

Attachment 7

European Central Bank Monetary Intermediation Cost

ECB Compounded Monetary Intermediation Cost 1999 to 2011 using M1 Euro Money Stock⁴

€M1 Money Stock Basis

Assumptions

(a)-Net GDP Productivity Growth Rate to economy (GDP Growth Rate (c) minus Intermediation Cost (b)) - (r _f)	0.45%
(b)-Intermediation Cost Percentage ²	2.86%
(c)-GDP Growth Rate (Net GDP + Intermediation Percentage) ²	3.31%

GDP EARNINGS WITH ECB INTERMEDIATION EXPENSE INCLUDED

(N)	(A)	(B) = (A) x (c)	(C) = (A) x (b)	(D) = (A)+(B)+(C)	(E)=∑ (C) Compounded		
Period	Year	Net GDP ¹ Begin Yr (€ Billions)	Productivity Growth (Net) (€ Billions)	ECB Intermediation Expense ² (€ Billions)	Net GDP ¹ End Yr (€ Billions)	Compounded Intermediation Expense ³	%
1	1999 ^a	€ 6,169.5	€ 204.4	(€ 176.4)	€ 6,197.5	€ 176.4	2.8%
2	2000	€ 6,197.5	€ 205.4	(€ 177.2)	€ 6,225.7	€ 359.5	5.5%
3	2001	€ 6,225.7	€ 206.3	(€ 178.0)	€ 6,253.9	€ 549.4	8.1%
4	2002 ^b	€ 6,253.9	€ 207.2	(€ 178.8)	€ 6,282.3	€ 746.4	10.6%
5	2003	€ 6,282.3	€ 208.2	(€ 179.6)	€ 6,310.9	€ 950.8	13.1%
6	2004	€ 6,310.9	€ 209.1	(€ 180.5)	€ 6,339.5	€ 1,162.8	15.5%
7	2005	€ 6,339.5	€ 210.1	(€ 181.3)	€ 6,368.3	€ 1,382.6	17.8%
8	2006	€ 6,368.3	€ 211.0	(€ 182.1)	€ 6,397.2	€ 1,610.5	20.1%
9	2007	€ 6,397.2	€ 212.0	(€ 182.9)	€ 6,426.3	€ 1,846.8	22.3%
10	2008	€ 6,426.3	€ 212.9	(€ 183.8)	€ 6,455.5	€ 2,091.7	24.5%
11	2009	€ 6,455.5	€ 213.9	(€ 184.6)	€ 6,484.8	€ 2,345.6	26.6%
12	2010	€ 6,484.8	€ 214.9	(€ 185.4)	€ 6,514.2	€ 2,608.8	28.6%
13	2011	€ 6,514.2	€ 215.9	(€ 186.3)	€ 6,543.8	€ 2,881.5	30.6%
Compound Growth Rates			0.45%	0.45%	0.45%	23.97%	
Count (Years)			13	13	13	13	

a-First electronic Euro use January 1, 1999.

b-First circulation Euro use January 1, 2002.

GDP EARNINGS WITH ECB INTERMEDIATION EXPENSE REMOVED

(N)	(A)	(B) = (A) x (c)	(C) = (A) x (b)	(D) = (A)+(B)+(C)		
Period	Year	GDP ¹ Begin Yr (€ Billions)	Productivity Growth(Total) (€ Billions)	ECB Intermediation Expense ² (€ Billions)	GDP ¹ End Yr (€ Billions)	
1	1999	€ 6,169.5	€ 204.4	€ 0.0	€ 6,373.9	
2	2000	€ 6,373.9	€ 211.2	€ 0.0	€ 6,585.1	
3	2001	€ 6,585.1	€ 218.2	€ 0.0	€ 6,803.3	
4	2002	€ 6,803.3	€ 225.4	€ 0.0	€ 7,028.8	
5	2003	€ 7,028.8	€ 232.9	€ 0.0	€ 7,261.7	
6	2004	€ 7,261.7	€ 240.6	€ 0.0	€ 7,502.3	
7	2005	€ 7,502.3	€ 248.6	€ 0.0	€ 7,750.9	
8	2006	€ 7,750.9	€ 256.8	€ 0.0	€ 8,007.7	
9	2007	€ 8,007.7	€ 265.3	€ 0.0	€ 8,273.1	
10	2008	€ 8,273.1	€ 274.1	€ 0.0	€ 8,547.2	
11	2009	€ 8,547.2	€ 283.2	€ 0.0	€ 8,830.4	
12	2010	€ 8,830.4	€ 292.6	€ 0.0	€ 9,123.0	
13	2011	€ 9,123.0	€ 302.3	€ 0.0	€ 9,425.3	
Compound Growth Rates		3.31%	3.31%	N.A.	3.31%	
Count (Years)		13	13	13	13	

Notes

1-GDP (Euro 17) from eurostat, Gross domestic product at market prices (tec00001) Update 9/22/2012 at <http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&language=en&pcode=tec00001&plugin=1>

2-ECB M1 Intermediation expense estimates from attachment 4.

3-ECB M1 Intermediation expenses compounded at total growth rate.

4-Format adapted from "The Tyranny of Compounding Costs" at <http://www.pbs.org/wgbh/pages/frontline/retirement/etc/tyranny.html>

ECB Eurozone (17) Monetary Intermediation Cost	€ Billions	% Percent
Economic (GDP) earnings 2011 w/o ECB intermediation expense	€ 9,425.3	100.0%
Economy earnings with ECB Intermediation expense deducted	€ 6,543.8	69.4%
ECB Intermediation Expense to Non Bank Economy since 1999	€ 2,881.5	30.6%

ECB Intermediation costs, primarily monetary expansion inflation, estimated to have consumed (wealth transferred) approximately 30.6% of eurozone economic returns to banking sector from 1999 to 2011.