



Currency

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+ Deposits

*i*




To calculate the amount of liquid balances (cash and deposits) needed for the entire U.S. economy, we need to know:

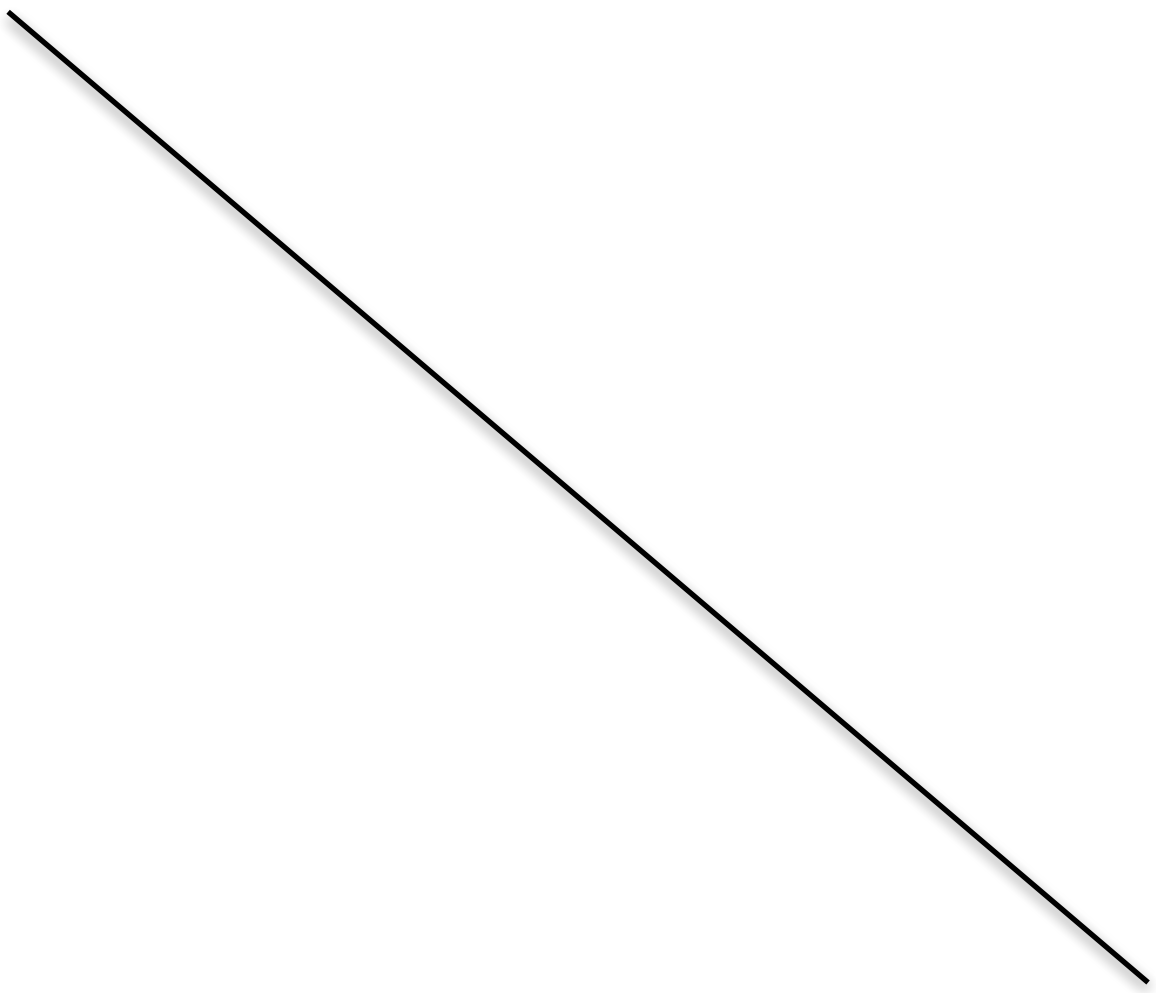
- 📌 The **prices** of all that is purchased and
- 📌 The total **number of units** purchased

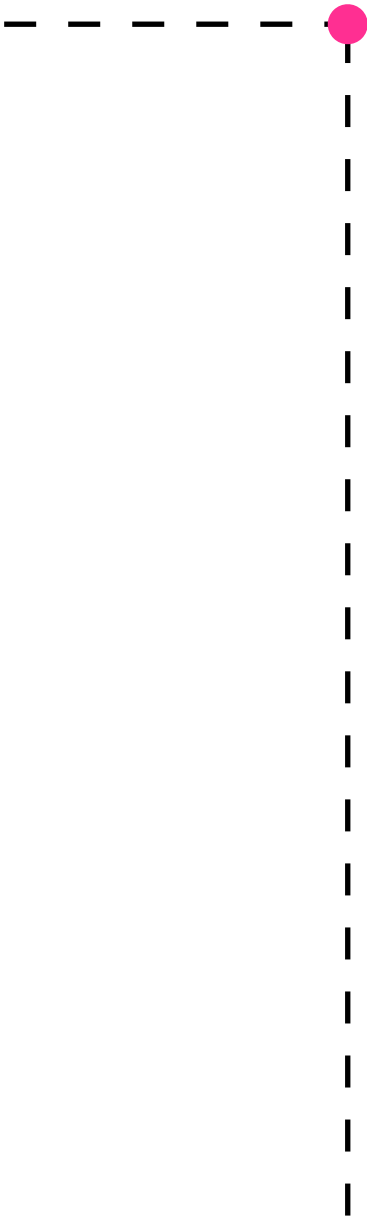


For prices  
we will use  
the CPI



For quantity  
we will use  
real GDP





$$M^d = 500$$





This line represents the need for liquid balances for a given price level ( $P_0$ ) and a given  $GDP_0$







P





















e



a

S

e













6

















e

**p**

u

**b**







W











e

e







a



g

e











u





**b**

a



a







e

S

$i_0$

$i_1$



For all interest rates, the demand  
for liquid balances will be **higher**



A rightward shift in the Demand for  
Money

$$M^d(P_0, GDP, P_0)$$





$M^d(P_1, GDP_0)$









P













a

S

e







e

W

e







2





S

2











S









e

**P**

U

**b**









W









e











W

e











U





**b**

2





a







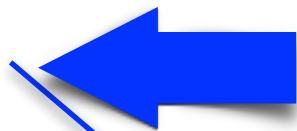
S



For all interest rates, the demand for liquid balances will be **lower**



A leftward shift in the Demand for  
Money



$M^d(P_0, GDP_1)$



How much money is needed for  
transactions?

If lunch is more  
expensive: **price** is  
\$**20**/lunch, then I  
need to have  
**7** $\times$ **20**=\$140 in cash  
or check

If I buy lunch only  
5 days a week,  
then I only need to  
have  $5 \times 15 = \$75$  in  
cash or check

If **prices increase** (inflation) the public will need **larger** liquid balances

If GDP decrease (fewer transactions) the public will need lower liquid balances

# How much money is needed for transactions?

If **prices increase** (inflation) the public will need **larger** liquid balances

➡ For all interest rates, the demand for liquid balances will be **higher**

➡ A **rightward shift** in the Demand for Money

If **GDP decrease** (fewer transactions) the public will need **lower** liquid balances

➡ For all interest rates, the demand for liquid balances will be **lower**

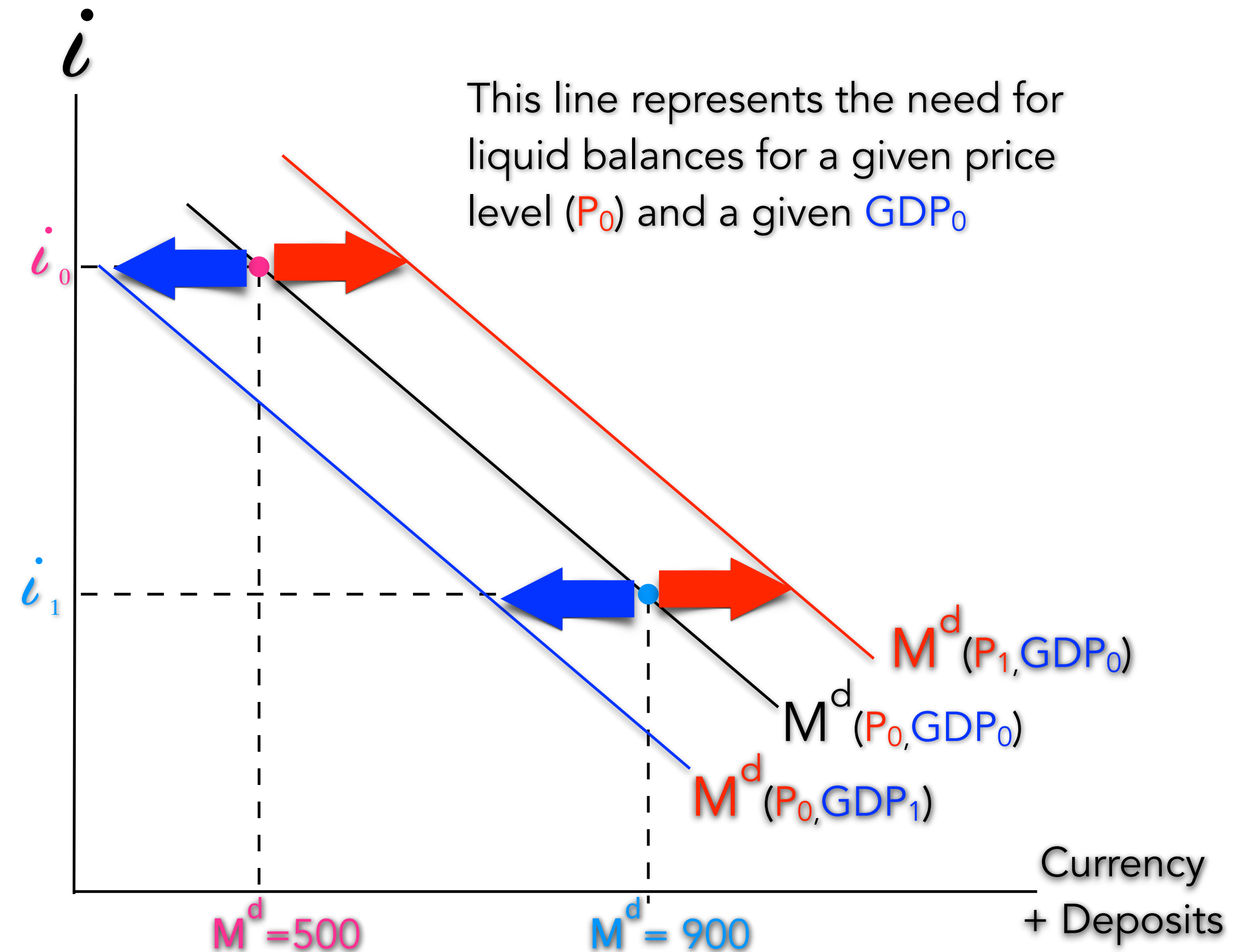
➡ A **leftward shift** in the Demand for Money

To calculate the amount of liquid balances (cash and deposits) needed for the entire U.S. economy, we need to know:

- The **prices** of all that is purchased and
- The total **number of units** purchased

For prices we will use the CPI

For quantity we will use real GDP



# Understanding the Supply and Demand for Money

