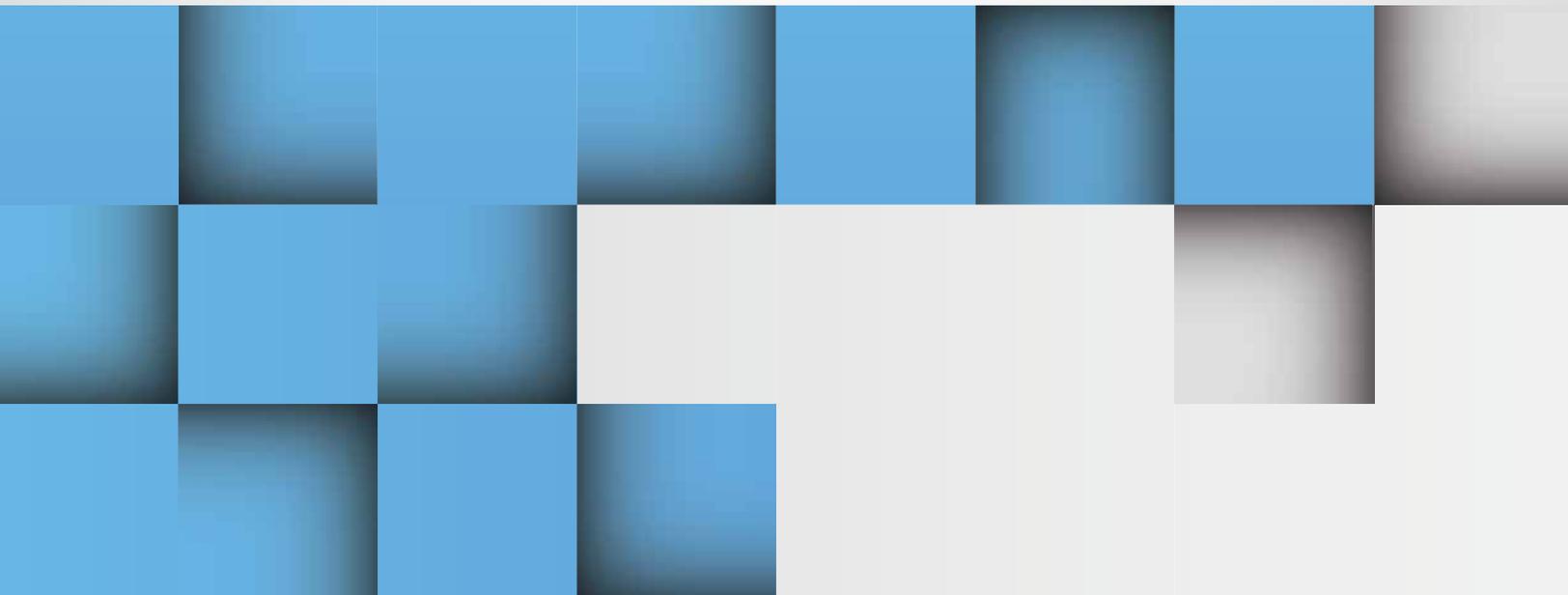


# Risk Management: Part Four **INCENTIVE COMPENSATION**—The Critical Blind Spot in ERM Today

Co-Sponsoring Organizations:



## Introduction

### **Incentive Compensation: The Critical Blind Spot in ERM Today**

The Joint Risk Management Section of the Society of Actuaries (SOA), the Casualty Actuarial Society (CAS), and the Canadian Institute of Actuaries (CIA), in collaboration with the International Network of Actuaries in Risk Management (“IN-ARM”) sponsored a call for essays on *“Incentive Compensation—the Critical Blind Spot in ERM Today”*. The call is the fourth in a series of calls on ERM topics related to the financial crisis. In the first call of the series: *“Risk Management: The Current Financial Crisis, Lessons Learned and Future Implications,”* published in early 2009, incentive compensation programs were identified as a key factor in the Global Financial Crisis. In this current call incentive compensation has been singled out for examination. It has been argued that the single biggest blind spot in current ERM frameworks is the misalignment of incentive compensation. Compensation practices have been at odds with risk management historically. Most firms are driven by growth not longer term profits; there is high risk and no reward for being the show stopper if things aren’t right. To exacerbate the situation, the risk manager is often perceived to be acting outside the structure of the firm.

To address the possible deficiencies in current incentive compensation programs, the call asks respondents to describe a compensation program that would provide appropriate incentives to employees to incorporate rigorous ERM into the management and operation of their companies. Authors were asked to consider the following questions:

- How do you reflect risk in the incentive comp program?
- How do you consider multiple time horizons?
- How do you reward or penalize favorable/unfavorable development for old years?
- How do you reward or penalize the role of actuaries/risk managers?
- How do you reward marketing?
- How do you reward or penalize integrated results?
- How do you discourage self-dealing and conflicts of interest?
- How do you minimize agent-principal risk?
- How do you deal with incentive compensation plans at competitors that do not adjust for risk?

This e-book contains 13 topical essays that express the opinions and thoughts of a number of authors on the subject. An essay is understood herein to essentially represent a short non-fiction form of writing expressing the often subjective opinion of the author. It should be understood that the thoughts and insights shared herein are not necessarily those of the Society of Actuaries, the Casualty Actuarial Society, the Canadian Institute of Actuaries, or corresponding employers of the essayists.

After review and deliberation by a dedicated group of volunteer experts, the Joint Risk Management Section Awarded prizes to:

- **1<sup>st</sup> prize:** *Management is Needed – Not Incentive Compensation*, by David Ingram
- **2<sup>nd</sup> prize:** *Incentive Compensation/Risk Management - Integrating Incentive Alignment and Risk Mitigation*, by Towers Watson (Rick Beal, Alex Weisgerber, Claudia Poster and Esther Becker)
- **3<sup>rd</sup> prize (tie):** *Incentive Compensation and the ERM Person/ Actuary*, by Charles Bryan
- *Some ERM Perspectives on Incentive Compensation*, by Al Weller

Of the essays published here, a few respondents have hands on experiencing with incentive compensation programs (Ingram, Bryan, and Fleming).

Some of the themes in the essays were:

- Management matters, Ingram states it as follows: “Management must manage. An incentive comp formula will not be sufficient.”
- The governance of the incentive compensation program is important. For instance Beale et al suggest the establishment of a governance framework to ensure balance.
- The measure(s) used to determine incentive compensation must be monitored for unintended consequences. As stated by Weller “According to Goodhart’s law, when a measure becomes a target, it ceases to be a good measure.
- Time frames matter, i.e., longer time frames are better. In particular, when short time frames are used there is a risk that compensation will be provided before the “true” outcomes of management activities are known.
- Goals other than risk management will be part of the incentive compensation program. Per Ingram, “while risk managers want Risk to be featured in incentive comp programs, it is not necessarily the most important thing for most companies in most years.”
- Incentives flowing from governments and regulators are important influences on corporate managements also. In Rudolph’s words “The government had become a prisoner of the bureaucracy, which itself suffered (and continues to suffer) from regulatory capture. This is when special interest groups, such as investment bankers, effectively take over a regulatory agency through a combination of lobbying, infiltration and bureaucratic job security. Incentives at governmental agencies need to protect the public.”

A variety of approaches to incentive compensation were offered including:

- Use of risk adjusted performance metrics (Beal, et.al.)
- Special caps to guard against unintended windfalls (Beal, et.al.)
- Compensation based on various financial measures, where the time frames are selected to provide some protection against payouts that occur before the real outcomes are known (Bryan)
- Claw back and deferral features (Pohle)
- Option provisions (Huh)

- No incentive compensation, at least as incentive compensation is currently implemented. Flemming cites a number of studies that question the value of incentive compensation. “Studies among general industry companies dispute whether top executive pay in fact reflects company performance, and in one study of 271 CEOs, no significant statistical relationship was found between total CEO pay and total shareholder return.” Flemming also points to a PWC study that “found that Complex (incentive) plans are a motivation killer.”

There were a number of literary references in the essays. Lalani cites the well-known book about extreme events, *The Black Swan, The Impact of the Highly Improbable*, Nassim Taleb. Barry cites *The Signal and the Noise* by Nate Silver, a book that has a quite a following among quantitative types, and Weller quotes Shakespeare.

The 13 essays give us much to ponder on the topic of incentive compensation. However, as numerous of the authors pointed out, there does not appear to be one “right” approach to incentive compensation that will prevent managements from being reckless and incent employees to practice good risk management. No matter how well thought out an incentive compensation program is, it needs to be implemented carefully, and will not, by itself result in managements that manage well.

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# The Necessity of Multi-Discipline Risk Management: Transformation of Mindset and Incentive Pay

By Etti Baranoff

## I. Introduction

Late in 2012, the press in Austin, Texas reported the death of a policeman, Houston McCoy,<sup>1</sup> who was known for climbing together with his fellow officer, Ramiro Martinez, the steps of the Tower at the University of Texas and killing the Tower Sniper.<sup>2</sup> Fourteen people (many of them students) were killed and 32 were wounded in the August 1, 1966 tragedy. The dark day for Austin and the University of Texas is embedded in the history of this city nestled in the hill country of central Texas.

Over 46 years later, the December 14, 2012 shootings at Sandy Hook Elementary School took the lives of 26 children, teachers and administrators.<sup>3</sup>

Is history repeating itself? What has happened in the past 46 years to risk management and prevention? Has very little changed? If this is the case, our lack of both preparedness and understanding of risk management paints a scary picture. We have not done enough through risk management education to transform the public mindset. Nor have we created adequate incentives and systems to uncover and handle risks effectively.

These man-made catastrophes are only two examples among a multitude that illustrate the importance of risk management in all aspects of our society. The nature of risk management is multi-disciplinary. To prevent future tragedies, it is a necessity that this field becomes a core requirement in all management or related programs of study. In order to ensure

that it takes hold in business life once graduates move on, a positive reinforcement mechanism needs to be established; I recommend monetary rewards as an incentive to be effective.

## II. Man-made Risks and Devastation

While McCoy and Martinez, the policemen who killed the Tower Sniper in 1966, were dubbed heroes, many of the heroes in Newtown, Connecticut did not survive the mass shooting. The tragic devastations of 2012 which include the movie theater shooting in Aurora, Colorado,<sup>4</sup> are only a few drops in a stream of horrible losses dating back to the September 11, 2001 terrorism act<sup>5</sup> and longer. All of these tragedies could have been reduced or even eliminated if the public was educated to adopt a risk mitigation mindset up front. Heavy losses in human life and money have always translated into risk management actions after the fact, not as preventative methods.<sup>6</sup> Since a preventative mindset is not endemic to our educational system, we are only able to react. Each catastrophe has led to more regulation and governmental action. The aftermath of September 11 saw the creation of the Department of Homeland Security and long security lines at airports around the world. Unfortunately, many of the security steps were only reactions to publicized, known threats—bombs placed in fluids, shoes and the like—rather than an approach to identify risks systemically.

In the private business arena, we also see reactive or corrective actions instead of thoughtful, full-fledged identification of front-end risks, measurement and development of the

<sup>1</sup> <http://www.statesman.com/news/news/local-obituaries/houston-mccoy-the-police-officer-who-shot-ut-tower/nTgc/>

<sup>2</sup> Charles Joseph Whitman was an engineering student and former Marine who killed 14 people and wounded 32 others in a shooting rampage located in and around the Tower of the University of Texas in Austin on the afternoon of August 1, 1966. Also see more coverage at: [http://www.trutv.com/library/crime/notorious\\_murders/mass/whitman/index\\_1.html](http://www.trutv.com/library/crime/notorious_murders/mass/whitman/index_1.html)

<sup>3</sup> <http://www.cnn.com/interactive/2012/12/us/sandy-hook-timeline/index.html>

<sup>4</sup> <http://www.cnn.com/interactive/2012/07/us/aurora.shooting/index.html>

<sup>5</sup> See: Etti G. Baranoff "Risk Management and Insurance after 9/11" Chapter 10 of "The Impact of 9/11 on business and Economics: The Business of Terror -- The Day that Changed Everything?" Edited by Matthew J. Morgan and Forwarded by James J. Heckman, Palgrave Macmillan, 2009

<sup>6</sup> See Baranoff and Baranoff "Trends in Insurance Regulation" Review of Business, Fall 2003, pp. 11-20

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necessary risk management tools.<sup>7</sup> These are the basic steps needed for risk management.

The two most known recent business disasters are the financial crises of 2008 and the British Petroleum oil rig explosion in the Gulf and Mexico in 2010.<sup>8</sup> For lack of space, I will focus only on the oil spill.<sup>9</sup> At BP, if there had been a warning voice by a risk manager, would he or she have been listened to in a world where profits lead to bonuses and risk warnings have no audience or incentive? If they were able to prevent the oil spill, would they have been rewarded? Not only was there no culture of risk management at BP, there was no mechanism to reward those who could have prevented the disaster. Most business schools at universities in the U.S. do not have even one course in Risk Management, and when they have it, it is not required for all students.<sup>10</sup>

By using risk measurement tools, stress analysis and Value at Risk (a risk measurement method), we create a mechanism to detect and compute the size of a potential calamity. Only in retrospect, large sums of money are spent and a Type I Error of checking millions of people daily for bombs in airports erroneously is permitted. That is to avoid the horrific likelihood that a Type II error will occur and a terrorist will be allowed on a plane as they may not be detected erroneously. Would it not be better to allow Type I errors in other parts

of our society and business community? This is fully implemented in other societies, notably Israel.

### III. Natural Catastrophes

The loss in dollars and lives are not always caused by man-made catastrophes; there are natural ones, too, such as the 2011 tsunami in Japan and the most recent devastation in highly populated areas of the U.S. from Super-storm Sandy in October 2012. Only after much of lower Manhattan and coastal Queens and New Jersey were flooded, did we begin listening to engineers who suggested building safety walls long before the catastrophe.<sup>11</sup>

In the 2005's Hurricane Katrina, the levees that broke and flooded New Orleans<sup>12</sup> had long been known to be vulnerable. FEMA's failure to rescue those trapped in New Orleans in a timely manner was another tragedy that cost 1,800 lives. Today the failed levees have been replaced with state-of-the-art pumping stations that resemble fortresses. Why should resources only be applied to areas that have already sustained the worst damage? Where are the proactive solutions?

### IV. The Need for Risk Management

There is not space to list all catastrophes of major and minor impacts here.<sup>13</sup> Nevertheless, the same theme recurs

<sup>7</sup> See Chapters 1, 2, 3 and 5 of the text book by Baranoff, Brockett and Kahane "Risk Management for enterprises and Individuals" 2009, Flat World Knowledge, Connecticut.

<sup>8</sup> <http://www.cnn.com/2012/11/28/us/bp-suspension/index.html>

Nov 28, 2012 – The U.S. government will block oil giant BP from new government ... "lack of business integrity" stemming from the 2010 explosion and oil spill. It was a tragedy that killed 11 oil workers and dumped 205 million gallons of oil into the Gulf ... " at: <http://www.cnn.com/2012/11/28/us/bp-suspension/index>

<sup>9</sup> For coverage of the need for risk management and actions to eliminate another financial crisis, see the work of The Geneva Association, the Financial Stability Board (FSB) and the Fed's actions in the U.S.

<sup>10</sup> See. [www.ARIA.org](http://www.ARIA.org) for the number of schools that teach risk and insurance. Temple University and St. Johns universities are the only two schools known to the author that require undergraduate students in the business schools to take one risk management course.

<sup>11</sup> <http://www.bloomberg.com/news/2012-11-09/billions-on-flood-barriers-now-might-save-new-york-city-l.html> Or <http://www.pbs.org/newshour/rundown/2012/11/engineers-draw-barriers-to-protect-new-york-from-another-sandy.html> among others.

<sup>12</sup> <http://www.reuters.com/article/2012/08/29/us-storm-isaac-idUSBRE87L0PH20120829>

<sup>13</sup> The reader is invited to review the impact of all the catastrophes of the recent decades and their cost at the Insurance Information Institute Web site at: [www.iii.org](http://www.iii.org)

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each time. Is it our nature to only employ risk management strategies *after* a disaster occurs? As if such risks were not identified already, measured and mitigation strategies could be developed?

In our modern century, with sophisticated predictive models available, why are we not prepared to build the infrastructure that will manage the risks with minimal losses in lives and dollars?

This kind of thinking is needed in all disciplines. A psychiatrist needs to know and evaluate the risks of his/her patients to society. A social media entrepreneur should identify and mitigate risks related to operating costs, privacy, marketing, etc. Otherwise, he will incur financial losses. This mindset should not end with the owners or leaders of

businesses. Every employee and stakeholder should have the same awareness of risks to avoid the agency conflict. These lessons need to be taught in all universities to all students, not just the few in selected business schools.

Incentives for Practicing Risk Management on the Front End  
With man-made and natural catastrophes occurring in increasing frequency, corporations need to develop incentive pay scales for those who identify risks and call for their measurement and mitigation. The question is how to measure these rewards? Since we do stress tests and use software to measure Value at Risk, why not include such measures in the matrix for incentives? Not just the profits. We can transform our reactionary mindset with complete risk management education, a critical step to better safeguard our businesses, communities and broader ecosystem.

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## Enterprise Risk, Enterprise Risk Reward

By Dennis Barry

### Risk is opportunity.

So says the Society of Actuaries. On its website. In its correspondence. Seemingly everywhere.

If that sentiment is, in fact, the way we want to perceive risk, then both enterprise risk management and its related component within incentive compensation plans seem unclouded in their applications. Note that here we're separating general management of enterprise risks from the more formal "Enterprise Risk Management." They are not the same.

Lower case enterprise risk management should be an effort to optimize risk acceptance or avoidance for the betterment of the business and its stakeholders. An example of success in that context might be Apple. It's hard to quantify risk of products that are entirely new but if Apple bet the company on the success of the iPod followed by the other i-products, someone in the organization judged that to be an appropriate risk to be taken. It's unlikely that any set of calculations based on demonstrable facts would have led to a conclusion that even came close to the actual success Apple has had, but here we are. On the other side we need only remember the New Coke debacle. As with Apple, this was a major change to an established business, but it didn't work. Again, no set of calculations based on facts would have revealed the result that ensued. Luckily Coca Cola hadn't bet the entire company on the new product and was able to roll things back before it got completely eaten up by the competition.

But competition is where the rubber really meets the road in the world of risk management. Whether it's competition for product market share or competition in the capital markets or competition for governmental favor or some other form of competition, where there is competition there is always risk, and opportunity. A company, like a predator, can run all day and all night in an attempt to catch prey or it can,

like an antelope, run all day and night to avoid being eaten. Even though a given company can be in either role at any time, it surely must run constantly. Risk is the chance that in its role as either predator or prey a company runs the wrong way, and risk management ought to be devoted to minimizing the effects of those occasions. But it needs to be clearly recognized that completely avoiding all adverse effects of risk gone wrong is impossible. All that can be done is to recognize that risk is present and manage the effects.

If we want incentive compensation for managing risk perhaps the road to happiness for all comes from one of the new metrics used in baseball: WAR—Wins Above Replacement. The idea is to put a value on a player versus a theoretical replacement. The higher the value, the more valuable the player. If we buy into the idea that risk is opportunity, the same concept can be applied to alternatives in terms of the risk/reward they bring to an organization. In fact, in many insurance companies that's how decisions regarding capital allocations are made. But not all risk choices can be made based only on calculations, or protocols, or SOP manuals. Think again about Apple. They could have stayed the course, continuing to successfully make and market a variety of very useful and unique computers, or they could branch out into a new world involving new technologies. Whether they already saw potential connections of the iPod technology to all the other things that have come along since, they made a choice based not on calculations relying on models populated with vast assumptions (which, with apologies to Fred Kilbourne, often lead to half-vast conclusions) but based on someone's belief in what was best for the business. Success was not inevitable, no matter what anyone believed, but they went ahead anyway.

Rewarding people for turning risk into success ought not to be difficult either in concept or execution, but there is one serious potential snag, and that is time frame. No incentive

**Enterprise Risk, Enterprise Risk Reward** by *Dennis Barry*

compensation should be paid to anyone until it is fully known how things turned out. The 2007-08 financial crisis points this need out in spades. People at AIG, to pick one example in our industry, were offered enormous amounts of money for executing a highly risky strategy, and then were rewarded before the final results were actually known. The company took advantage of the opportunity for growth—market share—but didn't factor the long-term financial health of the organization into the incentive equation. By the time the real risk reared its ugly head, bringing lethal consequences with it, huge incentive compensation had already been paid and it wasn't likely to be coming back. The company was lost because of what had earlier been seen as a success but really wasn't.

There are a lot of lessons from this and other similar events surrounding the financial crisis when it comes to risk and reward. As noted above, prime among them is that incentive compensation for accepting risk shouldn't be paid too soon. Another is that while blessings of either auditors or ratings agencies or both may be necessary conditions for accepting a risk, they are in no way sufficient. For demonstration of that truism, we need only look at the catastrophe that was Enron/Arthur Anderson. Of course Enron was an exercise, at least in large part, of deception and dishonesty whereas AIG was more one of failure to know what they were doing, but the outcome was the same. In both cases, though, a strong ERM function may well have ferreted out the truth before rather than after the fall. But even had appropriate ERM analyses been done and conclusions reached, in both cases it was the role of the two Boards to say either "No," or "No more."

An upper case ERM function is, in significant part, a complex form of internal audit with a heavy focus on compliance. It seeks to first codify and then, when possible, quantify a variety of risks, both ongoing and related to proposed

changes in the business, always with an eye toward avoidance of "catastrophe" by whatever definition. Having quantified risks, ERM then seeks to drive the organization toward acting in accordance with the results. It is primarily defensive in nature and, as stated so succinctly in the call for these essays, it claims as one of its major roles the saying of "no" when appropriate, a role for which there is no reward under current compensation systems. Nor should there be. Compliance is required for an organization's survival but it cannot be the sole, or primary, driver. The ultimate saying of "no" to major risks, as noted above in the AIG and Enron cases, is a Board function, not one for the ERM area alone. Certainly the Board should be armed with as much salient information as it can get. There must be clear, unencumbered, and unfiltered channels of communication between the risk evaluators and the Board, but ultimately the Board must decide. Think again of Apple. Had the Apple ERM function been able to say "no" to the iPod based on its best, state-of-the-art, fully robust analyses, your phone today mightn't be nearly as cool, or as small, but the Apple Board chose to go forward, presumably eyes open. That's why Boards are there.

In the ERM realm, one of the primary actuarial functions is to construct models. That's natural. It's what we as a profession have been doing for a long time, and we're good at it. But we're not perfect. No one is. We should heed Nate Silver's words in his 2012 book, *The Signal and the Noise*. While discussing the 2007-08 financial meltdown, he wrote, "We forget—or we willfully ignore—that our models are simplifications of the world. We figure if we make a mistake it will be at the margin. In complex models, however, mistakes are not measured in degrees but in whole orders of magnitude. S&P and Moody's underestimated the default risk associated with CDOs by a factor of 200. Economists thought there was just a 1 in 500 chance of a recession as severe as what actually occurred."

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ERM, with its structures and its calculations and its COSOs is still subject, at its core, to the same model problems as all other complex financial analyses. It is not infallible, no matter how diligent our efforts or pure our intentions. We should recognize ERM for what it is—an important and valuable tool—and not for what it isn't—the key to success for an organization. Incentive compensation isn't appropriate

for ERM, except in very small doses, any more than for other internal audit functions. More important, when it comes to applying ERM, a company should comply where compliance is required and use the ERM tools to best effect, but it should not count on ERM to save the organization. That's the role of competent management and the Board.

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## Incentive Compensation And The ERM Person/Actuary

By Charles A. Bryan

I have been in the unusual position of being from an actuarial background and chairing the compensation committee of a publicly held entity. Over the last four years our compensation committee has attempted to achieve several objectives in our compensation approach for the CEO and for the named executive officers that appear in the proxy:

1. Motivate and Compensate that level employee for good performance
2. Retain good people
3. Limit compensation to a reasonable amount
4. Satisfy the requirements of the proxy advisory agencies such as Institutional Shareholder Services (ISS), Glass-Lewis, and others
5. Receive a positive vote on Say-on Pay.
6. Exercise good risk management
7. Other less important objectives

Up until 2013 we had a system for both the short term plan and the long term plan based on four metrics: gross written premium, return on equity, combined ratio, and increase in diluted book value per share. These are companywide goals and seem to satisfy goals 1, 2, 3, and 6. However, in 2012 we failed the advisory say-on-pay vote mandated by the Dodd-Frank bill and so we were motivated to speed up the pace of change and more strongly emphasize objectives 4 and 5.

We implemented a new long term plan whose metrics are Relative Total Shareholder Return, Absolute Operating Return on Equity, and Longevity (to promote retention). So we now have 6 metrics when considering both our long term plan and our short term plan.

The one metric that speaks directly to risk management is the combined ratio. If the combined ratio is controlled every year, then the major risk will not arise from underwriting but instead from investments. Indirectly, we anticipate that the 3 year Total Shareholder Return and the three year

Operating Return on Equity will speak to our success in risk management.

So what are the issues that we found we had to consider and how did we incorporate risk management principles into the compensation system? The first issue was whether or not we should use Total Shareholder Return (TSR). Although the proxy advisory agencies are quick to emphasize that they do not mandate any particular metrics, at least one of the agencies uses a numerical score that in part includes a TSR component. Then we come to a secondary question: do the market and the valuation of a stock properly reflect how risky the stock is? After studying this issue, we did not come to a firm conclusion. There are numerous examples of companies who did not seem risky at one point in time because they were able to deliver consistent earnings at roughly the guidance level, that in retrospect turned out to be extraordinarily risky. On the other hand, the market does seem to penalize those companies that exhibit risk by variation in earnings, often due to net catastrophe risk or lines of business whose combined ratio fluctuates radically. Several large publicly held companies such as Allstate have deliberately reduced their exposure to catastrophe risk because of the perception, or the reality, that the stock price was held down due to this exposure to high risk. We concluded that the best approach was to include TSR as one of many metrics but retain the combined ratio as a metric that directly addresses risk. In addition, in setting the reward levels for the gross written premium, the reward is achievable at the highest level only if the loss ratio is below a specified level.

The second issue was what time frame for incentives should we use? The industry practice seems to use three years for long term plans. That seems to be a reasonable compromise between the difficulty of managing and incentivizing over a long time period and the need to use a long time period since risk often shows up only after the book of business becomes somewhat more mature. Certain types of risk such

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as catastrophes will only show up over a longer time period. Sometimes, a three year time period is too short.

The third issue was determining if there was any way we could directly include the risk in the compensation system without encouraging behavior that we did not want to encourage or discouraging some level of risk taking. After all, this is insurance. The three sources of risk we thought more deeply about were: risk of inadequate loss reserving; risk of catastrophes and a catastrophic event; the risk of under pricing current business. We concluded these were adequately but imperfectly covered near term by the combined ratio metric and longer term by the operating return on equity metric. Specific coverage of the risks would have to be by committee work emphasizing activities in these three areas, such as determining the probable maximum loss, and assurance that the required activity had taken place.

For inadequate loss reserving, we have three different actuarial reviews of the loss reserves each year. We perform the reserve review using credentialed actuaries that are also employees. We then annually engage a consulting firm to perform an overall review. And our independent auditors perform a review for the Audit Committee.

For the catastrophic risk, we rely on frequent reviews of our reinsurance program and our net retentions. However, this is flawed because there can always be more time spent on this type of review and its accuracy depends upon the diligence

of employees. However, we do have strong reinsurance expertise on our Board and that helps us to monitor this risk. Hurricane Sandy showed this was imperfect.

For inadequate pricing, we have had to rely on a strong culture of underwriting caution and an ability to move capital quickly from one line to another line. Moving capital also has an effect on the distribution system. We also use the combined ratio as one of our four metrics in the short term plan and we set a maximum above which there is no incentive pay for that portion of the plan. This is imperfect because no one really knows what the price should be for many lines, so we supplement the combined ratio metric with a review of the loss ratios by line and sub line at periodic board meetings to take advantage of the insurance expertise on our Board.

Of course there are numerous other risks that are controlled more through an Internal Audit process or other auditing. We have used Internal Audit to review things like the timeliness of claims reporting in programs business. These items can be appropriate for compensation systems below the CEO and NEO level but they can rapidly proliferate until it is a major effort to keep all the targets straight. We also have investment guidelines that are intended to limit the risk from investment fluctuation.

We are hopeful that the described compensation system draws a balance between achieving business objectives and avoiding unreasonable risks.

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## Managing Risks in Incentive Compensation Plans

By Karen J. DeToro and Nathan D. Pohle

Incentive compensation is a particularly critical issue for job seekers, employees, employers and shareholders. Attention has typically focused on the role of incentive compensation in attracting and retaining employees along with incenting behaviors in line with strategic objectives. However, recent market events have shifted the focus to risks that may be inherent in incentive compensation arrangements. These risks may be particularly difficult to identify and manage and, as such, companies should consider implementing robust risk management processes for proper alignment of incentive compensation with both strategic objectives and company risk appetite.

With increased attention being focused on this area of risk from regulatory bodies and various stakeholders, life insurance companies should also consider developing strategies to address regulatory requirements and compensation plan risks in the short and long term. In particular, companies may need to develop techniques and approaches to allow them to:

- Better align current incentives in compensation programs with the risk profile and appetite.
- Design internal controls to appropriately mitigate excessive risk taking.
- Maintain an appropriate level of incentives to attract and retain necessary talent.
- Meet increasing demands for disclosure, analysis and documentation from external regulators and stakeholders.

To address these challenges, there are several practical short-term and long-term strategies that life insurance companies can use to strengthen their risk management of incentive compensation across the performance management and compensation development cycle.

### Performance Management and Compensation Development Cycle

Incentive compensation plan design should be viewed as a cyclical process that incorporates periodic assessment of the plan and revises the plan to keep it aligned with external conditions and company strategy. There are three major steps within this process that should be undertaken every fiscal year.

1. **Develop/modify incentive compensation program.** The initial step in this process is to create both short-term and long-term components of an incentive compensation plan to supplement an already established fixed compensation program. This risk management-oriented approach seeks to achieve a proper balance between risk and reward by establishing a well-designed incentive compensation plan and balancing fixed and at-risk pay.
2. **Communicate and implement plan.** Whether viewed positively or negatively, any change to an employee's compensation affects one of the most important and personal aspects of a person's employment. In order for the compensation plan to work as intended, plan participants should understand through proper communication and implementation what they are being incented to do.
3. **Assess plan performance and risk.** This step includes both qualitative and quantitative methods to assess plan performance against the intended design and behaviors. Any deviations from what is expected should be properly communicated to key stakeholders. Key drivers of plan deviations must be understood so that they can be properly addressed through plan modifications. Many companies use qualitative assessments of compensation plans. However, quantitative assessments, such as stress

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testing, can be critical in helping companies understand trade-offs between risk and reward embedded in the compensation plans.

### Short-Term Strategies

Given the fact that most compensation plans are administered on an annual cycle, it might take a company several years to fully embed effective risk management into the incentive compensation program. However, within the first year, there are several practical next steps that companies can undertake across the components of the compensation cycle to begin to strengthen their risk management practices.

- **Develop/modify incentive compensation program.** Setting the tone from the top is relevant here at the onset of the cycle. As an initial step, any changes in management's outlook or strategy for the organization may necessitate a revision in a company's risk policy. Within this context, it is important for a company to perform a fresh, holistic review of its compensation risks within an enterprise risk management (ERM) framework and consider whether design features mitigate or exacerbate risk. Key design components can help companies mitigate risks in the compensation plan. Claw back, retention and deferral features are three examples of useful risk mitigators that can be embedded within plans.
- **Within the incentive compensation formulas themselves, metrics can be selected to appropriately balance risk/reward and better align compensation with the company's strategic objectives and risk appetite.** Commonly used metrics include earnings per share, stock price appreciation plus dividends, return on equity, revenue growth, and cash flows. There is no hard and fast rule in assessing the correct number and complexity of the metrics used in the incentive compensation payout structure; therefore, each company must assess the appropriateness of the metrics based on its own circumstances.

- **Communicate and implement plan.** The nature and degree of changes to a compensation plan may necessitate a commensurate need for transparent and consistent communication and change management across the organization. A key step in this process is establishing a climate that is receptive to change by providing tools and illustrative examples to enhance transparency for employees. Employees should be engaged in formal discussion that addresses not only the facts of the compensation plan, but also the philosophy underlying the compensation plan and how the plan fits with the overall company strategy and objectives. Finally, it may be helpful to create an ongoing forum for employee's questions or concerns that may arise throughout the year.
- **Assess plan performance and risk.** Some companies have successfully used methods to qualitatively assess compensation risk. One such method is a "risk review" wherein key features of the compensation plan are inventoried, risk mitigators and aggravators are identified, and a risk assessment is performed by assigning a score to each plan feature. These steps are intended to help identify areas of potential risk and opportunity that can be discussed with management and/or the compensation committee. Another method to employ is the continual tracking of key risk indicators (KRIs), such as the allocation of total compensation between fixed compensation and variable payouts. These KRIs can provide a timely and periodic view of the plan's risk/reward balance.

### Long-Term Strategies

Many of the longer-term action items build on the strategies employed in the short-term over the course of the compensation cycle. As lessons are learned and the concept of balancing risk and return is ingrained into the company's culture, significant strides can be made in managing compensation risk.

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- **Develop/modify incentive compensation program.** Information gleaned from the review of metrics and any qualitative or quantitative analyses performed in the prior year can be leveraged in redesigning the plan. Prior assessments may identify that metrics currently used in plans do not adequately reflect the risk and return trade-offs desired by the company, nor incent the right behaviors. In the longer term, a well balanced set of robust risk-adjusted metrics can be implemented to better align employee incentives with strategic objectives and risk appetite, while helping to meet recruiting and retention needs.
  - **Communicate and implement plan.** Properly setting the stage and achieving buy-in from the workforce can be important to plan implementation. A more significant change in a plan can require a commensurately significant effort around communication and change management. Over time, the company can continue to build and reinforce a culture and philosophy of a risk-reward based view of compensation through consistent communication.
  - **Assess plan performance and risk.** While qualitative assessments can be a good first step in identifying risks in a plan, eventually quantitative methods should be used to more fully understand the impacts of those risks. Stress testing can be an effective means of quantification for incentive compensation risks. Companies may apply stress testing to gain a better understanding of how the plan behaves under a range of employee actions, economic and non-economic scenarios and payout structures with the intent of answering the following questions:

    - How does the compensation formula respond across a range of employee behaviors and economic assumptions?
    - How does the compensation formula respond if various other (non-compensation) risk events occur, such as operational, strategic, and market risk events?
    - How do various compensation plan components (e.g., claw back provision or length of payout) impact payouts under various scenarios?
- To help ensure appropriate governance, stress testing results should be communicated to the compensation and risk committees along with the chief HR officer and other key stakeholders.

### Conclusion

By setting tone from the top and devoting appropriate resources, effort and thought leadership to the key issues in the compensation cycle, a company can enhance its balance of the rewards and risks inherent in an incentive compensation system. Due to the complexity of the metrics and strategies to effectively assess plan performance, it may take several iterations of the plan cycle for companies to fully embed these risk management principles. However, by steadily enhancing risk management processes, companies can make progress today by addressing short-term recommendations while laying the foundation to implement longer-term solutions in the future.

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## Key Considerations for Incentive Design

By Margaret N. Fleming

Incentive compensation is widely promoted as supporting “pay-for-performance” and being necessary “to attract, motivate and retain” high performing individuals. However, it is also seen as having played an important, and negative, role in the 2008 financial crisis. In redesigning incentive plans, we must consider:

- What research tells us about the relationship between pay and performance, and
- The “performance environment”.

The research on pay-for-performance *as it is actually implemented* raises some important concerns. Studies among general industry companies dispute whether top executive pay in fact reflects company performance, and in one study of 271 CEOs no significant statistical relationship was found between total CEO pay and total shareholder return.<sup>1</sup> Some Boards have taken this concern to heart and adjusted CEO pay; future studies will no doubt examine whether or not the pay-for-performance relationship is changing for CEOs.

Another case, researched by a Harvard professor, examined the effectiveness of ‘team bonuses’ at Hewlett Packard in the 1990’s and found that, despite favorable conditions, the overall impact was negative and the program was discontinued.<sup>2</sup> Although the case is not recent, and concerns teams, it is thought-provoking, and challenges traditional views about the relationships between incentives, motivation, pay and performance.

Further, research by PwC surveyed in meaningful detail the views of executives in the US and globally towards incentive compensation. Among other findings about pay in this interesting work was: “it’s clear from the [survey] results that risk aversion increases with the amount at stake”.<sup>3</sup> That is, as the size of a potential incentive award increases, executives become more risk averse, and would choose a lower award with certainty, instead.

The PwC study also found that “Complex [incentive] plans are a motivation killer. The idea that we can manage by incentives has led to evermore complex metrics frameworks and formulae. These have many consequences, most of them unintended. But a key one is the further reduction in value they cause in the eye of the executive.”<sup>4</sup>

Finally, the PwC study notes: “the *recognition* provided by participation in LTIPs [long-term incentive plans] seems to be more important to motivation than the financial incentive.”<sup>5</sup> [my italics]

Given the public attention to executive compensation levels and company performance, the strategy for some companies has been to shift the pay mix toward greater ‘risk pay’ – but, does this make sense?

Incentive compensation, like strategic planning, must be designed to fit the individual company, and not what everyone else does. Incentives cannot be expected to overcome weaknesses in strategy, organization, culture, or resources/

<sup>1</sup> Jessica Silver-Greenberg and Alexis Leondis, “CBS Overpaid Moonves \$28 Million, Says Study of CEO Pay,” Bloomberg.com, [www.bloomberg.com/news/print/2010-05-06/cbs-overpaid-leslie-moonves-28-million-in-study-of-executive-compensation.html](http://www.bloomberg.com/news/print/2010-05-06/cbs-overpaid-leslie-moonves-28-million-in-study-of-executive-compensation.html) (accessed February 15, 2013). Examining “pay-for-performance” requires interpreting proxy data, defining “performance” and modeling assumptions. See also Michael K. Ozanian and Elizabeth MacDonald, “Paychecks on Steroids,” Forbes.com, [www.forbes.com/free\\_forbes/2005/0509/134.html](http://www.forbes.com/free_forbes/2005/0509/134.html) (accessed February 15, 2013).

<sup>2</sup> Martha Lagace, “Pay for Performance Doesn’t Always Pay Off,” Working Knowledge (April 14, 2003), Harvard Business School, <http://hbswk.hbs.edu/cgi-bin/print/3424.html>.

<sup>3</sup> PwC, “Making Executive Pay Work: The Psychology of Incentives,” 14, <http://www.pwc.com/us/en/hr-management/publications/executive-pay-incentives.jhtml>.

<sup>4</sup> PwC, 28.

<sup>5</sup> PwC, 29.

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processes; nor to substitute for management accountability. These elements comprise the *performance environment*. This understanding is critical.

In 2008, we saw many weaknesses in company performance environments, including:

- **Business planning/goal setting:** Short-term thinking; plans lacking ERM integration; management/Board not understanding complex products or diversification risk; assumptions and modeling not carefully examined; failure to evaluate systemic risks;
- **Product design/modeling:** Products designed to obscure risk; price wars affecting assumptions and profitability;
- **Management:** inadequate Due Diligence on ratings; ignored warning signs of fraud/unauthorized activities; obscured balance sheet risks via use of derivatives; postponed/reduced certain expenses to increase current profits; increased reported volume and profit by underpricing or increasing risks assumed; invested in higher yield assets that increase portfolio performance but risk significant capital losses in the future; silenced voices that questioned the wisdom of the ‘herd’;
- **Organization/culture:** Some Board/managers lacking skills for their roles; the risk management function not elevated in many organizations; diversification & risk correlations not well understood; production emphasis not balanced with quality (risk); transparency lacking; various organizational barriers to communication were cited by Tim Cardinal and Jin Li in their Part 2 essay *Victory at All Costs*<sup>6</sup>;
- **Systems and processes:** underdeveloped risk modeling and application; guidelines for underwriting, accounting and investments vulnerable to modification under business pressures.

What could incentive compensation accomplish, given those issues? What performance would be reflected in company results? No company had all of those weaknesses, but many companies had multiple issues in these areas.

Much work has been done by companies to address these issues. However, to improve the incentive plans, an accurate current picture is important. Here’s where I’d start:

1. *What is the current performance environment? What are the overall priorities and the key issues? How are they being addressed?*
  - *How robust is the strategic planning and goal-setting process? For example, what is the effect of current capital markets conditions? Of e-commerce and mobile technology? How are individual goals set? Are companies confident in long-range plans? Does it benefit the business to cement goals by linking them to pay? Will overachievement or underachievement reflect performance fairly?*
  - *How is performance measured? Are systems in place to support it? How will regulatory changes impact performance measurement? What is the quality/transparency of communication? There is strong feeling against short-term emphasis and in favor of longer-term measures. Yet, research suggests the benefit of long-term incentives is less about motivating performance and more about recognition.*

<sup>6</sup> Tim Cardinal and Jin Li, “Victory at All Costs,” Risk Management Call for Essays Part 2: Systemic Risk, Financial Reform, and Moving Forward from the Financial Crisis, (Society of Actuaries: Jan.2011), 40-43, <http://www.soa.org/library/essays/fin-crisis-essay-2011-toc.aspx>

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Sustaining motivation over the long term requires cultural and communication emphasis.

- *What is the culture, including the current reward system? What are the characteristics/values of the organization? In what ways besides pay do we attract, motivate, retain and reward? How do we evaluate individual performance?*

2. *There is a case to be made for less leverage in incentives, not more.* In environments where significant risk challenges are present, the incentive compensation opportunity should be less, not more. Further, companies with performance environment issues may hinder their ability to address those issues *and/or* may enhance internal conflict, by having significant risk pay on the table. Also, to the extent that incentive participants feel results are not under their control, it adds little value and may actually be demotivating for some.

Incentive compensation is one element of a reward system, and there are additional ways to reflect pay-for-performance. Executives and managers are expected to give (and do give) their best efforts as a condition of employment. They are paid salaries which in themselves give management the right to establish priorities, provide performance feedback and otherwise exert management control. Non-cash rewards such as promotions, key projects, leadership roles, increased visibility, cross-training, career development, etc. are powerful rewards that can be motivational and effective in attracting and retaining high performers. Poor performers can be thoughtfully evaluated, and supported, re-assigned, or counseled out of the business if appropriate.

A clear understanding of the performance environment will provide essential guidance for setting incentive compensation expectations and designing meaningful plans.

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## Creating More Tail Risk in the Incentive Compensation Plan as a Risk Mitigation Strategy

By Joonghee Huh

As the recent financial crisis has witnessed, the current incentive compensation plans for company executives have not done an effective job in curtailing the executives' excessive risk taking behavior and encouraging them to take appropriate risk management actions in their strategic decision makings. This outcome could be largely attributed to the current compensation practice in which the executives do not participate sufficiently with negative performance of the company. This is a classic principal-agency problem, and this issue can be in part addressed by designing the compensation plan such that the executives' pay suffers more severely with poor performance of the company. With this design of the incentive compensation plans, the executives will have *incentives* to consider downside risk more seriously and establish appropriate risk management processes.

After debacles of several large financial institutions during the recent financial crisis, the compensation structures for the top executives have been more scrutinized, and as a result, there have been increasing tendency to make changes in the compensation plans to discourage irresponsible risk taking of the executives. For instance, there have been increasing uses of "claw-back" provisions in the pay, as mandated by the Dodd-Frank Act of 2010. The "claw-back" provisions could be a powerful tool if implemented appropriately, but the effective implementation would necessitate the compensation plan to clearly define triggers of the claw-back so that an occurrence of such event may not be legally disputable.

As an alternative to the "claw-back" provision which needs to reclaim payments from the executives in a future date, we propose potential optionality which can be embedded in the deferred incentive compensation structures so that the executives are exposed more substantially to tail risk scenarios through reduction in their pay amount. We discuss three possible optionality features that create such tail risk exposure for the executives. These proposed

features discussed in this paper are intended to complement the current deferred incentive structures such as deferred stock and deferred options which tend to reward upside of the company's performance but not sufficiently penalize downside.

First of all, we can introduce "barrier-option" style features into the deferred incentive compensation plan. For a knock-out type of the barrier option, the option value becomes null if the price of an underlying falls below a pre-defined barrier level. By adopting this feature into the compensation structure, the value of deferred stocks or options compensation can be designed to be worthless if the company's stock price falls below a certain threshold (i.e. barrier) during the vesting period. This barrier optionality can be designed to be triggered any time (i.e. American style) or at the end (i.e. European style) of the vesting period. Under this compensation scheme, the executives will tolerate moderate risk and loss but will have incentives to avert risk of a large financial loss that may cause the stock price to breach the threshold level.

With the "barrier-option" style feature, the pay amount changes abruptly at the threshold level below which the deferred stock/option becomes worthless. This may induce the executives to behave in a sub-optimal manner as they may be overly obsessed with ensuring the company stock price above this artificial threshold level. An alternative second approach would be making the pay amount to decrease less abruptly with under-performance of the company's stock price. One way of achieving this is through embedding additional "short put option" feature as part of the compensation plan. With this "short put option" feature, the executive pay is to decrease with the company's stock price, similar to the traditional deferred stock compensation structure where the compensation amount decreases or increases at the same rate as the company stock price. However, with additional

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“short put option” feature, the compensation amount can be designed to decrease at a faster rate than the company’s stock price below a specified threshold level. This design will also make the executives to be more adverse to the company’s underperformance.

The third possible feature that can be incorporated into the compensation structure is a “convertible deferred cash compensation” where the deferred cash compensation is to be converted into a fixed number of company shares if the stock price falls below a certain pre-determined level. This optionality can be either European or American style, depending on whether the convertibility is triggered by the stock price at the end of the vesting period or any time during the same period, respectively. With this type of compensation, the executives are not awarded for upside of the company’s performance, but only penalized for downside. This feature mirrors convertible bonds, and this type of the compensation plan may also help strengthen the company’s capital adequacy since the company’s obligation for cash compensation payment will disappear at the time the company may face capital shortage.

These three features suggested in this paper have commonality that they all make the executives to potentially partake more of the tail risk with the company’s performance. We do not intend to advocate any one type of the incentive compensation structure. If these features are appropriately implemented as part of the overall compensation package, the executives will likely be motivated to consider the downside risk more seriously in order to prevent dire personal consequences with their poor business decisions. These proposed features should be used in balance with existing compensation programs, since excessive use of these features may result in unintended consequence of stifling intelligent risk taking behavior of the executives. Actual implementation of these features in the executives’ compensation program may face some practical constraints and challenges. However, effective use of these tools can at least provide a partial but meaningful solution to this classic principal-agency problem of misalignment between the executives’ interest and that of shareholders by making risk management to be more of the executives’ personal interest.

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## Management Is Needed – Not Incentive Compensation

by Dave Ingram

*“Management must manage. An incentive comp formula will not be sufficient.”*

Many theoreticians and more than a few executives take the position that incentive compensation is a powerful motivator and therefore it follows directly that careful crafting of the incentive compensation program is all that it takes to get the most out of a company’s management team.

As an actuary working in a life insurance company where the executives believed that the right incentive comp was key, I had the experience of modeling and advising on the development of a number of incentive comp programs for the company’s distributors. Once in place, the reaction of the distributors was always similar; some people ignored the incentive comp program, some worked the program as was hoped by the designers, and a few abused the program.

For example, the company had a problem with low growth and they wanted to incent sales managers to hire new sales agents. So they added a bonus based upon the production of new hires and lightened (and in some cases eliminated) the penalty for hiring inappropriate people who were quickly unsuccessful. One sales manager figured out that simply by hiring large numbers of people who were often dubiously qualified, he could lower his unit cost of onboarding and collect that bonus on the new agent’s sales to their close friends and relatives before they flamed out. The cost of sales for that agency was 30% higher than the rest of the company and very few of his new hires stayed on to actually boost company growth. None of the other sales managers found that strategy desirable. And the efforts of management to design the incentives for new hires to prevent that abuse discouraged everyone else further from hiring.

Another part of the company had a new bonus program every single year. They never seemed to get what they wanted. Their top sales office head was expert at finding the path

of least resistance to maxing out on bonuses often without accomplishing any of the company objectives. The big problem that division had was that the top sales manager there was a very sociable and helpful guy. As he found the sweet spot every year, he immediately shared that knowledge with all of the other sales managers. So every year they did something different than what was wanted, got their bonuses and the SVP of that division sent the actuaries off to model a new version of incentive comp, twisting and turning it to try to make it foolproof.

What is wrong with this vision of incentive compensation is the fundamental idea that somehow the right formula will motivate employees to do their best to advance the company goals by perfectly aligning incentives. Reality here is actually a complex adaptive system. Designers of an incentive compensation system are unlikely to be able to anticipate all of the variations of actions by employees, competitors, suppliers, markets and customers that can happen, even a single year out. And each action by one group causes reactions by one or all of the others.

Management must manage. An incentive comp formula will not be sufficient. This applies to all corporate goals. Including Risk. And while risk managers want Risk to be featured in incentive comp programs, it is not necessarily the most important thing for most companies in most years.

Businesses have a hierarchy of needs along the lines of Maslow’s Hierarchy of Needs for people. First in that hierarchy is the need to have a product or service that people will pay for. Second is the need to be able to deliver that product or service at a cost that is less than what their customers will pay. Once those two basic needs are satisfied, businesses become potentially valuable. The third need of a business then is to create some reliability of the profits of the firm through some form of risk management. When the first three needs are met, then the firm definitely has a value. The

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fourth need then is to increase the value. Increasing the value requires that the firm achieve some combination of increases to the amount of business (need 1), the margin on the business (need 2) and/or the reliability of the profits (need 3). There may also be a fifth and sixth needs for businesses, similar to “esteem” and “self-actualization” in Maslow’s hierarchy, but that goes far beyond the scope of this discussion.

In many cases, plans to increase value will actually decrease one or two of the three elements to accomplish enough improvement in the third element to achieve overall value growth. Flawed plans that do not consider all three elements will often not actually deliver growth of value.

Which brings us back to the call for Risk to be included in incentive comp. Employees need to understand the firm’s strategies for satisfying all four needs. But it is usually much too complicated for incentive comp formulas to reflect all four needs. That is where management comes in. Management needs to fully understand that the one thing that is emphasized in incentive comp is NOT the only need of the business. They need to communicate the multiple needs and strategies to achieve those needs to the employees that are under incentive comp programs. And they need to provide ongoing feedback to all of their employees about how their

actions enhance or detract from the businesses ability to meet all four of those needs.

Business managers cannot just set the right incentive comp formula and then put their feet up. It is especially important for managers to make sure that they clearly communicate that there are other goals of the company that are not considered in the incentive comp. The “set the formula and walk away” approach leaves the employee with an airtight argument when they abuse the incentive comp system, that they thought that they were doing what the company wanted from them. Employees who have the authority to put the health of the firm at risk need to have a clear expectation that doing so in a way that is inconsistent with the risk appetite and risk management program of the firm have not just their incentive comp, but their entire compensation at risk.

The root problem that needs to be addressed is the problem of allowing highly paid employees to work as if only one of the four needs is important. Their incentive comp amplifies this wrongheaded job description. If the job description is fixed, the incentive comp can be just a nudge to increase emphasis on one of the four corporate needs. But that needs to be coupled with true management of those employees with all four corporate needs in mind.

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## Incentive Compensation - The White Swan in Risk Management

By Minaz H. Lalani

In his book *The Black Swan, The Impact of the Highly Improbable*, Nassim Nicholas Taleb describes three key attributes of a black swan event. First, it is an ‘outlier’ event, one outside the realm of regular expectations. Second, it carries an extreme impact. And third, because of its outlier status, human nature leads us to develop after the fact explanations for its occurrence, making it explainable and predictable. In my view, an event underlying incentive compensation (“Incentive Compensation event”) has three entirely opposite attributes to those of a black swan event. Incentive compensation payout which is a consequence of the event (e.g., meeting or exceeding a performance threshold, or implementing a strategic objective) is in the realm of regular expectations since the payouts can be reasonably estimated, and the payouts are explainable and predictable *prior* to the event occurring (threshold targets are set at a level where the maximum payout is determinable). Interestingly, a black swan event results in extreme downside losses, whereas, an incentive compensation event tends to result in massive upside payouts. Thus, incentive compensation events have opposite attributes to those of black swan events; from a risk management perspective, we can label incentive compensation as white swan events.

White swans are associated with peace, serenity and grace; in this essay, we will note that incentive compensation practices have been relatively unchanged (*peaceful and serene*), and these practices have been *gracefully* accepted in the market place without much discussion. Here we will discuss incentive compensation within an enterprise risk framework. We will also discuss potential actions and responses to designing and implementing effective incentive compensation programs from a risk perspective.

### Risk Framework

All enterprise risk management (ERM) frameworks have similar components. These components include setting risk appetite and risk policy, identifying, assessing and

measuring risk, and reporting and monitoring risk measures. Risk management frameworks are usually well defined and structured; however, the framework applied to incentive compensation is implemented to identify risks that impact the achievement of enterprise objectives over a 1 to 2 year period. This means that risk events, which are not expected during this period, are excluded from analysis. This occurrence can be illustrated through the following workforce planning example. If an enterprise has key employees who are expected to retire during the next 5 to 9 years, the loss of these key employees would have a substantial impact on the enterprise. From an incentive compensation perspective we might well ask, should this risk be identified now? Intuitively, the time to act would be now, in the present. The correct solution would be to implement the following: an aggressive succession plan, mentoring and training of new key employees, and the transfer of knowledge and a job-shadowing strategy. However, the likely solution for most enterprises would be to defer any risk mitigation strategies for a later period, since the deterioration in the financial measures in the current period (for a risk event than will occur in 5 to 9 years) would translate into a potential reduction in incentive compensation today.

The board of directors (Board) is responsible for assessing the risk appetite and developing a risk policy. It is also responsible for ensuring that the enterprise’s risk exposures are monitored and managed from a downside as well as an upside (opportunities) perspective. From an incentive compensation standpoint, the Board usually delegates its responsibility for compensation issues to the Human Resources Compensation Committee (HRCC) of the Board. In practice, the HRCC focuses on retaining management and key talent; therefore, incentives are significantly weighted towards short-term performance metrics, like Total Shareholder Return (TSR) or Earnings per Share (EPS). Incentive compensation payout for managing key risk categories (strategic, operational or human capital) are weighted to a lesser extent, and there is reduced

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focus on exceeding non-financial objectives, which could have material or increased risk exposure to the enterprise over the long run.

Risk management breakdown occurs because the HRCC does not effectively integrate strategic, operational and risk decision making processes into determination of incentive compensation. For effective risk governance, the HRCC should coordinate with the Risk and Audit Committee of the Board to bring more holistic risk measures into the designing of incentive compensation while minimizing the risk management breakdown.

### Aligning Incentive Compensation with Risk Management

Generally, the term “risk” in incentive compensation is narrowly defined as a positive outcome (incentive payout) resulting from a positive financial impact. In this definition, the concept of a negative outcome (negative payout) is not acceptable. Minimally, the expectation is that a negative financial impact will result in a ‘zero’ payout. Incentive compensation designs for management and key talent are asymmetric; that is, they have positive or zero payouts (“*Heads I win, Tails you lose*”). This is clearly illustrated through the example of traders with large position limits who can expose the enterprise to material credit or financial risk. These traders are paid substantial incentive compensations even if risk outcomes are materially worse than expected, so long as significant profits are generated on short term positive results. There are no compensation processes that adjust actual payouts on longer risk outcomes. Nor are there processes for downward adjustment for emerging negative risks that are a consequence of risk outcomes that resulted from the short term positive results.

The incentive compensation focus is on short-term financial objectives rather than on an enterprise long-range financial and non-financial risk objectives. For management and key

employees responsible and accountable for managing the risks, incentive compensation components should reflect key activities (marketing, operational, safety, recruiting, etc.) that result in material gains and losses to the enterprise. These activities should include short-term and long-term activities, as well as financial and non-financial activities that have inherent and emerging risk exposures to the enterprise.

In order to align incentive compensation to risk management, the narrow definition of risk has been redefined to ensure symmetry in compensation payouts. Management and key employees responsible for risk management are unlikely to take imprudent risks if their incentive payments are reduced or eliminated for activities that end up imposing significant losses on the enterprise. Potential actions that could be taken to improve incentive compensation designs include the following: adjustment of performance awards retroactively to reflect risk outcomes over a pre-determined (past and future) period, measuring financial and non-financial performance over a longer period while deferring payment of incentive compensation over an extended period and/or payment of incentive compensation over a multi-year period, and reducing the sensitivity of performance to short-term financial measures.

### Risk Measures

Annual public disclosure and reporting requires peer comparison of incentive compensation for senior management using TSR (total shareholder return based on share price appreciation and dividends). The acceptable practice is for the HRCC and their compensation consultants to select homogeneous peer comparators (based on revenues, market capitalization, number of employees, etc). The incentive compensation for senior management is, to a significant extent, justified by comparison of the enterprise’s TSR against peer comparators. A significant portion of the payout is market-driven, not performance driven; that is, the enterprise’s actual performance against objectives are

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reflected in incentive compensation, but to a lesser extent. By definition, the peer comparators may be a homogenous group based on the stated metrics (revenues, market capitalization, number of employees), but the comparison among these peer comparators is spurious, as each of these enterprises may represent varied industries with different business objectives (strategic, operations and financial), risk profile, workforce and financial maturity. The use of this acceptable practice results in a ‘mismatch’ risk for determining incentive compensation; therefore, standardized risk adjusted measures (discussed below) should be included when determining the peer comparators.

Enterprises use financial measures (Return on Assets-ROA, Return on Equity-ROE, Return on Capital -ROC, etc.) in their formulaic development of incentive compensation payout. Financial enterprises, due to the nature of their business, are able to determine economic risk capital and have trended towards the use of risk adjusted metrics (Return on Risk Adjusted Assets - RORAC, Return on Risk Adjusted Capital - RORAC, etc.) for evaluating risk-adjusted performance; however, there is still less traction on the use of risk adjusted metrics for incentive compensation. Non-financial enterprises use risk-adjusted performance metrics to a lesser extent due to the lack of publicly available standardized methodologies for the determination of these metrics. In order to establish the link between risk and incentive compensation, a significant shift in current compensation practices would be required by practitioners, and standardized tools and methodologies would have to be developed and available in the public domain.

As stated above, TSR is an acceptable and widely used measure. It has many merits (e.g., it allows investors to assess share performance), but this measure is incorrectly used and distorts incentive compensation. There is ample evidence in the public domain showing that 40% of returns are explained by market and sector movements. Additionally, in the short-term, share prices are driven more by differences in actual performance and market expectations than by the actual level of performance. It is this difference that produces higher or lower shareholder return to the market or to peer comparators. Despite this, TSR is used in determining a significant portion of market-driven incentive compensation. There are a number of proprietary measures (Economic Value Added, Market Value Added, etc.) that can replace the TSR measure; however, it may be prudent to develop a universal standardized measure to provide a more robust measure, thereby eliminating ‘pricing’ and ‘model’ risks in incentive compensation.

### Summary

Many beautiful places have a swan or two gracefully floating in a stream or lake. White swans depict graceful movements and are symbols of serenity. The incentive compensation landscape was a beautiful place with white swans; let’s stay with this idea, but maybe it’s time to gracefully introduce emerging compensation practices that are robust and have direct peaceful linkage to risk measures.

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# Incentive Comp Principles

By William Mech

## 1) Try really hard to hit target payout, on average

When you tell employees that their target incentive is XX%, they intuitively expect that, on average over time, that's what they'll get! Plus, when you do market salary comparisons, and are comparing to similar positions including "target" bonus pay, you are distorting the comparisons if bonuses routinely do not average out to target.

## 2) Link bonus pay to company fortunes, but vary that link

The higher an employee's target bonus, the more it should be affected by the company's results. Highly paid people have more capacity to absorb risk, and variability in bonus pay is expected. But, the broader one's responsibilities, the more bonuses should derive from comparably broader results. Lower paid employees should not only have less of their pay at risk (in %), but also be affected less by the overall organization. They need less volatility in their bonus pay, and more control over it. Bonus pay should not be a one-size-fits-all system, rather it should recognize the need for less volatility and more control when incentive targets are smaller. (note: hold in tension with #1 and #3)

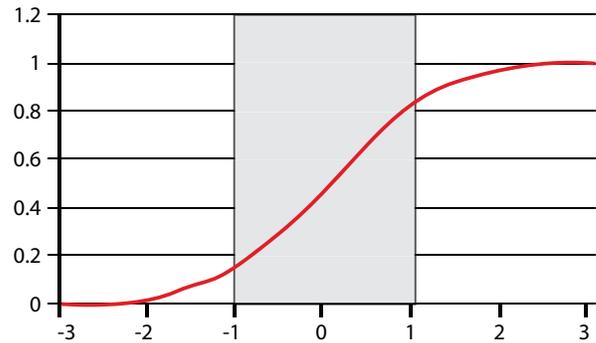
## 3) Be sure that 95% of the time, something gets paid out

Ranges around target such as [50%, 150%] are purely discretionary (arbitrary?) and can be changed. Widen the range so that any "cliff" or "cap" are further out in the tails; minimize constraints on rewards. Then, more people participate more fully, and variation in payouts is wider, to recognize variation in performance. High performers get even more, poor performers get much less, but... everybody plays, and plays more often.

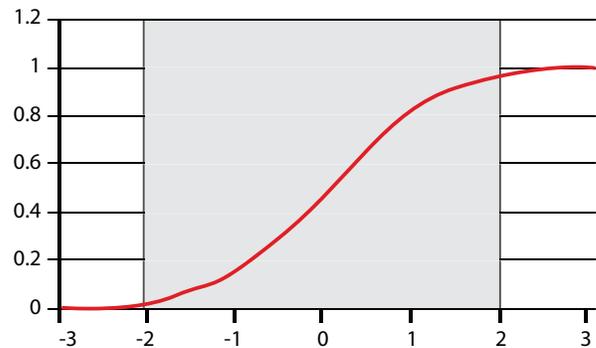
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## Examples for #3

Pay bonuses not like this:



But like this:



Set the "cliff" and the "cap" to minimize constraints

## Incentives and Systemic Risk: Not Just for Company Executives

By Max J. Rudolph

Enterprise risk management continues to evolve. Practice ranges vary widely. Models are becoming more sophisticated yet less transparent. Customers are becoming more sophisticated yet still depend on black box cookie cutter solutions. Incentive compensation, which everyone agrees is a key component of best practice ERM, lags behind. Given that people will do what you pay them to do, this behavior is not surprising.

There is no question that incentives are important. Most discussions of this topic deal with senior managers at businesses, but incentive led behavior is not purely monetary when considering systemic risk. The collapse of an entire financial system due to contagion from one company, industry or other entity is a big deal. One can, and should, argue that this would be an unintended consequence. Better information about prior decisions and their results can reduce systemic risk.

Regulators today view systemic risk, through the SIFI (Systemically Important Financial Institution) mechanism, as being driven by a single company. This is wrong. It is the practices those companies implement that create risk. The most famous individual company SIFI was AIG. It was actions at their Financial Products Division, holding unbalanced risk in a leveraged market, that threatened to bring down some of the biggest banks in the world. AIG was able to enter into these derivative contracts due to their AAA rating. Other financial institutions could have been doing the same thing. Other parts of the AIG holding company structure were not even aware of these actions, yet they were lumped together as if everyone was guilty of the same malfeasance. Banks, mortgage originators and other brokers had ethically questionable practices. Should only large companies be penalized while small firms go unchecked? It's the actions that create the risk, and a broad swathe should be cut through any industry with practices likely to interact with other parts of the financial system in a disastrous way.

Within the insurance industry, for example, there are risks that can be managed using the law of large numbers and risks where outlier events can dominate and threaten solvency. Reinsurers hold quite a bit of the known known risks with historical data, but also hold most of the unknown unknown risks. Reinsurers are also highly intertwined from an ownership and risk sharing perspective. If one of them became financially insolvent, it is unclear what the impact would be on other reinsurers. It is the industry practice that is at fault, not single company implications.

These systemic risks do not belong entirely to the banking and insurance sectors. Groups that could impact the global financial system include governments, from both established and emerging countries, rogue states and terrorist groups, non-governmental organizations (NGO), academic institutions, scientific researchers, financial institutions, and even manufacturing and service companies can all have unintended negative consequences on the world's financial order.

Systemic risk goes beyond pure financial risks, including higher costs due to trade conflicts and war. The financial system is at risk due to pollution, resource depletion, and forced changes to a way of life. They were initially free but true costs are yet to be determined.

### Established governments

Stable governments provide checks and balances, but even a multiparty system overextends and mean reverts with respect to policy and regulations. Prior to 2008 a generation of regulations had moved the United States toward a laissez faire economy where the "invisible hand" would manage the economy. The government had become a prisoner of the bureaucracy, which itself suffered (and continues to suffer) from regulatory capture. This is when special interest groups, such as investment bankers, effectively take over a regulatory agency through a combination of lobbying, infiltration

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and bureaucratic job security. Incentives at governmental agencies need to protect the public.

Examples: Both Robert Rubin and Henry Paulson served as US Treasury Secretary after leading investment bank Goldman Sachs. Gerrymandering, the process of manipulating voting districts to keep one party in the majority, has led to a divided political environment where moderates are not welcome. If you don't need to work with others to get elected why are we surprised that this trait has been lost in Washington.

**Governments in emerging countries**

Third world countries tend toward concentrated decision making power in leaders who often have their own agendas. The incentive is to stay in power since change in control often leaves the exiting leader dead. Getting these countries to open up their economies to trade, with restrictions so foreigners can't overly impact their markets through quick entry/exit, would align incentives with citizens.

Example: Venezuela, under Hugo Chavez, has nationalized firms and used oil money to provide benefits to the voters of his country. South America has contagion risk when this unsustainable situation breaks down.

**Rogue states**

A country intent on joining the powerful elite can slow economic growth through protectionism and by diverting resources to military budgets. Incentives of food and other services are offered in an attempt to manage expectations.

Example: The world is more stressful as North Korea pursues nuclear weapons and long range ballistic missiles. Incentives have had limited success to date as power is the motivation.

**Terrorist groups**

Those intent on terrorism want to incite change. It can be

difficult to incent this group as they feel life will improve for the masses despite popular opinion. Systemic risk increases as these groups will target disruption techniques like cyber-terrorism designed to create chaos in the financial markets.

Example: al-Qaeda grew in strength over many years before the 9/11/2001 World Trade Center attack and continues to pursue adoption of an extreme form of sharia law for all.

**Non-governmental organizations**

Non-governmental organizations operating without proper oversight can create systemic risk through actions or set the stage for future disruption.

Examples: United Nations troops in 2010 serving after the Haiti earthquake brought cholera to the local drinking water. The Gates Foundation has reduced the number of deaths in many remote parts of the world, but these areas have historically been subjected to food shortages and war. Incentives should be developed, with oversight, to balance good intentions against delayed suffering.

**Academic institutions**

Academic research has its own bureaucracy that makes it hard to change established practice. When Copernicus described a solar system that was not earth-centric, the existing intelligentsia challenged him. The incentives are to reward to existing bureaucracy and not make waves. The Nobel Prize in Economics has not helped, as its recent winners have focused on model driven mathematical models that serve as great proxies for markets but less well as predictors for future results.

Example: Warren Buffett has commented that he should endow professorships to teach the efficient market theory, as that will lead to another generation ignoring intrinsic value. EMH, CAPM and Black-Scholes tend to confuse the signal and noise, focusing on market values as always being correct.

## Incentives and Systemic Risk ... by Max J. Rudolph

**Scientific researchers**

When a researcher wants to publish results they can't find a place to do so unless they have statistically significant positive results. This is poor incentive as it leads negative results to be ignored. This results in redundant studies and impure data. Even Mendel fudged his data when studying peas to better prove his hypothesis.

Example: Peer reviewed science journal retractions have increased greatly over the past generation. Whether it is a vaccine's impact on autism or stem cell research, there is great pressure on researchers to "earn" their grant money and move up the food chain.

**Financial institutions**

Much of the recent financial crisis was laid at the feet of bankers and their incentives. This is appropriate, but there is plenty of blame to go around to others too. Mortgage originators are paid for top line growth, and the risk is passed on to others who naively rely on others to manage the risk. Incentives are not aligned. When flood insurance is subsidized by the government it is not surprising that private insurance dries up.

Example: sovereign debt required no capital to be held by banks or insurance companies, so investors in these institutions sought out riskier debts that provided a larger spread. This also occurred with liquidity risk. No capital is required to be held, so institutions loaded up as it seemed like free money.

**Manufacturing and service companies**

Within companies incentives get a lot of discussion as they apply to managers, and that is important. In addition, some government policies are designed with good intentions that lead to unintended consequences.

Example: Social Security contributions are capped for both individual and company contributions. Oftentimes this money is used to provide an additional retirement plan for the highly compensated, leading to higher pay with no alignment of performance incentives.

**Conclusion**

Proper incentives drive systemic risk, but it is not always obvious what the proper incentive is. A long time horizon helps think through unintended consequences and risk interactions. Providing proper oversight so one person never has absolute control, and a variety of perspectives is encouraged, will improve both incentives and results.

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## The Entitlement Paradox

By Russell Sears

Islands such as Gallipolis have been incubators for the way species evolve. Many have written on the competitive phase of the evolutionary process. Species adapt to perfect their strategic advantage, through natural selection or “survival of the fittest”. However, these islands illustrate other evolutionary strategies: “survival of the first” or “survival of the few”. Imagine the first lucky seed, birds, turtles or goats that found or were abandoned on these paradises. With plenty to eat and few or no predators, the population would explode quickly. Evolutionary math suggest that these strategies are filled with rapid expansion of populations and a race to become the dominate species of this new territory<sup>1</sup>. Competitive pressure to perfect the niche strategy would ensue. Competition does not always result in a better and stronger species. Often these overcrowded populations can go into boom and bust cycles. The population swings can make a species vulnerable to extinction. If the environment becomes fragile, due to overcrowding, the natural incentives of self-preservation and high pro-creation rates can result in tragic consequences for the species as a whole.

A rather simple formula  $R \times P(t) \times (1 - P(t))$  has some interesting properties<sup>2</sup>. When  $P(t)$  is interpreted as the percentage of the maximum population at time  $(t)$ ,  $(1-P(t))$  is the preventive drag for the next generation to reproduce, and  $R$  is the reproductive rate; this equation can illustrate both the boom and bust cycles that can occur. Further, if  $R \geq 4$ ,

the future forecast becomes harder to predict. This illustrates Lorenzo’s famous “Butterfly Effect”. A very small difference between  $P(0)$  (one that environmentally would be impossible to measure) can have a completely different pattern of booms and bust. These small differences in starting points can have much longer or shorter time periods until the points of extinction. Nature seldom simplifies the survival battle into such neat equations. Despite the more complex dynamics, nature does sometimes have similar resulting outcomes. Examples include:

1. Artic timber wolves and snow hare populations can have well defined boom and bust cycles similar to the simple equation when  $3 < R < 4$ .
2. The gypsy moth caterpillars can cannibalize their young into eradication of the next generation similar to when this equation is  $R > 4$ .

Man’s intelligence and ability to innovate has allowed us the ability to create a new environment on terms that give us a competitive advantage. Beyond innovative ideas, and communications with cooperation is key to such massive efforts<sup>3</sup>. The rational basis for the evolution of altruism and cooperation can be explained by understanding the different optimal strategies for different types of “Prisoners Dilemma”. See table below:

Prisoner Dilemma From Wiki	Prisoner B stays silent (cooperates)	Prisoner B betrays (defects)
Prisoner A stays silent (cooperates)	Each serves 1 year	Prisoner A: 3 years Prisoner B: goes free
Prisoner A betrays (defects)	Prisoner A: goes free Prisoner B: 3 years	Each serves 2 years

<sup>1</sup> Evolutionary Dynamics: Exploring the Equations of Life; by Martin Nowak; 2006

<sup>2</sup> “When Algebra Gets Chaotic”; by David Snell; Jan. 2012, Forecasting and Futurism

<sup>3</sup> SuperCooperators; Altruism, Evolution and Why We Need Each Other to Succeed; by Martin Nowak and Rodger Highfield; March 2012

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If the Prisoner Dilemma is a single event, then the optimal strategy is to betray the partner. There is no prior knowledge and the expectation is the partner will rationally behave in his best interest to your detriment, e.g., haggling with a car salesman. He will not give you the lowest price up front. You will not disclose your spouse insist that you get this car.

If however, there are infinite repetitions of the prisoner’s dilemma; then the optimal strategy is full loyalty/cooperation the first time; and thereafter return in kind. An example here is when your reputation is on the line (or businesses reputation). When it comes to signing the contract for the title to the car, then it is expected for both sides to be honest and loyal. It is rational to assume that the other side will behave equally rationally and protect their reputation and the business’s reputation.

Ants and humans are examples of “super-cooperators”. Ants however, are instinctively programed to cooperate, to be loyal and altruistic. This gives rise to the “devious ant” strategy. The optimal strategy for an ant would be to be disloyal. The other fellow ants would not be capable of changing strategies and return in kind, yet, the devious ant would benefit by betraying others and still reap the benefits of cooperation. To prevent this they are also instinctively tribal and war with outside tribes.

Humans can change strategies, but often are slow to recognize the disloyal person. As humans, you realize that while the assumption is towards altruism and trust, we also can “return in kind” once we acknowledge we’ve been deceived. The “devious ant” recognizes the deception will not go on forever. For an individual that expects the game to end soon, but believes others think it will continue, then the optimal strategy is to be the first devious ant and exploit others naiveté.

see table 2

<b>Type Prisoners Dilemma</b>	<b>Optimal Strategy</b>	<b>Examples</b>
One time no knowledge	Betray Partner	Predator Prey- buyer beware
Infinite Repetition	Be Loyal First Time Return in Kind Thereafter	Super cooperators Ants and human ingenuity, contracts Ongoing Business Model
Repeated Process Expected by one side business to end soon	Prey on Others Altruism Naiveté Until They Catch On	Devious Ant-, Bubble Market - Short Term Business Model- (Traveling Salesman)

Fast growth often leads to a general consensus that a bubble is forming. However, timing the bubble’s burst is difficult due to the chaotic nature of overcrowded environments. Since one side is vulnerable to being exploited by the other, often there is a race to be the first devious ant and form tribes. Often when growth or profits start slowing a company becomes vulnerable to these internal pressures to continue the pace, at the expense of the future.

This behavior can have a snow ball effect. One leader uses the “devious ant” strategy and is rewarded for it. Leadership doing this gives a signal that the business model is about to bust; therefore it is every man for their selves. Often incentives are designed so they get rewarded for shifting profits or sales growth, up front at the expense of either outright cannibalizing the future or shifting the risk to a later date and off balance sheet.

This has tremendous potential to recognize when a bubble is about to burst and a business is about to collapse. It shows

**The Entitlement Paradox** by *Russell Sears*

insiders information. If uncooperativeness, backstabbing and outright deception is increasing in an organization, then there are more and more votes of “devious ant” strategies, More inside people are realizing it is a bubble, about to burst and are taking what benefits/bonuses they can from the business model before it burst.

3. Selling of companies resilience – expertise, operations infrastructure,
4. “Stuffing the tail”- Under estimating tail risk, and then over-allocating to it.
5. Under estimating chance of long term trends- Government biases and demographic (e.g. interest rates)

This explanation of rational evolution of cooperation implies that incentives risk harming, rather than motivating best efforts in the following environments:

1. A prior fast growing or highly profitable niche where growth or profits are slowing.
2. An environment where overcrowding is beginning to happen
3. An environment where insiders see the turbulence occurring, but outsiders do not
4. An environment where one side expects the business opportunity to only last a short time, but the other side expects it to be an ongoing concern.
5. An environment which rewards only profits and growth.

People are not entitled to profits and growth. But they are entitled to honesty and respect. The most cost effective incentive programs are those that are based on the ideals stated in the Declaration of Independence-that people are “entitled” to certain inalienable rights. Such incentive programs get at the heart of the collaborative effort by making others feel a part of something bigger than them.

**The Entitlement Paradox:**

If a leader assumes that all are entitled to respect of ideas/ beliefs, cooperation, honesty and altruism; then the leader is entitled to expect the same in kind. This leader will find that people will flock to her shores due to the Liberty and opportunity that will abound. The best and the brightest will make great personal sacrifice to be a part of it and to ensure that it continues. It is the American Way.

These concepts have many incentive and risk management implications. More businesses are based on innovation and being the first to dominate a niche and as more leaders are approaching retirement age understanding the implications are becoming more important.

If, however, a leader assume that nobody is entitled to anything. It is a dog eat dog world Then the leader is entitled to nothing and can expect the same in kind. This leader will find that he is left with only those that could not leave, that are lucky to still have a job and too defeated to try.

Ideas how to identify and mitigate incentive risk are:

1. Watch for signs of niches becoming over crowded.
2. Monitor signs of lack of cooperation and collaboration

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# Incentive Compensation/Risk Management - Integrating Incentive Alignment and Risk Mitigation

By Rick Beal, Alex Weisgerber, Claudia Poster and Esther Becker, Towers Watson

Insurance companies' risk management practices came under great scrutiny as a result of the financial crisis. Ensuring that the structure of incentive compensation does not promote unnecessarily risky behavior has been the subject of many recommendations by regulatory agencies, Congressional mandate and commentary from professional organizations. At times, it seems these efforts may be aimed at trying to create (and enforce on the industry) one "perfect" incentive plan.

No single incentive design can fit every circumstance. However, organizations that follow a set of key principles can design effective incentive plans that align with organizational strategy, motivate individual and teams to achieve incremental performance, and incorporate appropriate risk-adjusted design safeguards, if organizations follow a set of principles.

## 1. First Understand the Risk Context

Before a balanced incentive plan can be designed, the organization must identify its material financial, operational and strategic risks. In short, it must have in place the basics of an Enterprise Risk Management (ERM) framework. Many organizations use historical incident/loss analysis, modeling and other tactics to better understand all of these risk areas.

Identifying employees who have the potential to expose the company to material adverse risk is another essential step. The Federal Reserve definition of material risk takers includes employees (or groups) anywhere in the organization that, through decisions or influence, can expose the organization to material risk. These are the employees whose incentive plans and performance goals should be scrutinized to ensure they do not encourage imprudent risk taking. These employees should receive additional, regular communications on the risk expectations of the enterprise.

While the definition is helpful, a "back of the envelope" approach to identification of material risk takers is not sufficient. Rather, a rigorous analytical approach should focus the organization's intelligence on the full range of business risks and map employees from every function to specific risk taking scenarios. These employees are not always the most senior people in the organization, and their ability to materially impact results may not always be obvious. For example, consider traders and employees who build models that establish and monitor risk parameters for acceptable trades.

Allocating risk capital to employees in critical risk functions and comparing it to a defined materiality threshold (e.g., a specified percentage of profits) can be a useful quantitative approach to identify material risk takers.

Organizational culture is another important factor that shapes the risk environment. Companies that overvalue short-term return run a greater chance of encouraging "rogue" behavior, prompting employees to take inappropriate risks or encouraging managers to turn a blind eye to risk taking. Therefore, it is important for managers to think critically about the tone of the organization's cultural attitude towards risk. An ideal culture balances support for prudent risk taking (e.g., that which supports differentiated performance and innovation) with strategies to discourage excessive risk taking.

## 2. Apply Risk Balancing/Design Interventions to Minimize Risk

Incentive plans must similarly find a balance between performance focus and risk sensitivity while taking into account business requirements and market practice. Managing these tradeoffs is the crux of traditional plan design. However, in the effort to motivate growth in profitability and

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shareholder return, risk balancing mechanisms are not always applied. There are a number of design features that should be considered to balance risk and reward, including:

- Risk-adjusted performance metrics in addition to the traditional P&L metrics
- Effective use of discretion as a hedge against windfalls or, conversely, achievement of stretch goals through inappropriate behavior
- Specific quantitative caps/windfall provisions
- Deferrals that match the time period between actions and outcomes
- Provisions to facilitate claw backs and acknowledge performance tails
- Eligibility threshold criteria that limit participation to accountable individuals
- Pay level and design benchmarking to ensure that any rewards are competitive and do not provide outsized results
- Rigorous assessment of quality of goals and outcomes – that is, both how they were achieved and their durability, ensuring that critical investments are not compromised.

### 3. Establish an Incentive Governance Framework to Ensure Balance

Regardless of its risk profile, an incentive plan requires oversight to ensure it is designed and administered effectively. A thorough review should involve an interdisciplinary perspective from Finance, Legal, Risk Management and senior corporate management and should have Board-level visibility. There are four key elements of a robust incentive compensation governance framework:

- **Structure:** What organizing approach will best support the execution of the governance model?
- **Roles:** What stakeholders are involved in the core processes of incentive design and administration?
- **Decision Authority:** What can each role do or decide for

each incentive design and administration practice?

- **Processes & Criteria:** What core processes must the enterprise conduct, and which criteria should be used to assure quality?

For organizations just beginning to consider incentive governance, mapping current practices can give a clear path for identifying weaknesses. Large, complex organizations often find that they have inconsistent, unclear practices, causing the same decisions to be handled differently in different areas of the business. Other organizations find that stakeholders (including, often, the risk team) are not consistently, explicitly included in incentive-related processes. Finally, some organizations' governance efforts are complicated because they do not clearly establish (and hence do not recognize that they have achieved) the desired outcomes of these processes.

Regardless of the governance structure and practices, establishing specific criteria can lead organizations to a deeper understanding of the effectiveness of their incentive design and administration processes. For instance, many organizations find that goal setting is a difficult process to manage and standardize. Incorporating criteria such as "Were common probability of attainment and allocation methods used for formulaic financial goals?" to the review of the goal-setting process can provide an objective basis for judging its outcomes.

### 4. Monitor Regularly

A thorough analysis can point out where compensation program design features potentially motivate excessive risk taking. The process should be repeatable and include the following elements:

- Cataloging of programs, including all short- and long-term plans and sales incentives, and the potential size of the awards and impacts on the organization

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- ERM framework as context with reference to the risk profiles of each business segment and the employees identified as material risk takers
- Identification of factors that mitigate the risks inherent in the plans, allowing for assessment of residual risk.

Regulators increasingly request quantitative “proof” of the degree to which incentives are adjusted for risk taking. Simulation, back testing, and other robust statistical analyses can test correlations among performance, risk and compensation. Analyses should consider differences between top earners’ risk profiles and those of other employees; qualitative analysis and assessment of specific risk outcomes; and scenario analysis testing pay sensitivity to risk outcomes.

### Addressing the ERM Opportunity

Incentive compensation plan design practices are evolving rapidly. HR, Finance and Risk practitioners are working to better understand inherent and residual business risks as well as inherent and residual (i.e., remaining risk after accounting for governance and business practices which may mitigate

risk) risk of incentive plans and to use this information to modify plan design and governance frameworks. Risk takers must have a clear understanding of risk parameters, the importance of compliance and the consequences of non-compliance. In addition, employees should understand what to do if they are pressured to take imprudent risks. By translating the ERM framework into easily understood terms for employees, ERM professionals can provide enormous support to the HR function.

Finally, embracing this work will have the benefit of aligning with the development of insurance companies’ Own Risk and Solvency Assessment (ORSA) frameworks. Methods to gauge risk may include both qualitative and quantitative analyses to help portray a clear view of relative risks. However, the ultimate effectiveness of the approaches suggested here depends on communication and implementation throughout the enterprise. The result is achievement of the twin goals of strategically aligned motivation and a balanced culture of risk mitigation.

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## Some ERM Perspectives on Incentive Compensation

By Alfred O. Weller

The title of this Call for Essays is “Incentive Compensation – The Critical Blind Spot in ERM Today.” The central question is what should enterprise risk managers do to manage the critical blind spot “incentive compensation”. The management goal was clearly encapsulated by William Shakespeare in 1605. In Macbeth Act 5 Scene 1, Lady Macbeth speaks the famous line “Out, damn’d spot! out, I say!”

Successfully achieving this goal may involve any and all of the following perspectives and considerations.

1. **Identifying Incentive Compensation** – Incentive compensation is created anytime there is a new economic deal (e.g., sale or contract), or a change in economic circumstances. Incentive compensation is commonly described more narrowly as a change to an underlying employment agreement to “incent” the employee to a new level and/or type of performance by rewarding such performance with increased income. In practice, for the following reasons, incentives arise in a much broader variety of circumstances. Sound management and, in particular, sound enterprise risk management requires awareness and recognition of these possibilities as a whole.
2. **Employee Diversity** – If every employee had the same background, came from the same economic circumstances and was motivated by incentives in the same way, places of employment would be incredibly dull and uninteresting. Such uniformity might even be a significant risk in itself. Employee diversity means that an incentive program that works well with one group of employees might be totally inappropriate to a second group. To use a decades old example, free Yankee tickets to a group from the Bronx probably would not incent a group from Brooklyn.
3. **Economic Motivation** – General motivations for economic activity can be classified many ways. For

simplicity, one set of general motivations is:

- Love – economic activity is undertaken to provide something for free to a loved one;
- Fear – economic activity is undertaken to provide something for free to a person threatening physical harm;
- Mutual benefit – economic activity is undertaken for mutual benefit as when economic goods are bartered.

Any single set of economic incentives is unlikely to have the same impact on individuals in each group.

4. **Time Horizons** – Incentives are often tied to yearly intervals in keeping with annual financial reporting. But what happens when employee goals span different time periods? For example, do actuarial examination raises (commonly classified as a form of incentive compensation) have any impact on performance or even pass rates for groups of actuarial students focused on professional recognition as qualified actuaries able to design and manage actuarial projects? Or in a pension plan tied to average earnings before retirement, is a one year incentive to reduce overtime likely to overcome a multiyear incentive of higher pensions attributable to increased overtime?
5. **Levels of Communication** – Communication always occurs on multiple levels often with not every participant’s attention focused on the same level. In today’s age, e-mail on a phone appears different from e-mail on a computer appears different from printed copy. Some folks focus on main message and fill in detail; others on details and build to main message. Position in a firm can affect focus. There may be levels of meaning. In such cases, problems can result on levels not contemplated by the originator of the communication. To give one not uncommon enough example, introduction of a new incentive compensation program can be viewed as a reduction in salary with little

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chance of attaining incentives – in other words as an incentive to look for employment elsewhere.

6. **Incentive Compensation in relation to Overall Earnings**

–In a bygone era when card games occurred by candlelight, sometimes it was appropriate to ask whether the game was worth the candle? In many business negotiations a change of 10% to 15% is needed before an offer is considered. When incentive compensation programs spread across many salary levels, testing whether the game is worth the candle to all participants is important.

7. **Measurements Used in Determining Incentive Compensation**

– According to Goodhart's law, when a measure becomes a target, it ceases to be a good measure. Goodhart was a British bank regulator but his comments apply as well to incentive compensation. For example, incentive targets can become self-fulfilling prophecies, when coding of premiums for incentive credit is out of phase with coding for policy effective date.

8. **Balancing Management Objectives**

– Short-term management objectives (e.g., increased sales) can conflict with long-term management objectives (e.g., strong customer relationships and marketplace image). Management needs to design short-term incentives to also contribute to long-term goals.

9. **Legal and Environmental Constraints**

– Law, regulation, and even accounting and tax requirements can impose constraints on incentive compensation programs. Less obvious are constraints imposed by the business environment. For example, a claims management firm that billed for services as a percentage of incurred losses could take a hit to income by incenting rapid claim settlement at below historical average claim severities.

10. **Assessing success** – An incentive compensation program succeeds when desired performance improves, the improved performance contributes more to success than administration of the program costs, and employees recognize that their compensation is related to the overall success. This is far different than claiming accurate measurement of the contribution of each employee in the firm. Incentive compensation is not laser surgery and generally not suited to such precise evaluation. If Joyce Kilmer had worked in a human relations department, he might have written:

Incentive programs are designed by fools like me,  
But only God can make a tree.

In summary, unique best incentive compensation programs do not generally exist, but effective ones do. Review of the above considerations enhances the chances of effective, practical design and implementation of incentive compensation programs. Lastly, the list also serves as a checklist affording an expedient test of incentive compensation program features.

Some readers will have noticed that, unless you count the year 1605, there are no formulas, equations, data or statistics in the preceding paragraphs - a six sigma moment in actuarial literature if you will. The basics of sound enterprise risk management do not always require mathematical analysis. To this end, we close with a quote from William Bradford on the role of risk management in the founding of Plymouth Plantation.

In regard to the question of risk in crossing the Atlantic and founding Plymouth Plantation Bradford wrote: *"It was answered, that all great and honorable actions are accompanied with great difficulties and must be enterprised and overcome with answerable courages. It was granted the dangers were great, but not desperate. The difficulties were many, but not invincible. For though there were many of them*

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*likely, yet they were not certain. It might be sundry of the things feared might never befall; others by provident care and the use of good means might in great measure be prevented; and all of them through the help of God, by fortitude and patience, might either be borne or overcome.”*

Thus, Plymouth Plantation claims to have succeeded in part because of enterprise risk management. The example might

even apply to the current Call insofar as survival is a mighty powerful form of incentive compensation. The point of this example is that a key step in overcoming the incentive compensation blind spot is understanding people in the enterprise and doing basic risk management analysis similar to what the Pilgrims did shortly after Macbeth was written.

Hopefully the above list and examples help.

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