

**TRAINING INVESTMENTS AS A PREDICTOR  
OF BANKS' SUBSEQUENT STOCK MARKET PERFORMANCE**

Laurie Bassi and Daniel McMurrer  
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*This paper examines the relationship between banks' spending on training (and changes in their training expenditures), on their subsequent stock price. The analysis assesses stock market performance from 2004 to 2008 for US banks, using a total of 30 observations.*

*We find that training expenditures are a very strong and statistically significant predictor of subsequent stock prices.*

*Although we have 2007 training data on only a very small number of banks, the analysis suggests that this relationship existed even during the market turbulence of 2008.*

*Taken together, the results argue that companies' spending on training is a piece of information that stakeholders need to know.*

**Introduction**

In the past, we have done research that has found strong evidence that training expenditures serve as a ***predictor*** of stock market returns for publicly-traded companies.<sup>1</sup> All else being equal, those companies that spend more on training (measured on a per capita basis) do better in the stock market in the subsequent year than those companies that spend less.

We have come to believe that this relationship reflects multiple factors. First, it is quite reasonable to take the findings at face value -- companies that choose to make larger investments in their employees are better-positioned for success. This is especially true in today's knowledge-based global economy, in which a company's people may often represent its most important (or only) competitive advantage.

Secondarily, training expenditures may serve as an indicator of a more general organizational characteristic -- a willingness to take a longer-term perspective on success -- looking beyond maximizing this quarter's earnings report.<sup>2</sup> And third, training expenditures (or changes in those expenditures) may serve as a window into an organization's future financial health and well-being -- a firm that's willing to incur the "cost" of long-term investments is, at minimum, one that is probably not on the verge of collapse. (And conversely, drastic cuts in its training expenditures from one year to the next may be a signal of upcoming trouble.)

All three of these factors are reasons that, as we have argued, investors and stakeholders should have a keen interest in an organization's training investments.

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<sup>1</sup> See, for example, "How's Your Return on People?" (Bassi and McMurrer), *Harvard Business Review*, March 2007, or "The Impact of US Firms' Investments in Human Capital on Stock Prices" (Bassi, Harrison, Ludwig, and McMurrer, 2004). Both are available for download at [www.mcbassi.com](http://www.mcbassi.com).

<sup>2</sup> Because training investments are treated as a "hidden" cost for accounting purposes (they are buried in a company's overhead - "selling, general, and administrative expenses," or SG&A), spending on training and development results in a "cost" that reduces immediate earnings.

### **Any New Insights in the Wake of the Global Financial Crisis?**

Following the financial cataclysm of 2008, stocks in financial markets across the world fell dramatically. Few companies and few industries were spared. It's clear that external financial events were having a massive effect on company valuations and stock performance. In the financial sector itself, banks and other institutions were judged in large part based on their exposure to mortgage defaults, subprime lending, other failed institutions, and a variety of esoteric financial instruments.

We found ourselves curious -- how well had this previously-documented relationship between training investments and stock market performance held up in a period in which external factors seemed to be playing a larger-than-usual role in driving the ups and downs of individual stocks in the stock market? Did it still exist? Was it just as strong or was it weaker? Or had the relationship perhaps vanished entirely, with the market perhaps punishing "good" companies and "bad" companies almost indiscriminately?

We were particularly interested in seeing how this relationship had evolved for bank stocks, the ones that had been most directly caught up in the market mayhem that characterized the second half of 2008. Did the same relationship still exist, or were those previously-observed effects being swamped by larger forces at play in the financial world?

### **Data and Analysis**

One of the perennial challenges in conducting any sort of analysis on the impact of training expenditures is the lack of available data. Because companies are not required to report it publicly, there is no centralized database of information -- it needs to be collected painstakingly, often from one company at a time. Over the years, we've built up our own database of training expenditures information,<sup>3</sup> and US banks represent one of the areas in which we have the largest number of data points (as well as data on changes over time), enabling us to take a deep look at this sector of the economy.

#### ***Training Expenditures Per Employee and Subsequent Year's Stock Performance***

We put together a database of 30 observations of US banks for which we had training data for at least one year during the most recent five years available (between 2003 and 2007).<sup>4</sup> We then examined the relationship between each bank's training expenditures per employee in one year and its stock market performance in the following year.<sup>5</sup> (To enable us to control across years and across different slices of the banking sector, we looked at the bank's performance relative to the average performance that year by all banks in its specific banking comparison group,<sup>6</sup> as defined by Morningstar.)

Using only training data to predict the subsequent year's relative stock market performance for those banks yielded an adjusted R-squared statistic of 0.21,<sup>7</sup> indicating that 21 percent of the variation<sup>8</sup> in relative stock

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<sup>3</sup> Most of our data came from one of three sources: published lists of top training companies (e.g., annually in *Training Magazine*), data collection efforts by our investment firm, Bassi Investments, or benchmarking data collected by McBassi.

<sup>4</sup> Accurate data on training expenditures is typically not available until at least the first or second quarter of the subsequent year. Hence, 2007 is the most recent year for which we currently have data available.

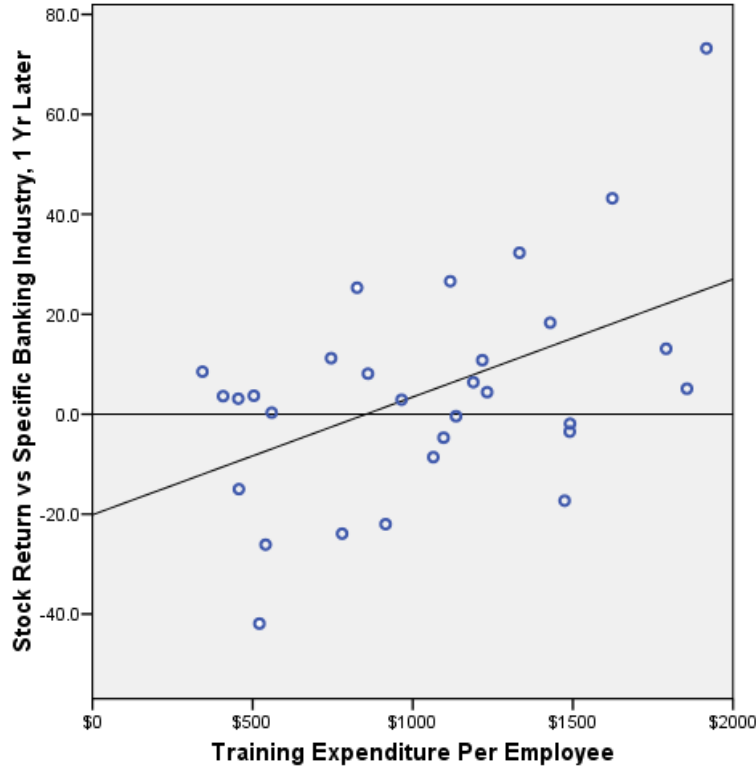
<sup>5</sup> 2008 stock return data are current as of December 10, 2008.

<sup>6</sup> Morningstar defines four categories of banks - international scope, super-regional, regional, or savings and loan. The relative performance was calculated by subtracting the overall performance by that banking category from the individual bank's actual performance. Thus, if a regional bank gained 15 percent in a year and regional banks as a whole gained 8 percent in that year, the bank's relative performance would be a positive 7 percent for the year.

<sup>7</sup> Note that in a simple linear regression, R-squared (the coefficient of determination) is the square of a correlation coefficient (commonly referred to as  $\rho$ ). So, for example, a R-squared of .25 corresponds to a correlation coefficient of .50.

market performance can be explained by variation in training expenditures per employee (which, as indicated above, likely serve as a combined indicator of a company's investment in its employees, its long-term perspective, and its financial well-being). This relationship can be seen graphically in Figure 1 below.

**Figure 1. Training Expenditures Per Employee, 2003 to 2007, and Subsequent Relative Stock Market Performance, US Banks**



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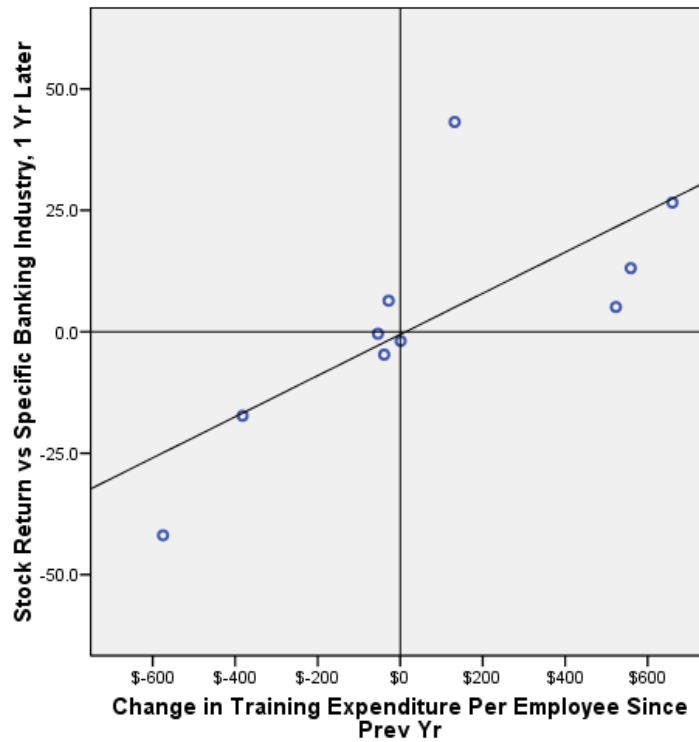
<sup>8</sup> We also examined the relationship between training expenditures per employee and relative stock market performance 2 or 3 years later, and found a much weaker relationship. We also added some non-US banks into the sample, and also found that the relationship was not as clear.

**Change in Training Expenditures and Stock Performance**

We then took the 10 instances in which we had data on training expenditures per employee for a bank for two consecutive years, and examined the relationship between the *change* in their per capita training expenditures and their relative stock market performance, as defined above. (For example, if a company spent \$1000 per employee in 2005 and \$1200 per employee in 2006, its change would be +\$200 when examining its stock performance in 2007.)

The relationship is even stronger for change in training expenditures than it was for training expenditures alone. The adjusted R-squared is 0.49, indicating that almost half of the variation in their relative stock market performance could have been predicted by the change in training expenditures that occurred in the previous year.<sup>9</sup> This relationship can be seen in Figure 2 below.

**Figure 2. Change in Training Expenditures Per Employee, 2004 to 2007, and Subsequent Relative Stock Market Performance**



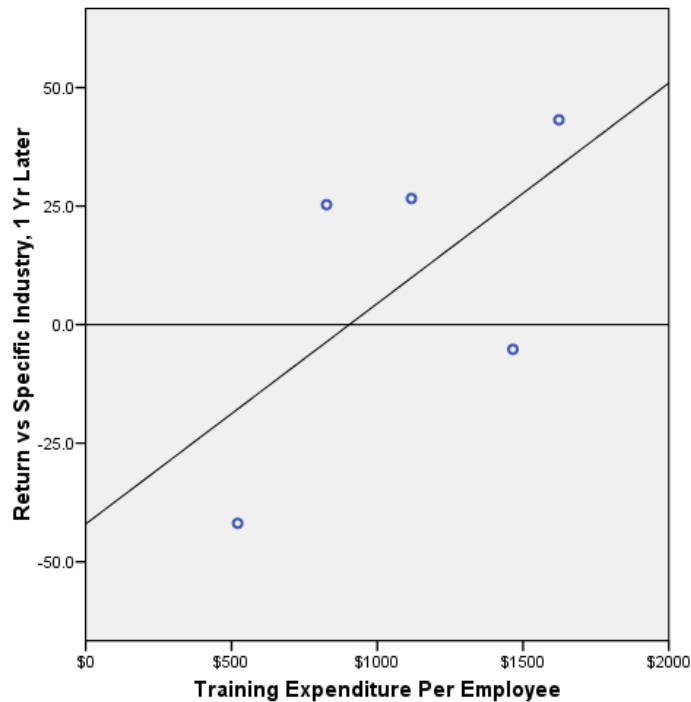
<sup>9</sup> As in the previous analysis, we also examined the relationship between change in training expenditures per employee and relative stock market performance 2 or 3 years later, and again found a much weaker relationship. Similarly, we also again found a weaker relationship when non-US banks were added into the data being analyzed.

**Training and Stock Market Performance in 2008**

Finally, the most interesting question. What about banks' performance in 2008 in particular? Did this relationship still exist? Because of limited data availability, we only have data on five banks,<sup>10</sup> which is hardly enough to provide a definitive answer.

This limited information, however, certainly points to an intriguing story. Training expenditures per employee in 2007 explained a comparable percentage of relative stock performance in 2008 (19 percent of all variation explained, based on the adjusted R-squared statistic, compared to a slightly higher 21 percent for the five-year analysis described above; see Figure 3).

**Figure 3. Training Expenditures Per Employee, 2007, and Relative Stock Market Performance, 2008**



And when change in training expenditure per employee is examined (this information was only available for four of these five banks), the relationship is again a strong one, with 39 percent of all variation explained by the change in training expenditure.<sup>11</sup> (See Figure 4.)

Further, investors would have been well-served to have avoided the bank in the lower-right corner of Figure 4. Its identity? Wachovia Bank.<sup>12</sup> Mired in losses related to bad mortgages, Wachovia frantically sold itself

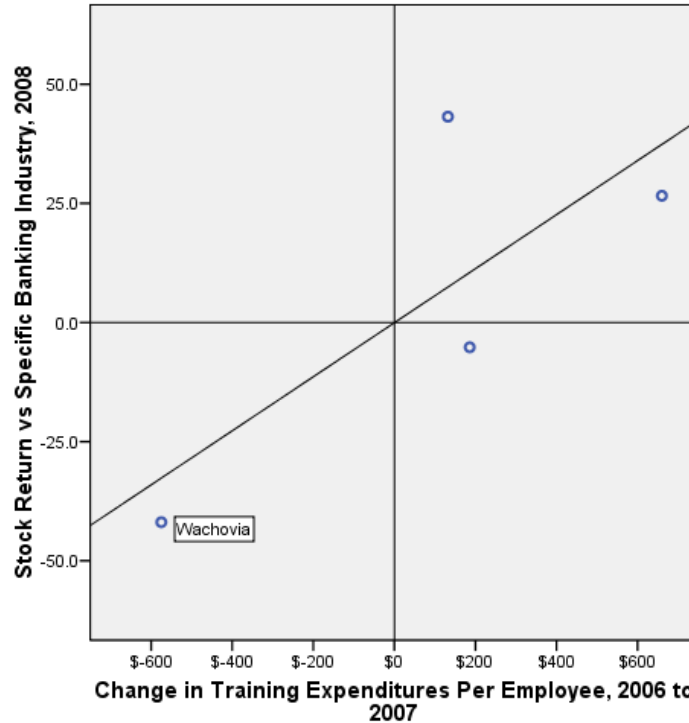
<sup>10</sup> Four of the banks for which we have changes data for 2006 to 2007 are from the United States; one is from Canada. The Canadian bank was included in the analysis to maximize the number of data points for this very small sample; its inclusion does not affect the nature of the results.

<sup>11</sup> This is lower than the 49 percent for the larger sample shown in Figure 2, but it should be noted that 39 percent of variation is still a substantial percentage, assuming these four banks are representative of the bank population as a whole.

<sup>12</sup> *Training Magazine* reported in its March 2007 issue that Wachovia spent \$1096 per employee worldwide in the previous year. In February 2008, the magazine reported that Wachovia spent \$521 per employee worldwide, a decline of \$575 per employee in one year.

in September/October 2008, under pressure from federal regulators. In the end, Wachovia lost over 85 percent of its market value during the calendar year 2008.

**Figure 4. Change in Training Expenditures Per Employee, 2006 to 2007, and Relative Stock Market Performance, 2008**



### Conclusion

We conclude that training investments (as well as changes in those investments) remain a powerful predictor of subsequent stock prices. This relationship appears to have existed even during the tremendous turbulence of 2008.

While this analysis cannot determine *why* this relationship exists, it seems reasonable to conclude that a number of factors are at play:

- First, common sense suggests that training investments have their intended impact: those firms that make greater investments in this area subsequently perform better as a result.
- Second, training investments may well serve as a proxy for the degree to which a firm is willing and able to take a long-term perspective, rather than focus excessively (and destructively) on quarterly earnings.
- Third, expenditures on training (and in particular, changes in those expenditures) may serve as a window into an organization's future financial health and well-being (or lack thereof).

The bottom line is that a company's spending on training is a critical piece of information for its stakeholders to know. If you're an investor or employee, you should demand this information. And if it is not forthcoming, or if it suggests that the firm is headed in the wrong direction, you might want to consider heading for the door.