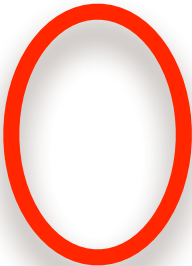


Banks then **create** additional money by **lending** these new
reserves several times





When the Fed **buys** bonds it **creates** money by **adding** bank reserves

When the Fed buys 10b in bonds, it injects 10b
of new money: $\Delta R = 10b$

$r = 10\%$

When the Fed buys 10b in bonds, Banks create 90b in new loans

ALL

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

$$\Delta D = 10 \times \frac{1}{0.1}$$

$$\Delta D = 10 \times 10 = 100$$


△L = 100 - 10 = 90

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

$$\Delta M^s \equiv 0 + \textcolor{red}{100} \equiv 100$$

When the Fed buys bonds, the Money Supply increase by 100b

When the Fed buys 10b in bonds, **Deposits** increase
by **100b**



The Fed
created
10b



Banks create
an additional
90b

Purchasing bonds from the public or from banks has the same effect except **banks are paid more** for the bonds than what they would get if they sold their bonds in the Open Market

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$$\Delta D = \Delta R \times \left(\frac{1}{r} \right)$$

$$r = 10\%$$

$$\Delta D = 10 \times \frac{1}{0.1}$$



The Fed
created
10b

$\Delta D = 10 \times 10 = 100$ When the Fed buys 10b in bonds, **Deposits** increase
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Banks create
an additional
90b

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

$\Delta L = 100 - 10 = 90$ When the Fed buys 10b in bonds, Banks create **90b** in new **loans**

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

$\Delta M^s = 0 + 100 = 100$ When the Fed buys bonds, the Money Supply increase by 100b

The Money Market