

Bank of Japan Monetary Intermediation Cost to the Japanese Economy Fractional Reserve Analysis with 1.3% Reserve Requirement (Example)

No Financial Intermediary Analysis

When no financial intermediary is involved, intermediation must be real direct asset lending. In this example, Farmer B as Intermediary lends Farmer A a tractor to use for ¥50,000. Farmer A rents the tractor from Farmer B and grows a crop which is sold. In this system ¥150,000 of wealth is created from crop sale split ¥100,000 to Farmer A and ¥50,000 to Farmer B for use of the tractor with financial intermediary not participating at ¥0.

I. No Financial Intermediary (Real Asset Tractor Lending)					
	Farmer A	Farmer B	Intermediary	Total	
Start (Cash)	¥49,675	¥49,675	¥650	¥100,000	Begin Cash
Tractor Rent	-¥50,000	¥50,000		¥0	
Sell Crop	¥150,000			¥150,000	
End (Cash)	¥149,675	¥99,675	¥650	¥250,000	End Cash
Direct Net Earnings	¥100,000	¥50,000	¥0	¥150,000	Earnings (¥)
% Earnings	66.67%	33.33%	0.00%	100.00%	Earnings (%)

II. With 1.3% Reserve Financial Intermediation Added (1.3% Real Backing)					
	Farmer A	Farmer B	Intermediary	Total	
Start (Cash)	¥49,675	¥49,675	¥650	¥100,000	Begin Cash
Direct Net Earnings(Above)	¥100,000	¥50,000	¥0	¥150,000	
Loan	¥50,000		¥50,000	¥50,000	
Loan Interest	-¥2,500		¥2,500	¥0	
Pay Back Loan	-¥50,000		¥50,000	¥0	
End (Cash)	¥147,175	¥99,675	¥52,500	¥299,350	End Cash
Net Earnings	¥97,500	¥50,000	¥51,850	¥199,350	Earnings (¥)
% Earnings	48.91%	25.08%	26.01%	100.00%	Earnings (%)
Wealth Transfer=(Principal+Interest) x (1- RR). Inflation is Principal portion wealth transfer				19.74%	Inflation Cash (%)
Inflation Cash (¥) [Principal Wealth Transfer] = Total Cash (¥) End - Total Cash (¥) Begin				¥49,350	Inflation Cash (¥)

1.3% Fractional Reserve Requirement Financial Intermediation/Wealth Transfer Impact						
	(A)=(a) x (1-RR)	(B)= Item x (1-RR)	= (1 - RR)	(C)=Item x RR	(D) = (B) + (C)	
Item	Item \$ Amount	Inflation	¥ Unearned	% Unearned	¥ Earned	Total Return
Loan Principal (a)	¥50,000	¥49,350	¥49,350	98.70%		¥49,350
Interest (Loan(a) x (c))	¥2,500		¥2,468	98.70%	¥33	¥2,500
Total	¥52,500	¥49,350	¥51,818	98.70%	¥33	¥51,850
Wealth Transfer (Unearned Return = Σ(B))						¥51,818
Financial Intermediation Unearned Return % (Unearned Return/Total Return = Σ(B)/Σ(D))						99.94%
Intermediary Return on ¥650 Required Reserve Investment (Total Return/Start Cash)						7976.92%
Earned Financial Intermediation (Interest x Reserve Requirement = Σ(C))						¥33
Earned Financial Intermediation % of Total Return of ¥51850 (Earned Return/Total Return)						0.06%

1.3% Fractional Reserve Financial Intermediation Analysis

In this 1.3% fractional reserve system the Financial Intermediary adds a ¥50,000 loan into the system 98.7% (1-reserve requirement) backed by no real or financial assets, increasing fractional reserve returns by ¥49,350 to ¥199,350 from the sale of the exact same crop now split ¥97,500 to Farmer A, ¥50,000 to Farmer B and ¥51,850 to the intermediary that added 1.3% real credit. Farmer A pays back a ¥50,000 loan and pays interest of ¥2,500 for 1.3% (¥650) of true credit intermediation. In the real world Farmer A would not borrow money this way unless he thought he was getting something. Farmer A cannot tell the difference between real credit of Tractor lending and 98.7% unbacked, 1.3% reserve financial intermediation. The 98.7% unbacked Financial Intermediary loan captures an extra 24.34% to 26.01% of the system earnings in the form of inflation and interest in a 98.7% direct transfer of wealth since the same crop is produced.

Prepared By

William Haugen
7175 Gaston Ave Apt 2225
Dallas, TX 75214
214-321-7494
whaugen@flash.net
December 8, 2012

Fractional Reserve Intermediation Analysis

In this system Wealth Transfer is (Loan Principal + Interest) x (1- Reserve Requirement)). Inflation is Principal portion of wealth transfer. In a 0% reserve system 100% of the loan repayment results in inflation with interest payments as direct wealth transfer without added inflation. In a 100% reserve system there is no inflationary wealth transfer and 100% of the interest earned is true credit intermediation.

Assumptions

Initial System Cash	¥100,000
Tractor Rent \$	¥50,000
Crop Sale Price	¥150,000
(a)-Loan Amount \$	¥50,000
(b)-Reserve Requirement (RR)	1.30%
(c)-Interest Rate	5.00%