

Apple Inc. (AAPL)

Values in Millions except per share amounts

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This model shows the stock prices implies by 70% and 52% ROICs.
1. First step is determining the NOPAT implied by the different ROICs.

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Current
Market Values																
Stock Price (closing)	\$9.89	\$16.24	\$12.88	\$7.76	\$7.36	\$10.34	\$18.64	\$53.20	\$76.98	\$153.47	\$128.24	\$182.37	\$292.32	\$404.30	\$667.10	\$454.74
Market Value of Equity	\$5,113.99	\$9,296.62	\$8,357.63	\$5,360.46	\$5,225.92	\$7,461.43	\$13,856.59	\$43,009.01	\$64,975.58	\$134,369.17	\$113,997.04	\$164,097.53	\$267,756.37	\$375,706.69	\$626,545.66	\$427,770.28
Enterprise Value	\$4,562.87	\$7,543.08	\$6,279.33	\$2,471.82	\$2,454.12	\$4,545.44	\$10,183.43	\$38,281.00	\$58,823.20	\$125,215.30	\$94,690.77	\$137,373.14	\$225,616.32	\$307,481.79	\$526,070.38	\$326,256.56
Economic Book Value (EBV)	\$2,952.93	\$5,030.74	\$278.27	(\$74.40)	\$1,743.48	\$3,284.32	\$6,019.48	\$18,098.50	\$27,699.09	\$46,850.96	\$74,624.06	\$136,679.10	\$212,171.29	\$392,508.18	\$266,024.93	\$225,795.93
Return on Invested Capital (ROIC)																
ROIC (Return On Invested Capital)	28.1%	42.7%	(20.4%)	(31.0%)	(11.0%)	2.9%	23.1%	137.7%	121.6%	145.1%	181.2%	223.7%	267.3%	338.7%	70.4%	52.0%
Change in ROIC	-	14.6%	(63.1%)	(10.6%)	20.0%	13.9%	20.2%	114.6%	(16.2%)	23.5%	36.1%	42.5%	43.6%	71.5%	(268.3%)	(286.7%)
Incremental Return on Capital	-	-	283.8%	(19.7%)	(38.0%)	30.0%	536.8%	(277.4%)	411.7%	112.5%	708.4%	986.6%	257.1%	1,783.8%	(339.6%)	(406.1%)
NOPAT (Net Operating Profit After Tax)																
NOPAT (Net Operating Profit After Tax)	\$215.46	\$292.55	(\$168.95)	(\$257.66)	(\$88.24)	\$29.69	\$201.25	\$1,097.28	\$1,808.63	\$3,169.04	\$4,464.64	\$8,184.04	\$13,357.96	\$25,250.42	\$10,827.34	\$8,004.40
NOPAT Margin	3.6%	4.8%	(2.1%)	(4.8%)	(1.5%)	0.5%	2.4%	7.9%	9.4%	13.2%	13.7%	19.1%	20.5%	23.3%	6.9%	5.1%
Change in NOPAT	-	77.1	(461.5)	(88.7)	169.4	117.9	171.6	896.0	711.3	1,360.4	1,295.6	3,719.4	5,173.9	11,892.5	(14,423.1)	(17,246.0)
NOPAT Growth	-	35.8%	(157.7%)	52.5%	(65.8%)	(133.6%)	577.8%	445.2%	64.8%	75.2%	40.9%	83.3%	63.2%	89.0%	(57.1%)	(68.3%)
Total Operating Revenue	\$5,941.00	\$6,134.00	\$7,983.00	\$5,363.00	\$5,742.00	\$6,207.00	\$8,279.00	\$13,931.00	\$19,315.00	\$24,006.00	\$32,479.00	\$42,905.00	\$65,225.00	\$108,249.00	\$156,508.00	\$156,508.00
Invested Capital																
Invested Capital	\$766.18	\$603.57	\$1,054.49	\$608.94	\$1,001.39	\$1,033.35	\$710.32	\$883.10	\$2,092.35	\$2,275.23	\$2,652.21	\$4,664.72	\$5,331.41	\$9,577.95	\$21,178.74	\$21,178.74
Average Invested Capital	\$766.18	\$684.87	\$829.03	\$831.72	\$805.17	\$1,017.37	\$871.84	\$796.71	\$1,487.72	\$2,183.79	\$2,463.72	\$3,658.47	\$4,998.07	\$7,454.68	\$15,378.34	\$15,378.34
Change in Invested Capital	-	(162.6)	450.9	(445.5)	392.4	32.0	(323.0)	172.8	1,209.2	182.9	377.0	2,012.5	666.7	4,246.5	11,600.8	11,600.8
Invested Capital Growth	-	(21.2%)	74.7%	(42.3%)	64.4%	3.2%	(31.3%)	24.3%	136.9%	8.7%	16.6%	75.9%	14.3%	79.7%	121.1%	121.1%
Average Invested Capital Turns	7.75	8.96	9.63	6.45	7.13	6.10	9.50	17.49	12.98	10.99	13.18	11.73	13.05	14.52	10.18	10.18
DCF Forecast Drivers																
Total Operating Revenue Growth	-	3.2%	30.1%	(32.8%)	7.1%	8.1%	33.4%	68.3%	38.6%	24.3%	35.3%	32.1%	52.0%	66.0%	44.6%	44.6%
NOPBT Margin	3.9%	5.3%	(2.9%)	(6.7%)	(2.1%)	0.6%	3.3%	10.8%	13.0%	18.7%	19.6%	27.6%	28.4%	31.3%	9.2%	6.8%
Cash Tax Rate	6.1%	9.8%	28.0%	28.6%	26.9%	26.3%	26.9%	26.9%	28.2%	29.3%	29.9%	30.9%	27.8%	25.5%	24.7%	24.7%
Net Working Capital Delta as % of Revenue Delta	-	(165.5%)	1.6%	12.1%	33.2%	(27.0%)	(14.2%)	(3.1%)	(11.8%)	(12.7%)	(16.6%)	12.6%	(11.6%)	(8.8%)	(1.4%)	(1.4%)
Adjusted Fixed Assets Delta as % of Revenue Delta	-	81.2%	22.7%	4.9%	70.3%	33.9%	(1.4%)	6.1%	34.2%	16.6%	21.0%	6.7%	14.6%	18.7%	25.5%	25.5%
Free Cash Flow (FCF) Analysis (FCF = NOPAT - Change In Invested Capital)																
FCF (Free Cash Flow)	-	\$455.16	(\$619.87)	\$187.88	(\$480.69)	(\$2.27)	\$524.28	\$924.50	\$599.38	\$2,986.15	\$4,087.66	\$6,171.52	\$12,691.27	\$21,003.89	(\$773.45)	(\$3,596.40)
Change in FCF	-	-	(1,075.0)	807.7	(668.6)	478.4	526.5	400.2	(325.1)	2,386.8	1,101.5	2,083.9	6,519.7	8,312.6	(21,777.3)	(24,600.3)
FCF Growth	-	-	(236.2%)	(130.3%)	(355.8%)	(99.5%)	(23,208.3%)	76.3%	(35.2%)	398.2%	36.9%	51.0%	105.6%	65.5%	(103.7%)	(117.1%)
FCF Yield	-	6.0%	(9.9%)	7.6%	(19.6%)	(0.0%)	5.1%	2.4%	1.0%	2.4%	4.3%	4.5%	5.6%	6.8%	(0.1%)	(1.1%)
Economic Earnings ((ROIC - WACC) * Invested Capital) & Comparison																
Economic Earnings	\$146.73	\$231.41	(\$246.76)	(\$329.99)	(\$111.00)	\$11.00	\$146.73	\$1,021.56	\$1,821.56	\$3,169.04	\$4,464.64	\$8,184.04	\$13,357.96	\$25,250.42	\$9,821.56	\$9,821.56
Change in Economic Earnings	-	84.7	(478.2)	(83.2)	111.00	11.00	146.73	1,021.56	1,821.56	3,169.04	4,464.64	8,184.04	13,357.96	25,250.42	9,821.56	9,821.56
Economic Earnings per Share	\$0.28	\$0.40	(\$0.38)	(\$0.48)	(\$0.19)	\$0.02	\$0.28	\$1.91	\$3.17	\$5.00	\$6.91	\$12.69	\$21.00	\$39.26	\$10.51	\$10.51
Economic Earnings per Share Growth	-	45.4%	(194.1%)	25.6%	19.0%	2.0%	28.6%	102.1%	182.2%	316.9%	446.5%	818.4%	1335.8%	2525.0%	60.6%	60.6%
ROIC (Return On Invested Capital)	28.1%	42.7%	(20.4%)	(31.0%)	(11.0%)	2.9%	23.1%	137.7%	121.6%	145.1%	181.2%	223.7%	267.3%	338.7%	70.4%	52.0%
WACC (Weighted Average Cost of Capital)	9.0%	8.9%	9.4%	8.7%	8.6%	8.1%	8.6%	8.2%	8.4%	8.4%	8.1%	7.4%	7.9%	7.8%	6.5%	6.4%
Economic Earnings Margin (ROIC - WACC)	19.2%	33.8%	(29.8%)	(39.7%)	(19.5%)	(5.1%)	14.5%	129.5%	113.2%	136.7%	173.1%	216.3%	259.4%	330.9%	63.9%	63.9%
GAAP Net Income	\$309.00	\$601.00	\$786.00	(\$25.00)	\$65.00	\$69.00	\$276.00	\$1,335.00	\$1,989.00	\$3,496.00	\$4,834.00	\$8,235.00	\$14,013.00	\$25,922.00	\$41,733.00	\$41,733.00
Change in GAAP Net Income	-	\$292.00	\$185.00	(\$811.00)	\$90.00	\$4.00	\$207.00	\$1,059.00	\$654.00	\$1,507.00	\$1,338.00	\$3,401.00	\$5,778.00	\$11,909.00	\$15,811.00	\$15,811.00
Diluted GAAP EPS	\$0.46	\$0.86	\$1.09	(\$0.04)	\$0.09	\$0.09	\$0.36	\$1.56	\$2.27	\$3.93	\$5.36	\$9.08	\$15.15	\$27.68	\$44.15	\$44.15
Diluted GAAP EPS Growth	-	87.5%	26.4%	(103.3%)	(348.4%)	5.7%	275.4%	337.3%	45.5%	73.4%	36.3%	69.4%	66.9%	82.6%	59.5%	59.5%
Economic Book Value Per Share, Accounting Book Value Per Share and Other Key Ratios																
PEBV (Price to Economic Book Value per Share)	1.73	1.85	30.03	(72.05)	3.00	2.27	2.30	2.38	2.35	2.87	1.53	1.20	1.26	0.96	2.36	1.89
Economic Book Value (EBV) Per Share	\$5.59	\$8.79	\$0.43	(\$0.11)	\$2.46	\$4.55	\$8.10	\$22.39	\$32.82	\$53.51	\$83.95	\$151.90	\$231.64	\$422.38	\$283.24	\$240.03

Economic Book Value Per Share, Accounting Book Value Per Share and Other Key Ratios

PEBV (Price to Economic Book Value per Share)	1.73	1.85	30.03	(72.05)	3.00	2.27	2.30	2.38	2.35	2.87	1.53	1.20	1.26	0.96	2.36	1.89
Economic Book Value (EBV) Per Share	\$5.59	\$8.79	\$0.43	(\$0.11)	\$2.46	\$4.55	\$8.10	\$22.39	\$32.82	\$53.51	\$83.95	\$151.90	\$231.64	\$422.38	\$283.24	\$240.03
Stock Price (closing)	\$9.69	\$16.24	\$12.88	\$7.76	\$7.36	\$10.34	\$18.64	\$53.20	\$76.98	\$153.47	\$128.24	\$182.37	\$292.32	\$404.30	\$667.10	\$454.74
PVGO per Share									\$4.16	\$99.96	\$44.29	\$30.47	\$60.68	(\$18.08)	\$383.86	\$214.71
PVGO as % of Stock Price									7.4%	65.1%	34.5%	16.7%	20.8%	(4.5%)	57.5%	47.2%
Accounting Book Value per Share									\$11.38	\$16.34	\$23.31	\$34.88	\$51.68	\$81.80	\$125.04	\$125.04
Price to Accounting Book Value									6.77	9.39	5.50	5.23	5.66	4.94	5.33	3.64
Enterprise Value Per Invested Capital									28.11	55.03	35.70	29.45	42.32	32.10	24.84	15.40
Enterprise Value Per EBITDA	13.78	18.87	(38.06)	(8.80)	(94.60)	36.11	25.68	23.31	21.84	26.43	13.99	10.99	11.61	8.64	8.99	5.58
Enterprise Value To Revenue	0.77	1.23	0.79	0.46	0.43	0.73	1.23	2.75	3.05	5.22	2.92	3.20	3.46	2.84	3.36	2.08
Price to Unlevered NOPAT per Share	23.74	31.78	(49.47)	(20.80)	(59.22)	251.31	68.85	39.20	35.93	42.40	25.53	20.05	20.04	14.88	57.87	53.44
P/E (Price/Earnings Multiple)	21.06	18.82	11.80	(214.42)	81.93	108.99	52.33	34.14	33.96	39.04	23.93	20.09	19.29	14.61	15.11	10.30
P/E Per Revenue Growth	-	5.79	0.39	6.53	11.59	13.46	1.57	0.50	0.88	1.61	0.68	0.63	0.37	0.22	0.34	0.23
Return on Equity	18.8%	19.4%	19.1%	(0.6%)	1.6%	1.6%	5.4%	17.9%	19.9%	24.1%	23.0%	26.0%	29.3%	33.8%	35.3%	35.3%

This part of my model shows the values behind my Economic Book Value calculation.

1. NOPAT/WACC is the first calc

2. Then, add/subtract debt, cash, options and tax liabilities, the values for which are provided below.

Economic Book Value (EBV) is divided by total basic shares to get EBV per share.

Economic Book Value Calculation and Components (see our blog for details on this calculation)

NOPAT (Net Operating Profit After Tax)	\$215.46	\$292.55	(\$168.95)	(\$257.66)	(\$88.24)	\$29.69	\$201.25	\$1,097.28	\$1,808.63	\$3,169.04	\$4,464.64	\$8,184.04	\$13,357.96	\$25,250.42	\$10,827.34	\$8,004.40
WACC (Weighted Average Cost of Capital)	9.0%	8.9%	9.4%	8.7%	8.6%	8.1%	8.6%	8.2%	8.4%	8.4%	8.1%	7.4%	7.9%	7.8%	6.5%	6.4%
Adjusted Total Debt	(1,090.6)	(451.5)	(505.6)	(651.8)	(679.9)	(781.2)	(478.5)	(674.1)	(877.8)	(1,083.7)	(1,353.6)	(1,528.8)	(1,660.5)	(2,373.9)	(3,699.2)	(3,699.2)
Fair Value of Preferred Capital	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Fair Value of Minority Interests	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Value of Outstanding ESO After Tax	(361.3)	(649.3)	(742.9)	(558.4)	(574.2)	(513.5)	(898.4)	(2,162.3)	(2,114.0)	(3,948.1)	(2,206.2)	(2,675.6)	(3,242.0)	(2,661.2)	(2,682.3)	(1,643.9)
Pensions Net Funded Status	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excess Cash	2,002.9	2,919.3	3,627.8	4,195.8	4,088.9	4,255.6	5,050.0	7,564.4	9,144.2	14,185.7	22,866.0	31,846.8	49,706.5	79,405.0	118,120.8	118,120.8
Adjusted Unconsolidated Subsidiary Assets (non-operating)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Adjusted Net Discontinued Operations Asset (Liability)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net Deferred Compensation Asset (Liability)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net Deferred Tax Liability	0.0	(65.0)	(301.0)	(97.0)	(63.0)	(45.0)	0.0	0.0	0.0	0.0	0.0	(918.0)	(2,664.0)	(6,145.0)	(11,264.0)	(11,264.0)
Economic Book Value (EBV)	\$2,952.93	\$5,030.74	\$278.27	(\$74.40)	\$1,743.48	\$3,284.32	\$6,019.48	\$18,098.50	\$27,699.09	\$46,850.96	\$74,624.06	\$136,679.10	\$212,171.29	\$392,508.18	\$266,024.93	\$225,795.93