

# **LESSONS LEARNED FROM CEO PAY AND MARKET CAP PERFORMANCE IN THE MINING AND METALS INDUSTRIES: IMPLICATIONS FOR THE BOARD OF DIRECTORS AND FOR CORPORATE GOVERNANCE**

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## **Abstract**

CEO pay was correlated with market capitalization performance. Three simple correlation tests of 2013 total CEO pay with market capitalization destruction over the approximate three and one-half year period, January 2011 through July 2014, yielded a 66% weighted average moderate correlation for thirty-four companies. The total market cap destruction for these companies was an estimated \$120.1 billion with total CEO pay of \$224.6 million. Thus, total market cap destruction was approximately 535 times greater than total CEO pay. During this approximate three and one-half year time period, the S&P 500 Index increased 51.8%. Our simple correlation tests do not imply any causality. However, some corporate governance researchers (Kostyuk, 2014 and Hilb, 2008) have advocated: "Pay for Performance, not Presence" which could include such correlations as part of executive compensation packages from Board of Directors' compensation committees. Claw-back provisions could be used for market capitalization destruction in evolving executive compensation packages.

**Keywords:** CEO Pay, Market Capitalization, Corporate Governance, Board of Directors

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## **1 Introduction**

One of the major responsibilities of a company's Board of Directors is to determine the compensation of the company's CEO. The recommendation usually comes from the Board's compensation committee. The compensation package for a CEO can consist of a base salary, incentive pay frequently in the form of shares of stock and stock options, and a severance package that may include a golden parachute. We have seen many examples of CEO compensation levels that have called into question why the Board chose to give these amounts. This was especially evident in two time periods. During the stock market decline of the early 2000s, the CEOs of Merrill Lynch and Citigroup were fired because their companies were posting losses in the billions of dollars. However, both were given golden parachutes of over \$100 million each. During the financial crisis of 2008-2009, many U.S. financial services companies lost billions of dollars, and some had to be bailed out by the U.S. government. However, there were many examples of these companies' CEOs still receiving high levels of compensation, including bonuses. These examples, as well as many others, have resulted in many stockholders, regulators, and legislators questioning

whether Boards of Directors are acting in the best interest of shareholders when they are making the CEO compensation decision.

A recent research study (Cooper, Gulen, and Rau, 2013) challenged the past two decades of academic research that argued chief executive officer (CEO) compensation should be aligned to firm performance. Such previous studies used small sample sizes in comparison to this new study. The authors of this new study also challenged recent regulatory proposals that have argued for more long-term compensation which implies a positive relation between incentive pay and future stock returns. Their paper abstract summarized their research findings:

"We find evidence that CEO pay is negatively related to future stock returns for periods up to three years after sorting on pay. For example, firms that pay their CEOs in the top ten percent of excess pay earn negative abnormal returns over the next three years of approximately 8%. The effect is stronger for CEOs who receive higher incentive pay relative to their peers. Our results appear to be driven by high-pay induced CEO overconfidence that leads to shareholder wealth losses from activities such as overinvestment and value-destroying mergers and acquisitions."

This study also found that CEO pay in the top ten percent of excess pay earned negative abnormal returns over the next five years of approximately 13%. The authors further elaborated their findings:

"In this paper, we present new evidence on the relationship between CEO pay, CEO overconfidence, and future stock returns using a much broader data set than previous studies. We show that highly paid CEOs exhibit firm investment and personal portfolio choice behavior that is consistent with being overconfident and that firms with the highest paid and most overconfident CEOs earn lower future returns relative to other CEOs. Specifically, we analyze the relation between CEO compensation and future returns using the entire Execucomp database (largely the S&P 1500 firms) over the 1994-2011 period, a much longer period than previous studies. We sort firms annually into industry and size benchmark adjusted CEO compensation (we deem this excess pay) deciles. We find a strong negative relation between annual excess pay and future abnormal returns. In the year after the firms are classified into the lowest and highest excess compensation deciles respectively, firms in the lowest total excess compensation decile earn insignificant abnormal returns."

They have defined excess pay as incentive compensation which includes restricted stock grants, option grants, long-term incentive payouts, and other annual noncash compensation. The companies in their study were the S&P 1550 firms or all NYSE, AMEX, and NASDAQ firms jointly listed on the Compustat Execucomp Database from 1994 to 2010 and on the CRSP files of stock returns from 1994 to 2011. Total median CEO pay consisted of 48% cash compensation (salary and bonus) and 52% incentive compensation for these companies.

They defined an overconfident CEO "as one who maintains a large proportion of unexercised exercisable in-the-money options relative to their total compensation, measured in the year after firms are allocated into pay deciles...Thus, according to this measure, the highest paid CEOs do in fact appear to be more overconfident than their lower paid peers." They found that high paid CEOs engaged in greater investment activities (capital expenditures and mergers) than low paid CEOs and that the stock market reacted more negatively to the merger announcements of the high paid CEOs. Their results "suggested that firms with highly paid CEOs earn significantly lower stock returns when the CEO is also overconfident." They also found "that the level of the industry and size adjusted incentive compensation is significantly negatively related to the forward one-year return of assets." Such poor company performance would be impounded in the negative stock returns by an efficient stock market which could give CEOs an incentive to manage accounting earnings.

In financial press interviews, the authors made further observations. These CEOs tend to think that they can do no wrong or they would not be entrusted

with their position and their pay. One of the authors commented: "They ignore dis-confirming information and just think that they are right. That tends to result in over-investing—investing too much and investing in bad projects that don't yield positive returns for investors" (Adams, 2014). This author also commented: "For the high-pay CEOs, with high overconfidence and high tenure, the effects are just crazy. They return 22% worse in shareholder value over three years as compared to their peers" (Morgan, 2014).

In summary, this research found that "firms in the lowest CEO pay decile earn insignificant industry and momentum adjusted returns. In contrast, the firms in the highest CEO pay decile earn significant negative abnormal returns. The performance worsens significantly over time." The authors concluded "that our results seem most consistent with the hypothesis that overconfident CEOs accept large amounts of incentive pay and consequently engage in value destroying activities that translate into future reductions in returns and firm performance. Our results are inconsistent with managerial risk-shifting. Our results imply that managerial compensation components such as restricted stock, options and long-term incentives payouts, that are meant to align managerial interest with shareholder value, do not necessarily translate into higher future returns for shareholders."

## **2 Application to mining and metals industries**

We did simplistic empirical tests of these authors' findings for CEO pay in three mining and metals industries (Grove and Clouse, 2015). Then, we extended these results for lessons learned concerning corporate governance implications. We chose these industries because some of their companies have recently experienced very dramatic market capitalization changes. We correlated total CEO pay in 2013 with market capitalization changes over a three and one-half year period from approximately January 2011 through July 2014 for three mining and metals industries: metal mining, primary metal industries, and coal mining. The total CEO pay data was provided by an AFL/CIO study on CEO-Pay-by-Industry (AFL/CIO, 2014). Our empirical tests used the following reported total CEO pay data for 2013: all thirteen CEOs in the metal mining industry; of the thirty-one CEOs in the primary metal industries, we just used the top thirteen to match the first industry; and all eight CEOs in the coal mining industry. We reasoned that the reported total CEO pay would include a significant portion of incentive pay since the prior cited study found that total CEO pay included 52% median CEO incentive compensation. Also, the average pay for the thirty-four CEOs in our study was \$6.6 million (with median pay of \$4.6 million) which implied a significant amount of incentive compensation.

By using this three and one-half year period, we looked both back and forward for changes in market cap versus total CEO pay. The market cap changes were estimated from approximately January 1, 2011 for the metal mining industry and February 1, 2011 for the primary metals and coal mining industries as these dates seemed to reflect stock price peaks for companies in these industries. For the thirty-four companies in our study, the ten negative numbers in the following three tables reflected market cap improvements versus the twenty-four positive

numbers reflecting market cap destructions over this three and one-half year period.

In Table 1, CEO pay for the thirteen metal mining companies was correlated with market capitalization change from January 2013 through July 2014. The total CEO pay was \$97.1 million. All the market cap changes were reductions for a total of \$68.4 billion in market cap destruction. The correlation of CEO pay with market cap destruction was 76.1% which indicated a strong positive correlation. Total market cap destruction was approximately 704 times greater than total CEO pay.

**Table 1.** CEO pay and market cap destruction (metal mining industry)

<b>Company</b>	<b>CEO Pay</b>	<b>Market Cap Destruction</b>
Freeport-McMoran Copper & Gold	\$ 55,260,539	\$ 21,000,000,000
Cliffs Natural Resources Inc.	\$ 10,744,662	\$ 11,100,000,000
Newmont Mining Corp.	\$ 8,763,222	\$ 17,400,000,000
Stillwater Mining	\$ 4,783,367	\$ 500,000,000
Hecla Mining Co.	\$ 3,854,679	\$ 2,000,000,000
Coeur Mining Inc.	\$ 3,602,873	\$ 1,700,000,000
Allied Nevada Gold Corp.	\$ 3,550,155	\$ 2,600,000,000
Gold Resource	\$ 2,334,252	\$ 960,000,000
Southern Copper Corp.	\$ 1,603,307	\$ 9,900,000,000
General Moly Inc.	\$ 1,052,775	\$ 360,000,000
Uranium Energy Corp.	\$ 567,251	\$ 360,000,000
Paramount Gold & Silver	\$ 517,624	\$ 390,000,000
Midway Gold Corp.	\$ 484,104	\$ 120,000,000
Totals	\$ 97,118,810	\$ 68,390,000,000
Pearson Correlation Coefficient	0.761	

In Table 2, CEO pay for the top thirteen primary metal companies was correlated with market capitalization change from February 2013 through July 2014. The total CEO pay was \$80.1 million. Although eight of the thirteen market cap changes were increases, the net change was \$5.6 billion in market cap destruction. This net destruction was caused significantly by the first two companies, Alcoa

and United States Steel, with the highest CEO pay, \$14.8 million and \$12.5 million, respectively, having the largest market cap destructions of \$3.5 billion and \$3.6 billion, respectively. The correlation of CEO pay with market cap destruction was 68.5% which indicated a moderate positive correlation. Total market cap destruction was approximately 70 times greater than total CEO pay.

**Table 2.** CEO pay and market cap destruction (primary metal industry)

<b>Company</b>	<b>CEO Pay</b>	<b>Market Cap Destruction</b>
Alcoa Inc.	\$ 14,825,806	\$ 3,500,000,000
United States Steel Corp.	\$ 12,477,409	\$ 3,600,000,000
Nucor Corp.	\$ 8,139,044	\$ (700,000,000)
Belden Inc.	\$ 5,803,483	\$ (1,400,000,000)
General Cable Corp.	\$ 4,966,123	\$ 900,000,000
Allegheny Technologies Inc.	\$ 4,663,181	\$ 3,200,000,000
Worthington Industries	\$ 4,586,568	\$ (1,300,000,000)
Kaiser Aluminum Corp	\$ 4,561,710	\$ (500,000,000)
Mueller Industries	\$ 4,557,968	\$ (600,000,000)
Carpenter Technology Corp.	\$ 4,440,845	\$ (600,000,000)
OM Group Inc.	\$ 4,301,928	\$ 300,000,000
Mueller Water Products Inc.	\$ 3,432,284	\$ (600,000,000)
Matthews Intl. Corp.	\$ 3,365,057	\$ (200,000,000)
Totals	\$ 80,121,406	\$ 5,600,000,000
Pearson Correlation Coefficient	0.685	

In Table 3, CEO pay for eight coal mining companies was correlated with market capitalization change from February 2013 through July 2014. The total CEO pay was \$47.3 million. Six of the eight market cap changes were reductions for a net total of

\$46.1 billion in market cap destruction. The correlation of CEO pay with market cap destruction was 45.7% which indicated a weak positive correlation. Total market cap destruction was approximately 975 times greater than total CEO pay.

**Table 3.** CEO pay and market cap destruction (coal mining industry)

<b>Company</b>	<b>CEO Pay</b>	<b>Market Cap Destruction</b>
Consolidated Energy Inc.	\$ 15,170,492	\$ 3,400,000,000
Peabody Energy Corp.	\$ 10,789,389	\$ 14,900,000,000
Alpha Natural Resources Inc.	\$ 7,955,008	\$ 12,600,000,000
Arch Coal Inc.	\$ 4,348,086	\$ 6,800,000,000
Cloud Peak Energy Inc.	\$ 4,098,089	\$ 400,000,000
Walter Energy Inc.	\$ 2,941,211	\$ 8,500,000,000
Westmoreland Coal Co.	\$ 1,670,898	\$ (400,000,000)
Hallador Energy Co.	\$ 343,777	\$ (67,500,000)
Totals	\$ 47,316,950	\$ 46,132,500,000
Pearson Correlation Coefficient	0.457	

In Table 4, CEO pay for top ten, highest paid CEOs in the three mining and metals industry companies was correlated with market capitalization change from January 2013 through July 2014. Three were from metal mining, four were from primary metals, and three were from coal mining. The total CEO pay was \$149.9 million. Eight of the ten market

cap changes were reductions for a net total of \$85.4 billion in market cap destruction. The correlation of CEO pay with market cap destruction was 53.5% which indicated a moderate positive correlation. Total market cap destruction was approximately 570 times greater than total CEO pay.

**Table 4.** CEO pay and market cap destruction (top 10 CEO pay in these three industries)

<b>Company</b>	<b>CEO Pay</b>	<b>Market Cap Destruction</b>
Freeport-McMoran C&G	\$ 55,260,539	\$ 21,000,000,000
Consolidated Energy Inc.	\$ 15,170,492	\$ 3,400,000,000
Alcoa Inc.	\$ 14,825,806	\$ 3,500,000,000
United States Steel Corp.	\$ 12,477,409	\$ 3,600,000,000
Peabody Energy Corp.	\$ 10,789,389	\$ 14,900,000,000
Cliffs Natural Resources Inc.	\$ 10,744,662	\$ 11,100,000,000
Newmont Mining Corp.	\$ 8,763,222	\$ 17,400,000,000
Nucor Corp.	\$ 8,139,044	\$ (700,000,000)
Alpha Natural Resources Inc.	\$ 7,955,008	\$ 12,600,000,000
Belden Inc.	\$ 5,803,483	\$ (1,400,000,000)
Totals	\$ 149,929,054	\$ 85,400,000,000
Pearson Correlation Coefficient	0.535	

### 3 Conclusions

The first three simple correlation tests of 2013 total CEO pay with market capitalization destruction over the approximate three and one-half year period, January 2011 through July 2014, yielded a 66% weighted average moderate correlation for these thirty-four companies: 76.1% (strong) for the thirteen metal mining companies, 68.5% (moderate) for the thirteen primary metal companies, 45.7% (weak) for the eight coal mining companies. Also, there was a fourth correlation test which yielded a 53.5% (moderate) correlation for the top ten highest paid CEOs from these three industries. The total market cap destruction for these three industries was an

estimated \$120.1 billion with total CEO pay of \$224.6 million. Total market cap destruction was approximately 535 times greater than total CEO pay. During this approximate three and one-half year time period, the S&P 500 Index increased 51.8% with the following annual changes: -1.2% in 2011; +16.7% in 2012; +24.8% in 2013; and +5.5% for first seven months of 2014.

The tests in this research paper were just simple correlations with no causality implied from any of these correlation tests. However, some corporate governance researchers (Kostyuk, 2014 and Hilb, 2008 and 2006) have advocated: "Pay for Performance, not Presence" which could include such correlations as part of top executive compensation

packages from Board of Directors' compensation committees. Claw-back provisions, similar to the requirements of the U.S. Dodd-Frank Act and the U.S. Sarbanes-Oxley Act for accounting restatements, could be expanded to include market capitalization destruction in evolving compensation packages. Claw-backs could also be used when a firm does poorly in relation to its peers. Compensation committees could also re-consider the conventional wisdom that CEOs make their best decisions when they have the most incentive-based compensation which is contrary to both the results of the 2013 research study cited here and our correlation tests in this research paper.

More innovative types of executive compensation were also supported by the findings of this 2013 research study where the more the CEO was paid, the worse his/her company did and this effect was the largest in the 150 firms with the highest paid CEOs (Adams 2014). The companies run by the highest 10% paid CEOs returned 10% less to their shareholders than their peers did and the companies with the top 5% paid CEOs returned 15% less to their shareholders.

This 2013 research study also found that the longer CEOs were in their jobs, the worse was their firms' poor performance. One of the co-authors said this finding was due to these CEOs being able to appoint more allies to their boards and such board members are more likely to go along with the CEO's bad decisions. He said in an interview: "For the high-pay CEOs, with high overconfidence and high tenure, the effects are just crazy. They return 22% worse in shareholder value over three years as compared to their peers" (Adams 2014). Similarly, Warren Buffett observed that often board members find it hard to disagree with a major investment project recommendation that has been backed by the CEO and top management, based upon his experience in serving on more than forty boards (Buffett 2009).

These research findings have reinforced the argument by various economists, lawmakers, and activists that the U.S. corporate compensation systems which link CEO pay to company performance are badly broken. They have noted that U.S. CEOs make almost 300 times more than their workers (versus Ben & Jerry's CEO compensation guideline for themselves of 10 to 1 in the early 1990's). These critics have observed that often CEOs get performance-based bonuses even when their performance failed to meet targets, like many bank CEOs who walked away with millions of dollars during the recent financial crisis. Also, over one-third of the highest paid CEOs over the past 20 years have been bailed out by taxpayers, fired from their jobs by their boards, or busted for fraud (Pyke 2014).

In a previous period when the airline industry was going through significant market cap destruction, Sam Addoms, the CEO of Frontier Airlines, was asked about the very high levels of compensation for this industry's CEOs. He said "The common argument

that you hear is that if you don't pay the CEOs at this high level, they might leave. My response is: Based on their performance, what is wrong with that?" Perhaps the boards and shareholders in the three industries used in our study should be asking what would be wrong if some of their highly paid CEOs left.

All these conclusions have implications for corporate governance by Boards of Directors. The Board compensation committees could revise their compensation packages with claw-backs for market cap destruction and poor performance versus competitors. Similarly, Board nominating committees could try to institute term limits for CEOs and separate the CEO position from the Chairman of the Board position to help limit the CEO's power. Also, they could try to make Board members more independent by instituting Board term limits which would reduce the CEO's influence on such members.

Warren Buffett's mentor, Benjamin Graham, made observations about such corporate governance behavior over 60 years ago in 1951 (Zweig 2009):

"Directors shouldn't merely be independent but also businesslike. They must have an arm's-length relationship with management; they also should combine good character and general business ability with substantial stock ownerships (purchased by them, not through option grants). The independent directors should publish a separate annual report analyzing whether the business is showing the results for the outside stockholder which could be expected of it under proper management."

Annual proxy statements reporting on executive pay still do not comply with Graham's 1951 recommendations: "A kind of interrogation in which directors are called upon to justify the generous treatment they are asking the stockholders to approve. The stockholders are entitled to be told just what are the excellent results for which these arrangements constitute a reward and by what analogies or other reasoning the board determined that the amounts accorded are appropriate." As another executive pay researcher observed in 2009: "It's high time for corporate compensation committees—and investors—to start doubting whether the lavish pay packages they endorse actually work" (Zweig 2009).

For example, one starting point for boards and investors could be an analysis of the results in the four tables in this paper, especially the Freeport-McMoran CEO pay situation. He was ranked number nine in a list of the 100 Highest Paid U.S. CEOs in 2013 (AFL/CIO, 2014). He received total CEO compensation of \$55,260,539 in 2013 while the company's market cap destruction from 2011 through the middle of 2014 was approximately \$21,000,000,000. At the other end of the spectrum would be an analysis of the CEO pay situations of Belden Inc., Worthington Industries, and Hallador Energy. All three of these companies saw a positive return from their "investment" in their CEOs. Belden's CEO compensation of \$5,803,463 went with

a market cap increase of \$1,400,000,000. Worthington's CEO compensation of \$4,586,568 went with a market cap increase of \$1,300,000,000. Hallador had a market cap increase of \$67,500,000 while its CEO received a relatively small pay of \$343,777. Maybe these three companies have Boards that are doing what they should be doing. It is worth investigating.

## References

1. Adams, S. "The Highest-Paid CEOs Are the Worst Performers, New Study Says," *Forbes*, June 16, 2014.
2. AFL/CIO, "CEO Pay by Industry," *Corporate Watch/Paywatch*, July 14, 2014.
3. AFL/CIO, "100 Highest Paid CEOs," *Corporate Watch/Paywatch*, July 14, 2014.
4. Buffett, W., "CEO Letter: Corporate Governance Sections", Berkshire Hathaway Inc., 2009.
5. Cooper, M., H. Gulen, and R. Rau, "Performance for Pay? The Relation Between CEO Incentive Compensation and Future Stock Price Performance," Working Paper, January, 2013.
6. Grove, H. and M. Clouse, "An Investigation of CEO Pay and Market Cap Performance in Three Mining and Metals Industries," *Oil, Gas, and Energy Quarterly*, 2015, June, Volume 63, No. 4-forthcoming.
7. Hilb, M., *New Corporate Governance: Successful Board Management Tools*, Third Edition, Springer, 2008.
8. Hilb, M., *New Corporate Governance*, Springer, 2006.
9. Kostyuk, A., Keynote Speaker, International Conference on Corporate Governance: A Search for Advanced Standards in the Wake of Crisis, Milan, Italy, May, 2014.
10. Morgan, J., "Study: Highest-Paid CEOs Perform the Worst of All," June 18, 2014, <http://moneynews.com/StreetTalk>.
11. Pyke, A., "The More a Company Pays its CEO, The Worse Its Shareholders Do," *ThinkProgress*, June 17, 2014.
12. Zweig, J., "Does Golden Pay for the CEOs Sink Stocks?" *Wall Street Journal*, December 26, 2009.