

Equity Research  
North America

Industry

# Enterprise Technology

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## Industry Overview

November 10, 2003

# Morgan Stanley CIO Survey Series: Release 4.4

### GICS SECTOR INFORMATION TECHNOLOGY

US Strategist Weight	17.4%
S&P 500 Weight	18.4%

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- **Enterprise IT Spending Has Reached an Inflection Point**  
Our October, 2003 Survey of 225 Fortune 1000 CIOs (chief information officers) points to 2% IT budget gains this year, raising the potential for 4Q budget flush.
- **Several Indicators Point to Improving IT Spending Growth**
  - 1) The 2003 and 2H/03 Up-to-Down Budget Ratios increased to 1.83 and 1.55, respectively, their highest levels in three years. A reading above 1.5 signals expansion.
  - 2) For 4Q03, 37% of CIOs expect to increase their technology spending sequentially, a 15-percentage point gain from 9/02.
  - 3) Vendor pricing appears to be firming.
- **Improving CIO Sentiment on Economic Conditions and Business Outlook**  
The number of CIOs doubled that were positive on the current conditions of the economy, and their outlook for their own company's business prospects has strengthened steadily since June.
- **Unchanged 2004 IT Budget Outlook of 2% Growth**  
For 2004, IT budgets could grow 2%, based on 40% of our 225 CIOs having finalized their budgets. By the end of November, 75% of our CIOs will have finalized their 2004 budgets.
- **For 2004, CIOs Expect Storage Hardware, Infrastructure Software, and Network Equipment to Gain the Greatest Share of IT Budgets**  
Storage Hardware, Infrastructure Software and Network Equipment should increase their share of IT spending, while PC Software and Enterprise Applications Software should lose share.
- **2004 Share Gain Leaders and Laggards**  
Cisco, IBM, Microsoft, EMC, CSC, Foundry, Hewlett-Packard and Accenture should gain IT budget share next year, while Sun, Oracle, Gateway, Avaya, PeopleSoft, and Computer Associates could lose ground.



Survey

Morgan Stanley does and seeks to do business with companies covered in its research reports. Investors should consider this report as only a single factor in making their investment decision.

## Morgan Stanley CIO Survey Series: Release 4.4

This report contains the latest results of our ongoing CIO Survey Series, which we have published in its current form since the beginning of 1999. The survey is conducted by telephone and uses a respondent base of 300 IT executives, of which 225 participate in the survey for each round of interviews.

This report contains results from our latest round of surveys, conducted from October 13 to October 24, 2003. All responses were collected in strict confidence and were used only in combination with all others in the survey sample. The survey yields a total of 225 responses from IT executives of the Fortune 1000. We present the results of the survey in the exhibits on the following pages.

Our survey focuses on enterprise technology spending by the Fortune 1000. The Morgan Stanley Technology Research Team believes that small-and-medium-size-businesses and the consumer are driving higher IT demand growth than the Fortune 1000. Mary Meeker, Morgan Stanley's Internet and PC Applications Software analyst, estimates that Microsoft derives 35% of its revenue from large enterprises, 35% from consumers, and 30% from small-and-medium-size-businesses.

Exhibit 1

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Exhibit 2

### Respondents — By Company Revenues

Over \$30 billion	12%
\$21-30 billion	11%
\$11-20 billion	13%
\$6-10 billion	24%
\$1-5 billion	29%
Under \$1 billion	9%
Unable to comment	2%

Source: Morgan Stanley CIO Survey, October 2003.

Exhibit 3

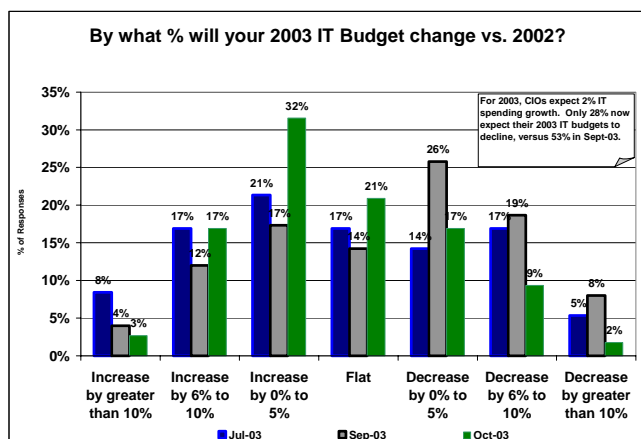
### Respondents — By Industry

Financial Services	20%
Manufacturing	19%
Services	12%
Telecom	11%
Government	7%
Managed Healthcare	5%
Distribution	4%
Software Development	4%
Professional Service/Engineering Design	4%
Conglomerate	3%
Multiple Industries	2%
Utilities	2%
Retail	2%
Entertainment	2%
Education	1%
Media Information	1%
Environmental/Waste	0%
Aerospace	0%

Source: Morgan Stanley CIO Survey, October 2003.

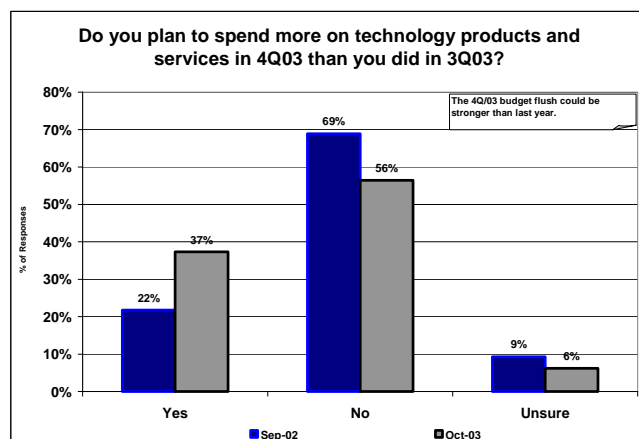
## Enterprise IT Spending Has Reached an Inflection Point

Exhibit 4  
2003 IT Budgets



Source: Morgan Stanley CIO Survey, October 2003.

Exhibit 6  
4Q03 IT Budgets



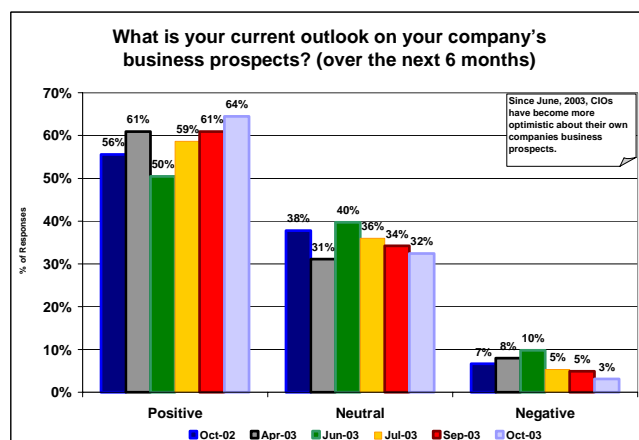
Source: Morgan Stanley CIO Survey, October 2003.

Exhibit 5  
Up-to-Down Budget Ratio History

Survey Period	Up-to-Down Budget Ratio	Year-over-Year Growth Period
Nov-00	3.83	2001 vs. 2000
Nov-01	0.58	2002 vs. 2001
Jan-02	0.71	2002 vs. 2001
Feb-02	0.67	2002 vs. 2001
Mar-02	0.63	2002 vs. 2001
Jun-02	0.75	2002 vs. 2001
Sept-02	1.81	2003 vs. 2002
Oct-02	1.28	2003 vs. 2002
Nov-02	1.63	2003 vs. 2002
Apr-03	1.03	2003 vs. 2002
Jun-03	0.39	2003 vs. 2002
Jul-03	1.28	2003 vs. 2002
Sept-03	0.64	2003 vs. 2002
Oct-03	1.83	2003 vs. 2002

Source: Morgan Stanley CIO Survey, October 2003.

Exhibit 7  
CIO Sentiment



Source: Morgan Stanley CIO Survey, October 2003.

**Executive Summary****Enterprise IT Spending Has Reached an Inflection Point**

— Our October, 2003 Survey of 225 Fortune 1000 CIOs (chief information officers) points to 2% expansion in IT budgets this year, suggesting stronger fourth quarter IT budget flush than last year. Based on several indicators in our Survey, we now believe that enterprise IT spending has begun to expand.

**More Positive Signs** — Several data points suggest improved enterprise IT spending in 4Q/03 and 2004:

1. The 2003 and 2H/03 Up-to-Down Budget Ratios rose to 1.83 and 1.55, respectively, the highest levels in three years. A ratio above 1.5 points to IT budget expansion, we believe.
2. For 4Q/03, 37% of CIOs expect to increase their spending sequentially, up from 22% in 9/02.
3. This year, 78% of our CIOs are planning to spend at least 95% of their original budget.
4. Since 9/03, the number of CIOs doubled that were positive on the current conditions of the economy, while their outlooks for their companies' business prospects have improved steadily since June, 2003.
5. Vendor pricing appears to be firming somewhat. Since 9/03, the percentage of CIOs that saw less discounting increased to 16% from 8%.

**Up-to-Down Budget Ratio Rose to the Highest Level Since November 2000** — The Up-to-Down Budget Ratio increased sharply to 1.83 from 0.64 in 9/03, the strongest performance in three years. We believe that an up-to-down ratio of at least 1.50 points to clear expansion in IT budgets.

We use the Up-to-Down Budget Ratio as a proxy to see whether IT budgets are expanding or contracting. For example, a measure of 1.5 indicates that budgets are expanding, since for each CIO that expects a decrease, 1.5 expects an increase. In contrast, a measure of 0.5 indicates that budgets are contracting since for each CIO that expects a decrease, only 0.5 expect an increase.

**Preliminary 2004 IT Budget Outlook Suggests Modest Growth**

— For 2004, our CIOs continue to forecast 2% growth in IT budgets. This is consistent with our September 2003 Survey. Approximately 40% of our CIOs completed their formal 2004 budget plans before responding to our survey. By the end of November, we expect 75% of our CIOs to have finalized 2004 IT budget plans.

**CIOs Outlook on Own Company's Business Prospects Improved Consistently from the June 2003 Bottom** — In October, 2003, 64% of CIOs were positive on their firm's business prospects, up from a low of 50% in June 2003.

Exhibit 8

**Consistent Improvement in Sentiment About Own Company Business Prospects**

Survey Date	% of Positive Responses
October 2003	64%
September 2003	61%
July 2003	59%
June 2003	50%

Source: Morgan Stanley CIO Survey, October 2003.

The question related to this exhibit was the following: "What is your current outlook on your company's business prospects? (Over the next six months)"

**The Number of CIOs that Turned Positive on the Economy Doubled** — Sentiment about the economy improved significantly. Fully 36% of CIOs indicated that the current conditions of the economy were good, up from 17% in September, 2003.

**Top IT Spending Priorities in 2003** — CIOs top five priorities are: 1) security software; 2) application integration; 3) document management software; 4) storage hardware; and 5) business intelligence tools. However, such priorities tend to be volatile on a short-term basis.

**Greatest Areas of Improvement and Deterioration**

Document management software, XML-based applications, new custom development, and Web server software posted the greatest improvement in CIO spending priorities on a month-to-month basis.

Exhibit 9

**Greatest Areas of Improvement**

Technology	Q.Q	Y.Y	# of Resp.
Document management software	133%	21%	70
XML-based applications	107%	12%	56
New custom development	87%	17%	28
Web server software	58%	76%	30

Source: Morgan Stanley CIO Survey, October 2003.

Note: Growth rates are based on the number of responses reported by CIOs.

In contrast, ERP software / ERP upgrade, network equipment, Windows upgrade – server, application servers, E-commerce initiatives, Windows upgrade – desktop, Application integration, and content management software for Web site experienced the greatest deterioration on a month-to-month basis.

Exhibit 10

**Greatest Areas of Deterioration**

Technology	Q.Q	Y.Y	# of Resp.
ERP software / ERP upgrade	-60%	-39%	43
Network equipment	-40%	-38%	34
Windows upgrade — server	-33%	-15%	52
Application servers	-32%	-43%	28
E-commerce initiatives	-31%	-39%	41
Windows upgrade — desktop	-28%	-19%	59
Application integration	-21%	-32%	74
Content Mgmt. software for Web site	-15%	-14%	44

Source: Morgan Stanley CIO Survey, October 2003.

Note: Growth rates are based on the number of responses reported by CIOs.

**Approach for Defining Greatest Areas of Improvement and Deterioration**

— The objective of this section is to identify directional changes in the trend of priorities for CIOs. We have conducted a thorough analysis of the changes in CIO priorities using data collected during the past year. For an area to be included in the greatest areas of improvement (deterioration) list, we require a minimum of a 10% increase (10% decrease) on both a sequential (September 2003 to October 2003 in this case) and year-over-year basis (September 2002 to October 2003 in this case). In addition, we have only included areas with a minimum of 20 responses for the current period.

### Industry and Company Highlights

**For 2004, Storage Hardware, Infrastructure Software and Network Equipment Expected to Post Largest Share Gain Within IT Budgets** — Storage Hardware, Infrastructure Software and Network Equipment should grow their share of 2004 enterprise IT spending, while PC and Enterprise Software and BPO may lose share. The BPO result is somewhat counter-intuitive. For 2004, perhaps lower BPO spending will drive increased outsourcing to lower expenses.

Exhibit 11

### Ranking IT Spending by Industry<sup>1</sup>

Industry	2004 vs. 2003	4Q03 vs. 3Q03
Storage Hardware	1	4
Infrastructure Software	2	2
Network Equipment	3	3
Offshore Services	4	1
Servers	5	5
Consulting and SI	6	7
IT Outsourcing	7	10
PC Hardware	8	9
Enterprise Applications	9	8
BPO	10	6
PC Software	11	11

Source: Morgan Stanley CIO Survey, October 2003.

Note: 1) Ranking is based on relative strength index level. 1 is the highest and 11 is the lowest.

**Share Gain Leaders and Laggards** — For 2004, based on CIO responses, Cisco, IBM, Microsoft, EMC, CSC, Foundry, Hewlett-Packard and Accenture appear well positioned to gain IT budget share, while Sun, Oracle, Gateway, Avaya, PeopleSoft, and Computer Associates could lose ground.

**Customer Service Has a Strong Relationship with IT Spending Share** — Over the past 12 months, 9 of the top 10 companies with improving customer service appear well positioned to gain IT budget share next year. This group of companies includes Accenture, Bearing Point, NCR, Foundry, EMC, CSC, Cisco, IBM, and Extreme Networks. On the other hand, during the same period, of the companies scoring in the bottom 10 for customer service, seven may lose IT budget share over the next twelve months. Such group includes BEA Systems, Gateway, Lucent, Sun, Oracle, Avaya, and PeopleSoft.

Our cross-referencing IT spending plans for the next twelve months against changes in levels of customer service over the last twelve months provides a telling picture about where CIOs prefer to make their investments. As a group, companies that received the highest Relative Strength Index

(“RSI”) rating for customer service are positioned to gain share of the IT budget over the next twelve months, while the vendors that received the lowest RSI rating for customer service could lose share.

Exhibit 12

### Direct Relationship – IT Spending and Customer Service

Customer Service Ranking	Avg. RSI for IT Spending
Top Quartile	59%
Above Average Quartile	50%
Below Average Quartile	49%
Bottom Quartile	44%

Source: Morgan Stanley CIO Survey, October 2003.

### Relative Strength Index Definition and Calculation —

We have adopted an index methodology to compare sector and company results for 31 of the largest enterprise-facing technology companies. The Relative Strength Index (“RSI”) is a useful way to measure sector and company specific service and demand trends. In general, we believe that an RSI reading above 50% indicates improvement, while a reading below 50% signals deterioration.

### Relative Strength Index (RSI) Calculations

- 1) **RSI for IT Spending by Industry** =  
Largest Increases in Spending / Total # of Responses
- 2) **RSI for IT Spending by Company** =  
{More Spend + (0.5 \* No Change)} / Total # of Responses
- 3) **RSI for Changes in Customer Service by Company** =  
{Improving Service + (0.5 x No Change)} / Total # of Responses

The RSI measures three things based on CIO responses. First, for 4Q/03 and 2004, which industries will post the largest increase or decrease in IT spending. Second, which technology companies will gain or lose share of IT budgets next year. Finally, over the last twelve months, which companies posted improving or deteriorating customer service.

Here is an example of how we calculate the RSI. We asked the following question: “Over the next twelve months, with which of the following IT vendors will you spend more or less of your IT dollars compared to the last twelve months?” We gave CIOs choices including “more, less, no change and unsure” for 31 enterprise-facing technology companies. For example, with CSCO, 94 CIOs indicated that they would spend more, 67 expected no change, 14 were unsure, and 6 will spend less. We calculate the RSI for CSCO as follows:

$$RSI = \{94 + (0.5 \times 67)\} / \{94 + 67 + 6\} = 76\%.$$

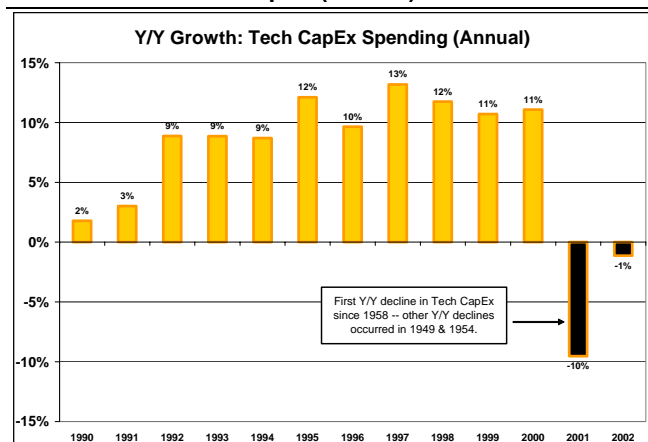
**Recent Figures from the BEA**

Five quarters ago, data from the Bureau of Economic Analysis turned positive in terms of year-over-year, quarterly technology capital spending growth, while six of the last seven quarters have shown positive sequential Q/Q growth. Such growth followed two consecutive years of declining technology capital spending ending in 2002.

On October 30, 2003, advance estimates for 3Q03 technology capital spending data highlighted 9% year-over-year growth and 4% sequential quarterly gains.

Exhibit 13

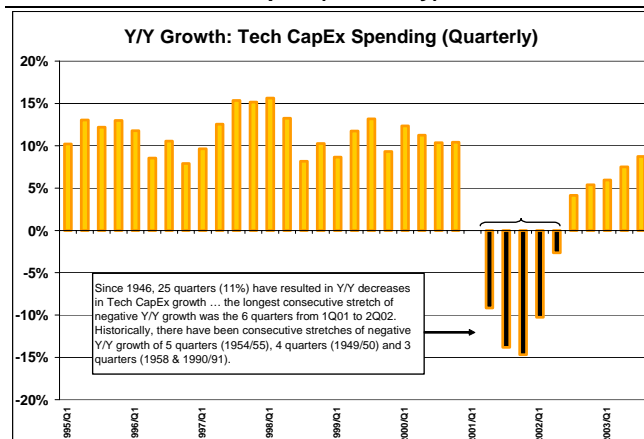
**Y/Y Growth of Tech CapEx (Annual)**



Source: Bureau of Economic Analysis.

Exhibit 14

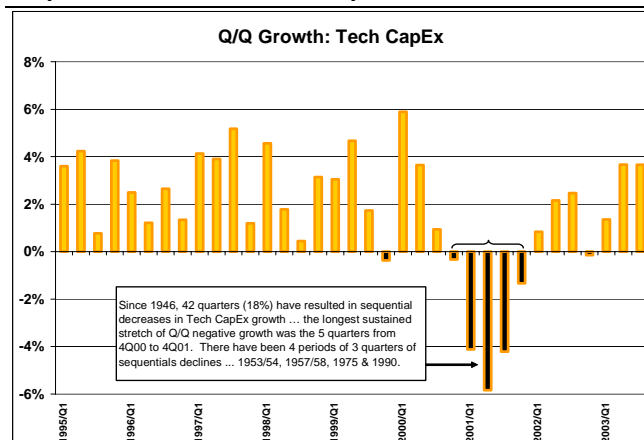
**Y/Y Growth of Tech CapEx (Quarterly)**



Source: Bureau of Economic Analysis.

Exhibit 15

**Sequential Growth of Tech CapEx**



Source: Bureau of Economic Analysis.

**S&P 500 Index Indicators**

According to Steve Galbraith, Morgan Stanley's Chief Investment Officer, in 3Q/02, the average S&P 500 company began to post revenue and earnings growth, after a few quarters of contraction. Meanwhile, in 2002, S&P 500 capital spending-to-sales and capital spending-to-depreciation ratios were well below trend-line. Taken together, such data suggest that potential declines in IT budgets this year may be limited.

Exhibit 16

**Y/Y Growth of S&P500 Revenue and Earnings**

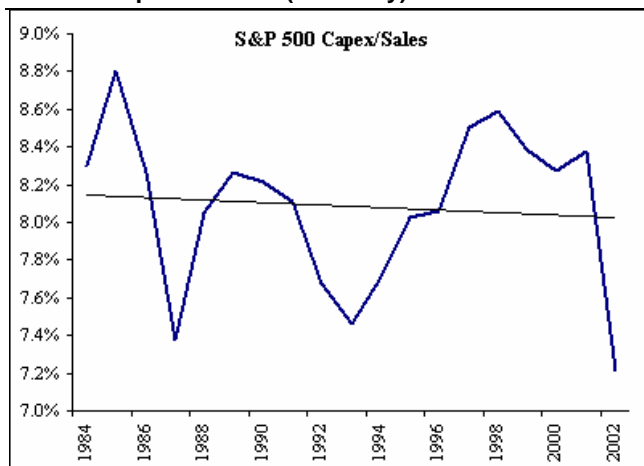
	Revenue	Earnings
1Q01	10.2%	-1.9%
2Q01	3.8%	-15.4%
3Q01	-3.9%	-26.0%
4Q01	-5.0%	-30.8%
1Q02	-4.3%	-26.3%
2Q02	0.8%	-11.6%
3Q02	3.9%	4.8%
4Q02	3.3%	18.5%
1Q03	9.4%	22.3%
2Q03	6.6%	17.7%
3Q03E	NA	15.0%
4Q03E	NA	14.3%
1Q04E	NA	13.3%
2Q04E	NA	14.1%
3Q04E	NA	13.2%
4Q04E	NA	11.7%

Source: Morgan Stanley Research, Compustat, First Call Consensus Estimates, Standard and Poors

Notes: Revenue figures exclude financials. EPS figures are on an operating basis. Estimates are based on First Call Consensus

Exhibit 17

**S&P500 CapEx to Sales (Quarterly)**

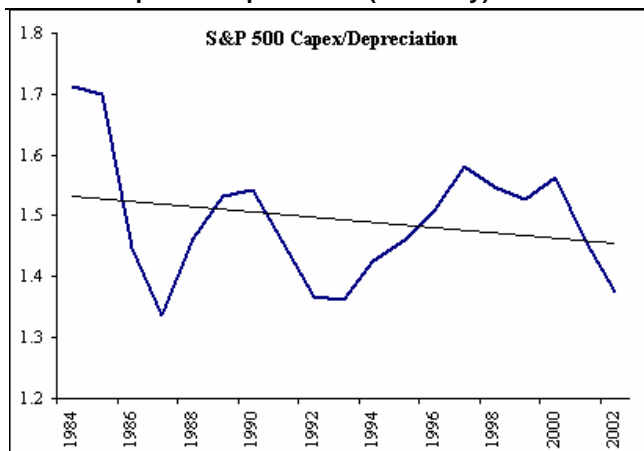


Source: Morgan Stanley Research, Compustat

Note: Thin line is linear trendline.

Exhibit 18

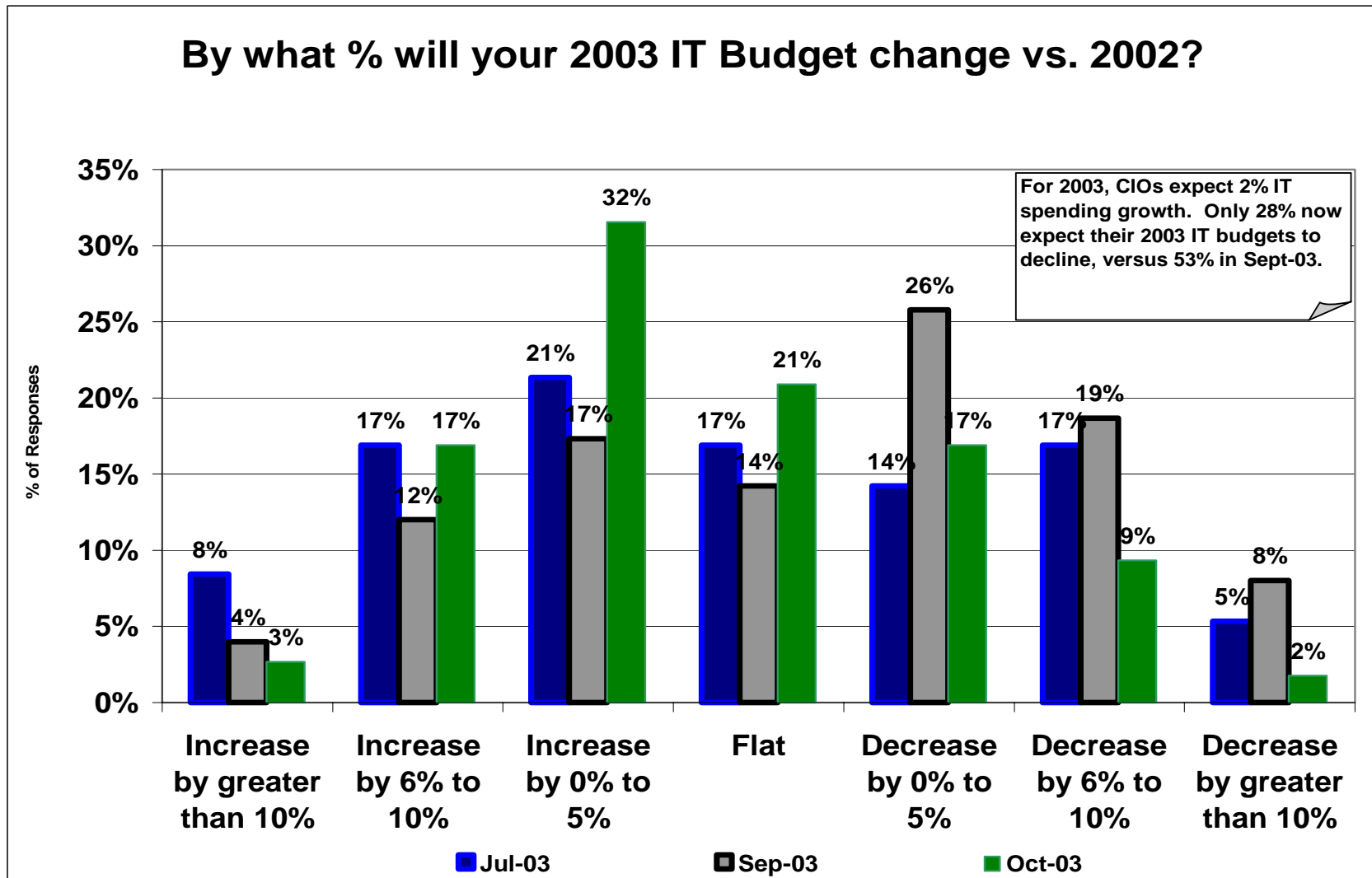
**S&P500 CapEx to Depreciation (Quarterly)**



Source: Morgan Stanley Research, Compustat

Note: Thin line is linear trendline.

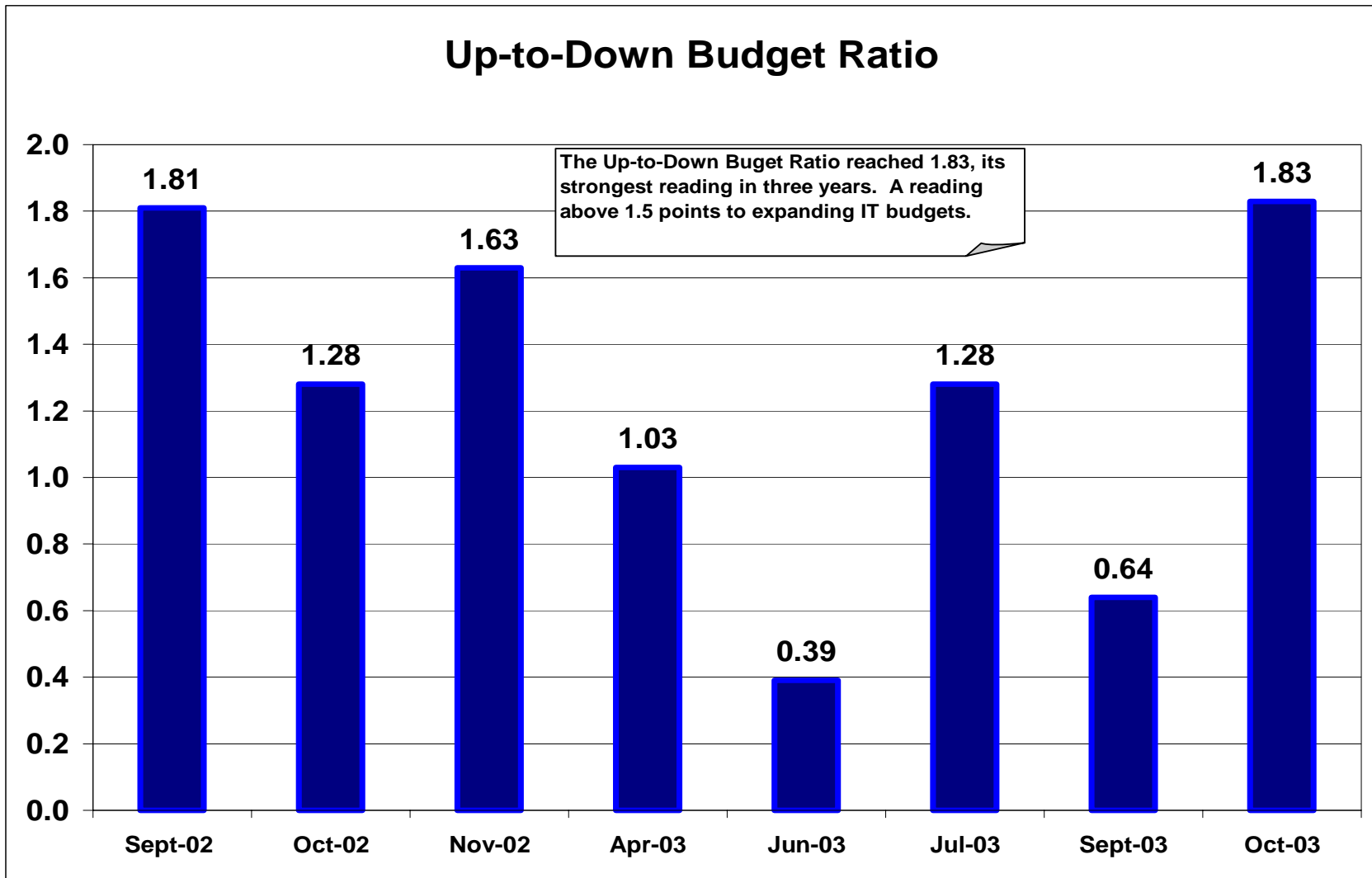
Exhibit 19  
2003 IT Budgets



Source: Morgan Stanley CIO Survey, October 2003.

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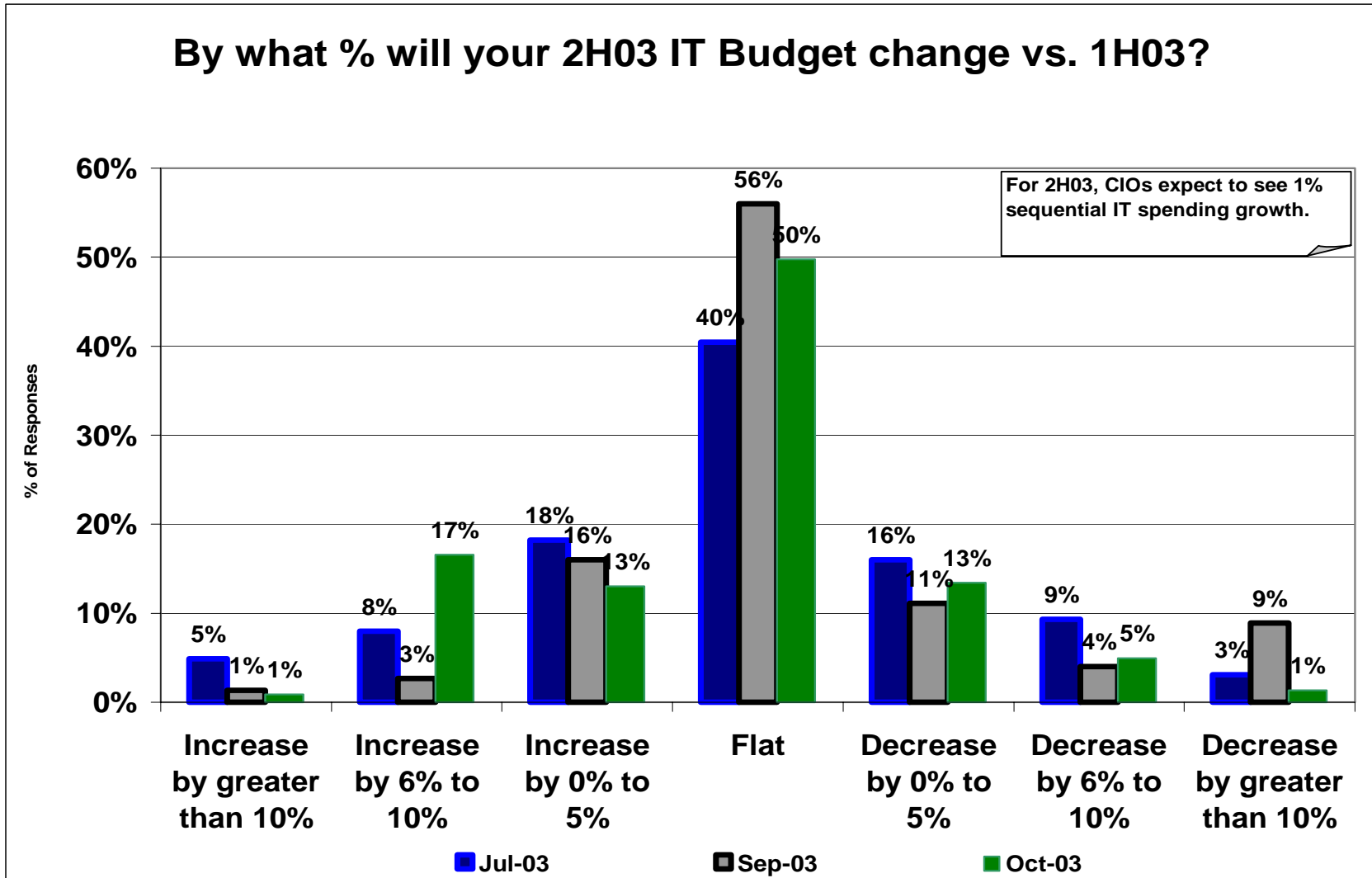
Exhibit 20  
2003 IT Budgets



Source: Morgan Stanley CIO Survey, October 2003.

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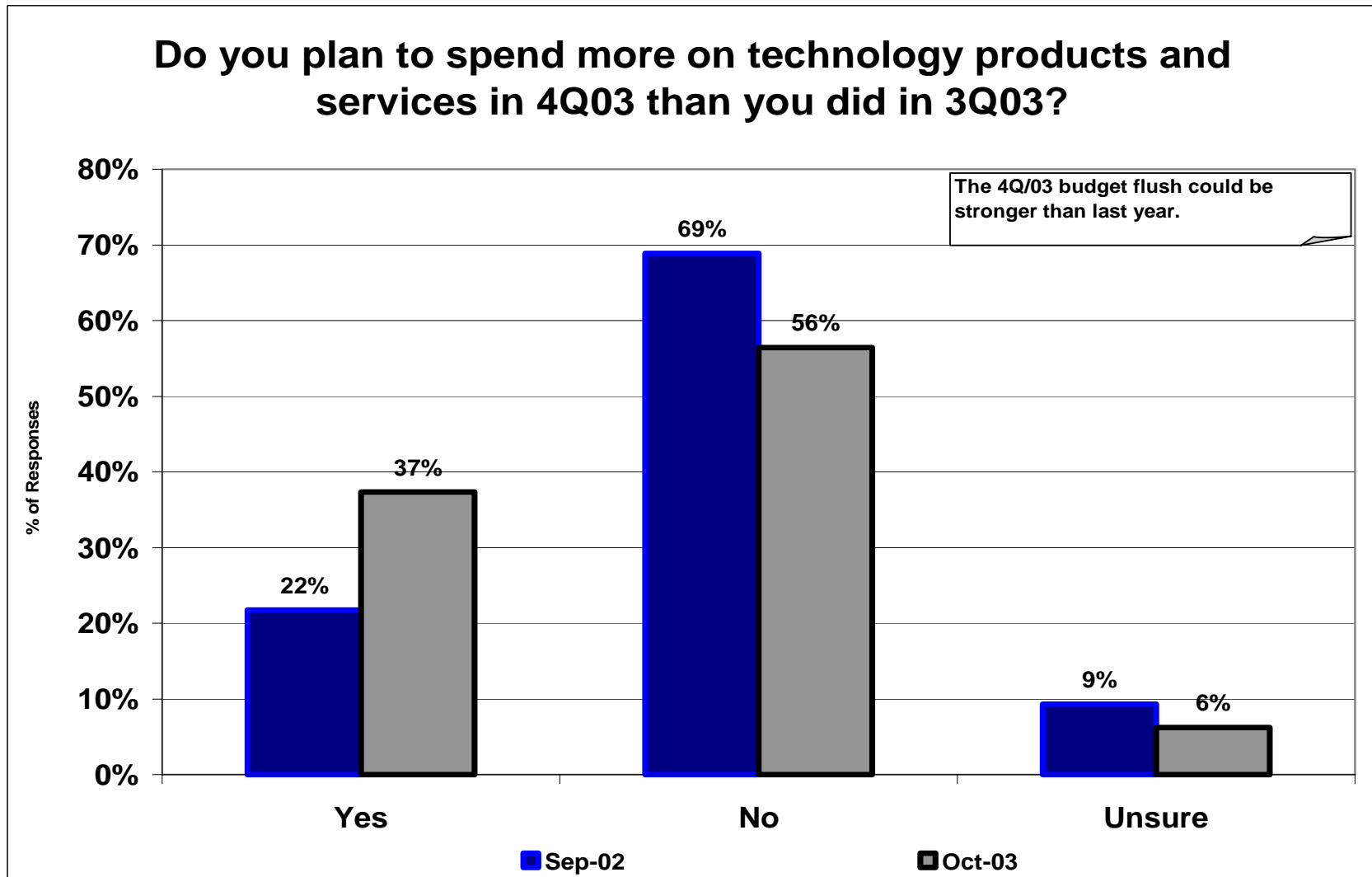
Exhibit 21  
2003 IT Budgets



Source: Morgan Stanley CIO Survey, October 2003.

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Exhibit 22  
4Q03 IT Budgets



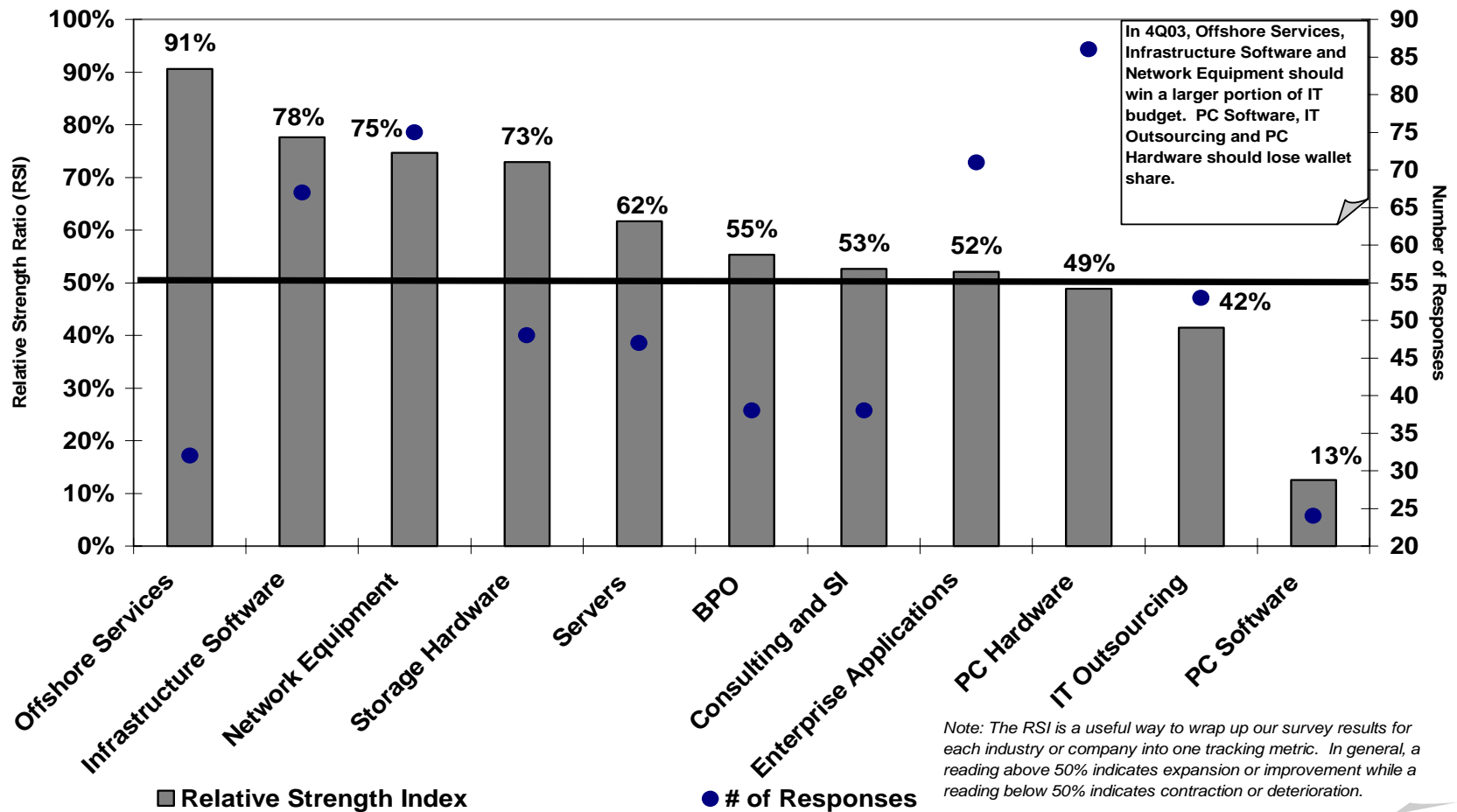
Source: Morgan Stanley CIO Survey, October 2003.

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Exhibit 23

4Q03 IT Budgets by Technology Industry

Please select the technology industries that you expect to see the largest increases or decreases in spending for 4Q03 compared to 3Q03?

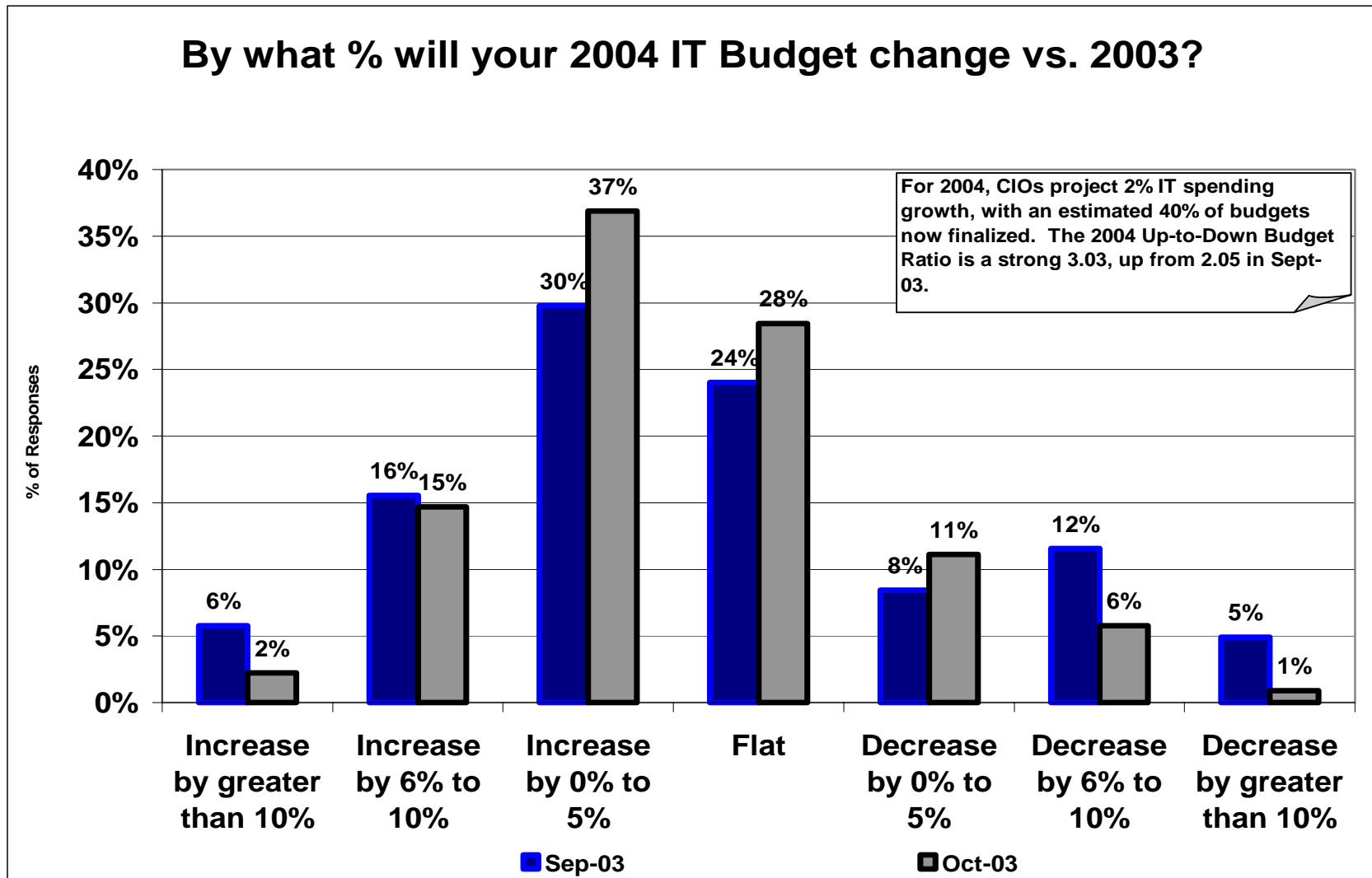


Source: Morgan Stanley CIO Survey, October 2003.

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Please see analyst certification and other important disclosures starting on page 33

Exhibit 24  
2004 IT Budgets

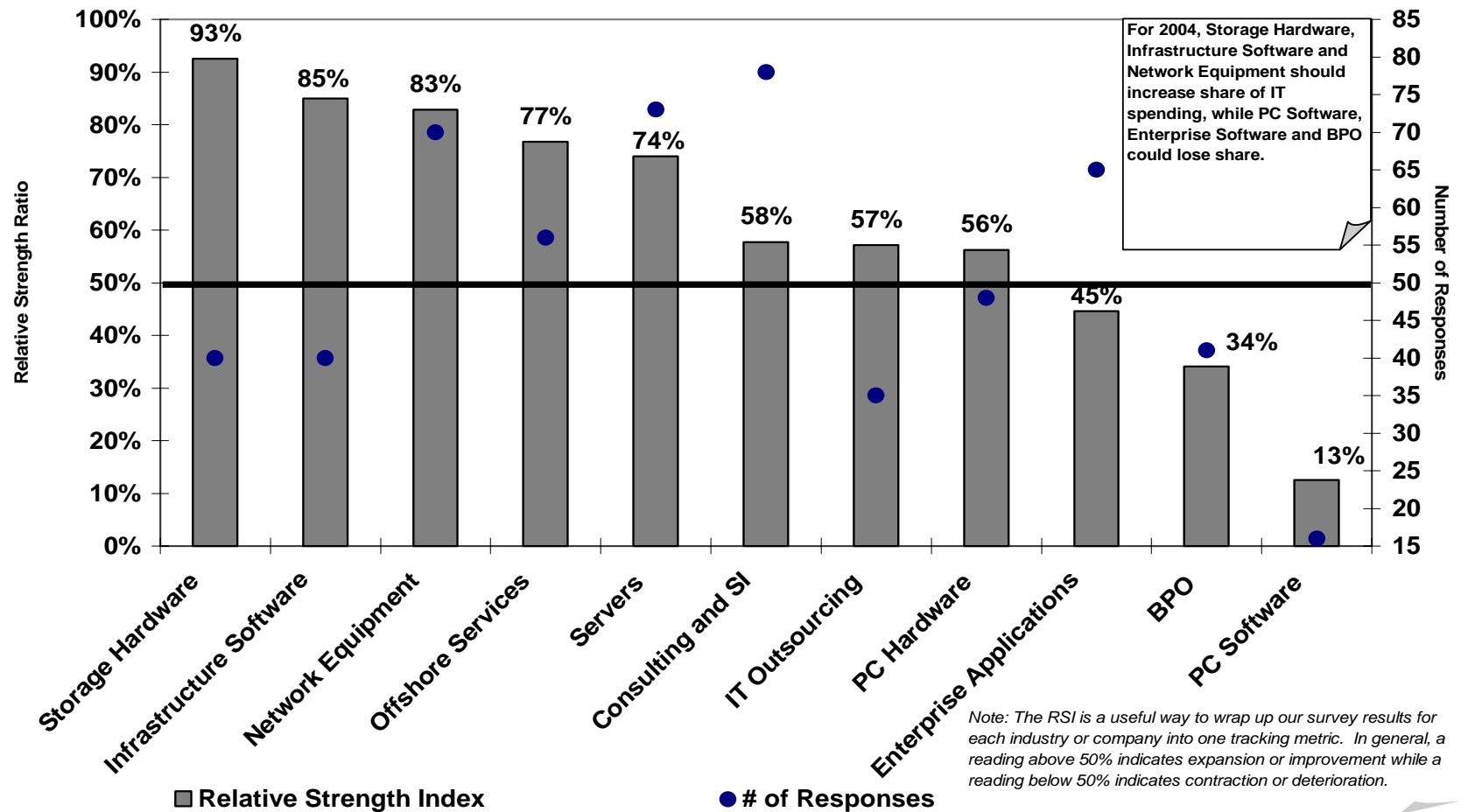


Source: Morgan Stanley CIO Survey, October 2003.

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Exhibit 25  
2004 IT Budgets by Technology Industry

Please select the technology industries that you expect to see the largest increases or decreases in spending for 2004 compared to 2003?



Source: Morgan Stanley CIO Survey, October 2003.

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Exhibit 26

**Gains and Losses within Overall IT Budget****Next Twelve Months**

Ranking of IT Vendor	RSI	# of Responses
<b>TOP QUARTILE</b>		
1) Cisco	76%	167
2) IBM	66%	177
3) Microsoft	63%	179
4) EMC	57%	91
5) CSC	56%	84
6) Foundry	56%	68
7) Hewlett-Packard	55%	140
8) Accenture	55%	82
<b>ABOVE AVERAGE QUARTILE</b>		
9) NCR	55%	75
10) Symantec	55%	86
11) Network Associates	52%	65
12) Extreme Networks	51%	67
13) Juniper Networks	51%	67
14) Lexmark	51%	73
15) SAP	51%	96
16) Bearing Point	51%	71
<b>BELOW AVERAGE QUARTILE</b>		
17) EDS	51%	76
18) Seagate	50%	65
19) 3Com	49%	85
20) BEA Systems	48%	85
21) Dell	48%	161
22) Siebel	46%	76
23) Veritas	45%	74
24) Lucent Technologies	45%	104
<b>BOTTOM QUARTILE</b>		
25) Nortel Networks	43%	84
26) Computer Associates	43%	139
27) PeopleSoft	43%	95
28) Avaya	42%	85
29) Gateway	38%	80
30) Oracle	36%	133
31) Sun	36%	102

Source: Morgan Stanley CIO Survey, October 2003.

**Notes**

A Relative Strength Index (RSI) reading above 50% indicates expansion, while one below 50% points to contraction, we believe.

We calculated the RSI by asking our CIOs which companies would see the largest increase or decrease in IT spending trends over the next 12 months.

Exhibit 27

**Changes in Customer Service Level  
Last Twelve Months**

Ranking of IT Vendor	RSI	# of Responses
<b>TOP QUARTILE</b>		
1) Accenture	77%	45
2) Bearing Point	74%	25
3) NCR	70%	42
4) Foundry	68%	14
5) EMC	68%	113
6) CSC	68%	34
7) Cisco	65%	176
8) IBM	62%	175
<b>ABOVE AVERAGE QUARTILE</b>		
9) Siebel	61%	33
10) Extreme Networks	60%	10
11) EDS	59%	32
12) Hewlett-Packard	59%	183
13) Dell	57%	169
14) Network Associates	57%	50
15) 3Com	57%	22
16) Veritas	54%	103
<b>BELOW AVERAGE QUARTILE</b>		
17) SAP	54%	71
18) Symantec	51%	111
19) Nortel Networks	51%	77
20) Computer Associates	51%	131
21) Microsoft	49%	213
22) PeopleSoft	45%	66
23) Avaya	44%	52
24) Seagate	42%	19
<b>BOTTOM QUARTILE</b>		
25) Oracle	42%	159
26) Lexmark	41%	33
27) Sun	36%	88
28) Lucent Technologies	33%	84
29) Gateway	32%	53
30) BEA Systems	31%	42
31) Juniper Networks	14%	11

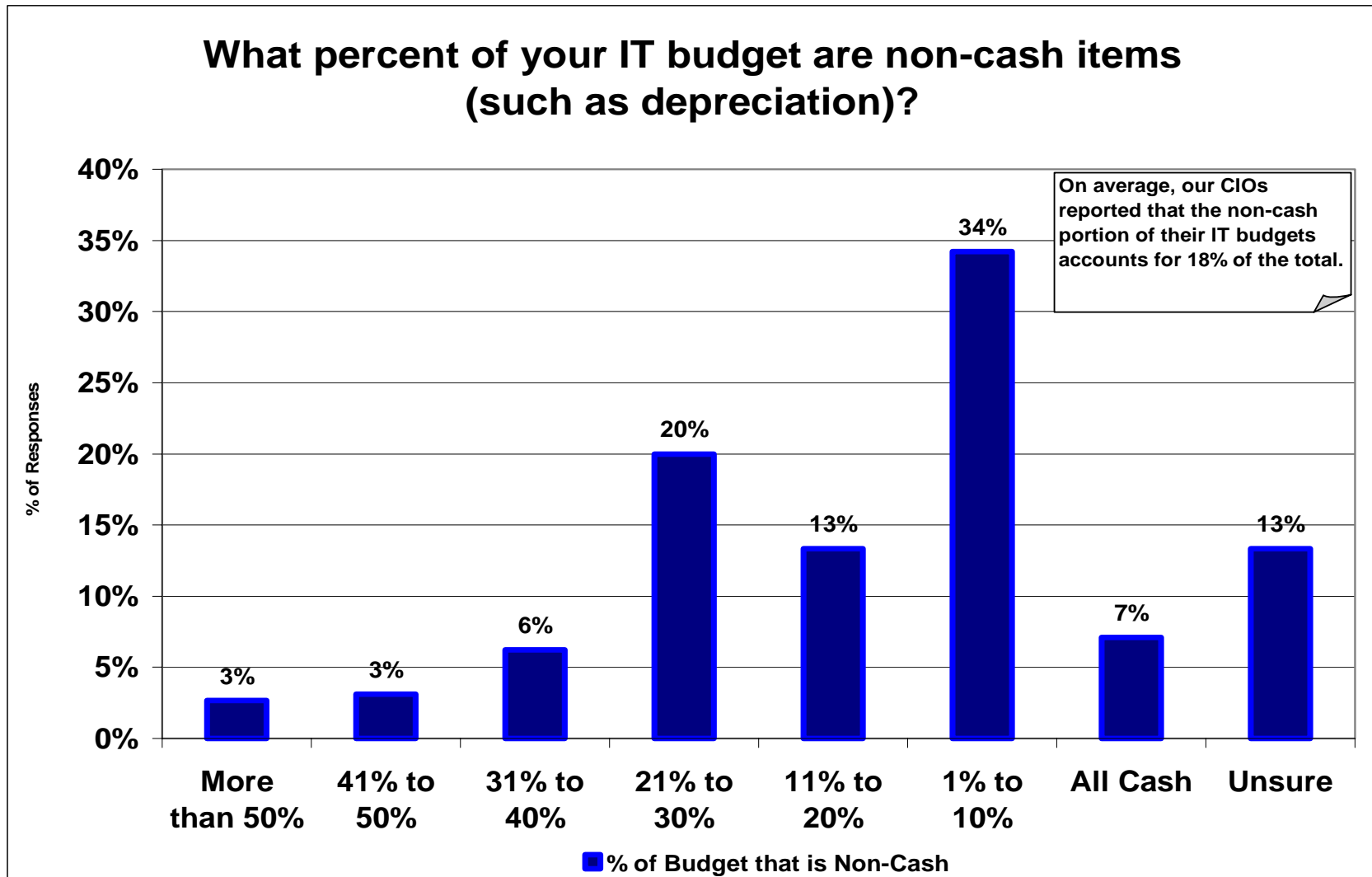
Source: Morgan Stanley CIO Survey, October 2003.

**Notes**

A Relative Strength Index (RSI) reading above 50% indicates overall improvement, while one below 50% points to overall deterioration, we believe.

We calculated the RSI by asking our CIOs which companies observed improvement, deterioration or no change in customer service levels over the last 12 months.

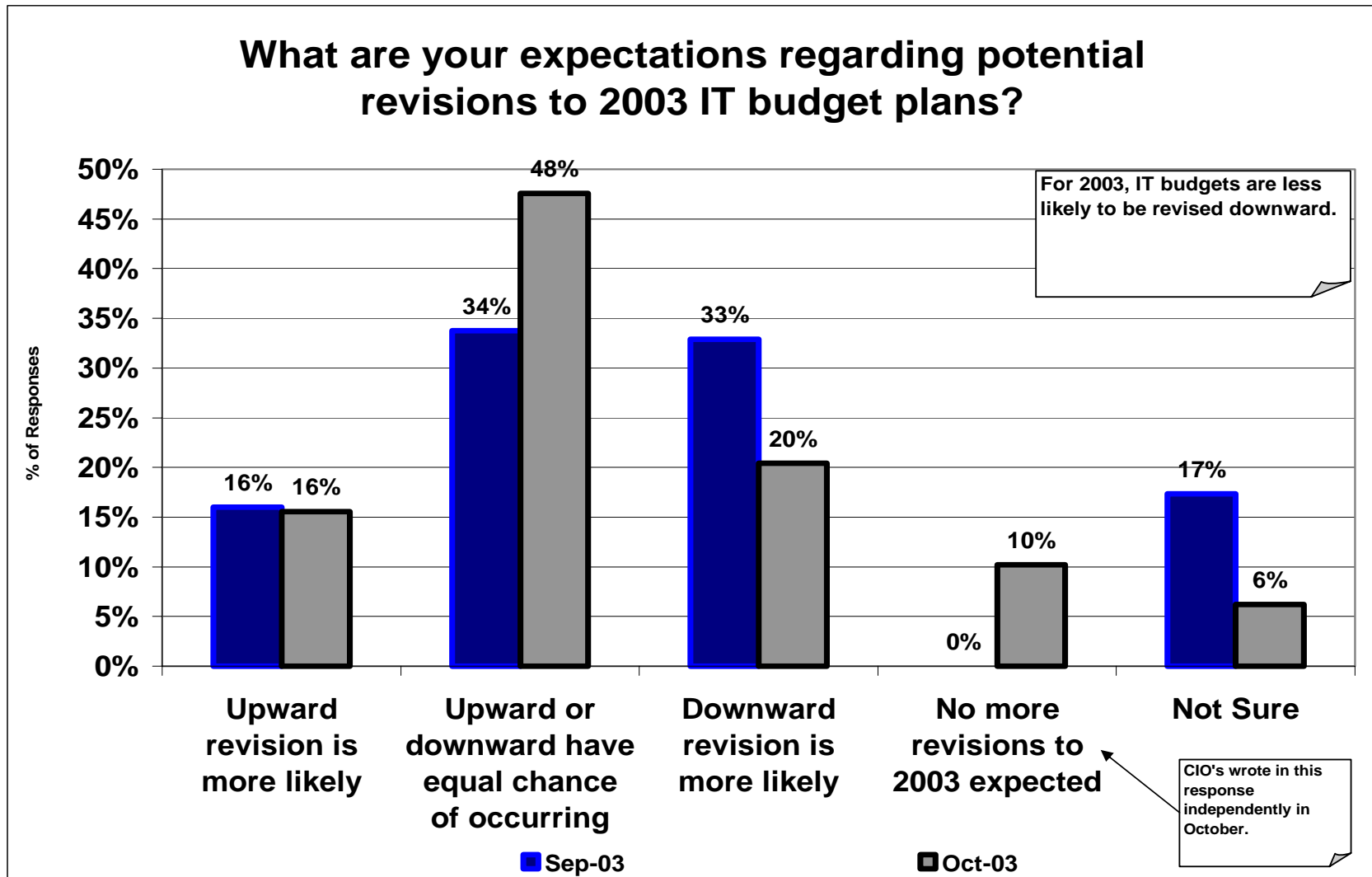
Exhibit 28  
IT Budgets



Source: Morgan Stanley CIO Survey, October 2003.

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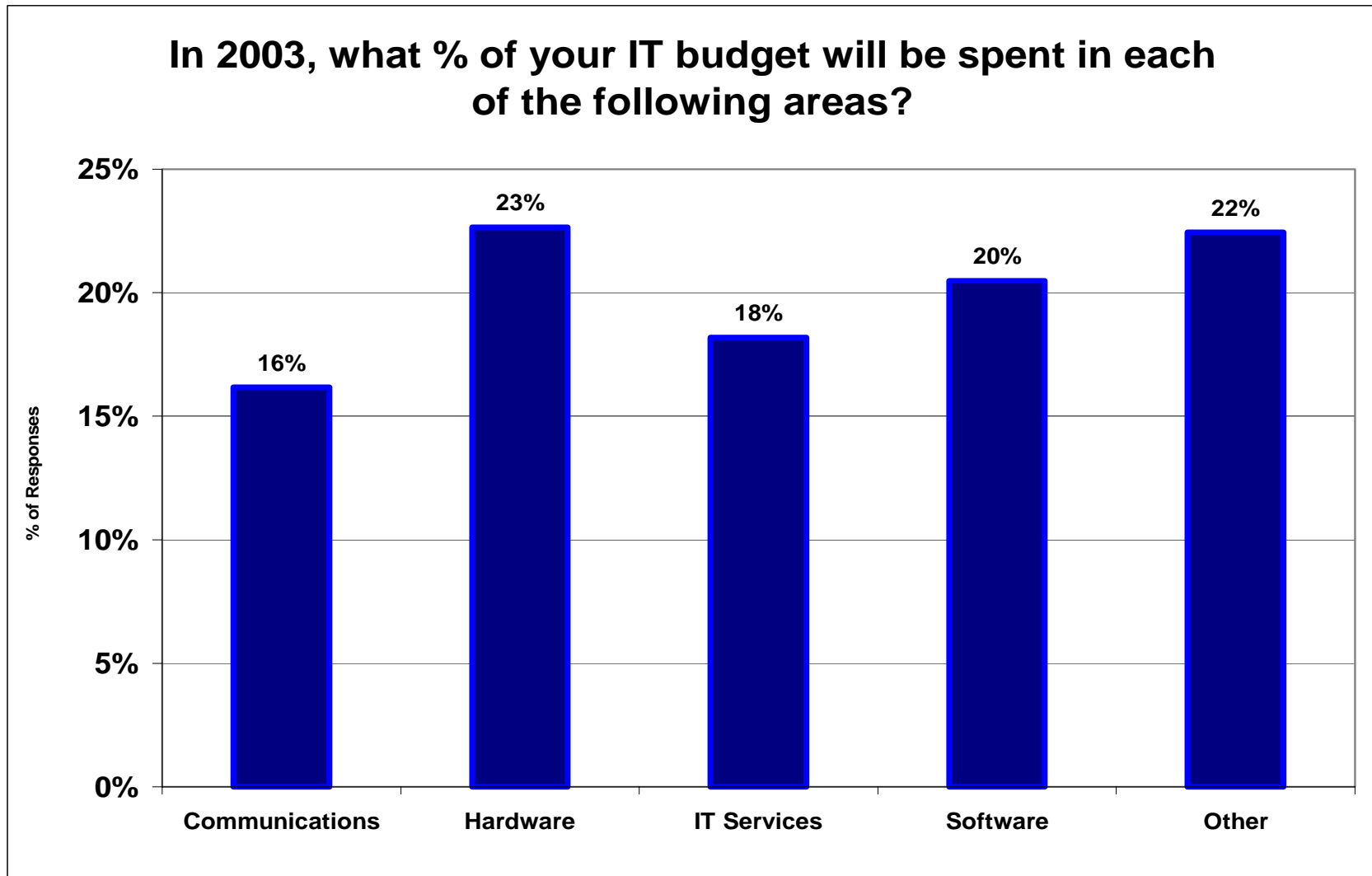
Exhibit 29  
2003 IT Budgets



Source: Morgan Stanley CIO Survey, October 2003.

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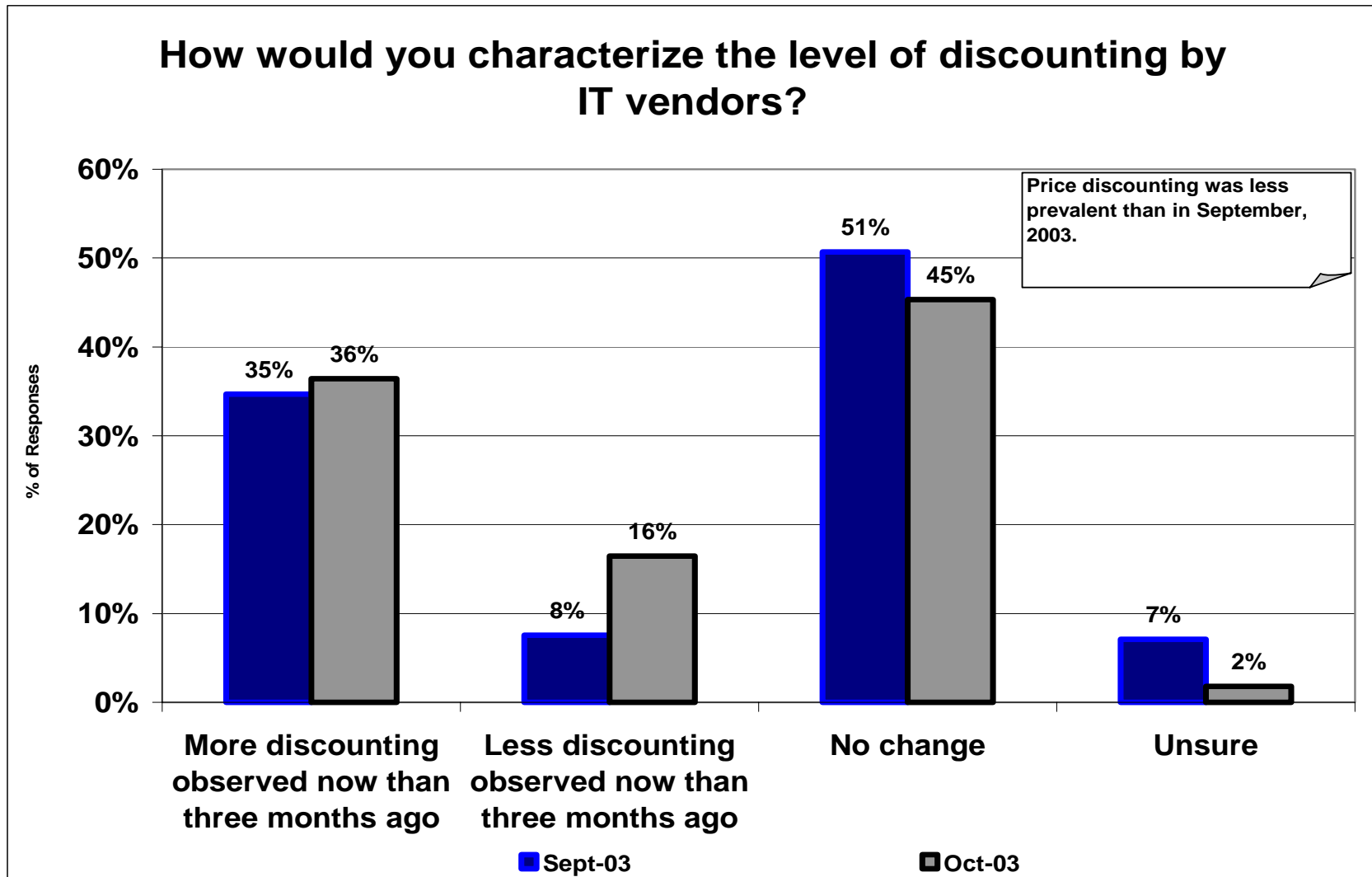
Exhibit 30  
IT Budgets



Source: Morgan Stanley CIO Survey, October 2003.

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Exhibit 31  
Pricing Environment



Source: Morgan Stanley CIO Survey, October 2003.

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Exhibit 32

**2003 Priorities**

**In your organization, are any of the following top priorities in 2003? (Please mark all that apply)**

**In your organization, which areas are your top priorities in 2003? (Multiple responses permitted)**

	Oct 2003			Sept 2003		July 2003		June 2003		April 2003		September 2002	
	# of Resp.	Rank	Change in Rank	# of Resp.	Rank	# of Resp.	Rank	# of Resp.	Rank	# of Resp.	Rank	# of Resp.	Rank
Security software	112	1	---	108	1	65	4	70	4	101	2	82	2
Application integration	74	2	▲1	94	3	94	1	102	1	114	1	109	1
Document management software	70	3	▲21	30	24	45	11	59	9	61	11	58	9
Storage hardware	67	4T	▲2	76	6	58	6	66	6	84	3	54	12T
Business intelligence tools	67	4T	▲5	63	9T	62	5	36	19T	73	5	52	14
Wireless initiatives	66	6	▲3	63	9T	48	9	75	3	69	8	69	5
Microsoft Office upgrade	62	7	---	74	7	37	18	46	14	51	20	55	10T
Windows 2000 / XP upgrade — desktop	59	8	▼4	82	4	74	2	76	2	75	4	73	3
XML-based applications	56	9	▲17	27	26T	33	21	58	10	40	25	50	16
Windows 2000 / XP upgrade — server	52	10	▼5	78	5	55	7	51	11	57	13T	61	8
Data mining / OLAP tools	51	11	---	62	11	46	10	48	13	58	12	36	24T
Personal computers (PCs)	48	12	▼4	68	8	40	14	43	15	49	21	47	19
Content Management software for Web site	44	13	▲2	52	15	36	19	23	30	35	28	51	15
ERP software / ERP upgrade	43	14	▼12	107	2	69	3	68	5	66	9	70	4
E-commerce initiatives	41	15	▼3	59	12	44	12	63	7	56	15	67	6
Customer service applications	36	16	▲5	33	21T	22	29T	29	24	62	10	30	29T
Network equipment	34	17T	▼4	57	13	39	15	38	17	71	7	55	10T
Call center software	34	17T	▲2	36	19	23	28	27	26	57	13T	40	22
Converged voice and data networks	32	19T	▼2	43	17	29	22	21	32	22	35	31	28
Network and application management software	32	19T	▲9	26	28T	27	24T	18	35T	42	24	32	27
Web site enhancements	31	21	▲2	31	23	38	16T	49	12	26	33	48	18
Web server software	30	22	▲13	19	35	16	38T	13	41T	13	42T	17	40T
Employee / Enterprise data portal projects	29	23	▲5	26	28T	53	8	61	8	53	17T	64	7
Application servers	28	24T	▼6	41	18	34	20	34	21	52	19	49	17
New custom development	28	24T	▲12	15	36	20	33	20	33	19	37	24	33
Linux-based servers	26	26	▼10	48	16	27	24T	15	38	55	16	22	34
Intel servers	22	27T	▼13	54	14	19	34T	28	25	53	17T	17	40T
Storage software	22	27T	▲7	20	34	42	13	31	23	72	6	39	23
Java-based enterprise applications	21	29	▲10	11	39	24	27	22	31	21	36	21	35T
Web development tools or products	19	30	▼9	33	21T	18	36T	25	27	39	26	44	21
CRM software	18	31T	▼6	29	25	38	16T	37	18	44	23	46	20
Supply chain management software	18	31T	▼1	24	30	22	29T	24	28T	37	27	20	37
Unix servers	18	31T	---	23	31	28	23	36	19T	31	30	21	35T
Knowledge management	18	31T	▲14	4	45T	16	38T	17	37	25	34	29	31
Database software	16	35T	▼9	27	26T	22	29T	24	28T	47	22	54	12T
Mainframe systems management	16	35T	▲7	7	42T	5	49T	5	47	7	47	2	50
Content delivery networks	16	35T	▲10	4	45T	7	47	13	41T	29	31	33	26
Consulting	14	38T	▼18	34	20	25	26	32	22	17	39T	30	29T
Web/Intranet to legacy integration tools or products	14	38T	▲6	5	44	18	36T	18	35T	17	39T	36	24
Mainframe hardware	13	40	▲9	0	49	10	42	2	50	13	42T	12	46T
E-mail response software	9	41T	▼9	22	32	13	41	0	51	15	41	15	42T
Mainframe software	9	41T	▲6	3	47	9	43T	14	39T	0	51	12	46T
Infrastructure resource management software	8	43	▼10	21	33	8	45T	19	34	27	32	18	38T
Inventory management/provisioning	7	44	▼7	14	37	8	45T	10	45	3	49	15	42T
Marketing / customer analytics software	6	45T	▼7	12	38	21	32	11	44	9	44	13	45
Procurement software	6	45T	▲4	8	41	15	40	9	46	4	48	25	32
E-store software for Web site	5	47	▲3	0	50	6	48	14	39T	18	38	14	44
Salesforce automation software	4	48	▼8	10	40	19	34T	40	16	34	29	18	38T
CAD/CAM, EDA	3	49	▼7	7	42T	5	49T	12	43	2	50	0	51
PRM / Channel management software	1	50	▼2	2	48	9	43T	4	48	8	45T	6	49
Personalization software for E-business	0	51	---	0	51	4	51	3	49	8	45T	11	48

Source: Morgan Stanley CIO Survey, October 2003.

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Exhibit 33

**2003 Priorities — Greatest Areas of Improvement**

<b>Technology</b>	<b>M.M</b>	<b>Y.Y</b>	<b>Responses (October 2003)</b>
Document management software	133%	21%	70
XML-based applications	107%	12%	56
New custom development	87%	17%	28
Web server software	58%	76%	30

Source: Morgan Stanley CIO Survey, October 2003.

Note: Growth rates are based on the number of responses reported by CIOs. M.M compares October 2003 to September 2003. Y.Y compares October 2003 to September 2002.

Exhibit 34

**2003 Priorities — Greatest Areas of Deterioration**

<b>Technology</b>	<b>M.M</b>	<b>Y.Y</b>	<b>Responses (October 2003)</b>
ERP software / ERP upgrade	-60%	-39%	43
Network equipment	-40%	-38%	34
Windows upgrade — server	-33%	-15%	52
Application servers	-32%	-43%	28
E-commerce initiatives	-31%	-39%	41
Windows upgrade — desktop	-28%	-19%	59
Application integration	-21%	-32%	74
Content Mgmt. software for Web site	-15%	-14%	44

Source: Morgan Stanley CIO Survey, October 2003.

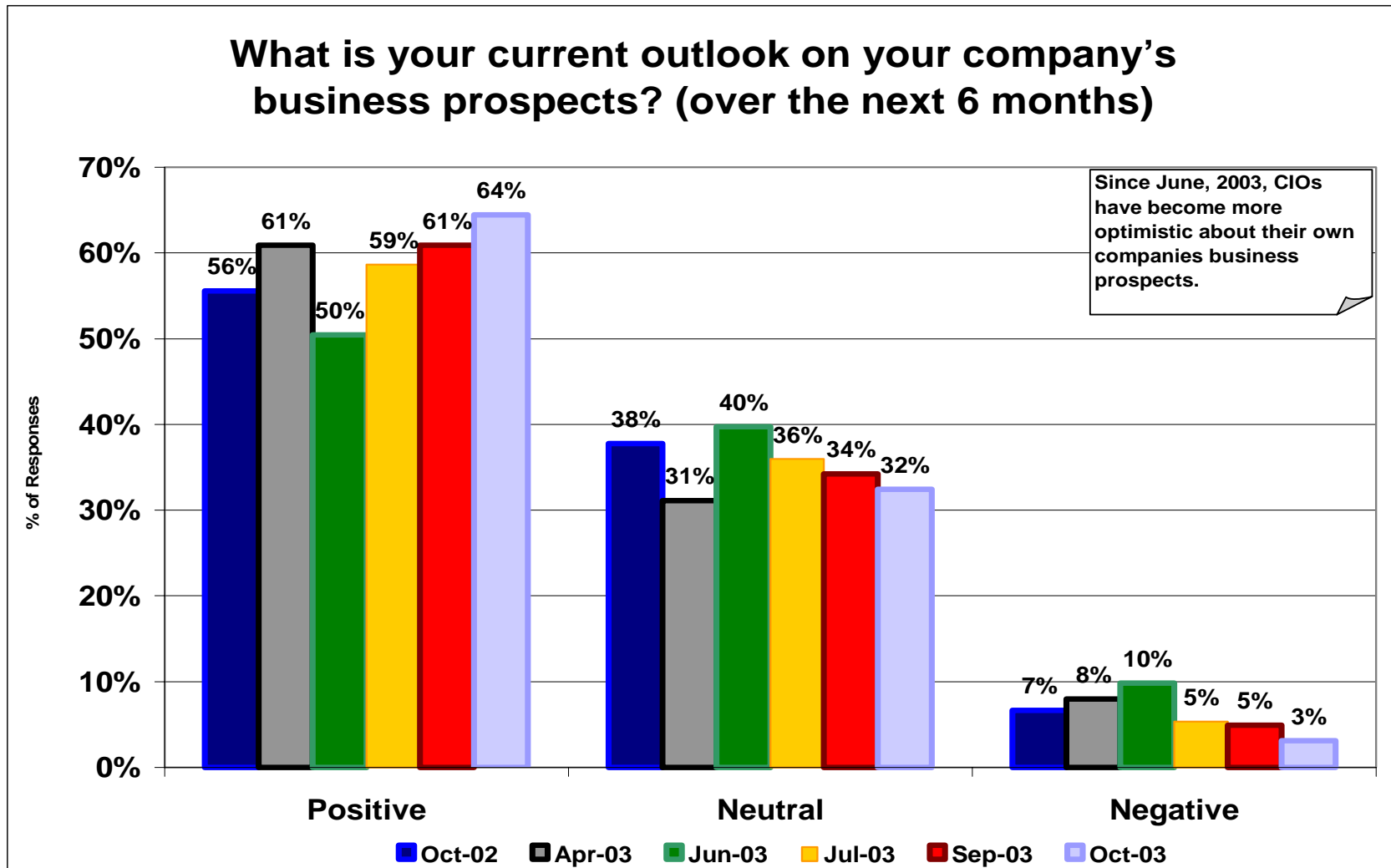
Note: Growth rates are based on the number of responses reported by CIOs. M.M compares October 2003 to September 2003. Y.Y compares October 2003 to September 2002.

For an area to be included in the greatest areas of improvement (deterioration) list, we require a minimum of a 10% increase (10% decrease) on both a sequential (September 2003 to October 2003 in this case) and year-over-year basis (September 2002 to October 2003 in this case). In addition, we have only included areas with a minimum of 20 responses for the current period.

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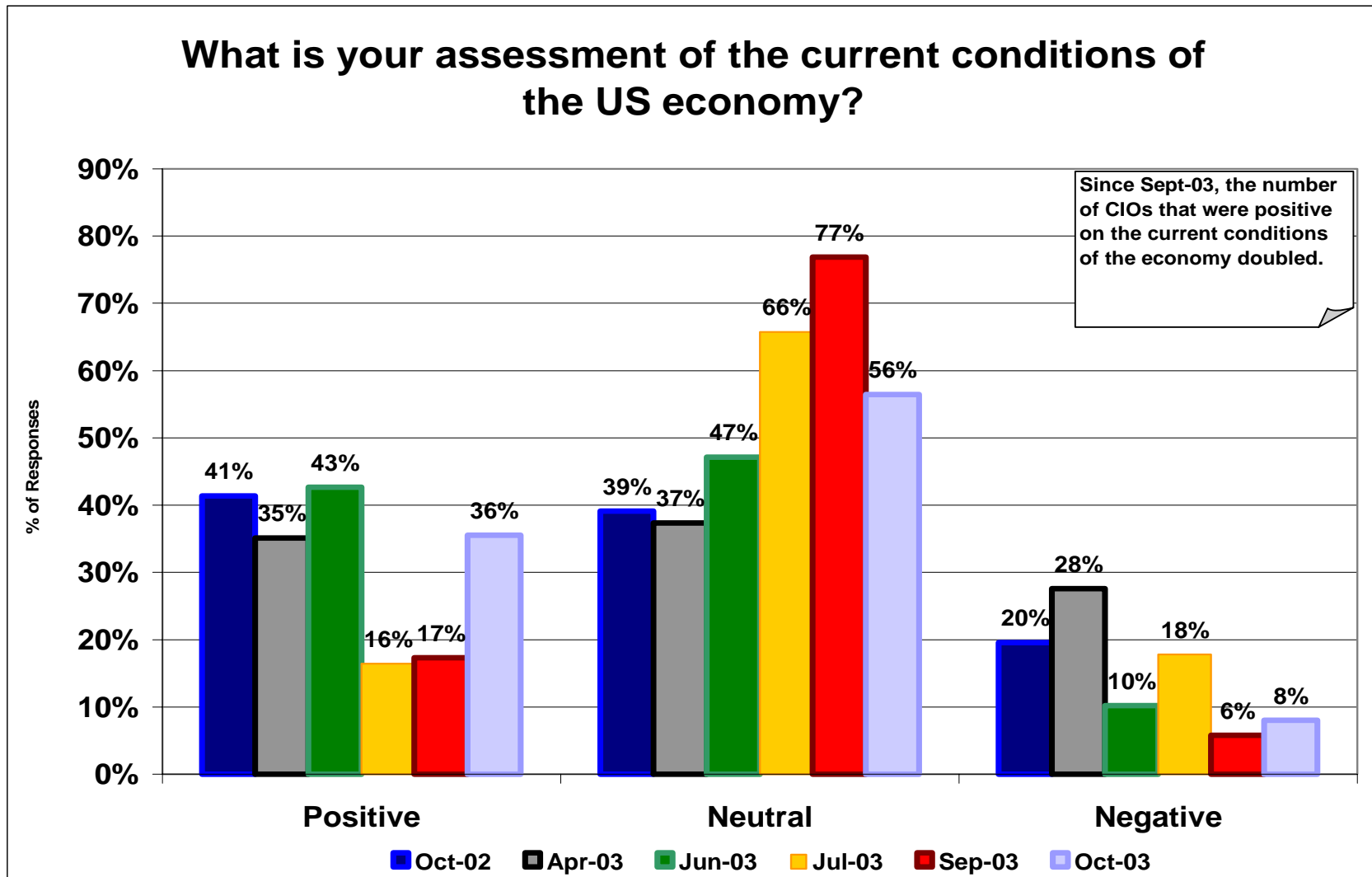
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Exhibit 35  
Company Outlook



Source: Morgan Stanley CIO Survey, October 2003.

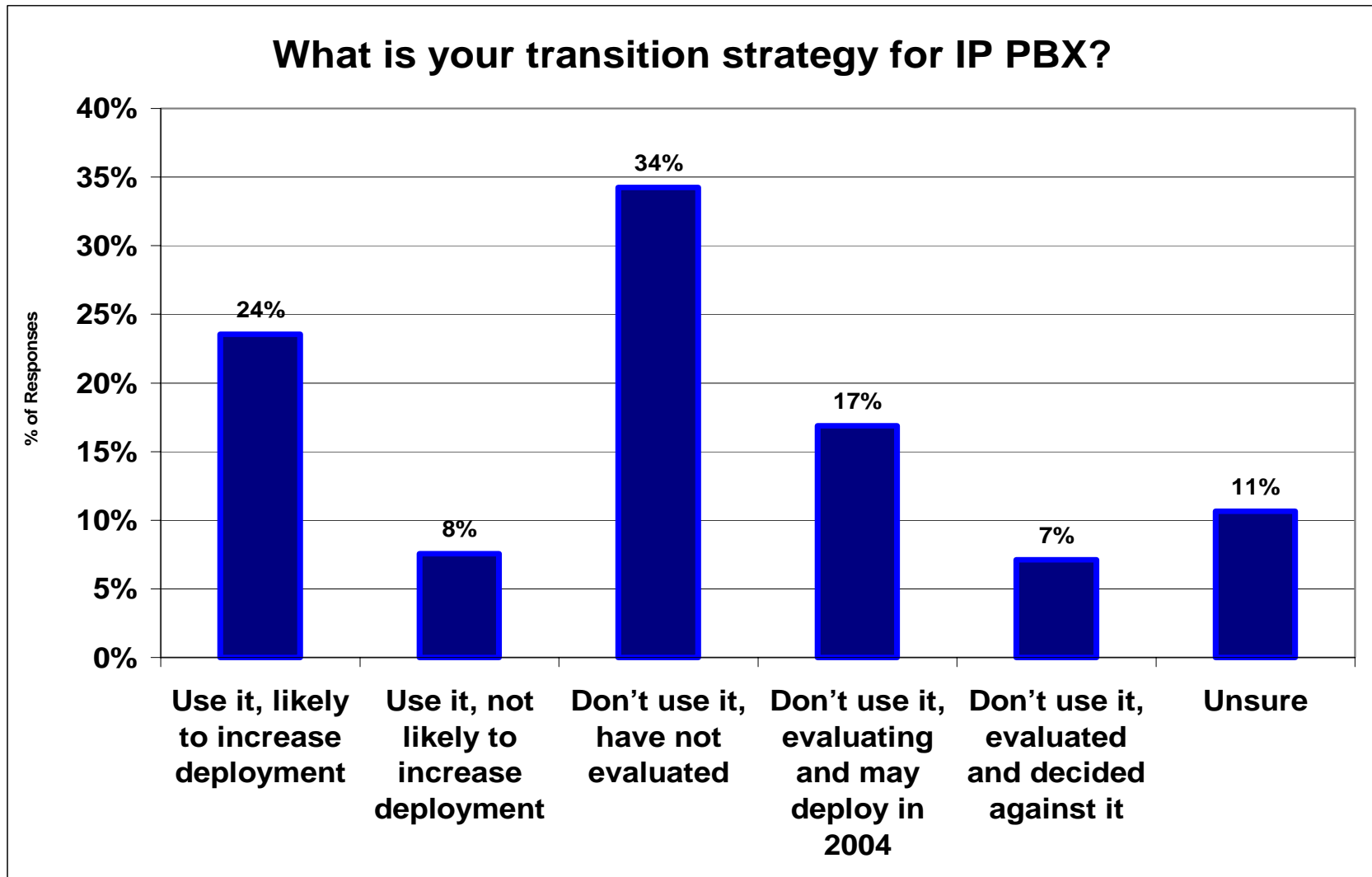
Exhibit 36  
Economic Sentiment



Source: Morgan Stanley CIO Survey, October 2003.

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Exhibit 37  
Network Equipment

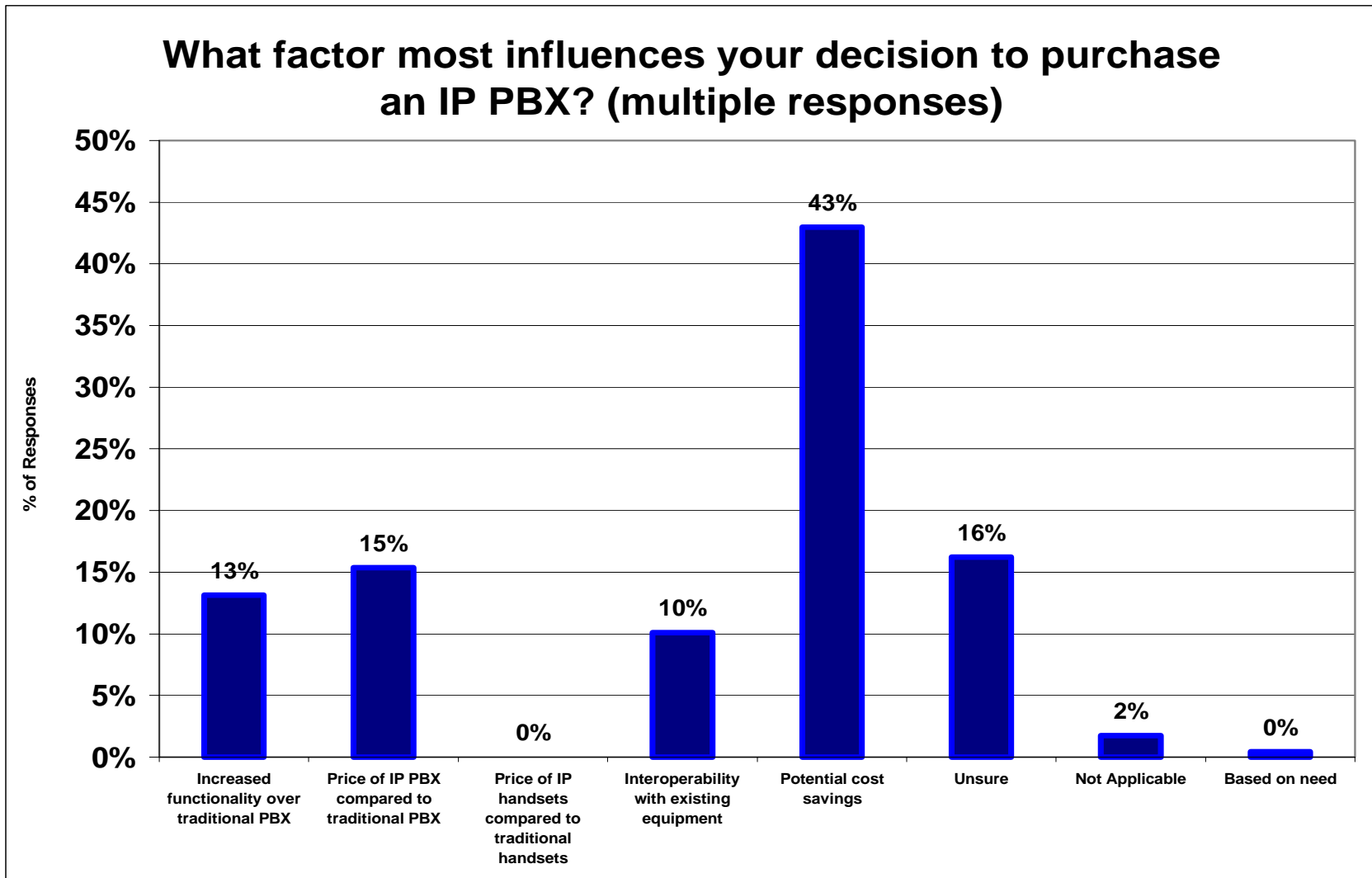


Source: Morgan Stanley CIO Survey, October 2003.

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Exhibit 38  
Network Equipment

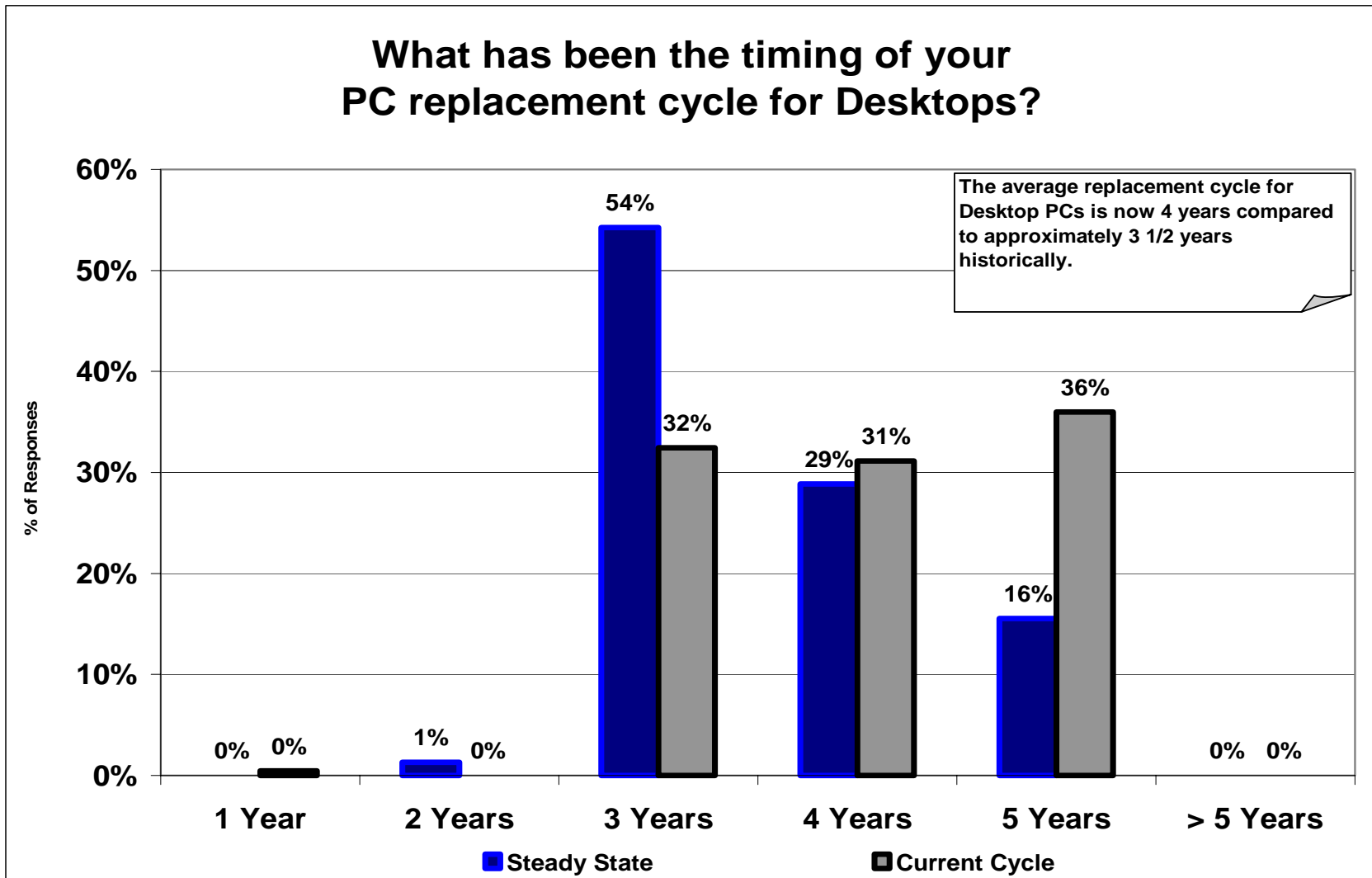


Source: Morgan Stanley CIO Survey, October 2003.

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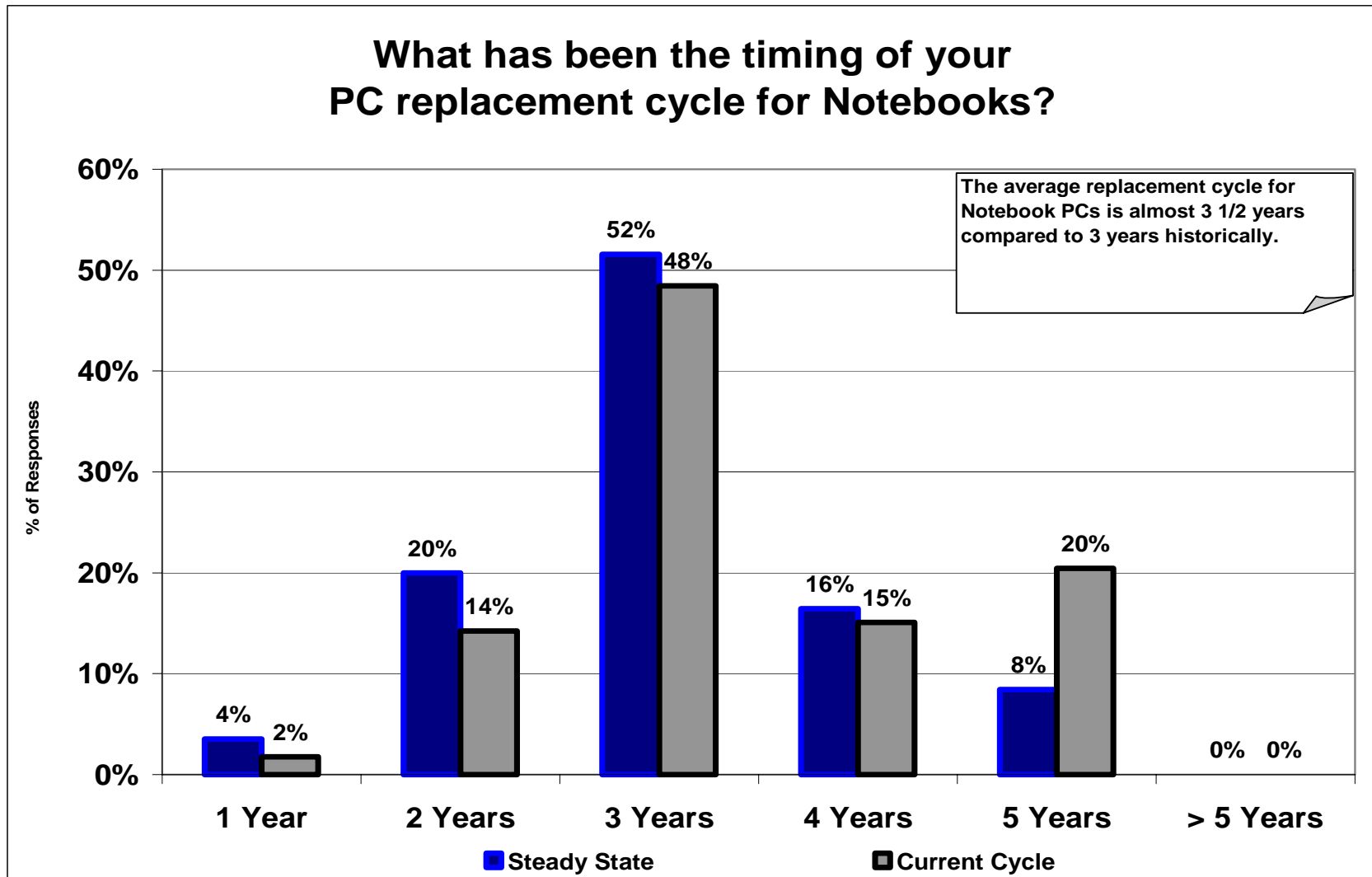
Exhibit 39  
PC Replacement Cycle



Source: Morgan Stanley CIO Survey, October 2003.

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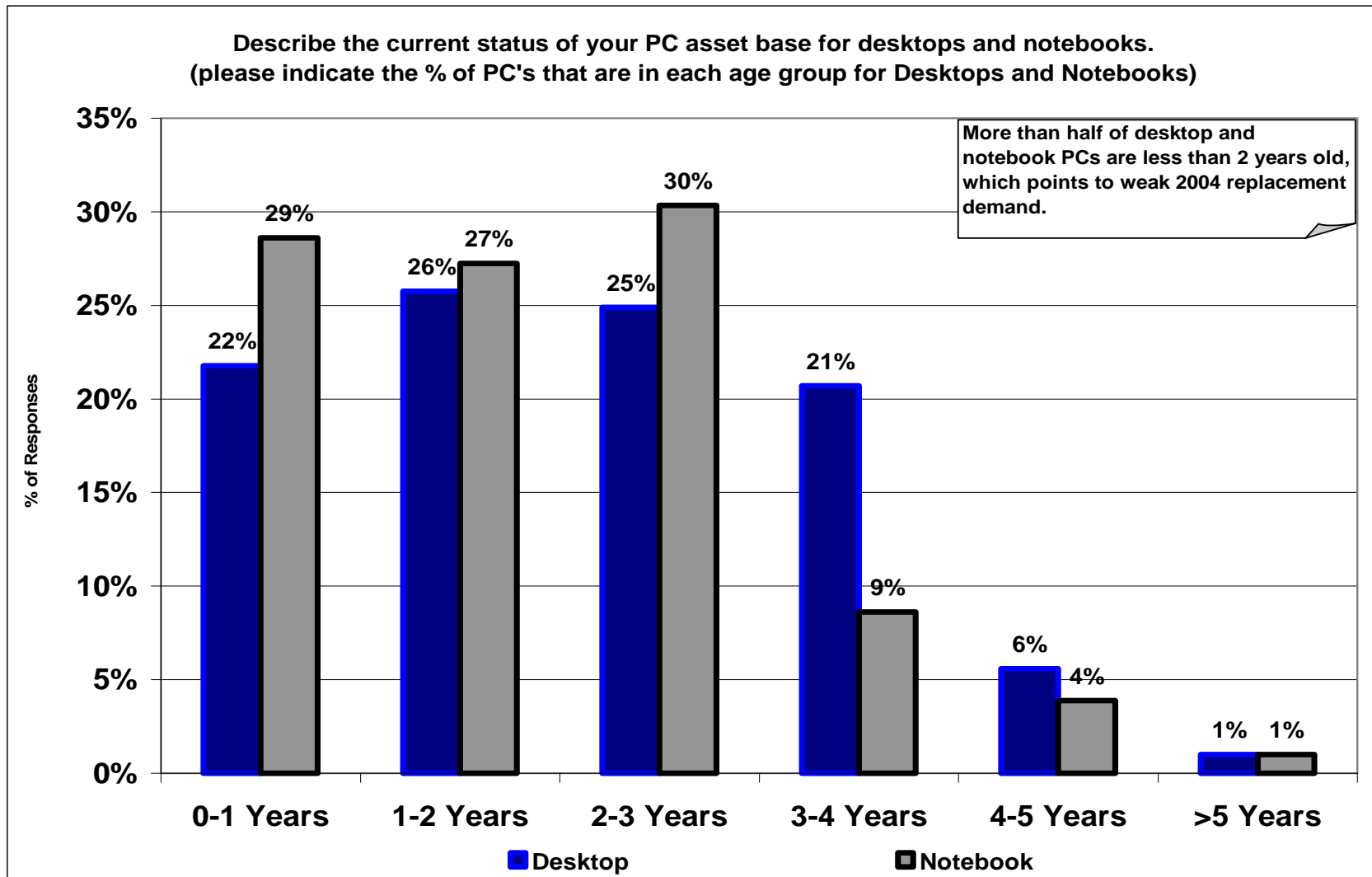
Exhibit 40  
PC Replacement Cycle



Source: Morgan Stanley CIO Survey, October 2003.

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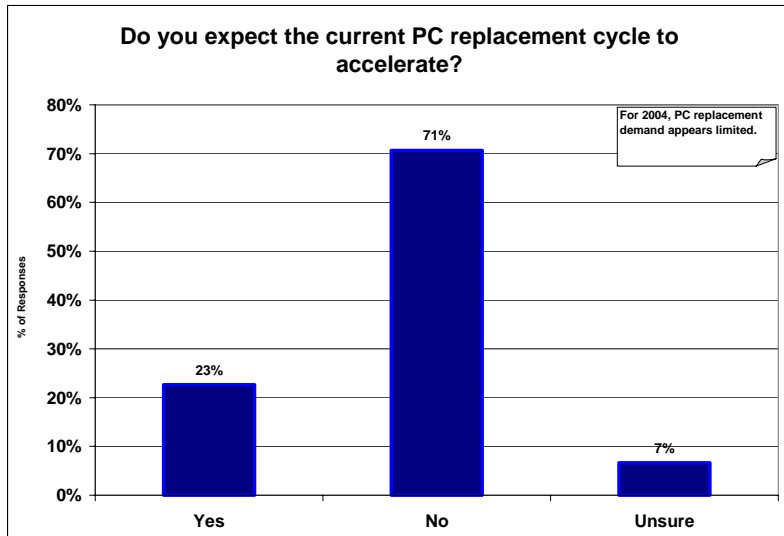
Exhibit 41  
PC Replacement Cycle



Source: Morgan Stanley CIO Survey, October 2003.

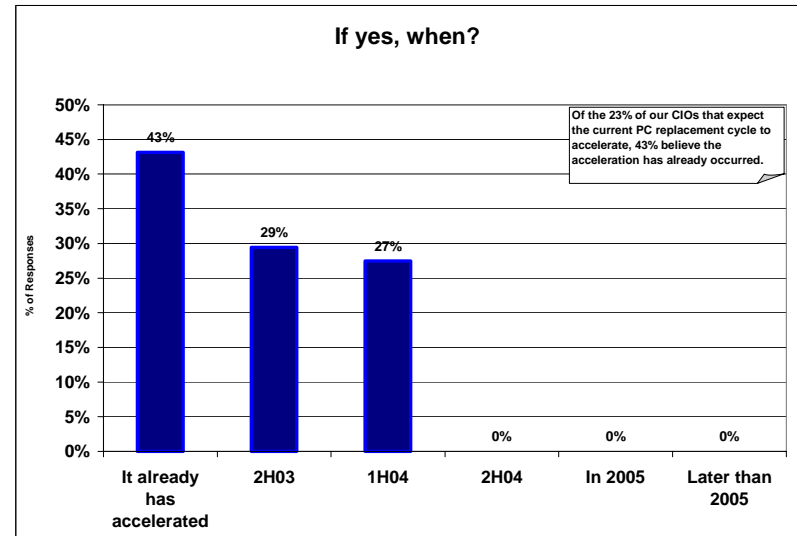
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Exhibit 42  
PC Replacement Cycle



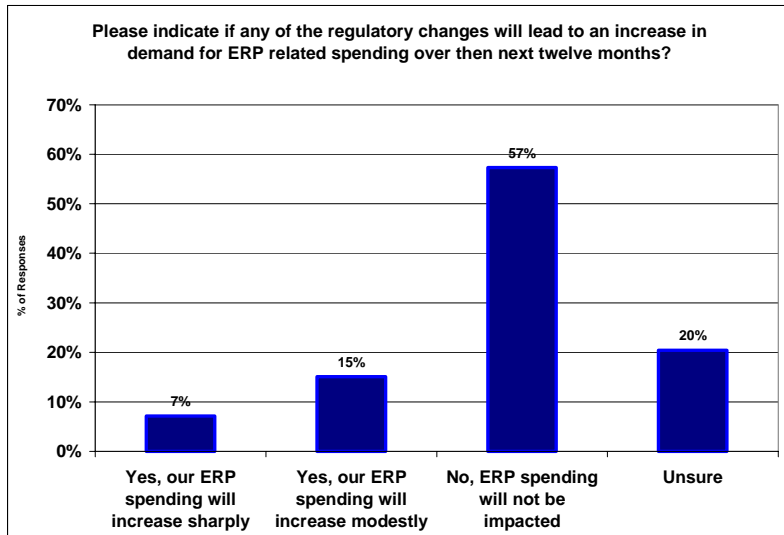
Source: Morgan Stanley CIO Survey, October 2003.

Exhibit 43  
PC Replacement Cycle



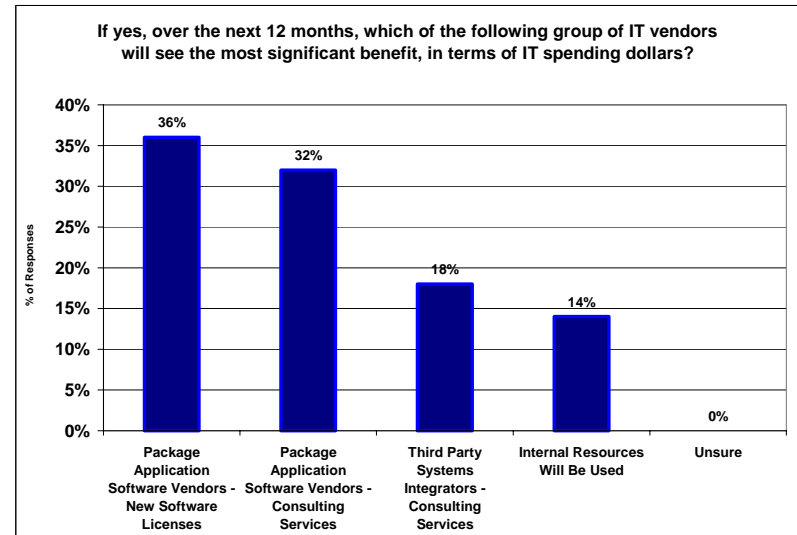
Source: Morgan Stanley CIO Survey, October 2003.

Exhibit 44  
ERP Software



Source: Morgan Stanley CIO Survey, October 2003.

Exhibit 45  
ERP Software



Source: Morgan Stanley CIO Survey, October 2003

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(as of October 31, 2003)

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<b>Overweight</b>	572	31%	237	38%	41%
<b>Equal-weight</b>	862	47%	282	46%	33%
<b>Underweight</b>	406	22%	99	16%	24%
<b>Total</b>	1,840		618		

Data include common stock and ADRs currently assigned ratings. For disclosure purposes (in accordance with NASD and NYSE requirements), we note that Overweight, our most positive stock rating, most closely corresponds to a buy recommendation; Equal-weight and Underweight most closely correspond to neutral and sell recommendations, respectively. However, Overweight, Equal-weight, and Underweight are not the equivalent of buy, neutral, and sell but represent recommended relative weightings (see definitions below). An investor's decision to buy or sell a stock should depend on individual circumstances (such as the investor's existing holdings) and other considerations. Investment Banking Clients are companies from whom Morgan Stanley or an affiliate received investment banking compensation in the last 12 months.

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