

## Bank of Japan Monetary Intermediation Cost to the Japanese Economy

Bank of Japan (BOJ) Compounded Monetary Intermediation Cost to Economy 1984 to 2011<sup>1</sup>

M1 Money Stock Basis

(a)-Net GDP Productivity Growth Rate to economy (GDP Growth Rate (c) minus Intermediation Cost (b)) - ( r<sub>f</sub>)

Assumptions

-1.48%

(b)-Intermediation Cost Percentage<sup>2</sup>

3.28%

(c)-GDP Growth Rate (Net GDP + Intermediation Percentage)<sup>2</sup>

1.80%

## GDP EARNINGS WITH FED INTERMEDIATION EXPENSE INCLUDED

(N)	(A)	(B) = (A) x (c)	(C) = (A) x (b)	(D) = (A)+(B)+(C)	(E)=∑ (C ) Compounded		
Period	Year	Net GDP <sup>3</sup> Year(Begin) (¥ Billions)	Productivity Growth (Net) (¥ Billions)	BOJ Intermediation Expense <sup>2</sup>	Net GDP Year (End) (¥ Billions)	Compounded Intermediation	
						Expense <sup>4</sup>	%
1	1984	¥285,058.0	¥5,126.4	-¥9,348.7	¥280,835.8	¥9,348.7	3.2%
2	1985	¥280,835.8	¥5,050.5	-¥9,210.2	¥276,676.1	¥18,727.0	6.3%
3	1986	¥276,676.1	¥4,975.7	-¥9,073.8	¥272,578.0	¥28,137.5	9.4%
4	1987	¥272,578.0	¥4,902.0	-¥8,939.4	¥268,540.6	¥37,582.9	12.3%
5	1988	¥268,540.6	¥4,829.4	-¥8,807.0	¥264,563.0	¥47,065.7	15.1%
6	1989	¥264,563.0	¥4,757.8	-¥8,676.5	¥260,644.4	¥56,588.7	17.8%
7	1990	¥260,644.4	¥4,687.4	-¥8,548.0	¥256,783.7	¥66,154.3	20.5%
8	1991	¥256,783.7	¥4,617.9	-¥8,421.4	¥252,980.3	¥75,765.4	23.0%
9	1992	¥252,980.3	¥4,549.5	-¥8,296.6	¥249,233.2	¥85,424.6	25.5%
10	1993	¥249,233.2	¥4,482.2	-¥8,173.8	¥245,541.6	¥95,134.6	27.9%
11	1994	¥245,541.6	¥4,415.8	-¥8,052.7	¥241,904.7	¥104,898.2	30.2%
12	1995	¥241,904.7	¥4,350.4	-¥7,933.4	¥238,321.6	¥114,718.1	32.5%
13	1996	¥238,321.6	¥4,285.9	-¥7,815.9	¥234,791.6	¥124,597.0	34.7%
14	1997	¥234,791.6	¥4,222.4	-¥7,700.1	¥231,313.9	¥134,537.9	36.8%
15	1998	¥231,313.9	¥4,159.9	-¥7,586.1	¥227,887.7	¥144,543.5	38.8%
16	1999	¥227,887.7	¥4,098.3	-¥7,473.7	¥224,512.3	¥154,616.6	40.8%
17	2000	¥224,512.3	¥4,037.6	-¥7,363.0	¥221,186.9	¥164,760.2	42.7%
18	2001	¥221,186.9	¥3,977.8	-¥7,254.0	¥217,910.7	¥174,977.2	44.5%
19	2002	¥217,910.7	¥3,918.9	-¥7,146.5	¥214,683.0	¥185,270.5	46.3%
20	2003	¥214,683.0	¥3,860.8	-¥7,040.7	¥211,503.2	¥195,643.0	48.1%
21	2004	¥211,503.2	¥3,803.6	-¥6,936.4	¥208,370.4	¥206,097.8	49.7%
22	2005	¥208,370.4	¥3,747.3	-¥6,833.6	¥205,284.1	¥216,637.8	51.3%
23	2006	¥205,284.1	¥3,691.8	-¥6,732.4	¥202,243.4	¥227,266.2	52.9%
24	2007	¥202,243.4	¥3,637.1	-¥6,632.7	¥199,247.8	¥237,986.0	54.4%
25	2008	¥199,247.8	¥3,583.2	-¥6,534.5	¥196,296.6	¥248,800.4	55.9%
26	2009	¥196,296.6	¥3,530.2	-¥6,437.7	¥193,389.1	¥259,712.4	57.3%
27	2010	¥193,389.1	¥3,477.9	-¥6,342.3	¥190,524.7	¥270,725.3	58.7%
28	2011	¥190,524.7	¥3,426.4	-¥6,248.4	<b>¥187,702.6</b>	<b>¥281,842.4</b>	<b>60.0%</b>
Growth Rates		-1.48%	-1.48%	-1.48%	12.94%		
Count (Years)		28	28	28	28		

## GDP EARNINGS WITH FED INTERMEDIATION EXPENSE REMOVED

(N)	(A)	(B) = (A) x (c)	(C) = (A) x (b)	(D) = (A)+(B)+(C)			
Period	Year	GDP <sup>3</sup> Year(Begin) (¥ Billions)	Productivity Growth(Total) (¥ Billions)	BOJ Intermediation Expense <sup>2</sup>	GDP Year (End) (¥ Billions)		
1	1984	¥285,058.0	¥5,126.4	¥0.0	¥290,184.4		
2	1985	¥290,184.4	¥5,218.6	¥0.0	¥295,403.0		
3	1986	¥295,403.0	¥5,312.5	¥0.0	¥300,715.5		
4	1987	¥300,715.5	¥5,408.0	¥0.0	¥306,123.5		
5	1988	¥306,123.5	¥5,505.3	¥0.0	¥311,628.7		
6	1989	¥311,628.7	¥5,604.3	¥0.0	¥317,233.0		
7	1990	¥317,233.0	¥5,705.0	¥0.0	¥322,938.1		
8	1991	¥322,938.1	¥5,807.6	¥0.0	¥328,745.7		
9	1992	¥328,745.7	¥5,912.1	¥0.0	¥334,657.8		
10	1993	¥334,657.8	¥6,018.4	¥0.0	¥340,676.2		
11	1994	¥340,676.2	¥6,126.6	¥0.0	¥346,802.8		
12	1995	¥346,802.8	¥6,236.8	¥0.0	¥353,039.7		
13	1996	¥353,039.7	¥6,349.0	¥0.0	¥359,388.7		
14	1997	¥359,388.7	¥6,463.2	¥0.0	¥365,851.8		
15	1998	¥365,851.8	¥6,579.4	¥0.0	¥372,431.2		
16	1999	¥372,431.2	¥6,697.7	¥0.0	¥379,128.9		
17	2000	¥379,128.9	¥6,818.2	¥0.0	¥385,947.1		
18	2001	¥385,947.1	¥6,940.8	¥0.0	¥392,887.9		
19	2002	¥392,887.9	¥7,065.6	¥0.0	¥399,953.5		
20	2003	¥399,953.5	¥7,192.7	¥0.0	¥407,146.2		
21	2004	¥407,146.2	¥7,322.0	¥0.0	¥414,468.2		
22	2005	¥414,468.2	¥7,453.7	¥0.0	¥421,921.9		
23	2006	¥421,921.9	¥7,587.7	¥0.0	¥429,509.7		
24	2007	¥429,509.7	¥7,724.2	¥0.0	¥437,233.9		
25	2008	¥437,233.9	¥7,863.1	¥0.0	¥445,097.0		
26	2009	¥445,097.0	¥8,004.5	¥0.0	¥453,101.5		
27	2010	¥453,101.5	¥8,148.5	¥0.0	¥461,250.0		
28	2011	¥461,250.0	¥8,295.0	¥0.0	<b>¥469,545.0</b>		
Growth Rates		1.80%	1.80%	N.A.	1.80%		
Count (Years)		28	28	28	28		

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## Notes/Sources:

- 1-Format adapted from "The Tyranny of Compounding Costs" at <http://www.pbs.org/wqhb/pages/frontline/retirement/etc/tyranny.html>
- 2-Intermediation and GDP growth rate estimates from Attachment 5.
- 3-Initial GDP from Attachment 5 via MeasuringWorth, 2011 website at <http://www.measuringworth.com/datasets/japandata/>
- 4-BOJ M1 monetary intermediation expense compounded at total growth rate.

BOJ Monetary Intermediation Cost 1984-2011	¥ Billions	% Percent
Economic (GDP) earnings 2011 w/o BOJ intermediation expense	¥469,545.0	100.0%
Economy earnings with BOJ Intermediation expense deducted	¥187,702.6	40.0%
BOJ Intermediation Expense to Non Bank Economy since 1984	<b>¥281,842.4</b>	<b>60.0%</b>
Bank of Japan Intermediation costs, primarily monetary expansion inflation, estimated to have wealth transferred approximately 60% of economic system returns to banking sector from 1984 to 2011.		