

# European Central Bank Monetary Intermediation Cost

## Conversion Economic Impact Economy and Jobs on EU Eurozone (17) Member States

December 31, 2011

Country	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
European Union (EU) Member State Protocol Order	Belgique/België	Deutschland	Eesti	Éire/Ireland	Elláda	España	France	Italia	Kýpros	Luxembourg	Malta	Nederland	Österreich	Portugal	Slovenija	Slovensko	Suomi/Finland	
Native English	Belgium	Germany	Estonia	Ireland	Greece	Spain	France	Italy	Cyprus	Luxembourg	Malta	Netherlands	Austria	Portugal	Slovenia	Slovakia	Finland	
Economic Indicators (as of 12/31/2011)	EZ (17) Total	BE	DE	EE	IE	ELGR	ES	FR	IT	CY	LU	MT	NL	AT	PT	SI	SK	FI
GDP 2011 by Country (€ Billions) <sup>1</sup>	€ 9,425.34	€ 369.84	€ 2,592.60	€ 15.95	€ 156.44	€ 215.09	€ 1,063.36	€ 1,996.58	€ 1,580.22	€ 17.76	€ 42.82	€ 6.50	€ 601.97	€ 300.71	€ 170.91	€ 36.17	€ 69.06	€ 189.37
Central Government consolidated total liabilities [F_TOT] (€ Billions) <sup>2</sup>	€ 7,123.81	€ 344.02	€ 1,442.71	€ 1.05	€ 164.74	€ 220.19	€ 648.20	€ 1,598.32	€ 1,745.35	€ 20.25	€ 8.59	€ 5.50	€ 402.22	€ 222.51	€ 156.59	€ 18.99	€ 30.87	€ 93.70
Unemployment, 2011-12 [une_nb_m] <sup>3</sup>	16,934,000	341,000	2,326,000	79,000	306,000	1,072,000	5,281,000	2,957,000	2,461,000	41,000	13,000	12,000	403,000	182,000	791,000	90,000	387,000	192,000
<b>I. Historical Average (1999-2011)</b>	<b>EZ (17) Total</b>	<b>Belgium</b>	<b>Germany</b>	<b>Estonia</b>	<b>Ireland</b>	<b>Greece</b>	<b>Spain</b>	<b>France</b>	<b>Italy</b>	<b>Cyprus</b>	<b>Luxembourg</b>	<b>Malta</b>	<b>Netherlands</b>	<b>Austria</b>	<b>Portugal</b>	<b>Slovenia</b>	<b>Slovakia</b>	<b>Finland</b>
ECB Capital Key % <sup>4</sup>	69.9705%	2.4256%	18.9373%	0.1790%	1.1107%	1.9649%	8.3040%	14.2212%	12.4966%	0.1369%	0.1747%	0.0632%	3.9882%	1.9417%	1.7504%	0.3288%	0.6934%	1.2539%
Country % of EZ(17) Capital Key Total ( [Country Amt] = [EZ(17) Total] x [Country % of EZ(17) Capital Key Total] )	100.0000%	3.47%	27.06%	0.26%	1.59%	2.81%	11.87%	20.32%	17.86%	0.20%	0.25%	0.09%	5.70%	2.78%	2.50%	0.47%	0.99%	1.79%
(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)
1. ECB Operations (2011 Actual Net) <sup>5</sup>	€ 0.44	€ 0.02	€ 0.12	€ 0.00	€ 0.01	€ 0.01	€ 0.05	€ 0.09	€ 0.08	€ 0.00	€ 0.00	€ 0.00	€ 0.02	€ 0.01	€ 0.01	€ 0.00	€ 0.00	€ 0.01
2. New Money (M1) Issued times ( 1 - reserve requirement) <sup>5,d</sup>	€ 231.51	€ 8.03	€ 62.66	€ 0.59	€ 3.68	€ 6.50	€ 27.48	€ 47.05	€ 41.35	€ 0.45	€ 0.58	€ 0.21	€ 13.20	€ 6.42	€ 5.79	€ 1.09	€ 2.29	€ 4.15
Total Annual Intermediation	€ 231.95	€ 8.04	€ 62.78	€ 0.59	€ 3.68	€ 6.51	€ 27.53	€ 47.14	€ 41.43	€ 0.45	€ 0.58	€ 0.21	€ 13.22	€ 6.44	€ 5.80	€ 1.09	€ 2.30	€ 4.16
Intermediation Capitalized <sup>c</sup>	€ 5,798.73	€ 201.02	€ 1,569.41	€ 14.83	€ 92.05	€ 162.84	€ 688.19	€ 1,178.57	€ 1,035.64	€ 11.35	€ 14.48	€ 5.24	€ 330.52	€ 160.92	€ 145.06	€ 27.25	€ 57.46	€ 103.92
GDP % Improvement ( [Annual Intermediation] / [GDP] )	2.5%	2.2%	2.4%	3.7%	2.4%	3.0%	2.6%	2.4%	2.6%	2.6%	1.4%	3.2%	2.2%	2.1%	3.4%	3.0%	3.3%	2.2%
Jobs Estimate (assuming €750000 Capitalized Value per Job)	7,731,642	268,025	2,092,545	19,779	122,731	217,119	917,580	1,571,423	1,380,857	15,127	19,304	6,984	440,691	214,555	193,417	36,332	76,620	138,554
<b>II. 2011 Actual</b>	<b>EZ (17) Total</b>	<b>Belgium</b>	<b>Germany</b>	<b>Estonia</b>	<b>Ireland</b>	<b>Greece</b>	<b>Spain</b>	<b>France</b>	<b>Italy</b>	<b>Cyprus</b>	<b>Luxembourg</b>	<b>Malta</b>	<b>Netherlands</b>	<b>Austria</b>	<b>Portugal</b>	<b>Slovenia</b>	<b>Slovakia</b>	<b>Finland</b>
ECB Capital Key % <sup>4</sup>	69.9705%	2.4256%	18.9373%	0.1790%	1.1107%	1.9649%	8.3040%	14.2212%	12.4966%	0.1369%	0.1747%	0.0632%	3.9882%	1.9417%	1.7504%	0.3288%	0.6934%	1.2539%
Country % of EZ(17) Capital Key Total ( [Country Amt] = [EZ(17) Total] x [Country % of EZ(17) Capital Key Total] )	100.0000%	3.47%	27.06%	0.26%	1.59%	2.81%	11.87%	20.32%	17.86%	0.20%	0.25%	0.09%	5.70%	2.78%	2.50%	0.47%	0.99%	1.79%
(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)
1. ECB Operations (2011 Actual Net) <sup>5</sup>	€ 0.44	€ 0.02	€ 0.12	€ 0.00	€ 0.01	€ 0.01	€ 0.05	€ 0.09	€ 0.08	€ 0.00	€ 0.00	€ 0.00	€ 0.02	€ 0.01	€ 0.01	€ 0.00	€ 0.00	€ 0.01
2. New Money (M1) Issued times ( 1 - reserve requirement) <sup>5,d</sup>	€ 103.59	€ 3.59	€ 28.04	€ 0.26	€ 1.64	€ 2.91	€ 12.29	€ 21.05	€ 18.50	€ 0.20	€ 0.26	€ 0.09	€ 5.90	€ 2.87	€ 2.59	€ 0.49	€ 1.03	€ 1.86
Total Annual Intermediation	€ 104.02	€ 3.61	€ 28.15	€ 0.27	€ 1.65	€ 2.92	€ 12.35	€ 21.14	€ 18.58	€ 0.20	€ 0.26	€ 0.09	€ 5.93	€ 2.89	€ 2.60	€ 0.49	€ 1.03	€ 1.86
Intermediation Capitalized <sup>c</sup>	€ 2,600.54	€ 90.15	€ 703.83	€ 6.65	€ 41.28	€ 73.03	€ 308.63	€ 528.55	€ 464.45	€ 5.09	€ 6.49	€ 2.35	€ 148.23	€ 72.17	€ 65.06	€ 12.22	€ 25.77	€ 46.60
GDP % Improvement ( [Annual Intermediation] / [GDP] )	1.1%	1.0%	1.1%	1.7%	1.1%	1.4%	1.2%	1.1%	1.2%	1.1%	0.6%	1.4%	1.0%	1.0%	1.5%	1.4%	1.5%	1.0%
Jobs Estimate (assuming €750000 Capitalized Value per Job)	3,467,386	120,201	938,437	8,870	55,041	97,371	411,504	704,731	619,269	6,784	8,657	3,132	197,635	96,221	86,741	16,294	34,361	62,137
<b>III. Monetary Debt Impact (as of 12/31/2011)<sup>1,2 Notes</sup></b>	<b>EZ (17) Total</b>	<b>Belgium</b>	<b>Germany</b>	<b>Estonia</b>	<b>Ireland</b>	<b>Greece</b>	<b>Spain</b>	<b>France</b>	<b>Italy</b>	<b>Cyprus</b>	<b>Luxembourg</b>	<b>Malta</b>	<b>Netherlands</b>	<b>Austria</b>	<b>Portugal</b>	<b>Slovenia</b>	<b>Slovakia</b>	<b>Finland</b>
(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)	(€ Billions)
Bank Note to Gov't to cover fractional reserve deposit cash shortage <sup>6</sup>	€ 13,076.39	€ 468.80	€ 3,632.99	€ 12.29	€ 250.10	€ 223.69	€ 2,020.72	€ 2,454.35	€ 1,137.71	€ 88.70	€ 455.03	€ 25.52	€ 1,100.30	€ 603.97	€ 253.65	€ 33.52	€ 36.04	€ 279.01
Euro Circulation Currency Conversion (Currency x [%CapKeyTotal]) <sup>7</sup>	€ 888.68	€ 30.81	€ 240.52	€ 2.27	€ 14.11	€ 24.96	€ 105.47	€ 180.62	€ 158.72	€ 1.74	€ 2.22	€ 0.80	€ 50.65	€ 24.66	€ 22.23	€ 4.18	€ 8.81	€ 15.93
Intermediation Capitalized	€ 13,965.07	€ 499.61	€ 3,873.51	€ 14.56	€ 264.21	€ 248.65	€ 2,126.19	€ 2,634.97	€ 1,296.43	€ 90.44	€ 457.25	€ 26.32	€ 1,150.95	€ 628.63	€ 275.88	€ 37.70	€ 44.85	€ 294.94
GDP % Improvement ( [Intermediation Cap'd] x [c-Growth Cap Rate] / [GDP] )	5.9%	5.4%	6.0%	3.7%	6.8%	4.6%	8.0%	5.3%	3.3%	20.4%	42.7%	16.2%	7.6%	8.4%	6.5%	4.2%	2.6%	6.2%
Jobs Estimate (assuming €750000 Capitalized Value per Job)	18,620,088	666,143	5,164,677	19,418	352,276	331,528	2,834,916	3,513,293	1,728,568	120,585	609,665	35,097	1,534,604	838,175	367,842	50,261	59,796	393,247
<b>Average GDP % Improvement</b>	<b>3.2%</b>	<b>2.9%</b>	<b>3.2%</b>	<b>3.0%</b>	<b>3.4%</b>	<b>3.0%</b>	<b>3.9%</b>	<b>2.9%</b>	<b>2.4%</b>	<b>8.0%</b>	<b>14.9%</b>	<b>7.0%</b>	<b>3.6%</b>	<b>3.8%</b>	<b>3.8%</b>	<b>2.8%</b>	<b>2.5%</b>	<b>3.1%</b>
<b>Average Jobs Estimate (assuming €750000 Capitalized Value/Job)</b>	<b>9,939,705</b>	<b>351,456</b>	<b>2,731,886</b>	<b>16,022</b>	<b>176,682</b>	<b>215,339</b>	<b>1,388,000</b>	<b>1,929,815</b>	<b>1,242,898</b>	<b>47,499</b>	<b>212,542</b>	<b>15,071</b>	<b>724,310</b>	<b>382,984</b>	<b>216,000</b>	<b>34,296</b>	<b>56,926</b>	<b>197,979</b>
<b>Average Unemployment % Total/Member State Reduction</b>	<b>58.7%</b>	<b>103.1%</b>	<b>117.4%</b>	<b>20.3%</b>	<b>57.7%</b>	<b>20.1%</b>	<b>26.3%</b>	<b>65.3%</b>	<b>50.5%</b>	<b>115.9%</b>	<b>1634.9%</b>	<b>125.6%</b>	<b>179.7%</b>	<b>210.4%</b>	<b>27.3%</b>	<b>38.1%</b>	<b>14.7%</b>	<b>103.1%</b>

**Notes**

1-It is expected sovereign debt holdings by banks will be credited and retired for use in funding full reserve deposits. The amount of sovereign debt holdings by banks is unknown but should net with reduced

bank loan keeping total benefit to people/nations at about the same level. Bank debt to sovereign governments should have a first lien position at the same market rate based on credit of entire Eurozone.

2-Bank debt from full reserve deposit conversion appears more than sovereign national debt for most countries. Consideration might be given to dividending excess to European citizens depository accounts or funding unfunded government liabilities.

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

**Assumptions**

Million	1,000,000
Billion	1,000,000,000
Trillion	1,000,000,000,000
Capital Value per Job Est. (Adjustable)	€ 750,000
a-Risk Free Base Rate ( r <sub>f</sub> ) (Attach 7 (a)-Net GDP Productivity Growth Rate '99-'11)	0.4542%
Bank Note Premium over Govt. Debt (Estimated)	0.25%
b-Bank Note Interest Rate Est. (Risk Free GDP Growth Rate(a)+Risk Premium)	0.70%
c-Economic Growth Rate (Est.) for Cap Rate	4.00%
d-ECB Bank Reserve Requirement (1999-2011)	2.00%
Exchange Rate \$1 U.S. Dollar to Euro	12/31/2011 € 0.7717
4-New York Times 7/6/2009 Estimated Job Creation Cost (\$)	\$31,169
4-New York Times 7/6/2009 Estimated Job Creation Cost (€)	€ 24,052
4-New York Times 7-6-2009 article "The Costs of Entrepreneurial Job Creation" at	http://boss.blogs.nytimes.com/2009/07/06/how-much-does-it-cost-to-create-a-job-by-encouraging-entrepreneurship/

**Sources**

1-GDP by country from European Commission eurostat, Gross domestic product at market prices (tec00001) at

<http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&language=en&pcode=tec00001&pluqin=1>

2-Central Government consolidated total liabilities [F\_TOT] from Attachment 10(a) EU Eurozone (17) Central Governments Consolidated Balance Sheets - Before Bank Conversion.

3-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](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=une_nb_m&lang=en)

4-ECB: Eurosystem Capital subscription Euro area national central banks at <http://www.ecb.int/ecb/orga/capital/html/index.en.html>

5-ECB Operating Cost and M1 increases from Attachment 6 ECB Annual Intermediation Cost 1999 to 2011.

6-Bank Note amounts from Attachment 8(a) Eurozone Banks Consolidated Balance Sheet Estimate from ECB EU Banking Data.

7-Euro Currency in Circulation for Conversion from Attachment 9 Eurosystem Consolidated Balance Sheet Conversion Estimate.

Fractional Reserve Intermediation Cost Est. Impact on Eurozone Jobs			
Intermediation Cost	(A)	(B)	Jobs Impact Estimates
	Annual	Capitalized	Annual Capitalized
<b>Estimation Basis</b>	(€ Billions)	(€ Billions)	=(A)/NYT Est <sup>4</sup> = (B)/€750,000
I. Historical Average	€ 231.95	€ 5,798.73	9,643,654 7,731,642
II. 2011 Actual	€ 104.02	€ 2,600.54	4,324,860 3,467,386
III. Monetary Debt Est.	€ 558.60	€ 13,965.07	23,224,780 18,620,088
Average	€ 298.19	€ 7,454.78	12,397,765 9,939,705

The Eurozone fractional reserve monetary system has a 98% (1 - RR) intermediation cost (wealth transfer effect) of new money creation. This is a loss of capital to the other sectors of the economy. Assuming a €750,000 of capital value per job creation, the average €7.455 trillion capitalized cost represents an estimated 9,940,000 private sector jobs. Per NY Times estimate the € 298.2 billion annual cost would be approximately 12,398,000 jobs. These estimates indicate the approximate cost of ECB monetary intermediation is on the order of 10+ million jobs.