Answer on Question #66089 – Economics – Macroeconomics

Question

Consider an individual who moves to canada and bring with him $40,000 in canadian currency, which he deposits in a canadian bank. for each of the cases below, work out the first three steps of the money multiplier process after the individual deposited $40,000 into a canadian bank, and then use the money creation equation to compute the overall change in deposits and reserves in the canadian banking system as a result of this new deposits of $40,000.a)10% target reserve ratio; no cash drain; no excess reserve. b) 10% target reserve ratio;5%cash drain; no excess reserves.

Solution

a) target reserve ratio - 10%

Step	New deposits $D_2=D_1-R_1$	Overall change in deposits	New reserves R=r*D	Overall change in reserves
1	40 000	40 000	40 000*0.1=4 000	4 000
2	40 000-4 000=36 000	40 000+36 000=76 000	36 000*0.1=3 600	4 000+ 3 600=7 600
3	36 000-3 600=32 400	76 000+32 400=108 400	32 400*0.1=3 240	7 600+3 240=10 840

b) target reserve ratio - 10%, cash drain – 5%.

Step	New deposits $D_2=(D_1-R_1)$ *(1-c)	Overall change in deposits	New reserves R=r*D	Overall change in reserves
1	40 000	40 000	40 000*0.1=4 000	4 000
2	(40 000-4 000)*0.95 =34 200	40 000+34 200=74 200	34 200*0.1=3 420	4 000+ 3 420=7 420
3	(34 200-3 420)*0.95 =29 241	74 200+29 241=103 441	29 241*0.1=2 924	7 420+2 924=10 344

Answer

a) overall change in deposits - 108 400
overall change in reserves - 10 840

b)
overall change in deposits - 103 441
overall change in reserves - 10 344

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