

Attachment 11

Bank of Japan Monetary Intermediation Cost

Bank of Japan Monetary Intermediation Cost Impact on Economy and Jobs

Assumptions

a-BOJ Reserve Requirement (From Attachment 1)	1.30%
b-Bank Note Rate Est.(Risk Free Rate(r_f) [Not less than zero] + Risk Premium est. at 25bp)	0.25%
c-Economic Growth Rate (Est.) for Cap Rate	4.00%
d-Capital Value per Job Est. (Adjustable)	¥80,000,000
Exchange Rate \$1 U.S. Dollar to Yen ⁷	3/31/2012 ¥82.87
New York Times 7/6/2009 Estimated Job Creation Cost (\$)	\$31,169
8-New York Times 7/6/2009 article \$31,169 job creation cost converted to Yen (¥)	¥2,582,975

Step 1. Estimate Monetary Intermediation Cost

I. Historical Average (2002-2011, Last 10-years)

	(¥ Billions)
1. BOJ Operations (Fiscal 2011 Actual Net) ¹	¥286.8
2. New Money (M1) Issued times (1 - reserve requirement) ^{1,a}	¥24,997.8
Total Annual Intermediation	¥25,284.6
Intermediation Capitalized ^{2,c}	¥632,115.5

II. Fiscal 2011 Actual

	(¥ Billions)
1. BOJ Operations (Fiscal 2011 Actual Net) ¹	¥286.8
2. New Money (M1) Issued times (1 - reserve requirement) ^{1,a}	¥19,628.7
Total Annual Intermediation	¥19,915.5
Intermediation Capitalized ^{2,c}	¥497,887.7

III. Monetary Debt Impact^{1,2,3 Notes}

	(¥ Billions)
Bank note to Gov't to cover fractional reserve deposit cash shortage ^{3,b}	¥488,660.2
Commercial Bank Federal Gov.t Securities Holdings Retired ³	¥166,881.2
Bank of Japan Gov't Securities Holdings Retired ³	¥87,247.2
Intermediation Capitalized	¥742,788.6

Step 2. Estimate Monetary Intermediation Cost Impact on Japanese Economy and Jobs

There is no economic reward for monetary leverage from M&M Theorem (Corollary, risk free rate (r_f) should be GDP growth rate, not gov't debt rate.)

Japanese Economic Indicators (as of 3/31/2012)

GDP Fiscal 2011 (¥ Billions) ⁴	¥469,545.0
Total Central Government Debt (¥ Billions) ⁵	¥959,950.3
Unemployment, 2012-3 [une_nb_m] ⁶	3,070,000

Risk Free Rate (r_f) for bank note, not less than 0%

[GDP] - [Monetary Intermediation] (Net % GDP)	
1956 to 2011 (56 Years)	4.04%
1984 to 2011 (28 Years)	-1.72%
2002 to 2011 (10 Years)	-5.98%
Last Year 2011	-6.25%

Sources: Attachments 5 & 7

Bank of Japan Monetary Intermediation Cost Economic Impact Estimates

	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
	Intermediation Cost		Jobs Impact Estimates			Unemployment	GDP %	Federal Debt
	Annual	Capitalized	Annual	Capitalized	Average	Reduction %	Improvement	Reduction %
Estimation Basis	(¥ Billions)	(¥ Billions)	= (A)/NYT Est ⁸	= (B)/¥80,000,000 (d)	= [(C)+(D)]/2	= (E)/[Unemployment]	= (A) / [GDP]	= (B)/[Fed Debt]
I. Last 10 Ave (02-11)	¥25,284.6	¥632,115.5	9,788,952	7,901,444	8,845,198	288.1%	5.4%	
II. Fiscal 2011 Actual	¥19,915.5	¥497,887.7	7,710,298	6,223,596	6,966,947	226.9%	4.2%	
III. Monetary Debt Est.	¥29,711.5	¥742,788.6	11,502,839	9,284,858	10,393,848	338.6%	6.3%	77.4%
Averages	¥24,970.6	¥624,263.9	9,667,363	7,803,299	8,735,331	284.5%	5.3%	77.4%

The BOJ fractional reserve monetary system has an average 98.7% (1 - RR) intermediation cost (wealth transfer effect) of new money creation. This is a loss of capital from the other sectors of the economy to the banking sector. Assuming ¥80,000,000 Yen of capital value per job creation, the average ¥624.3 trillion capitalized cost represents an estimated 7,803,000 private sector jobs. Per NY Times estimate the ¥25.0 trillion annual cost would be approximately 9,667,000 jobs. These estimates indicate the approximate cost of monetary intermediation is on the order of 8.7 million jobs.

Notes

- 1-Japanese government debt holdings by commercial banks expected to be credited and retired for use in funding full reserve deposits.
- 2-Bank debt to Japanese government estimated to be first lien at the same interest rate for all banks based on the risk free rate (r_f) for Japan, but not less than zero + a risk premium estimated at 25 basis points (0.25%).
- 3-Ignores potential interest rate manipulation intermediation costs.

Sources

- 1-BOJ Operations and M1 increases from Attachment 5 BOJ Annual Monetary Intermediation Cost 1984 to 2011 using M1 Money Stock.
- 2-Intermediation Capitalized = [Annual Intermediation] ÷ [Economic Growth est. for Cap Rate (c)]
- 3-Bank Note amounts from Attachment 9(a) Japanese Commercial Banks Consolidated Conversion Estimate and Attachment 9(c) Bank of Japan (BOJ) Conversion Estimate.
- 4-GDP from "What Was the Japan GDP or CPI Then?" MeasuringWorth at <http://www.measuringworth.com/datasets/japandata/>
- 5-Total Central Government debt from Attachment 10 Japanese Central Government Debt.
- 6-Unemployment data from European Commission eurostat, Harmonised unemployment by gender - total (teilm010) at http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=une_nb_m&lang=en
- 7-Historical exchange rate for U.S. Dollar (\$) to Yen (¥) from x-rates.com at <http://www.x-rates.com/historical/> Lookup Date 10/3/2012
- 8-New York Times 7-6-2009 article "The Costs of Entrepreneurial Job Creation" estimated at \$31,169 per job at <http://boss.blogs.nytimes.com/2009/07/06/how-much-does-it-cost-to-create-a-job-by-encouraging-entrepreneurship/>

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