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MAGAZINE

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# Off in the Clouds

## Investing in a Fast-Emerging Technology

by Arthur Goldgaber

**Cloud computing is transforming how companies big and small are managing their computer and data systems. But the term is often used broadly in the information technology industry and includes companies in a broad group of industries, including hardware, software, IT services, cyber security and the Internet — just to name a few.**

**C**loud computing generally refers to the practice of corporations hiring a third-party vendor to operate one or more of their IT systems, such as email or payroll, on its own servers. In theory, the outsourcing helps companies reduce spending on hardware, software and personnel and, in turn, enables these firms to devote the savings to boosting core operations.

As Morningstar analyst Michael Holt says: “We know that (the cloud) is not a passing fad; it’s the real deal. However, measuring the adoption is hard to estimate.”

In terms of the cloud computing market size, research firm Gartner Inc. estimates that although \$74 billion was spent on public cloud services in 2010, it represented only 3 percent of total enterprise spending.

But public cloud services will grow five times faster than overall IT enterprise spending — 19 percent annually through 2015, according to Peter Sondergaard, Gartner’s senior vice president and global head of research. The shift away from traditional IT acquisition models to public cloud services is still in the early stages, Sondergaard adds.

In another recent report, Gartner also predicts that the reign of the personal computer as the sole corporate access device may be nearing an end and by 2014, the personal cloud will replace the personal computer at the center of users’ digital lives.

By the end of 2013, consumer cloud services for accessing content will be integrated into 90 percent of all connected consumer devices, Gartner projects. These trends will probably mean that PCs won’t require as much computing or storage capabilities as they have today, says Alex Henderson, an analyst at institutional trading firm Miller Tabak + Co., LLC.

### Off-Site Storage

Tech experts will also use the term “doing things in the cloud.” Operating in the “cloud” refers to activities that are conducted on the Internet, or more accurately on the millions of servers around the world that are its backbone, rather than on one’s computer hard drive. So if a digital document is stored or a digital task is being performed in the cloud, that means the file or application lives on a server that a user accesses over an Internet connection via a Web browser or app, rather than on “local” devices such as a user’s PC or smartphone.

Henderson emphasizes that all parts of the cloud need to work together from storage, security and access in order to present the user with a “seamless interface.” This concept is certainly not new. For years, there have been services that would back up files to a distant server over the Internet or keep photos online.

In addition, Web-based email programs such as Yahoo! Mail or Hotmail are familiar examples of cloud-based applications. These programs operate on servers, not a user's PC, and are accessed through a Web browser.

What's changed is that in recent years, large-scale Internet-based storage has come down in price so that it's possible for programmers to create more sophisticated remote software. Internet connections also have improved. Also, some users have expressed a desire to share and collaborate in easier and more comprehensive ways than emailing files.

Cloud-based services allow many colleagues to view, comment on and edit the same material. All this has provided a boost to cloud computing.

### Select Your Service

To further define the cloud computing sector, analysts organize these companies into three categories:

- **Software as a service (SaaS)**, or the delivery of complete applications from a third-party data center over the Internet. Examples include SuccessFactors (recently acquired by SAP) and Taleo (ticker: TLEO) in performance management, Salesforce.com (CRM) and Right-Now Technologies in call center automation.
- **The second type of cloud computing company is platform as a service (PaaS)**, an application development and deployment environment hosted in a third-party data center. PaaS environments generally have tools and services that enable app developers to rapidly create new app functions to run in the cloud. Players here include Microsoft's Windows Azure (MSFT), Amazon's Web Services (AMZN) and Google (GOOG).
- **The third category is infrastructure as a service (IaaS)**, which is the most basic-level public cloud offering — firms that offer third-party data centers that can run customer workloads or store customer data.

An example in IaaS is Rackspace Hosting (RAX), which rents computer servers via the Internet to process business applications and perform number-crunching. The firm charges clients an hourly rate per cloud server plus fees for bandwidth and managed service.

Bryan McGrath, Rackspace's finance director, says, "Enterprise customers and the public cloud service have been large drivers of growth over the past 18 months."

For 2011's fourth quarter, cloud computing accounted for 20.6 percent of the company's total revenues, up from 14.6 percent in the same period a year earlier. Its main business is providing website hosting services, and Rackspace competes with Amazon and others.

Cloud services revenue, while smaller, rose considerably more than Web hosting in 2011's fourth quarter: Cloud services revenue grew 86 percent to \$58.4 million, up from \$31.4 million in 2010's fourth quarter, while

Web hosting revenue increased 22 percent to \$224.8 million, up from \$183.3 million.

In terms of its most important financial performance yardstick, McGrath says the company focuses on return on invested capital, which was 11 percent in 2010 and 15 percent in 2011.

### Biggest Clouds on the Horizon

Within the cloud computing sector, many analysts have identified VMware (VMW), whose virtualization software enables programmers to run many more applications on each of its servers, as one of the most important companies. Boosting the utilization rate of each server allows companies to reduce the number of its servers and significantly reduce costs, says Miller Tabak's Henderson.

The company has established a strong record of revenue and profit growth in the past few years. For 2011, revenues rose 32 percent to \$3.77 billion and net income climbed nearly 103 percent to \$724 million. But the stock recently was trading at a frothy trailing price-earnings ratio of 63.7.

Morningstar analyst Holt says that investors can benefit from VMware's growth by purchasing the stock of EMC Corp. (EMC), which owns 80 percent of VMware.

Although shares of EMC are trading just below Holt's target price of \$30, he believes the company has continued to generate strong sales of its external storage equipment to data centers. Cloud computing companies need massive amounts of storage, and EMC is a key vendor of storage hardware. Plus, EMC is trading at a P/E of 26.2, far below VMware's. *(Companies are mentioned in this article for educational purposes only. No investment recommendations are intended.)*

In 2011's fourth quarter, EMC maintained its lead in the external disk storage systems market with a 29.4 percent revenue share, followed by IBM (IBM) at 15.2 percent. NetApp (NTAP) and Hewlett-Packard (HPQ) tied for third at 11.2 percent and 10.3 percent, respectively, according to International Data Corp. (IDC, which provides technology market intelligence, declares a statistical tie when there's less than a 1 percentage point difference in the factory revenues of two or more vendors.)

The research firm estimates that worldwide external disk storage systems' factory revenues posted year-over-year growth of 7.7 percent, totaling just under \$6.6 billion. Hitachi (HIT) ended the quarter in fifth position, with a 9.2 percent share.

EMC also garnered the largest share of the storage software market with over 25 percent market share, according to IDC. The storage software market increased to \$3.8 billion during the quarter, up 10.5 percent over the same period last year. For 2011, EMC's share stood at 24.7 percent of the global storage software market, up

from 24.4 percent in 2010. The total storage software market in 2011 was up 11.6 percent over 2010 to a record high of \$14.2 billion. Symantec (SYMC), IBM and NetApp retained their second, third and fourth positions, respectively, according to IDC.

EMC cited that it “strengthened its technology leadership and services expertise in cloud computing” throughout 2011 in its earnings statement for 2011’s fourth quarter and for full-year 2011.

Holt explains that in the short term EMC is benefiting from strong sales of its storage devices to third-party providers of data hosting and other cloud computing services. Over the long term, however, this trend may mean lower sales of its storage devices to its traditional corporate clients as they outsource business IT functions.

### A Moat in the Sky?

In evaluating information technology companies, Henderson says he first examines the company’s products and services and attempts to assess how well the com-



### Information Warehousing.

An IBM innovations systems engineer checks out the equipment at the company’s Cloud Computing Center in Southbury, Conn. The center opened in 2009 to serve commercial clients.

pany can defend its technological advantage. In other words, he wants to avoid investing in a company whose products or services are similar to its competitors and thus must compete simply on price.

He also looks for growing operating margin because he’s noticed that rising operating margins often are a crucial factor in generating shareholder value over time.

Within the cloud computing sector, Henderson notes that cyber security software companies have been performing well owing to the strong need for their products. In the past year, cyber attacks have been increasing and

## Companies in the Cloud

Company	Ticker	FY 2011 revenue (millions)	5-yr sales growth	5-yr EPS growth	5-yr avg pre-tax profit (%)	5-yr avg return on equity (%)	Current P/E	5-yr consensus EPS growth (%)	Value Line Financial Strength
Acme Packet	APKT	307.3	30.8	31.5	22.5	9.7	42.7	23.7	B+
Amazon.com	AMZN	48,077.0	34.1	9.8	4.0	20.9	148.1	30.3	A+
Apple	AAPL	108,249.0	44.9	63.9	26.0	26.6	17.3	19.6	A++
Aruba Networks	ARUN	396.5	30.6	151.2	N.A.	N.A.	48.2	24.6	B+
Carbonite	CARB	60.5	N.A.	N.A.	N.A.	N.A.	3.5	27.5	N.A.
Citrix Systems	CTXS	2,206.4	11.5	15.1	16.5	10.6	43.0	16.4	B++
EMC	EMC	20,007.6	10.1	10.9	14.4	10.4	26.9	15.1	A
Equinix	EQIX	1,606.8	38.2	169.7	7.7	6.4	88.1	32.3	B
F5 Networks	FFIV	1,151.8	20.6	36.6	24.8	13.4	43.3	20.8	B++
Google	GOOG	37,905.0	21.5	25.8	33.2	17.2	21.8	18.2	A++
Hitachi	HIT	108,667.0	4.2	294.9	72.4	N.A.	20.9	3.8	B
IBM	IBM	106,916.0	1.2	15.6	17.8	63.9	15.9	10.8	A++
Juniper Networks	JNPR	4,448.7	10.9	7.2	17.3	6.3	26.8	13.4	B++
Microsoft	MSFT	69,943.0	6.8	15.0	38.6	41.4	11.9	8.0	A++
NetApp	NTAP	5,122.6	14.8	20.5	10.7	13.7	29.3	15.2	A
Oracle	ORCL	35,622.0	16.7	17.1	34.2	22.5	15.3	11.8	A++
Rackspace Holding	RAX	1,025.1	28.0	34.4	8.3	9.5	106.1	35.5	B++
Riverbed Technology	RVBD	726.5	31.6	46.4	7.0	5.1	72.2	21.2	B++
Salesforce.com	CRM	2,266.5	30.3	(45.9)	7.8	5.7	N.A.	27.3	A
SAP	SAP	19,794.2	6.9	11.1	26.9	25.4	17.7	13.5	A
Sourcefire	FIRE	165.6	31.3	227.3	9.7	7.2	228.0	20.2	B+
Symantec	SYMC	6,190.0	3.7	19.1	15.4	8.8	18.1	9.9	B++
Taleo	TLEO	308.9	23.4	(43.1)	N.A.	N.A.	N.A.	18.5	B+
VMware	VMW	3,767.1	28.5	24.2	16.4	12.5	65.7	24.5	B++

Sources: BetterInvesting data, Yahoo! Finance, Value Line

Note: The editors recommend that readers study the annual fundamental data of any companies of interest in this table. Some of the companies have less than five years of financial history, or have had recorded annual losses in the past five years, or both; this can distort the averages presented here.

there have been numerous news accounts of hackers who have accessed the computer systems of major corporations or governments, stolen critical data or caused important systems to malfunction.

Sourcefire (FIRE) is a strong player in the cloud computing security space, Henderson says. The company's annual gross margins are now in the mid teens, but its margins "should be able to expand to the 30s over time," he says. "They are spending aggressively to build distribution and expand their product line." Gross margins are lower currently, "but as they beat revenue projections, they should drive margins higher."

For 2011, Sourcefire's revenue rose 27 percent to \$165.5 million and income was \$6.2 million, or \$0.21 per diluted share. Compared with \$20.0 million, or \$0.69 per diluted share, for 2010. But the company's stock price has rallied 50 percent year to date and its P/E is a whopping 234.

Sourcefire isn't unusual: Many cloud computing companies are trading at extremely high P/Es. The 40 members of the ISE Cloud Computing index, which is tracked in an exchange-traded fund (ticker: SKYY), sold for an average of about 23 times projected earnings recently, compared with 13.4 for the SPDR S&P 500 Trust ETF. The index includes IBM along with younger pure-play companies such as Salesforce.com, Rackspace Hosting and VMware.

For this reason, Daniel A. Morris, president and chief investment officer of Morris Capital Advisors in Malvern, Pa., prefers to invest in companies like Oracle (ORCL), which has a large share of the CRM market and announced in October the purchase of RightNow Technologies, a Salesforce.com competitor.

Oracle's valuation is a more reasonable 16 times earnings. Morris' strategy is to search for companies with reasonable valuations and the potential to grow.

He considers Oracle's valuation "a better place to start" than pure-play cloud computing companies with much higher valuations. In addition, he stresses that Oracle has a diverse source of sales and income and doesn't rely just on its cloud computing services.

Other older, established tech players that could benefit from cloud computing include IBM and Microsoft, which offers a solution called Windows Azure. In 2010, IBM announced plans to increase its annual cloud computing revenues by \$3 billion to \$7 billion by 2015. **B**

#### Websites of Interest

#### International Securities Exchange Cloud Computing Index

[www.ise.com/webform/options\\_product\\_indexDetails.aspx?categoryID=96&symbol=CPQ](http://www.ise.com/webform/options_product_indexDetails.aspx?categoryID=96&symbol=CPQ)



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