

suppose real GDP is growing at 4 percent, the money supply is growing at 11 percent, the velocity of money is constant, and the real interest rate is 6 percent.

a) what is the current inflation rate and nominal interest rate?

b) if the money supply growth rate increase to 15 percent, how will your answers in part(a) change?

(i) $M/P=Y/V$

Y - growing by 4% so coefficient = 1.04

M - growing by 11% so coefficient = 1.11

V - constant =1

$$1.11/P=1.04/1$$

$$P=1.11/1.04 \approx 1.067 \approx +6.7\%$$

r-real interest rate

i-nominal interest rate

π -inflation

$$(1+r)=(1+i)/(1+\pi)$$

$$1.06=(1+i)/(1+0.067)$$

$$i=(1.06*1.067)-1$$

$$i \approx 0.13102 \approx 13.10\%$$

(ii)

$M/P=Y/V$

Y - growing by 4% so coefficient = 1.04

M - growing by 15% so coefficient = 1.15

V - constant =1

$$1.15/P=1.04/1$$

$$P=1.15/1.04 \approx 1.1057692 \approx +10.57\%$$

r-real interest rate

i-nominal interest rate

π -inflation

$$(1+r)=(1+i)/(1+\pi)$$

$$1.06=(1+i)/(1+0.1057)$$

$$i=(1.06*1.1057)-1$$

$$i \approx 0.1720 \approx 17.20\%$$

$$i^1 \approx 13.10\%$$

$$i^2 \approx 17.20\%$$

$$\Delta i = (17.20/13.10)-1 \approx$$

$$\approx 1.3129-1 \approx +31.29\%$$