Equations to calculate the effect of an injection of new money:

$$\Delta D = \Delta R \times \frac{1}{r}$$

ΔR = New money

ΔL = ΔD - ΔR

$$\Delta D = 3{,}000 \times \frac{1}{0.1}$$

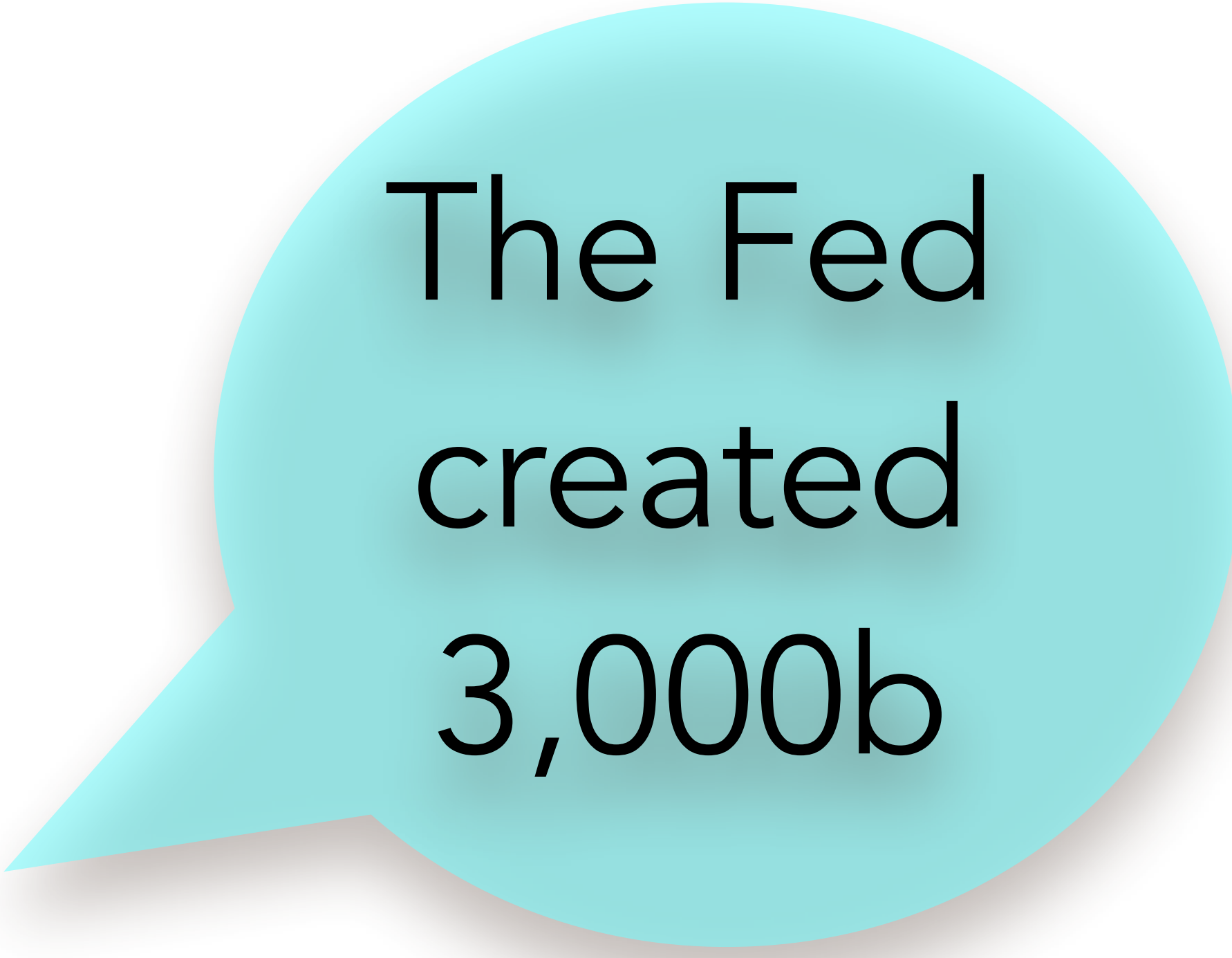
$$\Delta R = 3{,}000$$

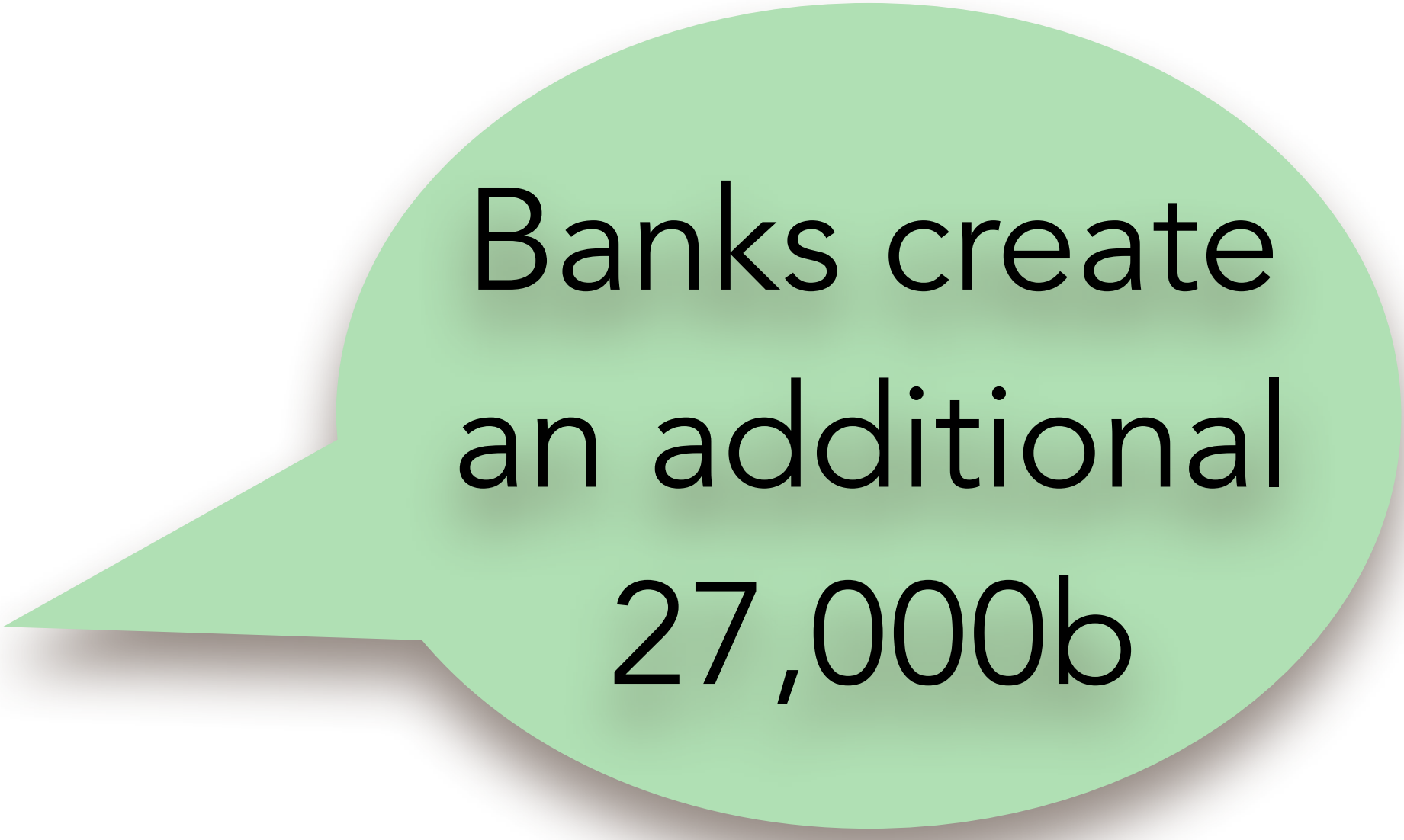
$= 3{,}000 \times 10$

$$\Delta L = 30{,}000 - 3{,}000$$

=30,000

=27,000


The Fed
created
3,000b


Banks create
an additional
27,000b

Money Supply (M^S)= Currency outside banks + Deposits

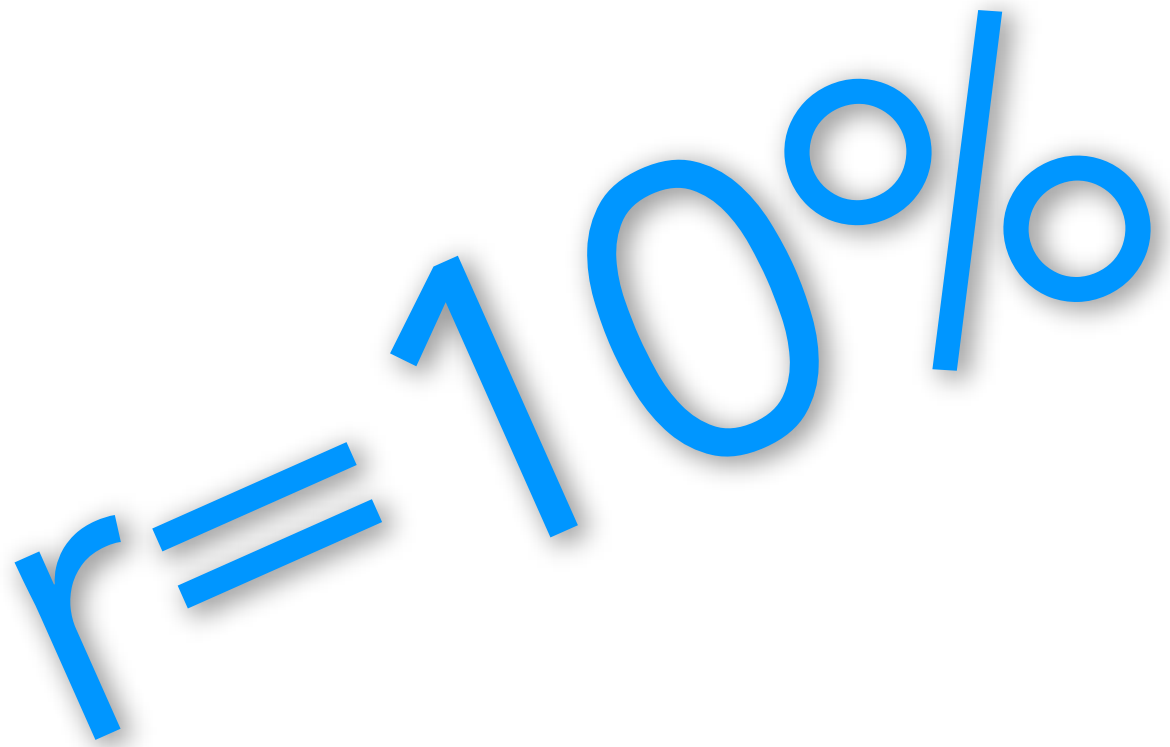
Change in the Money Supply (ΔM^S) = ΔCurrency + ΔDeposits

$$\Delta M^{s} = \Delta \text{Currency} + \Delta \text{Deposits}$$

$$\Delta M^{s} = \text{zero} + 30{,}000$$

If we **assume** the entire amount of all loans become deposits: no portion of any loan “leaks” into currency

Then the change in the money supply is the same as the change in Deposits


r=10%

Equations to calculate the effect of an injection of new money:

ΔR = New money

$\Delta R = 3{,}000$

The Fed created 3,000b

$\Delta D = \Delta R \times \frac{1}{r}$ $r=10\%$

$\Delta D = 3{,}000 \times \frac{1}{0.1} = 3{,}000 \times 10 = 30{,}000$

$\Delta L = \Delta D - \Delta R$

$\Delta L = 30{,}000 - 3{,}000 = 27{,}000$

Banks create an additional 27,000b

Money Supply (M^s)= Currer ide banks + Deposits

Change in the Money Su ΔCurrency + ΔDe

ΔM^s = ΔCurrency + ΔDe

If we **assume** the entire amount of all loans become deposits: no portion of any loan "leaks" into currency

Then the change in the money supply is the same as the change in Deposits

ΔM^s = zero +30,000