

SAP IBM



Input interpretation:

SAP (SAP) | IBM (IBM)

Latest trades:

SAP	€29.58 (A\$ 53.27) (SAP Xetra Friday 11:35 am EDT 57 hours ago)
IBM	\$ 101.37 (A\$ 135.89) (IBM NYSE Friday 4:00 pm EDT 53 hours ago)

Fundamentals and financials:

market cap	\$ 134 billion
revenue	\$ 100.8 billion
employees	398 455
revenue / employee	\$ 266 000
net income	\$ 12.31 billion
shares outstanding	1.321 billion
annual earnings / share	\$ 9.10
P/E ratio	11.14
annual dividends / share	\$ 2.00
dividend yield	1.94%

(based on trailing 12-month totals, last close price and annual employees)

Recent returns:

	day	month	YTD	year	5 year
SAP	-0.94%	+0.63%	+17.18%	-9.25%	-5.21%
IBM	+0.32%	+2.55%	+20.45%	-21.09%	+17.79%

Wolfram|Alpha: SAP IBM

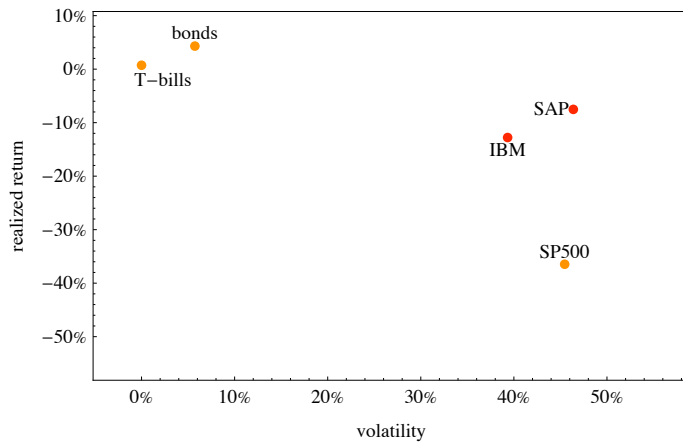
Relative price history:



(normalized relative to May 21, 2008 starting date)

Performance comparisons:

	average daily return	daily volatility	annual return	annual volatility
SAP	-0.031%	2.93%	-7.52%	46.39%
IBM	-0.054%	2.48%	-12.78%	39.33%
SP500	-0.181%	2.87%	-36.47%	45.46%
bonds	+0.017%	0.36%	+4.31%	5.73%
T- bills	+0.003%	0.00%	+0.73%	0.00%



Correlation matrix:

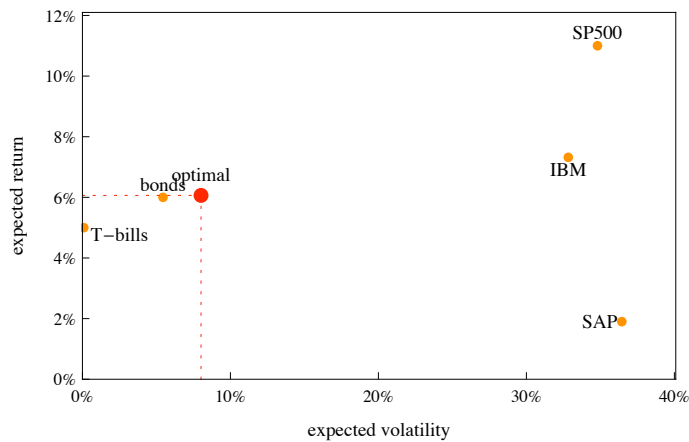
	SAP	IBM	SP500
SAP	1	0.331	0.402
IBM	0.331	1	0.756
SP500	0.402	0.756	1

Projections:

Mean–variance optimal portfolio:

	weight	shares	cost
SAP	13.01%	4399	\$ 130 100 (A\$ 174 400)
IBM	14.18%	1399	\$ 141 800 (A\$ 190 100)
SP500	14.08%	1587	\$ 140 800 (A\$ 188 700)
bonds	29.38%	294	\$ 294 000 (A\$ 394 100)
T–bills	29.35%	294	\$ 294 000 (A\$ 394 100)

(amounts based on \$1 million portfolio)



optimal portfolio's expected yearly return	6.06%
optimal portfolio's yearly volatility	8.01%