	Liability
	+ Demand Deposits - Borrowed Reserves

Private Nonbank Entity

Asset	Liability
+ Demand Deposits - Bomb	

Final position case 3

Treasury

Asset	Liability
+ Bomb	+ Bond

Private Bank

Asset	Liability
+ Bond	+ Demand Deposits

Private Nonbank Entity

Asset	Liability
- Bomb + Demand Deposits	