

EMC Corporation

Investment Recommendation: < Buy >

Sep. 30, 1999 Price: 71 3/8 P/E ratio: 78.9

Projected Annual Return: 25.30%

The analysis allows me to select an industry for investment consideration. Given the growth in the Internet, e-commerce, and the recent explosion of electronic data, the relative growth of the storage industry seemed to be strong and is expected to continue over the future years. EMC is extremely well positioned in this fastest-growing computer storage sector in the high-technology arena. Several companies that are competitive leaders in the industry were examined. EMC Corporation (EMC), is a leading firm in the industry with worldwide distribution of its products. EMC has all of the attributes of being an excellent company. It is a competitive leader, with aggressive growth prospects worldwide. The management of the company has demonstrated its strong ability to expand and grow with excellent prospects in the future. The company is well financed with a strong and solid capital structure. The company has excellent productivity per employee. The company is profitable with an excellent profit margin relative to the whole industry and its competitors. The company has met all of the requirements to be an excellent investment.

Sector: Technology **Industry:** Computer Storage Devices

Company Summary: EMC Corp. and its subsidiaries design, manufacture, market and support a range of high-performance storage products, enterprise systems and software products, and related services for the worldwide enterprise storage market. It has leading share of open systems storage market. Product lines include Symmetrix and Connectrix. For the past 6 months ended 6/30/99, revenues rose 36% to \$2.42B. Net income rose 52% to \$509.6M. Results reflect continued strong demand for the Symmetrix series of products, increased licenses of software and higher margins due to increased software sales. The technology edge should make this opportunity quite lucrative for EMC.

1. Competitive position

Revenue (1999)		Past 10yrs	Past 5yrs	Future 5 yrs**
\$5,400 mill	Growth (revenue)	32.0%	36.0%	29.5%
	St. Dev. Of growth	30.2%	8.2%	5.0%

The total revenue of EMC represents a relatively large proportion of the industry revenue. While its close competitor, *Seagate Technology, Inc.* is losing its edge (For the FY ended 7/2/99, revenues fell less than 1% to \$6.80B. Net income totaled \$1.18B, vs. a loss of \$530M.), EMC has been increasing its revenue drastically during the past 10 years. The revenue growth during the past five years tends to be rather stable, though it shows a little more volatile than the GDP growth rate and the industry sales growth rate. It shows that the computer storage industry has already entered the mature period and EMC will continue to be prevailing in the next five years and it will still enjoy expanding revenue.

2. Productivity

In terms of rev./employee and Rev/Total Assets, EMC has not achieved the highest productivity efficiency compared with its another competitor DLT & Storage (DSS), though its R/E is a little higher than the industry and Sector index. And even the R/A is the lowest among the leading players in storage industry. But since EMC has been increasing its revenue drastically and will keep this trend in the next few years, so the R/A and R/TA will be increased in the near future.

	Rev/Employee (TTM)	Rev/Total Assets (TTM)
EMC Corp.	\$ 475,584.00	1.01
Seagate	\$ 82,951.00	1.16
DLT & Storage	\$ 662,393.00	1.36
GADzoox	\$ 196,068.00	1.06
Industry	\$ 432,830.00	1.08
Sector	\$ 415,507.00	1.09
S&P 500	\$ 483,932.00	1.06

3. Management Efficiency

Management has had huge success with its operation expense control initiatives. NPM ratio has kept increasing from 5.2% ten years ago to 20.8% in the 1998 fiscal year. Annual sales also have climbed from \$171 mill. to \$3973.7 mill. during the past ten years, with an average annual growth rate of 32%. Without small fraction of long-term debt, EMC does not have much interest expense burden in the future, and enjoys a financial strength over its rivals. While expanding its revenues with a strong trend, EMC is also decreasing its operating expense effectively so as to get a bigger positive cash flow.

4. Capital Structure

EMC's total capital of \$5,269million mainly comes from its equity. It has not much long-term debt, even the current liabilities of \$814 mil. accounts for just 15% of its total capital. Its debt due at 3/31/99 is \$24 mill., representing only 5% of its net income.

Quarter ending 06/30/1999	
Common Stocks	1,013 mil.
Current Asset	\$3,133 mil.
Total Assets	\$5,269 mil.
Current Liab.	\$814 mil.
Tot. Liabilities	\$1,383 mil.
Owner's Equity	\$3,886 mil.

5. Financial Position

EMC enjoys a strong financial position in the computer storage industry. It has \$3,133 mill. current assets, including \$1,346 mill. cash. The current assets provide a sufficient liquidity for profit generating. In addition, EMC has a higher-than-industry average quick ratio and current ratio (3.05 vs. 2.79 and 3.85 vs. 3.55, respectively). It also has a lower than industry LT debt to equity (MRQ) and total debt to equity (MRQ) (0.13 vs. 0.24 and 0.13 vs. 0.26, respectively). This shows that EMC is currently at a stronger financial position than other storage companies are.

6. Profitability

	Revenues	NPM	ROE	ROA		Return	Ge	Gd
EMC Corp.	\$5,400mill	20.97%	29.13%	24.50%	Ave(past 10 yrs)	90.00%	37.50%	0
Seagate Technology	\$6,802mil	17.29%	39.86%	20.01%	Ave(past 5 yrs)	60.00%	50.50%	0
DLT & Storage	\$1,302mil	22.37%	12.94%	9.50%	STD(past 10 yrs)	75.00%	16.11%	0
Gadzoox Networks	\$24.8mill	-368.86%	-58.00%	-54.58%	STD(past 5 yrs)	51.00%	14.83%	0
Industry		17.06%	27.24%	17.28%				
Sector		12.69%	23.98%	11.38%				

While compared with the other big computer storage players, EMC has the second highest annual revenues, the highest NPM and ROA with ROE lower than Seagate Tech.. EMC continues to have the full ability to generate high profit margin and increasing sales volume in the industry. In the past five years, EMC's earnings growth rate has become less volatile than the period before, while the average annual growth rate of earnings grew up to 50.5% annually.

7. Expected return & Pro Forma

Past 10-year Returns:

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Avg.	St. Dev.
EMC Corp.	41.4%	56.5%	108.9%	264.5%	59.4%	1.1%	20.7%	101.0%	120.5%	126.5%	90.0%	31.9%
S&P 500	-3.2%	30.6%	7.6%	9.9%	1.3%	37.6%	23.0%	33.2%	23.6%	4.5%	16.8%	13.8%

Pro Forma Analysis (Revenue Growth Rate): 35% annually

Expected IRR: 25.3% (5-year time frame)

The expected sales revenues from 2000 through 2004 are calculated based on the value line estimates for the year 00-04.

Summary of Return Estimates

- Value Line history Return
High – 23%, Low -- 10.00% r = 16.50%
- Pro Forma Analysis, Estimates 00 – 04
Ge = 37.65%, Gd = 0, PE04 = 40, D04 = D00 = 0, Pcurrent = 64, r = 25.30%