Monetary Aggregates

- Currency in Circulation (C); Reserves held by banks (R); Deposits (D)
- Required Reserves (RR); Excess Reserves (ER)
- Currency-Deposit Ratio (c) $= \frac{C}{D}$; Reserve Ratio (rr) $= \frac{RR}{D}$; Excess Reserve Ratio (er) $= \frac{ER}{D}$.

$$\text{Monetary Base}(MB) = C + R = C + RR + ER = c \times D + rr \times D + er \times D = (c + rr + er) \times D.$$

$$\implies D = \frac{1}{c + rr + er} \times MB.$$

$$\text{Money Supply}(M1) = C + D = c \times D + D = (c + 1) \times D = \frac{1 + c}{rr + er + c} \times MB.$$

$$\implies \text{Money multiplier}(m) = \frac{1 + c}{rr + er + c}.$$