

Federal Reserve Monetary Intermediation Cost to the American Economy

Federal Reserve Compounded Monetary Intermediation Cost to Economy 1984 to 2016¹

M2M (M2 Less Small Time Deposits) Money Stock Basis

(a)-Net GDP Productivity Growth Rate to economy (GDP Growth Rate (c) minus Intermediation Cost (b)) - (r_f)

(b)-Intermediation Cost Percentage²

(c)-GDP Growth Rate (Net GDP + Intermediation Percentage)²

Assumptions %TotalGrowth

2.37%	46.6%
2.71%	53.4%
5.07%	100.0%

GDP EARNINGS WITH FED INTERMEDIATION EXPENSE INCLUDED

(N)	(A)	(B) = (A) x (c)	(C) = (A) x (b)	(D) = (A)+(B)+(C)	(E)=Σ (C) Compounded	
Period	Year	Net GDP ³ Year(Begin) (\$ Billions)	Productivity Growth (Net) (\$ Billions)	Fed Intermediation Expense ²	Net GDP Year (End) (\$ Billions)	Compounded Intermediation Expense ⁴ %
1	1984	\$3,638.1	\$184.6	(\$98.5)	\$3,724.2	\$98.5 2.6%
2	1985	\$3,724.2	\$188.9	(\$100.8)	\$3,812.4	\$204.3 5.1%
3	1986	\$3,812.4	\$193.4	(\$103.2)	\$3,902.6	\$317.8 7.5%
4	1987	\$3,902.6	\$198.0	(\$105.6)	\$3,994.9	\$439.6 9.9%
5	1988	\$3,994.9	\$202.7	(\$108.1)	\$4,089.5	\$570.0 12.2%
6	1989	\$4,089.5	\$207.5	(\$110.7)	\$4,186.2	\$709.6 14.5%
7	1990	\$4,186.2	\$212.4	(\$113.3)	\$4,285.3	\$858.9 16.7%
8	1991	\$4,285.3	\$217.4	(\$116.0)	\$4,386.7	\$1,018.4 18.8%
9	1992	\$4,386.7	\$222.5	(\$118.7)	\$4,490.5	\$1,188.8 20.9%
10	1993	\$4,490.5	\$227.8	(\$121.5)	\$4,596.8	\$1,370.7 23.0%
11	1994	\$4,596.8	\$233.2	(\$124.4)	\$4,705.6	\$1,564.6 25.0%
12	1995	\$4,705.6	\$238.7	(\$127.4)	\$4,816.9	\$1,771.3 26.9%
13	1996	\$4,816.9	\$244.4	(\$130.4)	\$4,930.9	\$1,991.6 28.8%
14	1997	\$4,930.9	\$250.1	(\$133.5)	\$5,047.6	\$2,226.1 30.6%
15	1998	\$5,047.6	\$256.1	(\$136.6)	\$5,167.1	\$2,475.6 32.4%
16	1999	\$5,167.1	\$262.1	(\$139.8)	\$5,289.3	\$2,741.0 34.1%
17	2000	\$5,289.3	\$268.3	(\$143.2)	\$5,414.5	\$3,023.3 35.8%
18	2001	\$5,414.5	\$274.7	(\$146.5)	\$5,542.6	\$3,323.2 37.5%
19	2002	\$5,542.6	\$281.2	(\$150.0)	\$5,673.8	\$3,641.8 39.1%
20	2003	\$5,673.8	\$287.8	(\$153.6)	\$5,808.1	\$3,980.1 40.7%
21	2004	\$5,808.1	\$294.6	(\$157.2)	\$5,945.5	\$4,339.2 42.2%
22	2005	\$5,945.5	\$301.6	(\$160.9)	\$6,086.2	\$4,720.2 43.7%
23	2006	\$6,086.2	\$308.8	(\$164.7)	\$6,230.2	\$5,124.4 45.1%
24	2007	\$6,230.2	\$316.1	(\$168.6)	\$6,377.7	\$5,553.0 46.5%
25	2008	\$6,377.7	\$323.5	(\$172.6)	\$6,528.6	\$6,007.3 47.9%
26	2009	\$6,528.6	\$331.2	(\$176.7)	\$6,683.1	\$6,488.8 49.3%
27	2010	\$6,683.1	\$339.0	(\$180.9)	\$6,841.2	\$6,998.8 50.6%
28	2011	\$6,841.2	\$347.1	(\$185.2)	\$7,003.1	\$7,539.0 51.8%
29	2012	\$7,003.1	\$355.3	(\$189.5)	\$7,168.9	\$8,111.0 53.1%
30	2013	\$7,168.9	\$363.7	(\$194.0)	\$7,338.5	\$8,716.5 54.3%
31	2014	\$7,338.5	\$372.3	(\$198.6)	\$7,512.2	\$9,357.3 55.5%
32	2015	\$7,512.2	\$381.1	(\$203.3)	\$7,689.9	\$10,035.3 56.6%
33	2016	\$7,689.9	\$390.1	(\$208.1)	\$7,871.9	\$10,752.6 57.7%
Growth Rates		2.37%	2.37%		2.37%	15.28%
Count (Years)		33	33		33	33

GDP EARNINGS WITH FED INTERMEDIATION EXPENSE REMOVED

(N)	(A)	(B) = (A) x (c)	(C) = (A) x (b)	(D) = (A)+(B)+(C)	
Period	Year	GDP ³ Year(Begin) (\$ Billions)	Productivity Growth(Total) (\$ Billions)	Fed Intermediation Expense ²	GDP Year (End) (\$ Billions)
1	1984	\$3,638.1	\$184.6	\$0.0	\$3,822.7
2	1985	\$3,822.7	\$193.9	\$0.0	\$4,016.6
3	1986	\$4,016.6	\$203.8	\$0.0	\$4,220.4
4	1987	\$4,220.4	\$214.1	\$0.0	\$4,434.5
5	1988	\$4,434.5	\$225.0	\$0.0	\$4,659.4
6	1989	\$4,659.4	\$236.4	\$0.0	\$4,895.8
7	1990	\$4,895.8	\$248.4	\$0.0	\$5,144.2
8	1991	\$5,144.2	\$261.0	\$0.0	\$5,405.1
9	1992	\$5,405.1	\$274.2	\$0.0	\$5,679.3
10	1993	\$5,679.3	\$288.1	\$0.0	\$5,967.5
11	1994	\$5,967.5	\$302.7	\$0.0	\$6,270.2
12	1995	\$6,270.2	\$318.1	\$0.0	\$6,588.3
13	1996	\$6,588.3	\$334.2	\$0.0	\$6,922.5
14	1997	\$6,922.5	\$351.2	\$0.0	\$7,273.7
15	1998	\$7,273.7	\$369.0	\$0.0	\$7,642.7
16	1999	\$7,642.7	\$387.7	\$0.0	\$8,030.4
17	2000	\$8,030.4	\$407.4	\$0.0	\$8,437.8
18	2001	\$8,437.8	\$428.0	\$0.0	\$8,865.8
19	2002	\$8,865.8	\$449.8	\$0.0	\$9,315.6
20	2003	\$9,315.6	\$472.6	\$0.0	\$9,788.1
21	2004	\$9,788.1	\$496.6	\$0.0	\$10,284.7
22	2005	\$10,284.7	\$521.7	\$0.0	\$10,806.4
23	2006	\$10,806.4	\$548.2	\$0.0	\$11,354.6
24	2007	\$11,354.6	\$576.0	\$0.0	\$11,930.7
25	2008	\$11,930.7	\$605.2	\$0.0	\$12,535.9
26	2009	\$12,535.9	\$635.9	\$0.0	\$13,171.8
27	2010	\$13,171.8	\$668.2	\$0.0	\$13,840.1
28	2011	\$13,840.1	\$702.1	\$0.0	\$14,542.2
29	2012	\$14,542.2	\$737.7	\$0.0	\$15,279.9
30	2013	\$15,279.9	\$775.1	\$0.0	\$16,055.0
31	2014	\$16,055.0	\$814.5	\$0.0	\$16,869.5
32	2015	\$16,869.5	\$855.8	\$0.0	\$17,725.3
33	2016	\$17,725.3	\$899.2	\$0.0	\$18,624.5
Growth Rates		5.07%	5.07%	N.A.	5.07%
Count (Years)		33	33	33	33

Notes/Sources:

- 1-Format adapted from "The Tyranny of Compounding Costs" at <http://www.pbs.org/wgbh/pages/frontline/retirement/etc/tyranny.html>
- 2-Intermediation and GDP growth rate estimates from Attachment 3.
- 3-Initial GDP from Attachment 3 via St. Louis Fed economic data at <https://fred.stlouisfed.org/series/GDPA>
- 4-Fed M2M Intermediation expenses compounded at total growth rate.

Last Updated 10/27/2017

Fed Monetary Intermediation Cost 1984-2016	\$ Billions	% Percent
Economic (GDP) earnings 2016 w/o Fed intermediation expense	\$18,624.5	100.0%
Economy earnings with Fed Intermediation expense deducted	\$7,871.9	42.3%
Fed Intermediation Expense from Non Bank Economy since 1984	\$10,752.6	57.7%

Fed Intermediation costs, primarily monetary expansion inflation, estimated to have wealth transferred approximately 57.7% of economic system returns to banking sector from 1984 to 2016.