



## **Share Repurchases in the Technology Industry: A Study of Stock Price Impact**

June 2006

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## Executive Summary

# Repurchase plans ineffective in the medium term

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**The GTK Technology Share Repurchase Analysis suggests repurchase programs should be used as a long term tool by companies...**

- ...whose growth AND risk profile have declined with increasing cash flow, and
- ...whose stock price returns are best benchmarked against broad (non-technology) market indices rather than the NASDAQ or sector peers

**Our analysis, focused on programs of material size, shows neutral stock price impact within the six-month period following the announcement of a share repurchase program (“SRP”)**

- Our conclusions should discourage technology companies from using an SRP opportunistically to “signal” the undervaluation of their equity
- Companies should not expect improved valuation to replace M&A firepower (cash) used for repurchases
- Recent academic studies, generally for broad industry sets and longer time frames, report results consistent with ours

**When we segmented our data, there was some indication that positive results were more likely for companies that**

- Had *greater* than \$200MM in market cap
- Had *less* than 30% cash-to-market cap
- Were profitable with low LTM P/Es
- Announced repurchases for 5-10% of shares outstanding

# Long term utility appears valid for Tech companies

## **Share repurchases are best in enhancing shareholder value when used as a systematic, long-term tool**

- SRPs have been a useful value-creation tool in many industries, and can serve a similar purpose in the technology sector as IBM's experience, studied herein, shows
- Post-announcement stock price "drift" or even underperformance versus industry peers for up to 3 years has been observed in academic studies
- While also construed as signaling a decline in growth, studies indicate long-term use of SRPs can create value if shareholders also perceive a long-term reduction in the company's risk profile
  - Microsoft's and IBM's cases are illustrative
  - A very long-term view (e.g. 4+ years) for the materialization of valuation benefits is required
- A long term view necessarily begs the question of the company's confidence in its long-term cash flow. In the absence of a strong positive view, SRPs are best viewed and utilized as a special dividend, rather than as a meaningful driver of valuation

## **If an SRP is being considered as a result of shareholder feedback, the following should be kept in mind**

- Shareholders subconsciously or otherwise may be seeking to increase liquidity as much as the stock price
- The most recent academic studies, not yet widely internalized in the financial community, are less supportive of the benefits of repurchases than earlier ones

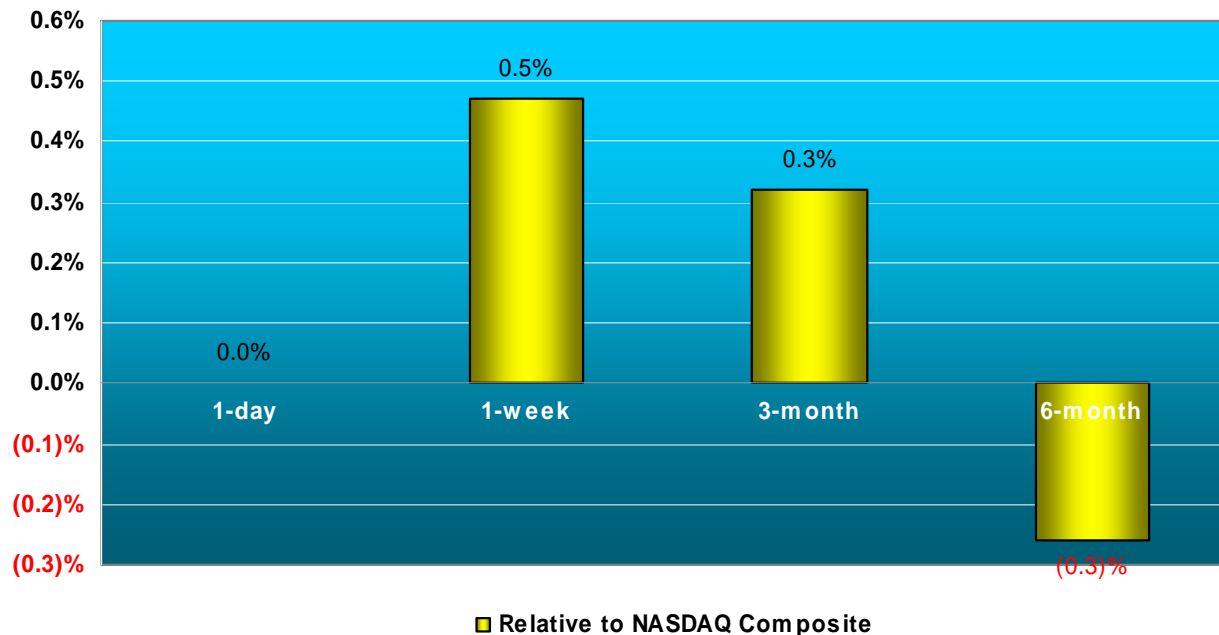
# Little incremental benefit during the first 6 months

Our study of about 240 repurchase announcements since mid-2003 showed little benefit in stock price performance over the subsequent six month period

- We indexed our results to the NASDAQ composite
- Beyond a six month period, technology share price volatility made isolating SRP impact difficult
- We will post updates and underlying data on our website [here](#)

## Stock Price Impact of Technology Company Share Repurchases

*Period after announcement of repurchase plan, indexed to the NASDAQ composite*



## **Background and Case Studies**

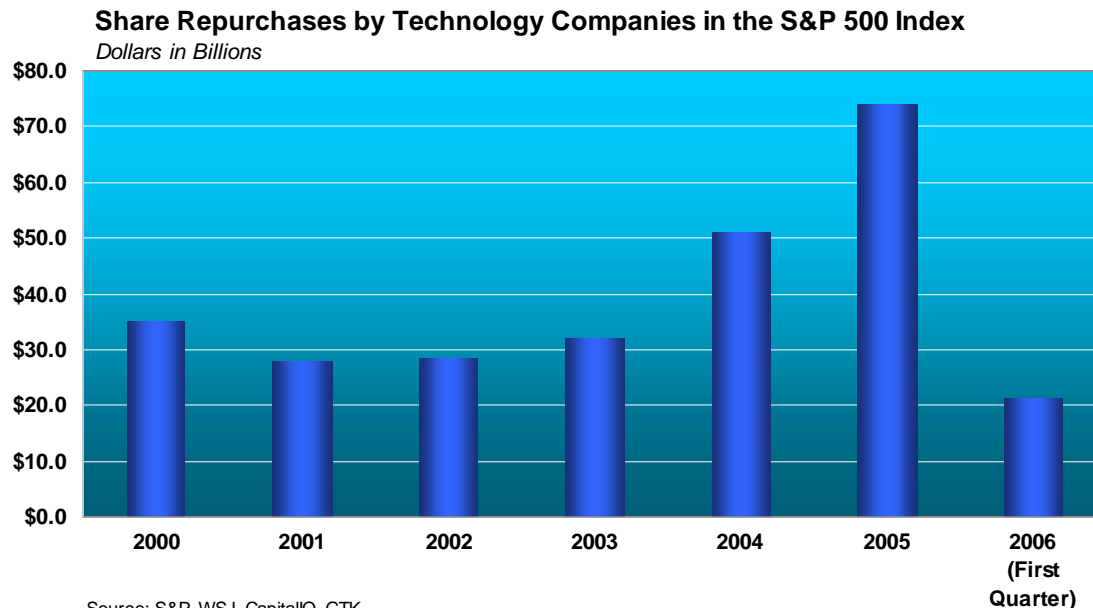
# Buybacks increasingly common in Technology

The chart below evidences the substantial increases in repurchases by large-cap Tech players

- Certain sectors are maturing and return opportunities for retained cash have declined
- Aggressive cost-containment has resulted in strong cash flows and cash balances

Experience from outside the Technology industry indicates room for continuation of this trend

- In mature industries buybacks have been a key shareholder value creation tool, especially since regulatory safe-harbors were introduced in 1982
- A Wall Street Journal study indicated that in 2000 through 2005, total cash used for buybacks ranged from two-thirds to more than twice the amount spent on acquisitions



Source: S&P, WSJ, CapitalIQ, GTK

# Tech companies have narrow repurchase rationale

Technology company rationale for SRPs – compared to that of mature industries – is more weighted toward shorter term and focused uses (e.g. to signal undervaluation or manage dilution from option exercises), which tend to be less impactful versus long-term, more systematic programs

90% of SRPs are open-market repurchases, given simplicity and lack of up-front commitment

| Typical Rationale                                                                                                                                                                                                                                            | Execution Methods                                                                                                                                                                                                             | Completion                                                                                                                                                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Manage dilution from options</p> <p>Signal undervaluation</p> <p>Return cash to shareholders, including for defensive purposes</p> <p>Increase leverage &amp; lower cost of capital</p> <p>Manage ownership profile, including for defensive purposes</p> | <p><b>Open market repurchase, on average for about 7% of shares outstanding</b></p> <p>Dutch Auction</p> <p>Accelerated repurchase</p> <p>Fixed price tender offer</p> <p>Repurchase of insider stake</p> <p>Puts/collars</p> | <p>Academic data suggests:</p> <p>80% of all programs (incl. non-Tech) are not completed</p> <p>Typically, 75%-80% of authorized shares are repurchased</p> |

# Academic studies indicate modest outcomes

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**Academic studies are trending toward concluding that the more closely an SRP's stock price impact is indexed to a group of the company's peers (rather than a broad market index), the less likely that an "excess" return will be detected**

- Detailed studies by Ikenberry, et. al. in the 1990's showed meaningful returns in excess of *a broad index*
  - About 3% upon announcement and 12% excess return over a four year period
  - Small-cap, "value stocks" and larger buybacks were calculated to exhibit higher excess returns (e.g. about 8% at announcement and up to 45% four-year excess return)
- Liano, et. al., in 2003 repeated the Ikenberry study but benchmarked the results within 17 (mainly mature) industry segments
  - Excess returns of about 3% upon announcement were also detected
  - However, returns of firms with SRPs were found to have *underperformed* their industry peers over a 3-year period
  - Small cap and value stocks fared slightly better
- Other recent studies show a meaningful, long-term reduction in cost of capital and improved share price performance
- The major studies reviewed by GTK for this report indicate medium term "drift" in the share price, consistent with our own tech-sector specific results

# Potential for good results for mature Tech companies

**As examples, we review the stock price performance of Applied Materials, Cisco and Microsoft as well as IBM**

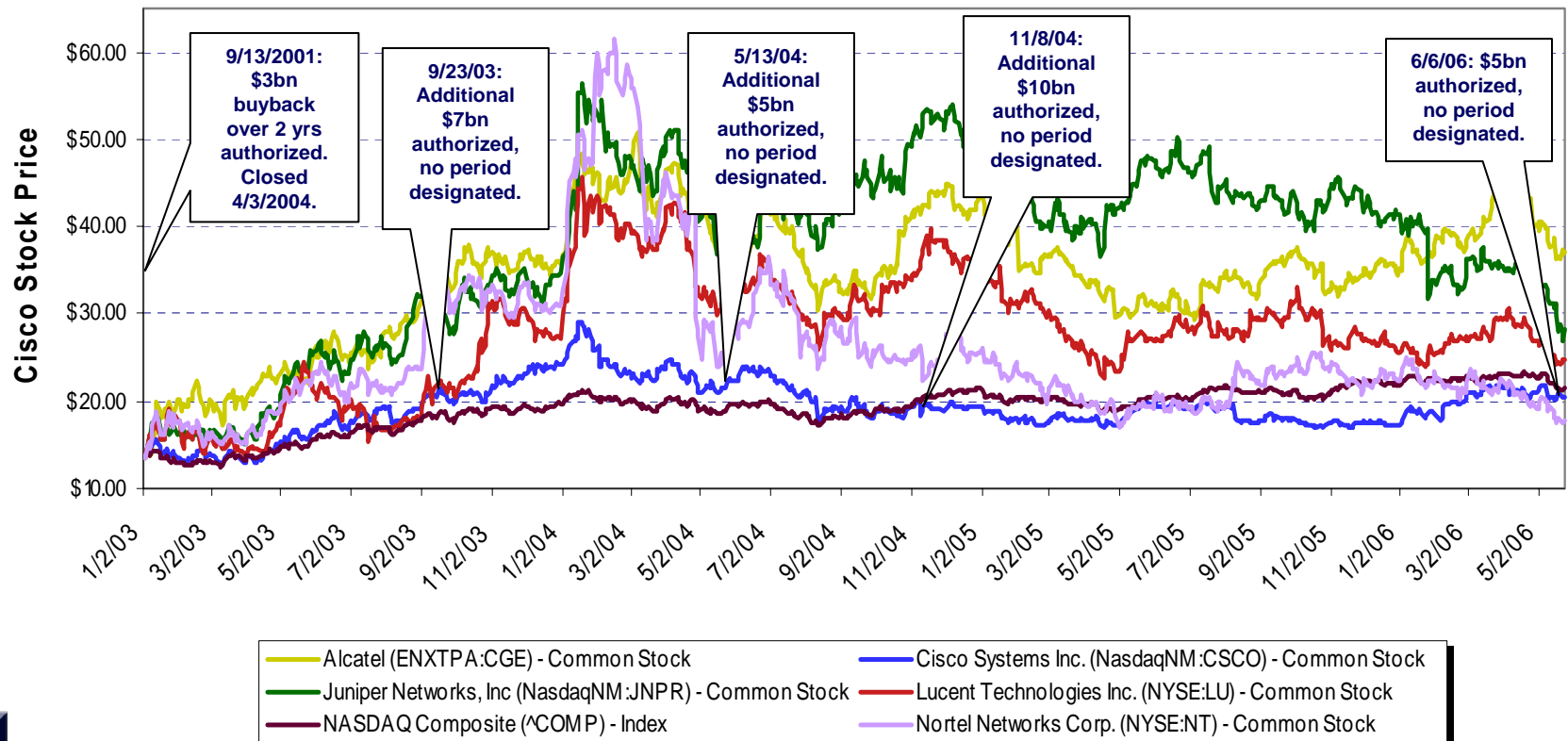
- There is no discernable impact on stock price, relative or absolute, upon announcement of their repurchase programs
- Furthermore, Applied Materials, Cisco, and Microsoft, each with 2-5 year histories of significant SRPs, have generally underperformed both their peers and the NASDAQ composite since January 2003
- While IBM's stock price has also underperformed during this time period, the company's long-term, systematic SRPs have reduced shares outstanding as a key driver of EPS growth and helped drive excellent stock price performance over the last 10 years

**Clearly, multiple factors contribute to stock price performance, but the examples are illustrative.**

# Cisco: \$30bn of repurchases announced since 2001

As a maturing company with high cash flow and few major threats on the horizon (e.g. a low risk profile), Cisco is a good candidate for eventual SRP-assisted stock price growth

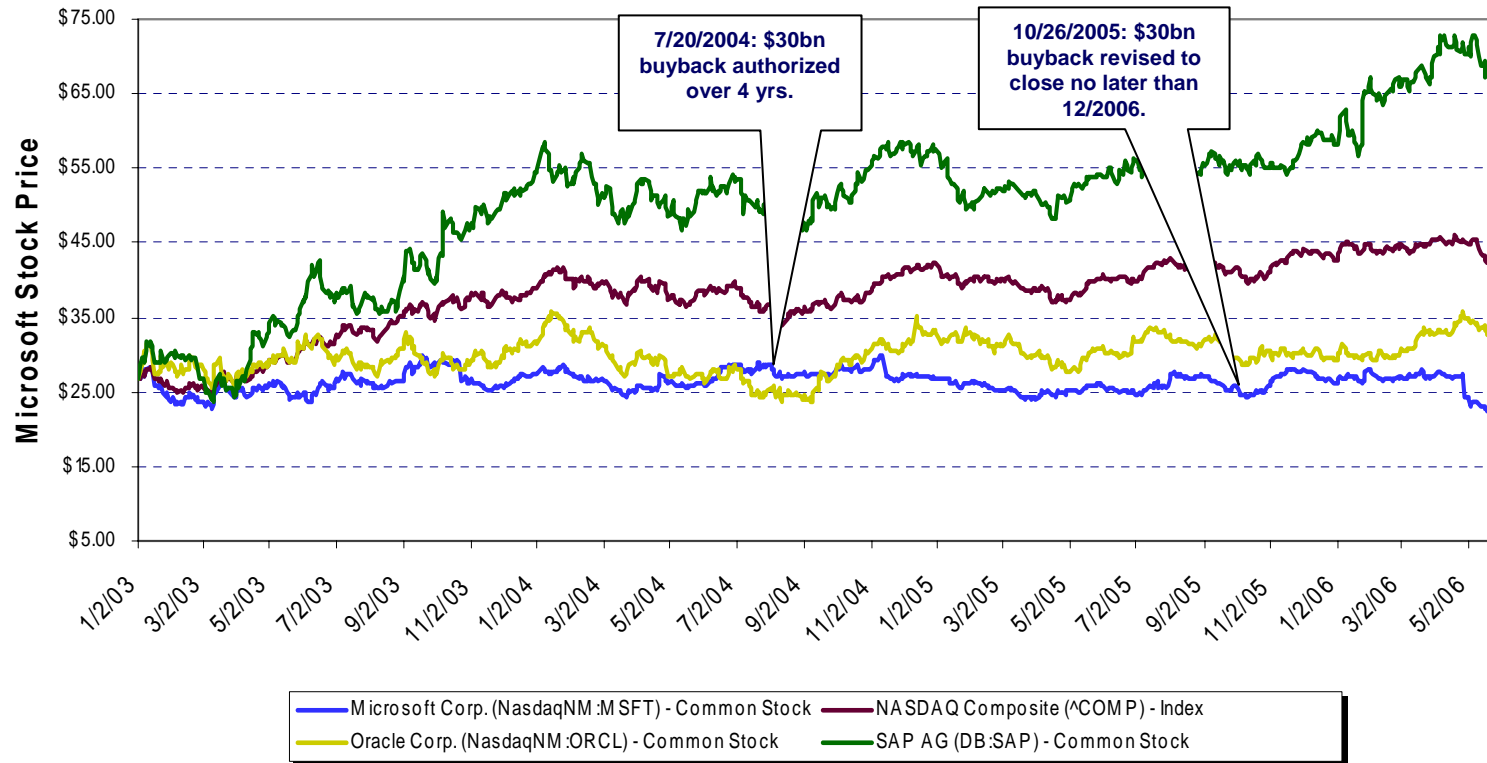
- Recall that studies indicate 3 or more years are required for stock price impact from an SRP
- Cisco hasn't highlighted its cash flow as much as AMAT, Microsoft and IBM, all of which issue dividends. Microsoft has formalized repurchases as a key component of driving return



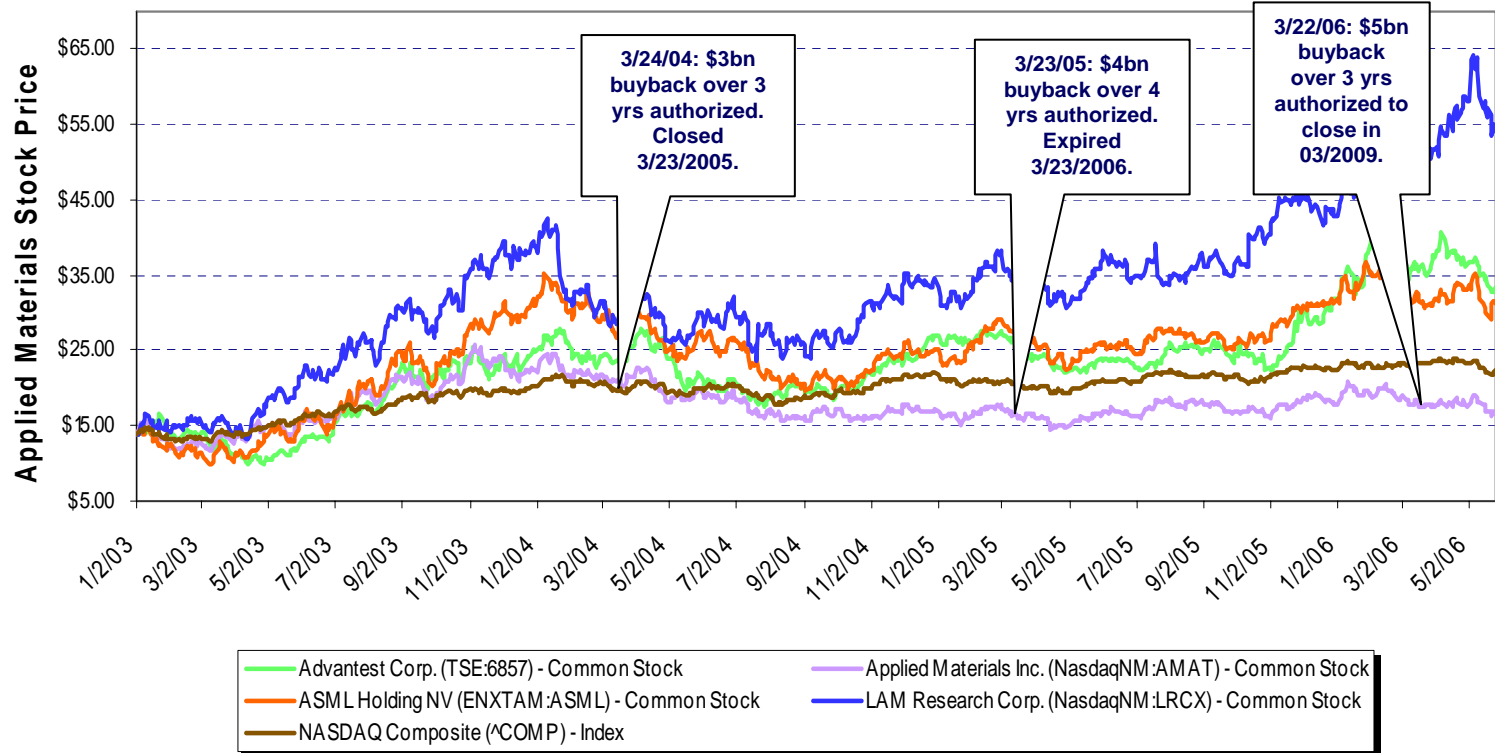
# MSFT: \$30bn of repurchases announced since 2004

MSFT, while aggressive in highlighting its cash flow as a value driver, is in the unusual position of lowered growth expectations but with emerging competitive threats (e.g. Google)

- Share repurchases, serving as a reminder of slower growth, may further disturb shareholders already concerned about growing competition



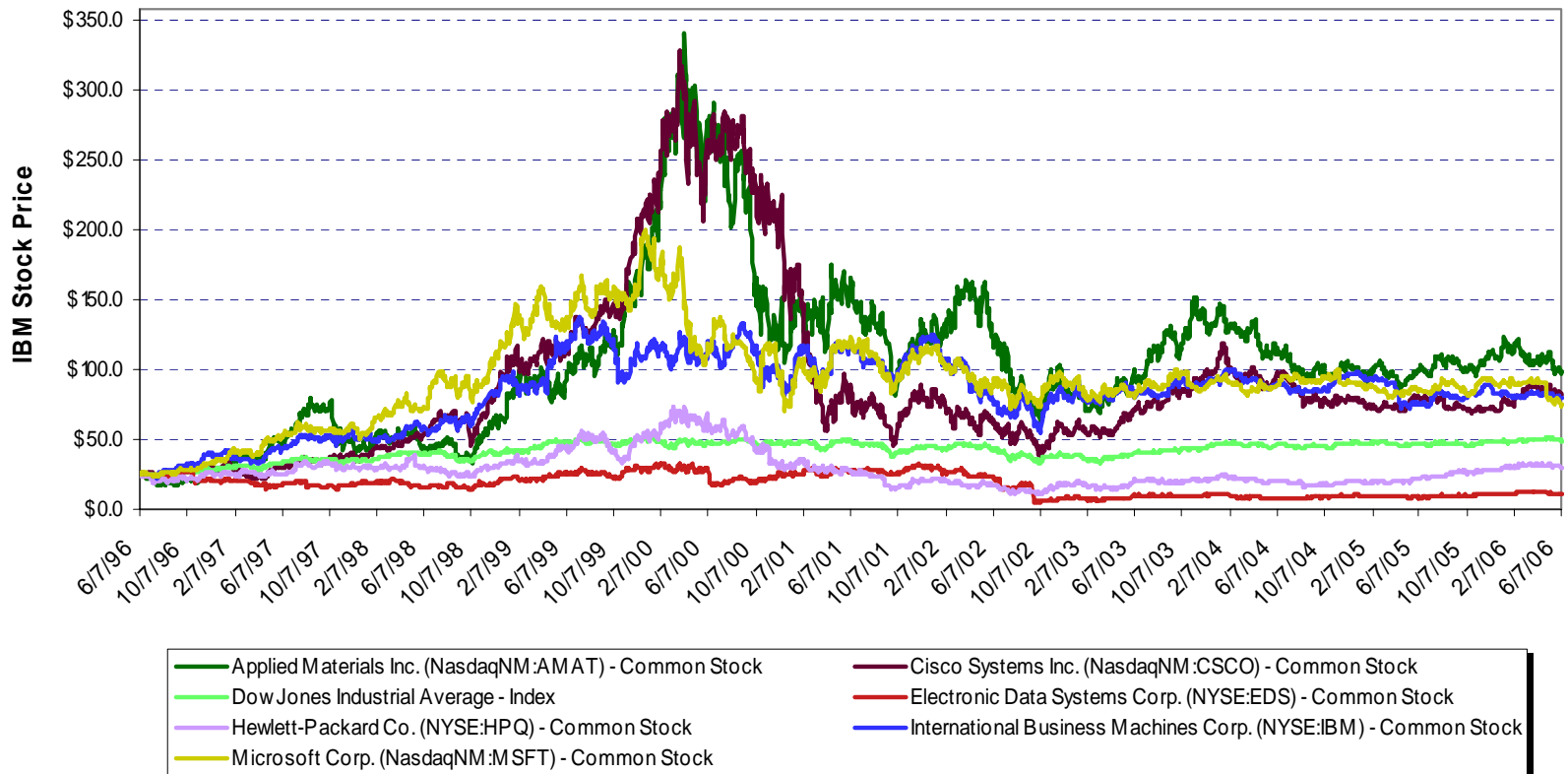
# AMAT: \$12bn of repurchases announced since '04



# IBM's excellent 10-yr stock price performance ...

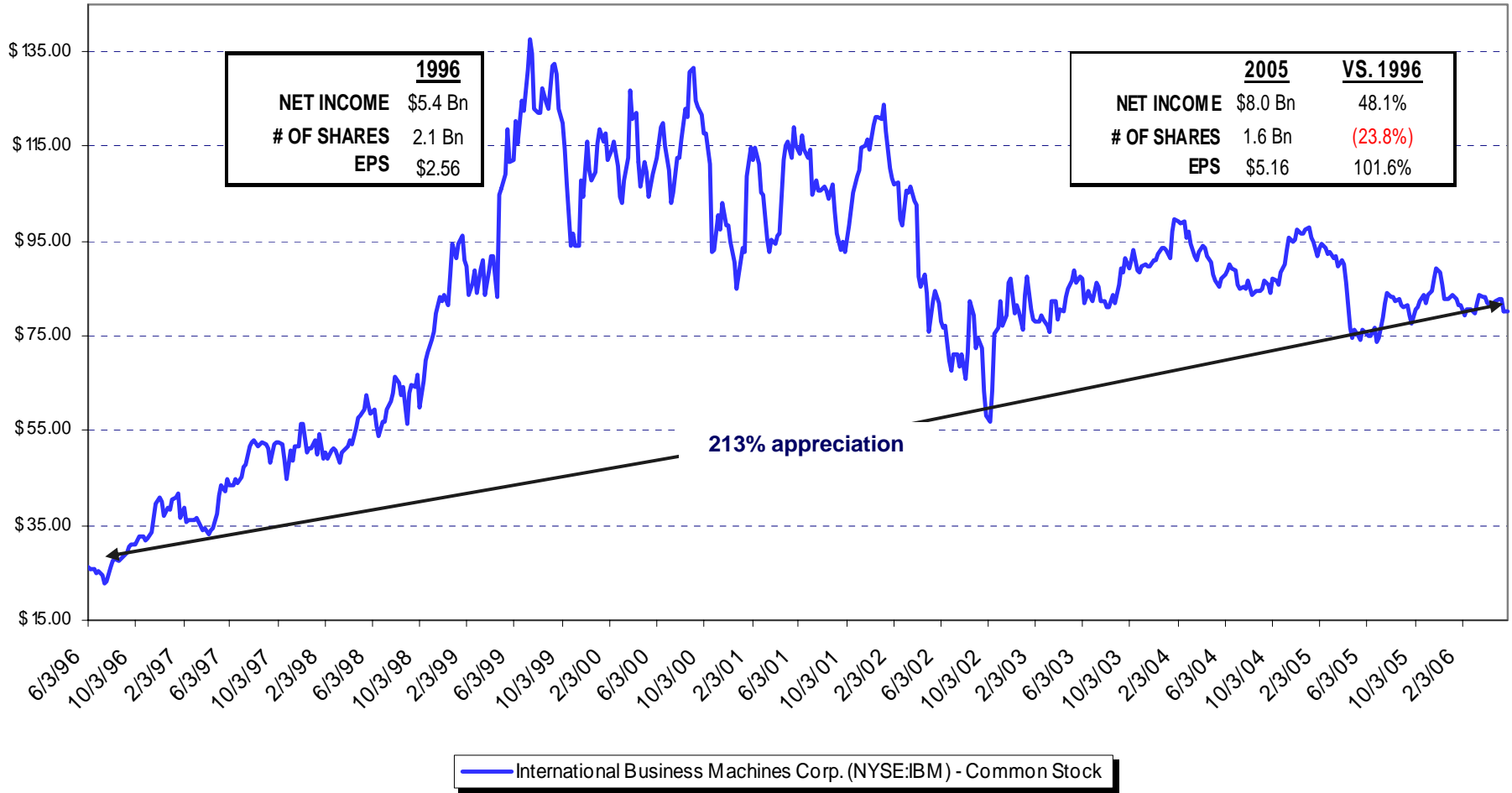
Surprisingly, IBM's share price performance has matched or exceeded the performance of peers HP and EDS, as well as leaders such as Cisco and Microsoft. Also, IBM issued dividends throughout this period, while Cisco does not issue dividends and Microsoft began issuing dividends only in 2003

- Significantly, IBM's 10-year performance has exceeded the Dow's, of which it is a component



# ... benefits significantly from share repurchases

About one quarter of IBM's 10-year EPS growth is driven by repurchases



## **Technology Share Repurchase Study -- Detailed Results**

# Analytical framework

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**The GTK Share Technology Repurchase Study reviewed about 240 share repurchase programs announced since mid-2003 by technology companies**

- Repurchase programs for less than 3% or more than 25% of shares outstanding were excluded to control for routine treasury operations and recapitalizations, respectively
- Some companies made more than one announcement during this time period. We treated each as a discrete event
- We used third-party categorizations of “Information Technology” companies, which generally exclude Internet advertising and telecommunications services
- No other filters, including for company size, were used

**We also present the correlation of stock price impact with the following metrics**

- Equity value at the time of announcement
- Cash as a percent of equity value at the time of announcement
- LTM P/E at the time of announcement
- Percent of shares to be repurchased
- Stock price versus the 52 week low at the time of announcement

**We tracked the stock price performance relative to the NASDAQ composite on the 1-day, 1-week, 3-month and 6-month anniversaries of the SRP announcement**

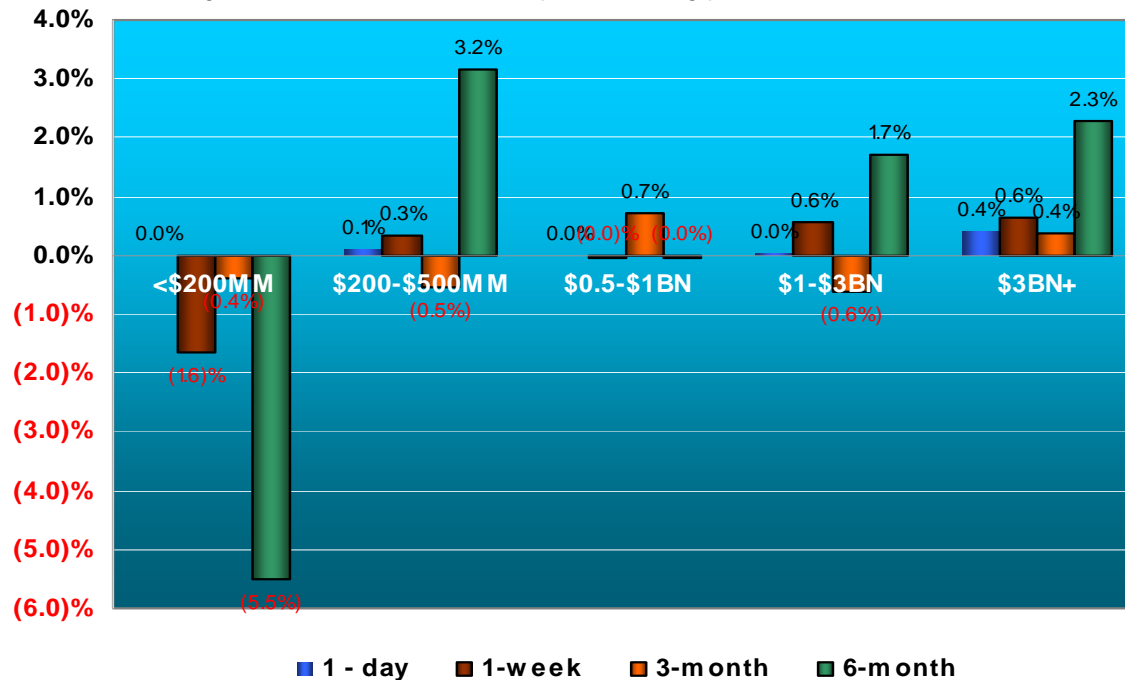
# Large-cap tech stocks fair better with SRPs

This observation from our Study supports the use of SRPs as long-term value drivers for companies whose business is de-risking

- However, some academic studies, when they see positive results, see them skewed *toward* small-cap entities. This conflict may be because over the last three years, and certainly compared to the industrial companies involved in academic studies, small-cap technology companies have been viewed as competitively challenged. Therefore, we may be seeing a general underperformance in small-cap tech stocks rather than mainly SRP-related effects

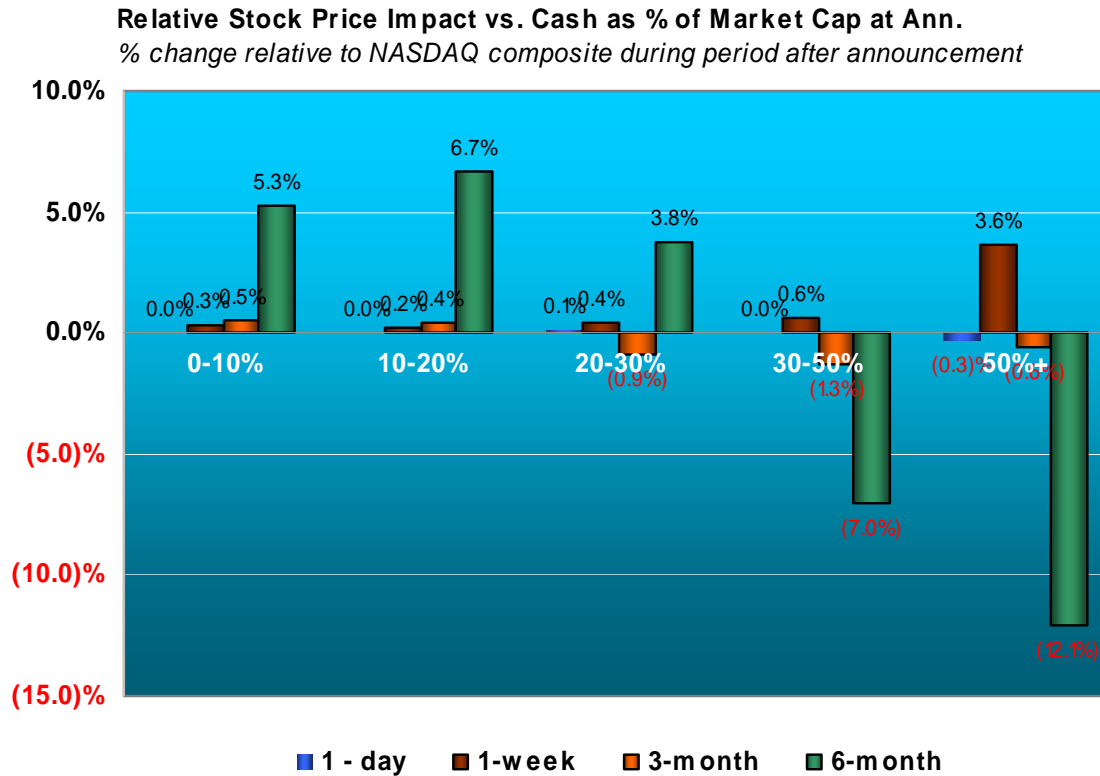
**Relative Stock Price Impact vs. Market Cap at Announcement**

*% change relative to NASDAQ composite during period after announcement*



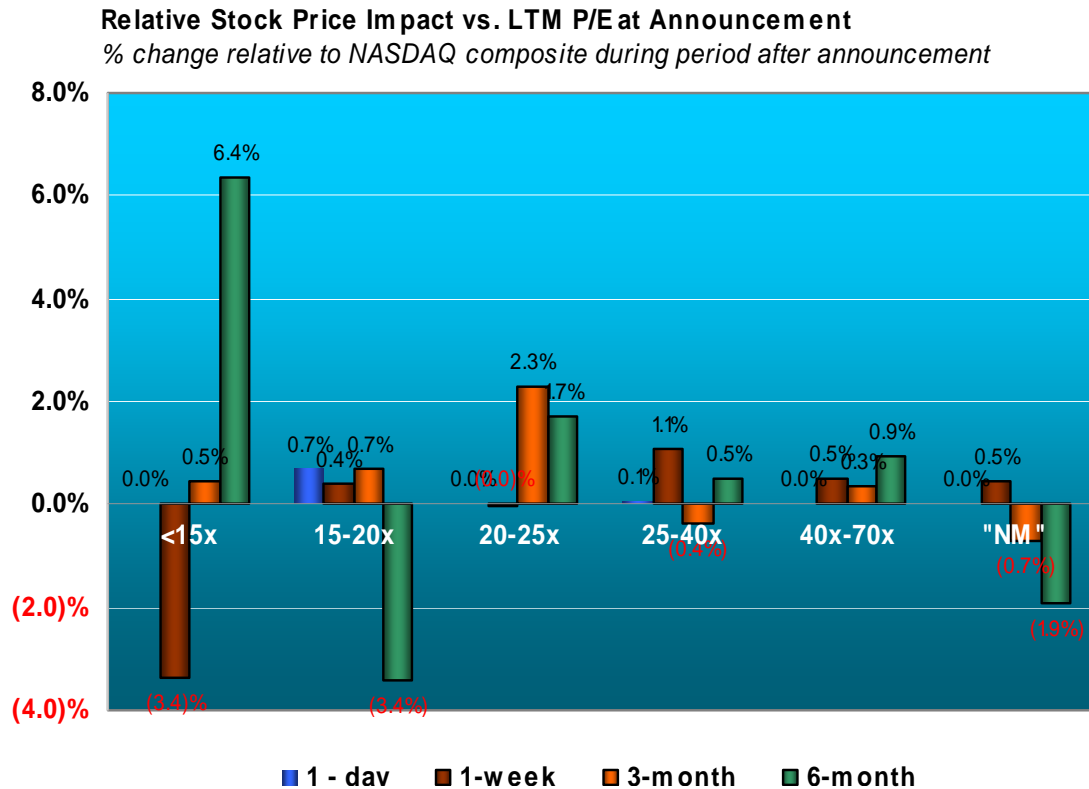
# Cash-heavy companies fair worse

High cash-to-market cap ratios often belong to companies with overarching business challenges that have depressed their stock prices. As such, we may infer that SRPs can't overwhelm the influence of the business challenge



# Profitable, low P/E stocks more amenable to SRPs

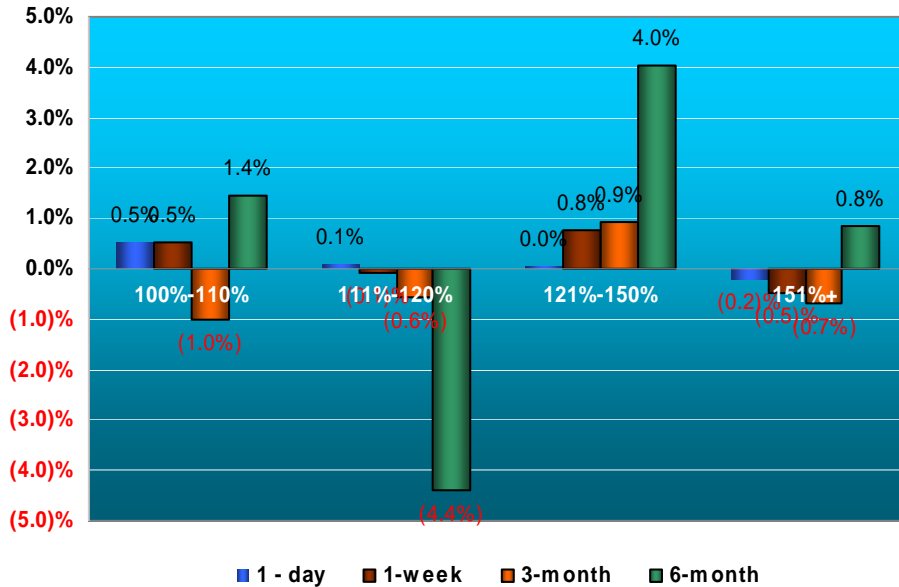
A general trend of better performance for low-P/E stocks may be inferred. The “NM” category is associated with companies that were break-even to loss-making



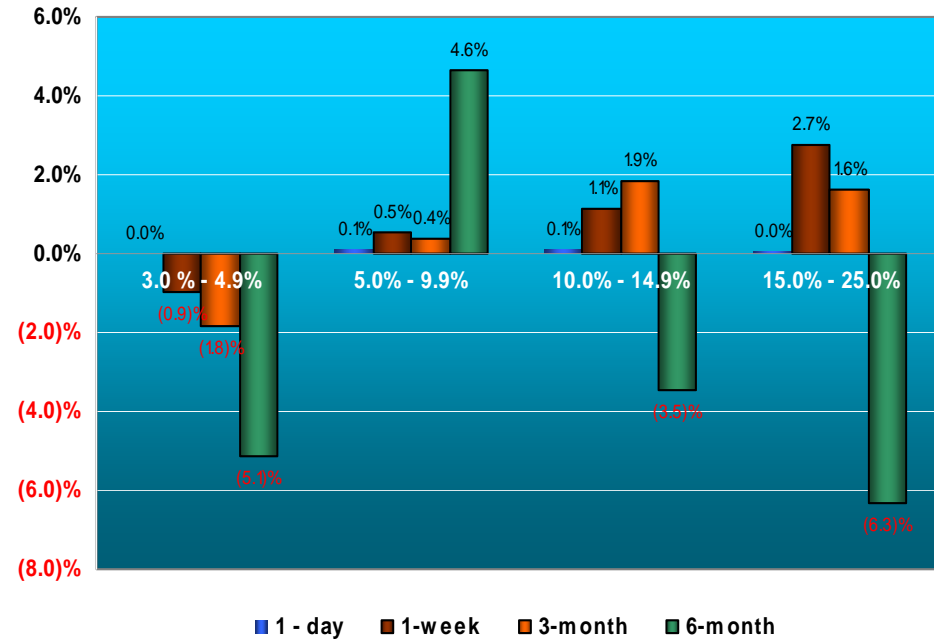
# Other potential correlations

**Median-size repurchase programs (about 7% of shares outstanding) seem to do best, while correlations with the stock price relative to its 52-week low are difficult to draw**

**Relative Stock Price Impact vs. Stock Price at Ann. as % of 52wk Low**  
 % change relative to NASDAQ composite during period after announcement



**Relative Stock Price Impact vs. % of Shares to be Repurchased**  
 % change relative to NASDAQ composite during period after announcement



# Detailed results, including unadjusted figures

## Stock Price Impact vs. Market Cap at Announcement

Repurchase Programs, Technology, Last 3 Years

| Market Cap        | MEDIAN STOCK PRICE IMPACT |          |        |          |         |          |         |          |
|-------------------|---------------------------|----------|--------|----------|---------|----------|---------|----------|
|                   | 1 - day                   |          | 1-week |          | 3-month |          | 6-month |          |
|                   | Unadj.                    | Adj. (a) | Unadj. | Adj. (a) | Unadj.  | Adj. (a) | Unadj.  | Adj. (a) |
| <\$200MM          | 0.0%                      | 0.0%     | (1.9%) | (1.6%)   | 0.0%    | (0.4%)   | (8.6%)  | (5.5%)   |
| \$200-\$500MM     | 0.2%                      | 0.1%     | 1.0%   | 0.3%     | (0.4%)  | (0.5%)   | (9.8%)  | 3.2%     |
| \$500-\$1,000MM   | 0.0%                      | 0.0%     | 0.2%   | (0.0%)   | 2.0%    | 0.7%     | (5.9%)  | (0.0%)   |
| \$1,000-\$3,000MM | 0.0%                      | 0.0%     | 1.7%   | 0.6%     | 1.4%    | (0.6%)   | 3.8%    | 1.7%     |
| \$3bn+            | 0.4%                      | 0.4%     | 1.4%   | 0.6%     | 1.7%    | 0.4%     | (2.0%)  | 2.3%     |

(a) Normalized against NASDAQ change over same period.

## Stock Price Impact vs. Cash as % of Market Cap at Announcement

Repurchase Programs, Technology, Last 3 Years

| Cash/Market Cap | MEDIAN STOCK PRICE IMPACT |          |        |          |         |          |         |          |
|-----------------|---------------------------|----------|--------|----------|---------|----------|---------|----------|
|                 | 1 - day                   |          | 1-week |          | 3-month |          | 6-month |          |
|                 | Unadj.                    | Adj. (a) | Unadj. | Adj. (a) | Unadj.  | Adj. (a) | Unadj.  | Adj. (a) |
| 0-10%           | 0.0%                      | 0.0%     | 1.0%   | 0.3%     | 2.4%    | 0.5%     | 10.0%   | 5.3%     |
| 10-20%          | 0.1%                      | 0.0%     | 0.3%   | 0.2%     | 0.9%    | 0.4%     | 13.8%   | 6.7%     |
| 20-30%          | 0.0%                      | 0.1%     | 0.9%   | 0.4%     | 1.9%    | (0.9%)   | 12.3%   | 3.8%     |
| 30-50%          | 0.5%                      | 0.0%     | 0.6%   | 0.6%     | (2.0%)  | (1.3%)   | 0.1%    | (7.0%)   |
| 50%+            | 0.0%                      | (0.3%)   | 5.4%   | 3.6%     | 3.9%    | (0.6%)   | (1.7%)  | (12.1%)  |

(a) Normalized against NASDAQ change over same period.

## Stock Price Impact vs. LTM P/E at Announcement

Repurchase Programs, Technology, Last 3 Years

| LTM P/E                             | MEDIAN STOCK PRICE IMPACT |          |        |          |         |          |         |          |
|-------------------------------------|---------------------------|----------|--------|----------|---------|----------|---------|----------|
|                                     | 1 - day                   |          | 1-week |          | 3-month |          | 6-month |          |
|                                     | Unadj.                    | Adj. (a) | Unadj. | Adj. (a) | Unadj.  | Adj. (a) | Unadj.  | Adj. (a) |
| <15x                                | 0.0%                      | 0.0%     | (3.2%) | (3.4%)   | 3.4%    | 0.5%     | 0.1%    | 6.4%     |
| 15-20x                              | 0.5%                      | 0.7%     | 0.1%   | 0.4%     | 1.7%    | 0.7%     | (1.9%)  | (3.4%)   |
| 20-25x                              | 0.2%                      | 0.0%     | 1.2%   | (0.0%)   | 1.9%    | 2.3%     | (6.7%)  | 1.7%     |
| 25-40x                              | 0.0%                      | 0.1%     | 1.1%   | 1.1%     | 0.6%    | (0.4%)   | (3.0%)  | 0.5%     |
| 40x-70x                             | 0.0%                      | 0.0%     | 1.8%   | 0.5%     | 2.4%    | 0.3%     | (0.7%)  | 0.9%     |
| Depressed earnings /<br>loss-making | 0.0%                      | 0.0%     | 1.1%   | 0.5%     | 0.3%    | (0.7%)   | (8.6%)  | (1.9%)   |

(a) Normalized against NASDAQ change over same period.

# Detailed results including unadjusted figures (cont'd)

## Stock Price Impact vs. Percent of Shares to be Repurchased

Repurchase Programs, Technology, Last 3 Years

| Repurchase %  | MEDIAN STOCK PRICE IMPACT |          |        |          |         |          |         |          |
|---------------|---------------------------|----------|--------|----------|---------|----------|---------|----------|
|               | 1 - day                   |          | 1-week |          | 3-month |          | 6-month |          |
|               | Unadj.                    | Adj. (a) | Unadj. | Adj. (a) | Unadj.  | Adj. (a) | Unadj.  | Adj. (a) |
| 3.0 % - 4.9%  | (0.4%)                    | 0.0%     | 0.0%   | (0.9%)   | 1.1%    | (1.8%)   | (8.4%)  | (5.1%)   |
| 5.0% - 9.9%   | 0.4%                      | 0.1%     | 1.4%   | 0.5%     | 1.1%    | 0.4%     | 0.1%    | 4.6%     |
| 10.0% - 14.9% | 0.5%                      | 0.1%     | 1.3%   | 1.1%     | 1.6%    | 1.9%     | (4.2%)  | (3.5%)   |
| 15.0% - 25.0% | 0.0%                      | 0.0%     | 0.9%   | 2.7%     | 3.6%    | 1.6%     | (2.9%)  | (6.3%)   |

(a) Normalized against NASDAQ change over same period.

## Stock Price Impact vs. % 52 Week Low At Announcement

Repurchase Programs, Technology, Last 3 Years

| % 52 Week Low | MEDIAN STOCK PRICE IMPACT |          |        |          |         |          |         |          |
|---------------|---------------------------|----------|--------|----------|---------|----------|---------|----------|
|               | 1 - day                   |          | 1-week |          | 3-month |          | 6-month |          |
|               | Unadj.                    | Adj. (a) | Unadj. | Adj. (a) | Unadj.  | Adj. (a) | Unadj.  | Adj. (a) |
| 100%-110%     | 0.5%                      | 0.5%     | 1.4%   | 0.5%     | 2.6%    | (1.0%)   | 4.2%    | 1.4%     |
| 111%-120%     | 0.2%                      | 0.1%     | 0.4%   | (0.1%)   | 1.6%    | (0.6%)   | (2.2%)  | (4.4%)   |
| 121%-150%     | 0.0%                      | 0.0%     | 1.3%   | 0.8%     | 2.3%    | 0.9%     | (2.4%)  | 4.0%     |
| 151%+         | 0.0%                      | (0.2%)   | 0.5%   | (0.5%)   | (0.2%)  | (0.7%)   | (8.6%)  | 0.8%     |

(a) Normalized against NASDAQ change over same period.

# GTK Partners

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## Our services for the technology, healthcare, and consumer sectors include:

- M&A advisory. For public companies, GTK will consider retainer-oriented arrangements with reduced success fees. For private companies, we will consider equity-oriented compensation.
- Corporate development advisory. Our engagements are retainer-oriented with a client option to engage GTK on a per-transaction, reduced-fee basis.
- Private placements: \$10MM-\$150MM transactions for funding from US and European sources.

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