Merrill Lynch

Comment

United States
Technology Strategy

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TechStrat Survey

Survey of 75 U.S. and 25 European CIOs

Reason for Report: Survey Results

Industry

Highlights:

- **We find that fewer than 20% of respondents say they would slow their spending when the war starts. Still, that may be sufficient to cause back-end loaded companies to miss earnings. Once the war ends, few users expect to accelerate spending, underscoring the structural problems that are the true cause of the downturn.**
- **Windows and Linux server demand looks solid, and even Unix appears to be holding its own. Don't expect a mainframe renaissance.**
- **Users are interested in increasing the variable portion of IT costs but aren't yet sold on utility computing. IBM's e-business on demand is in the lead, followed by Sun's N1 and HP's UDC.**
- **CIOs prefer buying a solution from one company versus a partnership, which benefits IBM over Sun and HP.**
- **Interest in blade servers is relatively high, suggesting Dell may be incorrect in its belief that blades will be limited to 10% of the market.**

Spending Plans

If the Iraq war starts, would you slow your spending?

Yes	17%
No	73

If the war ended quickly, would it cause your IT spending to accelerate from current levels?

Yes	10%
No	90

The first result is similar to our last survey where 17% said the threat of war was impacting their spending. Although most CIOs claim to be unaffected, even 20% slowing could cause vendors to miss quarters. Recent comments from Oracle and Insight suggest incremental weakness in corporate demand and Intuit's miss reflects small business weakness.

A survey by Duke University and Financial Executives International found that 67% of finance chiefs surveyed a week ago are spending cautiously or holding off all capital spending due to war-related uncertainty. Companies such as EMC and Sun that have less recurring revenue are at most risk.

A quick end to the war wouldn't result in much pickup in spending, according to 90% of respondents. We think there could be a catch-up of demand that was deferred. But the main point is that there are structural problems in the economy and technology aside from war.

Is your spending on the following products increasing or decreasing?

Windows Servers

Increasing	55%
Decreasing	14
Flat	28
N/A	3

Linux Servers

Increasing	33%
Decreasing	2
Flat	23
N/A	42

Unix Servers

Increasing	38%
Decreasing	17
Flat	30
N/A	15

Mainframes

Increasing	8%
Decreasing	36
Flat	27
N/A	29

Server spending generally appears to be up. Windows looks strongest—according to IDC data, Wintel server sales rose 6% in 4Q with IBM and Dell gaining share. Of course, Linux is gaining share though 40% indicated no use of Linux. Unix looks surprisingly robust given recent revenue declines, suggesting that investors shouldn't overestimate the rate at which Linux is replacing Unix. Mainframes continue to recede; we do not look for a mainframe renaissance other than a kick from IBM's T-Rex in the second half.

Is excess hardware capacity depressing your 2003 spending?

Yes	18%
No	82

Most users do not point to excess hardware capacity as a spending inhibitor. Lack of compelling new product was mentioned. We also found a high server utilization rate of 40-50% compared to the belief of most vendors that the figure is 20-40%. Half of users, however, say they can't verify their utilization.

Is your software spending this year slanted more toward applications or infrastructure?

Applications	52%
Infrastructure	37
Both	11

Spending is heavier on applications than on infrastructure but we believe less so than in previous years. We are skeptical that there will be much new project activity this year. The most mentioned app software was ERP and CRM. Infrastructure software of interest included security, web services, middleware, databases, and optimization.

Utility Computing

What year do you expect utility computing will be real?

Avg. Year: 2006

What is the fixed versus variable cost portion of your IT budget?

Fixed	70%
Variable	30

Are you interested in increasing the variable cost percentage?

Yes	66%
No	34

Do you see utility computing as the primary way to swing the ratio?

Yes	35%
No	65

Most of the IT budget is a fixed cost today (facilities, depreciation, most people) and two-thirds of users would like to increase the variable portion, which is the aim of utility computing. Other ways to increase variable costs would be through outsourcing and contract workers. Clearly there is more evangelizing needed for utility computing.

Which vendor do you think is best positioned to make utility computing real?

1. IBM
2. Sun Micro
3. HP

Users define utility computing as "pay as you go" or "computing on demand." More than a few wonder if will ever reach fruition. Still, the average expected timeframe for utility computing to be real is 2006-07. IBM is far and away viewed as the most capable supplier with Sun edging out HP.

Are you aware of IBM's e-business on demand initiative?

Yes	69%
No	31

If yes, rate your interest on a scale of 1-10 (10=high).

Avg. rating: 4.9

Most users are familiar with IBM's nomenclature though less so in Europe we found. By "on demand" IBM means the ability to integrate processes end-to-end across a company and be dynamically responsive to the environment. IBM sizes the on-demand opportunity as about half of the $1.1 trillion enterprise computing market. Utility computing is just 10% of the opportunity, with infrastructure about 40% and business transformation 50% (though small today). Interest in IBM's approach is a reasonable 4.9.

Are you aware of HP's Utility Data Computing (UDC) initiative?

Yes	42%
No	58

If yes, rate your interest on a scale of 1-10.

Avg. rating: 4.0

HP argues that it has more installations than do competitors and Gartner writes that HP is ahead, but users don't seem to get that message. To HP's credit, IBM told us that Carly's aggressive marketing of UDC and adaptive infrastructure computing is visible in the marketplace.

Are you aware of Sun's N1 initiative?

Yes	33%
No	67

If yes, rate your interest on a scale of 1-10.

Avg. rating: 4.4

Familiarity with N1 is less than for HP's UDC but interest is slightly higher. Sun treats the data center as a system to be managed with N1 as a kind of operating system for the data center. Sun says N1 will be heterogeneous, but it's clear Sun's goal is to dominate: "Diversity is good in your work force, not in your data center." Sun has laid out the progression of N1 in three steps—virtualization, provisioning, and dynamic policy management. The provisioning piece should be available this year.

Do you prefer to buy a solution from one company like IBM or from a partnership, such as HP or Sun working with systems integrators and ISVs?

One company	68%
Partnership	28
Depends	4

Over the past couple years we saw increased interest in solutions versus best-of-breed products. Here we find interest in working with one vendor (usually IBM) for software/hardware/services. The advantage is "one throat to choke." The alternative model is the partnering approach HP and Sun take with systems integrators.

IBM believes the partnering approach is not as effective while HP and Sun argue that partnering provides more open technology and lower cost than IBM zapping the customer with big services bills. There is room for both, but right now IBM has gained the upper hand. Whether that changes if and when demand improves and innovation returns is debatable. IBM says there is a secular change in the way that CIOs buy with industry expertise more important, which is why IBM acquired PwC.

Blade Servers

Are you using blade servers?

Yes	22%
No	78

If not, do you expect to use blade servers in the next year?

Yes	40%
No	60

Are you more interested in density or price-performance?

Density	13%
Price-performance	87

Can you see blade servers replacing high-end servers someday?

Yes	68%
No	32

Blade market research firm IMEX estimates that the blade server market should exceed $3.5 billion by 2005. Key target markets are ISPs, enterprise/SMB, and telecom.

By the end of this year, about half of users will have some blade servers. Blades provide a 17% savings due to form factor (less heat, floor space, cabling), but the long-term benefit is the ability to manage thousands of processors with sophisticated software requiring fewer systems administrators. Private blade server vendor RLX has said there is a shift in user preference to performance over density, which is why RLX dumped the Transmeta processor for Intel. Our survey supports that decision.

Dell has said that blades would be less than 10% of the server market because of heat dissipation problems. IBM says it can solve those issues and predicts Dell will reverse its position in six months. Our survey supports IBM, with two-thirds of users believing blades can migrate up.

Which vendor do you view as the leader in blade servers?

1. HP
2. IBM
3. Dell

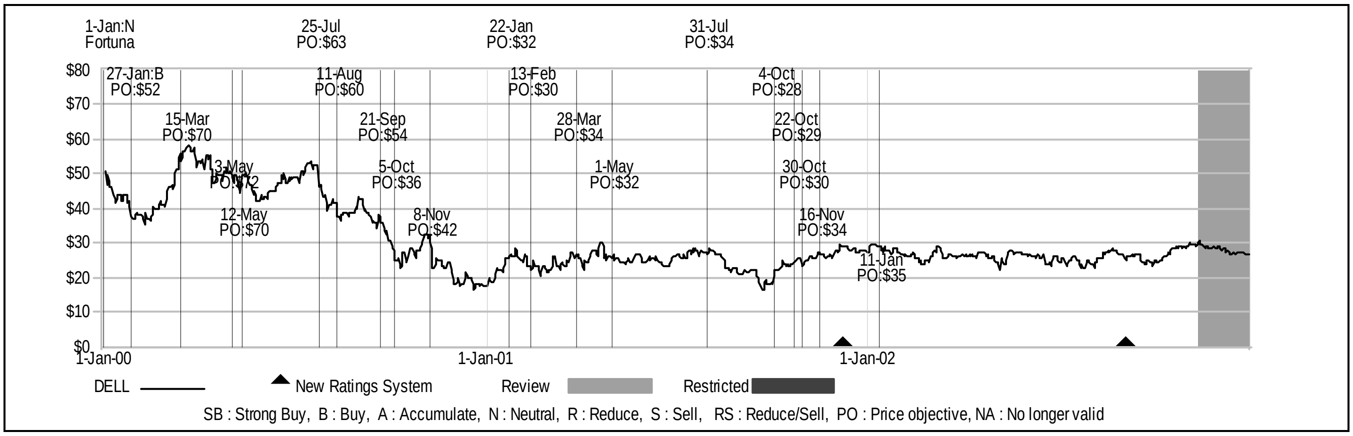
Sun introduced blade servers that can run Solaris or Linux. On a scale of 1-10, how interested are you in this product?

Avg. interest: 3.8

HP is the early leader with 15,000 blades shipped, and IBM has delivered 5,000 (75% Linux). Dell was ranked third by respondents—Dell might not want blades to succeed because it lacks the software expertise of its competitors though Dell works with third parties such as Jareva (now part of Veritas).

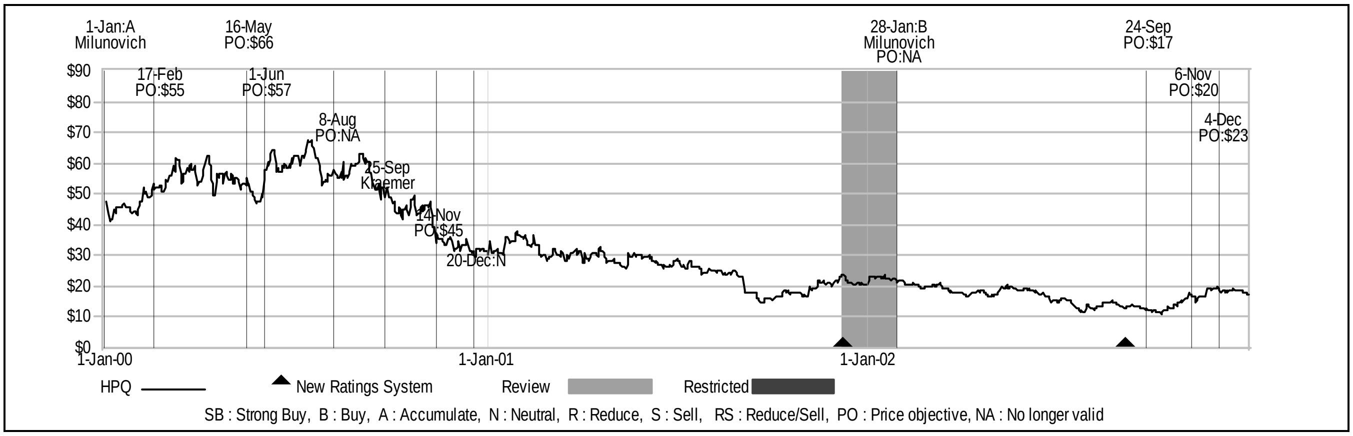
Sun has introduced blades that can run Solaris or Linux, which received modest interest in our survey. In addition, Sun is designing new low-end SPARC processors called the h-Series (Gemini in 2004 with 2X current performance and Niagra in 2005 at 5X). These could be the game-changing offerings Sun needs to leapfrog the competition.

DELL Price Chart



Prior to 8 Dec. 2001, the Investment Opinion System included: Buy, Accumulate, Neutral, Reduce and Sell. From 8 Dec. 2001 to 6 Sep. 2002, the Investment Opinion System included: Strong Buy, Buy, Neutral, and Reduce/Sell. On 8 Dec. 2001 Buy ratings became Strong Buy, Accumulate became Buy, and Reduce and Sell became Reduce/Sell. On 6 Sep. 2002, Strong Buy and Buy ratings became Buy, and Reduce/Sell became Sell. Any exceptions to these rating revisions are reflected in the chart. All price objectives for Neutral and Sell rated securities established before 6 Sep. 2002 were eliminated as of that date. The current Investment Opinion System is contained at the end of the report. Dark Grey shading indicates security is restricted with the opinion suspended. Light Grey shading indicates security is under review with the opinion withdrawn.

HPQ Price Chart



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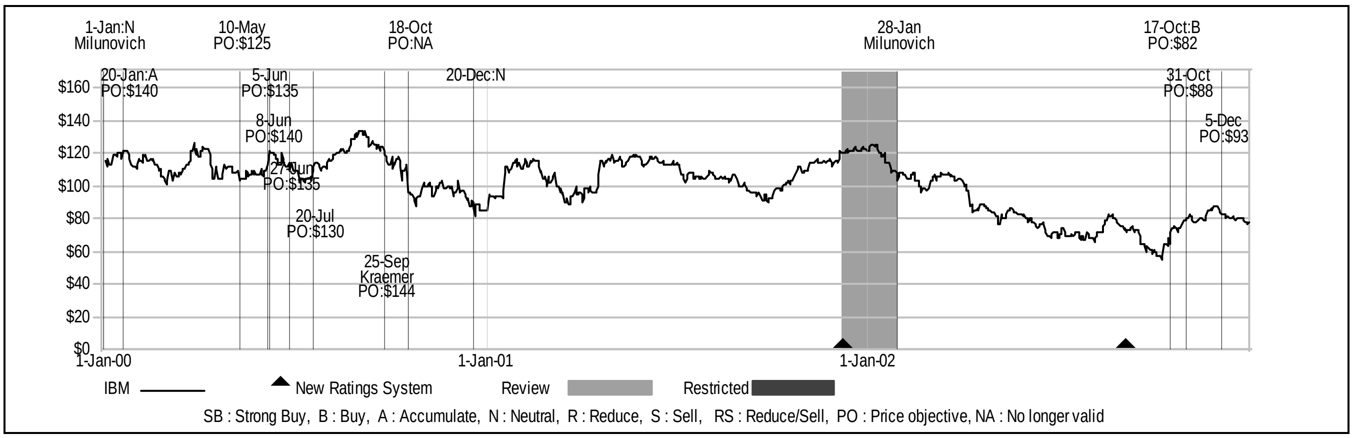
IBM Price Chart



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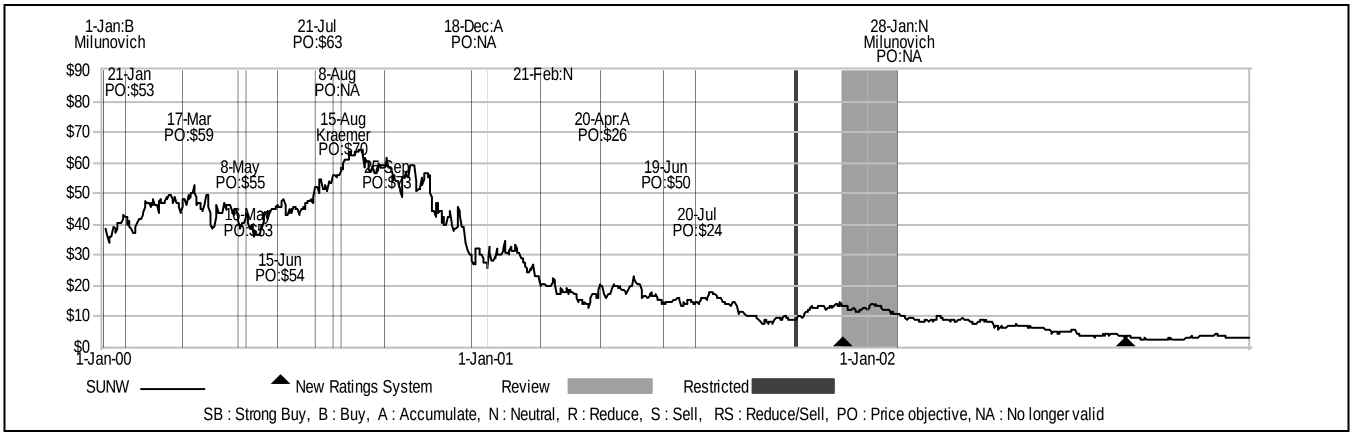
SUNW Price Chart



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Coverage Universe	Count	Percent	Inv. Banking Relationships*	Count	Percent
Buy	44	19.47%	Buy	6	13.64%
Neutral	154	68.14%	Neutral	26	16.88%
Sell	28	12.39%	Sell	4	14.29%

Investment Rating Distribution: Global Group (as of 31 December 2002)

Coverage Universe	Count	Percent	Inv. Banking Relationships*	Count	Percent
Buy	1110	43.46%	Buy	391	35.23%
Neutral	1236	48.39%	Neutral	319	25.81%
Sell	208	8.14%	Sell	43	20.67%

* Companies in respect of which MLPF&S or an affiliate has received compensation for investment banking services within the past 12 months.

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