Why Bank Reserves Change Because of Changes in Monetary Policy

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Expansionary Monetary Policy

Open Market Operations—assume Fed buys $10,000 of securities (assume R.R.R.=.1)

Bank 1 (before the Fed buy)

Assets	Liabilities
R.R. $ 2,000 E.R. $18,000 T.R. $20,000	Dep. $20,000

Bank 1 (after the Fed buy)

Assets	Liabilities
R.R. $3,000 E.R. $27,000 T.R. $30,000	Dep. $30,000

Bank reserves increase from $20,000 to $30,000

Reserve Requirement Ratio—lowering of R.R.R.

Bank 1 (at .1 R.R.R.)

Assets	Liabilities
R.R. $2,000 E.R. $18,000 T.R. $20,000	Dep. $20,000

Bank 2 (at .1 R.R.R.)

Assets	Liabilities
R.R. $1,800 E.R. $16,200 T.R. $18,000	Dep. $18,000

At R.R.R. = .1 bank reserves total $38,000

($20k + $18k)

Bank 1 (at .05 R.R.R.)

Assets	Liabilities
R.R. $1,000 E.R. $19,000 T.R. $20,000	Dep. $20,000

Bank 2 (at .05 R.R.R.)

Assets	Liabilities
R.R. $ 950 E.R. $18,050 T.R. $19,000	Dep. $19,000

At R.R.R. = .05 bank reserves total $39,000

($20K + $19K)

Discount Rate—lowering of (assuming R.R.R. is .1)

Bank 1 (before the lowering)

Assets	Liabilities
R.R. $2,000 ER + Fed Loan → E.R. $19,000 T.R. $21,000	Dep. $20,000 Fed. Loan $ 1,000

Bank 1 (after the lowering)

Assets	Liabilities
R.R. $ 2,000 ER + Fed Loan → E.R. $20,000 T.R. $22,000	Dep. $20,000 Fed. Loan $ 2,000

Bank reserves increase from $21,000 to $22,000

Contractionary Monetary Policy

Open Market Operations—assume Fed sells $10,000 of securities (assume R.R.R.=.1)

Bank 1 (before the Fed selling)

Assets	Liabilities
R.R. $ 2,000 E.R. $18,000 T.R. $20,000	Dep. $20,000

Bank 1 (after the Fed selling)

Assets	Liabilities
R.R. $1,000 E.R. $9,000 T.R. $10,000	Dep. $10,000

Bank reserves decrease from $20,000 to $10,000

Reserve Requirement Ratio—raising of R.R.R.

Bank 1 (at .1 R.R.R.)

Assets	Liabilities
R.R. $2,000 E.R. $18,000 T.R. $20,000	Dep. $20,000

Bank 2 (at .1 R.R.R.)

Assets	Liabilities
R.R. $1,800 E.R. $16,200 T.R. $18,000	Dep. $18,000

At R.R.R. = .1 bank reserves total $38,000

($20k + $18k)

Bank 1 (at .2 R.R.R.)

Assets	Liabilities
R.R. $4,000 E.R. $16,000 T.R. $20,000	Dep. $20,000

Bank 2 (at .2 R.R.R.)

Assets	Liabilities
R.R. $ 3,200 E.R. $12,800 T.R. $16,000	Dep. $16,000

At R.R.R. = .2 bank reserves total $36,000

($20k + $16k)

Discount Rate—raising of (assuming R.R.R. is .1)

Bank 1 (before the raising)

Assets	Liabilities
R.R. $2,000 ER + Fed Loan → E.R. $19,000 T.R. $21,000	Dep. $20,000 Fed. Loan $ 1,000

Bank 1 (after the raising)

Assets	Liabilities
R.R. $ 2,000 ER + Fed Loan → E.R. $18,500 T.R. $20,500	Dep. $20,000 Fed. Loan $ 500

Bank reserves decrease from $21,000 to $20,500