

The logo for Bank A features a stylized orange house shape. The roof is a triangle, and the main body is a rectangle with rounded corners. The text "Bank A" is centered within the triangular roof section.

Bank A



New
Money:
3,000b

The logo for Bank B is a blue house-like shape with a triangular roof and a rectangular body. The text "Bank B" is centered in the roof. The body is a large white rectangle with a blue border.

Bank B



$L = 0.9 * 3,000$



$D = 0.9 * 3,000$

The logo for Bank C is a pink house-like shape with a triangular roof and a rectangular body. The text "Bank C" is centered in the roof. The body is a large, empty rectangular frame.

Bank C

The logo for Bank D is a stylized house shape. It features a solid magenta triangle at the top, which serves as the roof. Below the triangle is a large, empty square with a thick magenta border, representing the main body of the building. The text "Bank D" is centered within the magenta triangle.

Bank D

The logo for Bank E is a yellow house-like shape with a triangular roof and a rectangular body. The text "Bank E" is centered in the roof. The body is a large white rectangle with a yellow border.

Bank E

A red envelope icon with a white rectangular area in the center. The text "Bank F" is written in black inside the white area.

Bank F



e





S

C

a



C

u



a



e





r

S









a



n



W





p



S





S

g

n

e

r

a



e

d

b

y



h

e

n

e

W

m



n

e

y





D

D = 3,000kb



$L = 0.9 * 0.9 * 3,000$



$D = 0.9 * 0.9 * 3,000$









9



3












$L = 0.9 * 0.9 * 0.9 * 3,000$



$D = 0.9 * 0.9 * 0.9 * 3,000$









9







9



3



0

0











9







9







9



3

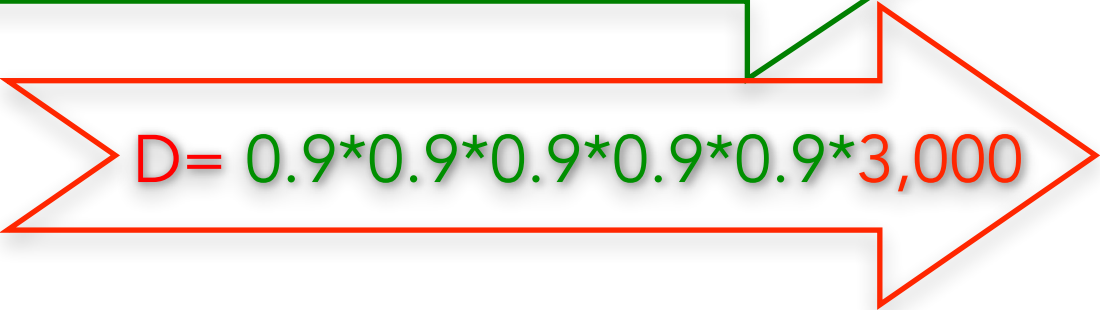









$$L = 0.9 * 0.9 * 0.9 * 0.9 * 0.9 * 3,000$$


$$D = 0.9 * 0.9 * 0.9 * 0.9 * 0.9 * 3,000$$

$$D = 0.9 * 0.9 * 0.9 * 0.9 * 3,000$$


$$L = 0.9 * 0.9 * 0.9 * 0.9 * 3,000$$


$$D = 0.9 * 0.9 * 0.9 * 0.9 * 3,000$$

$$D = 0.9 * 0.9 * 0.9 * 0.9 * 0.9 * 3,000$$

3,000

+0.9*3,000



Loans become
Deposits

+ 0.9*0.9*3,000

+ 0.9*0.9*0.9*3,000

+ 0.9*0.9*0.9*0.9*3,000

+ 0.9*0.9*0.9*0.9*0.9*3,000







h



S

p

r



C

e

S

S

C



n

t



n

u

e

S







S

e



e

r

a







u

n

d

S



**Total new
Deposits in all
checking accounts**















Factor out 3,000

3,000 (1

+0.9

$$+ 0.9 * 0.9$$

$$+ 0.9 * 0.9 * 0.9$$

$$+ 0.9 * 0.9 * 0.9 * 0.9$$

$$+ 0.9 * 0.9 * 0.9 * 0.9 * 0.9$$

+ . . .)



3,000 (1

+0.9

+0.9²

$$+ \dots 0.9^n)$$

+0.9³

+0.9⁴

+0.9⁵

+0.9%

$\Delta D = 3,0000$

$$\left(\frac{1}{1 - 0.9} \right)$$


$$\Delta D = 3,0000 (10)$$

$\Delta D = 30,000$ billion


A 3,000 injection of new money into the banking system, has the potential to increase total balances in deposit accounts by 30,000 billion




Is that a lot?



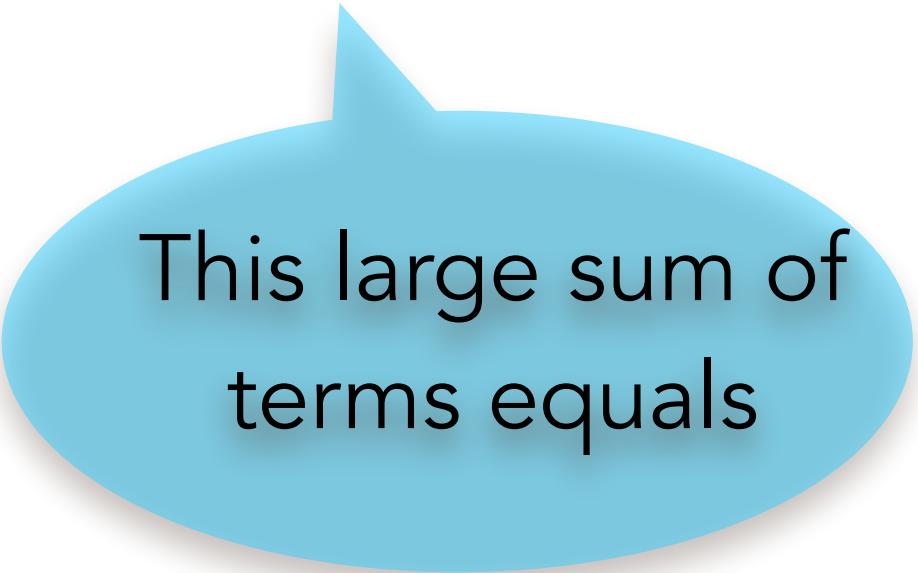
Banks are
allowed to lend
90% of Deposits



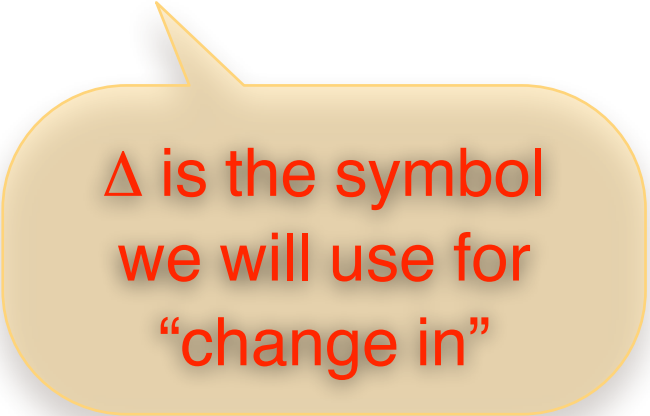
Banks are
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Banks are
allowed to lend
90% of Deposits



This large sum of
terms equals



Δ is the symbol
we will use for
“change in”

Let's calculate first Total **new Deposits** generated by the new money: ΔD

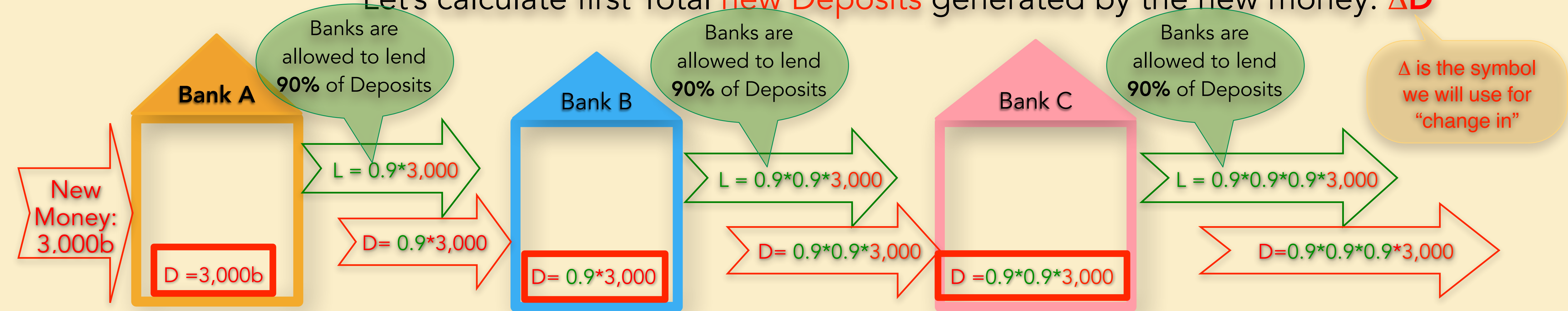
$$D = 0.9 * 3,000,000$$

$$D = 0.9 * 0.9 * 3,000,000$$

$$D = 0.9 * 0.9 * 0.9 * 3,000,000$$

+... this process continues for several rounds

Let's calculate first Total **new Deposits** generated by the new money: ΔD



Total new Deposits in all checking accounts $\Delta D = 3,000 + 0.9 \times 3,000 + 0.9 \times 0.9 \times 3,000 + 0.9 \times 0.9 \times 0.9 \times 3,000 + 0.9 \times 0.9 \times 0.9 \times 0.9 \times 3,000 + 0.9 \times 0.9 \times 0.9 \times 0.9 \times 0.9 \times 3,000 + \dots$ this process continues for several rounds

Factor out 3,000 $\Delta D = 3,000 (1 + 0.9 + 0.9 \times 0.9 + 0.9 \times 0.9 \times 0.9 + 0.9 \times 0.9 \times 0.9 \times 0.9 + 0.9 \times 0.9 \times 0.9 \times 0.9 \times 0.9 + \dots)$

$\Delta D = 3,000 (1 + 0.9 + 0.9^2 + 0.9^3 + 0.9^4 + 0.9^5 + \dots 0.9^n)$

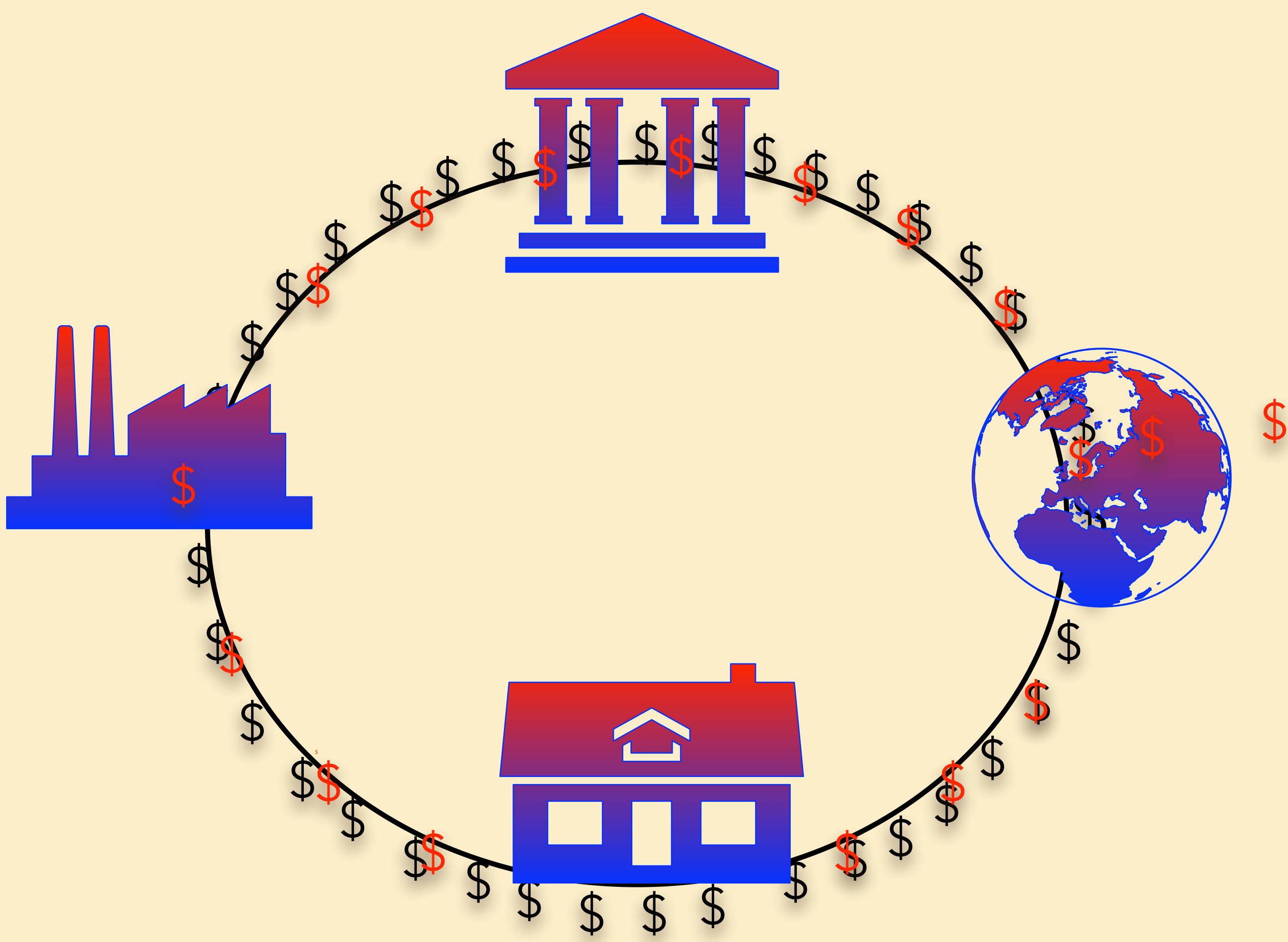
$$\Delta D = 3,000 \left(\frac{1}{1 - 0.9} \right)$$

$$\Delta D = 3,000 (10)$$

$$\Delta D = 30,000 \text{ billion}$$

Is that a lot?

A **3,000** injection of new money into the banking system, has the potential to increase total balances in deposit accounts by **30,000 billion**



The Federal Reserve
Bank creates new money