



Board of Director Pay:

Compensation Trends in the Life Sciences Industry

By: Edward Speidel, Matt Ward and Robert Surdel

The relationship between Board of Directors and managers of the companies they serve has evolved in recent years. While change in corporate governance will continue to unfold, the role of the Board and the accountabilities of its Directors today are starkly – and approaching fundamentally – different than they were 10 years ago. The once widely (if at times, unrealistically) accepted notion that Boards lack independence from Management has dissolved. Boards today are expected to be armed with the business, governance, legislative and financial acumen required to be critical, highly-engaged strategic advisors of the company.

The role of the Board is starkly different than it was 10 years ago

The impetus for the change is well-known, if not entirely contained: investor, media and government criticism of catastrophic corporate failures – inside and outside of life sciences – typically begins with the company’s senior management, but it also extends to the boardroom.

Few areas of a director’s role and responsibilities have gone unexamined and/or unchanged, as Boards work toward new models of high performance, such as the one developed by the National Association of Corporate Directors (NACD) in Figure 1.

Figure 1

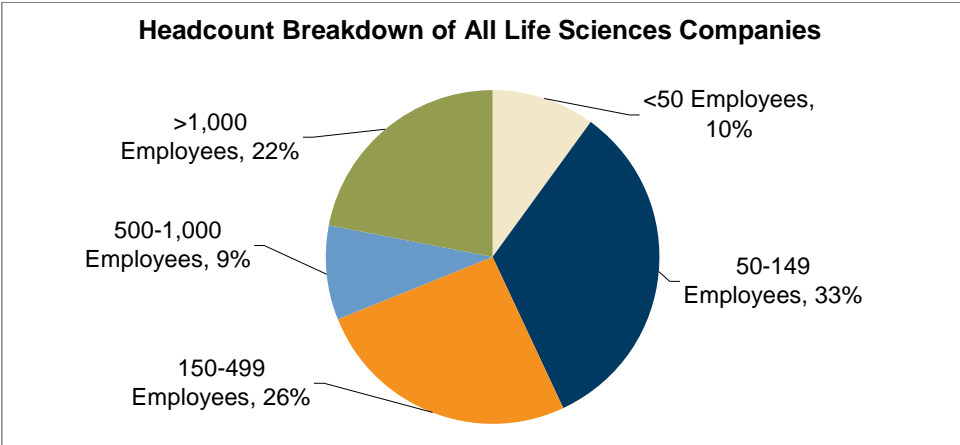


Source: National Association of Corporate Directors, Blue Ribbon Commission on Board Evaluation: Improving Board Effectiveness

Whether it be in how Board members are sourced and vetted, the standards of excellence for their processes, or how much time they spend fulfilling their responsibilities, these changes have reshaped the mission of Boards, and help to account for why compensation of directors is also experiencing ongoing change to more align with the roles and responsibilities of the Board.

This Radford White Paper examines the evolving changes in the boardroom, and how the compensation of Board members at life sciences companies has kept pace with these changes. The analyses are based on publicly filed data from 264 life sciences companies across a wide range of company sizes. Where year-over-year (2006 to 2007) analyses are discussed, data from both years were acquired from 200 life sciences companies. Figure 1 provides detail on the size of companies in the analysis.

Figure 2



All Life Sciences			
Percentiles	LFYE Revenue (MM)	LFYE Market Cap (MM)	LFYE Headcount
75th	\$258	\$1,502	781
50th	\$39	\$348	185
25th	\$9	\$132	89

By their nature, Boards are not conducive to abrupt, radical change

Board Transformation

By their nature, Boards are not conducive to abrupt, radical change. Board change evolves at varying paces and according to differing priorities, depending on the needs of the company. However, models that describe the components of a high-performing Board have crystallized, and many Boards are following all or a portion of these standards.

Figure 3 highlights key areas of change in recent years, and the effects of those changes. As the table outlines, the division of power in the corporate setting is migrating from the “CEO-as-rock-star” approach to one in which the Board takes a much more active role in sharing the responsibility for strategic direction and ongoing execution against these goals. Boards are also evaluating their oversight, shareholder relations process and succession practices as they work toward establishing the characteristics that define a high-performing Board. And, as discussed more below for its direct impact on compensation, Boards are becoming more highly engaged and looked to for virtual availability “24/7”.

Figure 3

Criteria	Old View	New View
Power	CEO "Rock Star"	Board-centric
Oversight	Rubber stamp	Business judgement
Focus	Insular/management-focused	Investor/stakeholder-focused Drive sustainable shareholder value
Process	Check the boxes Attend meeting/limited preparation	Value-add asset
Engagement	CEO "chums" - wine/dine	"24/7" business advisor Content expertise
Strategy	Setting strategy	Monitoring strategy
Succession	Succession crisis management	Succession planning/leadership development

Director skill sets are evaluated differently today, with preference given to specific backgrounds and experiences

“Right People”

Investor advocate groups have pushed for these changes, applauded them as they have evolved, and continue to ask for more.

However, these shifts in Board focus, both at the macro (purpose/mission of the company/Board) and at the micro (director responsibility/expectations) have created their own challenges, including the sourcing of new directors. For starters, Boards now largely have responsibility for sourcing and vetting candidates, a job once held by the CEO.

More significantly, director skill sets are evaluated differently today, with preference given to specific backgrounds and experiences that match the business context of the organization. For example, as companies evolve from the private to public setting, the venture capitalists who were among original directors are moving off the Board in order to make room for those with specific experience in driving growth in the next phase of an organization’s lifecycle. So, Boards are more consistently evaluating the skills and backgrounds of current members against the long-term needs of the organization (see Figure 4).

Life sciences companies are also looking for Board-level expertise to help navigate through the mounting scientific, business and regulatory requirements to gain higher Federal Drug Administration and global product approval. In 2007, FDA approvals of new drug applications fell by 13 percent¹, while approvable letters increased 40 percent. In business environments where such government actions can have immediate and dramatic effects on a company (stock prices immediately dropped an average of 13 percent at companies that received approvable letters in 2007 and 21 percent in 2006), directors are looked to for strategic and scientific guidance in ways not seen in the past.

Figure 4

Areas of Expertise	Board Member 1	Board Member 2	Board Member 3	Board Member 4	Board Member 5
Senior Leadership Exp.	■	■			
Business Development/M&A Exp.		■		■	
Financial Experience	■		■		
Public Board Experience	■		■		
Advisory/Strategic Planning Exp.			■		■
Diversity			■		■
Independence	■	■		■	■
Operational/Mfg. Exp.		■			■
Global Experience		■		■	
Technology/Science Exp.		■		■	
Human Capital Exp.				■	■

Source: NACD: Report of the NACD; Blue Ribbon Commission on The Governance Committee.

Directors are, in numbers never seen before, pursuing on-going training and education

Boards are also looking beyond the old model of seating directors who fit the acting CEO or Chief Scientific Officer prototype, a process which is expanding the field of potential candidates to include “next-level” senior managers (Executive/Senior Vice Presidents), academics, those with industry expertise, retired CEOs, and those with global experience.

And once seated on the Board, directors are, in numbers never seen before, pursuing on going training and education (some of which is certified/accredited by organizations such as NACD, Glass Lewis, and RiskMetrics/Institutional Shareholder Services (ISS)).

We expect to see continued education offerings and directors taking advantage of them, as we continue to see new forms of pressure from the shareholder advisor groups that monitor Board performance. The use of performance tests, such as the one used by ISS with Russell 3000 companies, has expanded. As of November 2007, any company in that index that has performed in the bottom five percent (based on operational and stock performance metrics) of its industry group in two consecutive years will be evaluated for possible “withhold” votes for directors.

For this and other reasons discussed above, we expect to see continued changes in corporate governance structure and practices.

Board Compensation

As Boards have acclimated to the changing business and regulatory environment, reengineered their processes and changed the criteria by which they select new directors, they are re-aligning compensation design to reflect this changing role.

The activity-based philosophy is giving way to a role-based philosophy

Compensation Philosophy

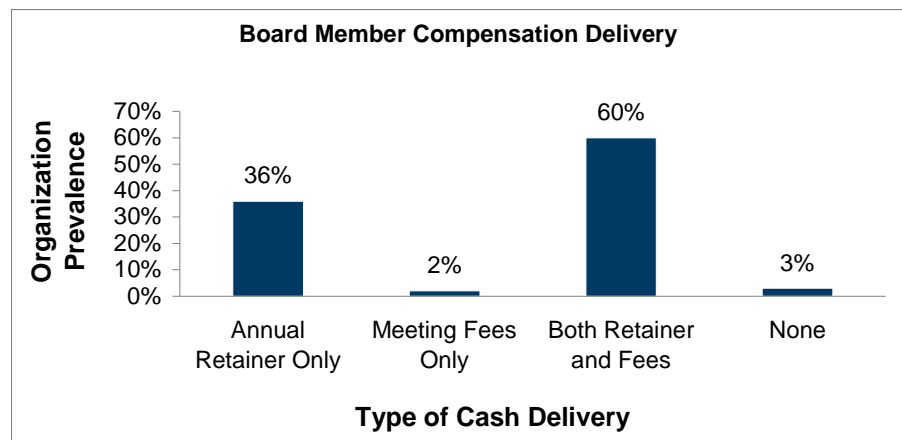
Board compensation was in the past almost exclusively activity-based, delivered in the form of meeting fees, and reflective of a philosophy of compensating directors for their formal Board involvement and time (generally defined by the number of meetings attended) similar to how a consultant would be paid by the company.

However, as we noted in last year's study, with the new reality of increased expectations taking hold, the activity-based philosophy is giving way to a role-based philosophy, a trend which grew in strength during 2007. Role-based pay typically takes the form of retainers and better reflects the new demands on directors, including the recognition that not all work is performed within the confines of a formal meeting.

As Figure 5 illustrates, while most companies continue to use a combination of both retainer and meeting fees, the use of annual retainers-only represents a significant portion of the pay models used in 2007 (36 percent).

The practice is growing, with about five percent of companies migrating to that approach between 2006 and 2007. Further, about 45 percent of life sciences companies deliver at least 75 percent of their Board member cash compensation via annual retainers, highlighting the shift from meeting fees to annual retainer as the primary cash delivery model.

Figure 5



Source: Radford proprietary database

A look at the workload alone of a typical director provides insight as to one reason this change is taking hold.

The average director sits on 2.5 Boards and spends 210 hours on his/her director duties, a 10 percent increase over prior years

The average director sits on 2.5 Boards and spends 210 hours on his/her director duties, a 10 percent increase over prior years.ⁱⁱ Further, Board membership today entails fewer formally-structured demands; whereas committee members in past years might have come together a few times a year for several hours at a time (scheduled months in advance), today they are virtually "on-call" for 15-30 minute conference phone calls (scheduled hastily and at times outside normal business hours). The very definition of what constitutes a "meeting" has been challenged, and the administrative burden associated with tracking meetings has multiplied; thus, the concept of role-based pay has gained traction.

The number of formal full Board meetings, on average, continued to increase between 2006 and 2007, as did the number of Compensation Committee meetings, as seen in Figure 6. The number of formal Compensation Committee meetings, specifically, has expanded to account for additional compensation disclosure required by the Securities and Exchange Commission in recent years, as well as the growing complexity of executive compensation issues. While the number of formal Audit Committee meetings has decreased slightly, this Committee still meets much more frequently than is the case for the Compensation and Governance Committees.

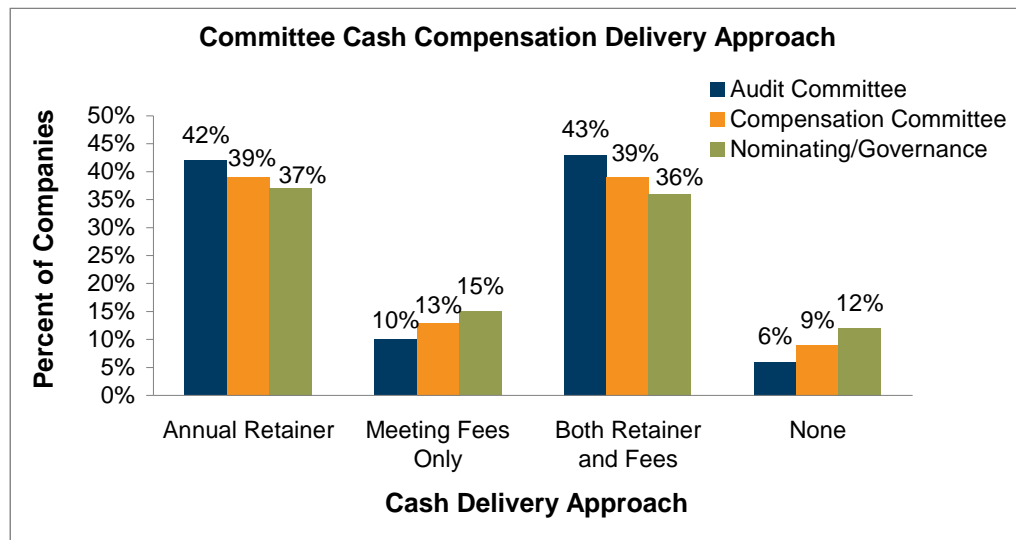
Figure 6
Life Sciences Board/Committee Activity

Meetings/Members	2006	2007	Change
Number of Full Board Meetings			
Median	8	8	No change
Average	8	9	Increased
Number of Audit Meetings			
Median	7	6	Decreased
Average	8	7	Decreased
Number of Compensation Meetings			
Median	5	6	Increased
Average	5	6	Increased
Number of Governance Meetings			
Median	3	3	No change
Average	3	3	No change

Source: Radford proprietary database

The delivery model for committee cash compensation mirrors that of Board membership compensation. As Figure 7 illustrates, companies are about equally as likely to use retainers alone as in combination with fees for committee compensation. The prevalence of annual retainer cash delivery has increased by five percent to 10 percent from 2006 to 2007, and we expect that the use of annual retainers will exceed the combination of retainer and fees within in the next year or two.

Figure 7



Source: Radford proprietary database

We expect that the use of annual retainers will exceed the combination of retainer and fees

Irrespective of pay model (whether activity- or role-based, or a combination of both), the median baseline cash compensation for Board members increased by roughly 10 percent between 2006 and 2007, and was a median of \$34,500 in 2007 (Figure 8).

Figure 8

Competitive Cash Compensation Elements

Element	Year-Over-Year Comparison				Most Recent Year	
	2006	2007	N =	Percent Change	2007	N =
Retainer Amounts For:						
Those Using Retainers Only						
Median	\$28,000	\$30,000	79	7%	\$30,000	94
Average	\$35,300	\$38,200		8%	\$37,300	
Those Using Retainers and Fees						
Median	\$20,000	\$20,000	116	0%	\$20,000	158
Average	\$22,800	\$25,400		11%	\$23,900	
Meeting Fee Amounts For:						
Those Using Retainers and Fees						
Median	\$2,000	\$2,000	116	0%	\$2,000	158
Average	\$1,900	\$1,950		3%	\$1,950	
Baseline Board Cash						
Median	\$32,250	\$35,000	200	9%	\$34,500	264
Average	\$36,200	\$40,000		10%	\$38,500	

Source: Radford proprietary database

It is worth noting that with respect to pay levels, relatively significant variability occurs in both baseline Board and committee cash compensation when looking at a specific company relative to its peer group. For example, in general, larger commercial companies tend to pay considerably higher levels of Board cash compensation than their smaller early stage research companies, which suggested a more specific review of practices for a customized peer group when comparing a company's practices to the market.

Board Leadership and Committee Membership Cash Compensation

Board Leadership Trends and Compensation

As the focus of the Board has become more strategic over recent years, the structure of Board leadership has similarly changed to meet the goal of Board independence. As a result, the prominence of CEO Chairmen has given way to non-employee Board leadership. Approximately 73 percent of life sciences Boards have separate CEO and Chair roles, and about 27 percent have a Lead or Presiding Director.

The role of Lead and Presiding Directors (which are present in cases where there is a CEO/Chair) is to serve as a focal point for Independent Directors, and set the agenda for Board meetings/activities. The Lead/Presiding Director chairs executive sessions, and is the liaison with the CEO, coordinates the activities of Independent Directors and oversees evaluations of the CEO, the Board and its committees. The non-Executive Chair (which is present in cases where

The prominence of CEO Chairmen has given way to non-employee Board leadership

the CEO is not Chair) fills all these responsibilities as well as presiding over shareholder meetings and interacting with major shareholders when necessary.

Figure 9

Board Leadership Retainer Premiums

Practices	%	N =
Percent of companies with a Non-Executive Chairman that provide member retainers	83%	131
Median Non-Executive Chairman Premiums as a multiple of member retainer	2.0x	109
Percent of companies with a Lead Independent Director that provide member retainers	41%	70
Median Lead Independent Director Premium as a multiple of member retainer	1.5x	29

Source: Radford proprietary database

Retainer fee premiums are a common form of compensating the additional responsibilities of Board leadership.

In addition to being more likely to receive a retainer premium, non-Executive Chairs typically receive a higher cash premium compared to Lead Directors – reflective of their additional responsibility and liability exposure. As shown in Figure 9, of those companies with a non-Executive Chairman, about 83 percent provide member retainers, and the Chairman's premium is set at about 2.0x of the member retainer. Approximately 41 percent of companies provide a premium to Lead Directors, at a median of 1.5x the member retainer.

Meeting fee premiums are a minority practice in life sciences; fewer than 10 percent of companies employ this practice.

Committee Cash Compensation Levels

The majority of life sciences companies pay some form of additional compensation for committee membership, in recognition of the additional workload associated with committee activity, and these committee member compensation levels typically vary, depending on the committee.

The majority of life sciences companies pay some form of additional compensation for committee membership

Typically, though not exclusively, if there is additional compensation for membership in one committee, there is additional compensation for all committees; however, Audit Committee members are most likely to receive additional compensation. Audit Committee members tend to receive compensation levels above those of the Compensation and Nominating/Governance committees, reflecting regulatory-related finance expertise requirements and increased risk associated with Audit Committee membership. However, compensation for the other committees is closing the gap with that of the Audit Committee.

Figure 10

**Competitive Committee Member
Cash Compensation by Committee**

Committee	Year-Over-Year				Most Recent Year	
	2006	2007	N =	Percent Change	2007	N =
Audit Member						
Median	\$6,250	\$7,500	200	20%	\$7,500	264
Average	\$7,700	\$8,200		6%	\$8,200	
Compensation Member						
Median	\$4,250	\$5,000	200	18%	\$5,000	264
Average	\$4,800	\$5,700		19%	\$5,600	
Nominating/Governance Member						
Median	\$2,500	\$3,000	192	20%	\$3,000	252
Average	\$3,600	\$4,000		11%	\$3,800	

Source: Radford proprietary database

The greatest increases in cash compensation for committee membership during 2007 occurred in the Compensation and Nominating/Governance committees, partly reflective of additional workloads associated with those committees (as noted above) and partly in response to new governance standards and increased risk management associated with the roles. As seen in Figure 10, median cash compensation increased 18 percent and 20 percent, respectively for Compensation and Nominating/Governance committee members.

Committee Chair Cash Compensation Levels

Chairs of these committees are typically paid a premium for the additional responsibilities associated with leadership, and the premium is typically about 2.0x of the member premium, as seen in Figure 11.

Figure 11

**Competitive Committee Chair
Retainer Cash Premium**

Retainer Type	Committee Retainer		
	Audit	Compensation	Nominating/ Governance
Median Chair Retainer for Those Paying Retainer Only	\$14,500	\$10,000	\$7,500
Median Chair Retainer for Those Paying Both Fees and Retainer	\$10,000	\$6,000	\$5,000
Median Chair Multiple of Member When Premium Exists	2.0x	2.0x	2.0x
	n = 223	205	185

Source: Radford proprietary database

As is the case with committee membership pay, committee leadership pay varies based on the committee, as Figure 12 illustrates. Baseline pay for Compensation and Nominating/Governance Chairs experienced a significant increase in 2007, with median increases of 25 percent and 48 percent respectively, reflective of a growth in time requirements of the roles.

In 2007, Audit Committee Chairs received the highest cash compensation (a median of \$15,000), while Compensation Committee Chairs received a median of \$10,000 and Nominating/Governance Chairs received \$7,000.

Figure 12

**Competitive Committee Chair
Cash Compensation by Committee**

Committee	Year-Over-Year				Most Recent Year	
	2006	2007	N =	Percent Change	2007	N =
Audit Chair						
Median	\$14,875	\$15,000	200	1%	\$15,000	264
Average	\$16,200	\$17,400		7%	\$17,100	
Compensation Chair						
Median	\$8,000	\$10,000	200	25%	\$10,000	264
Average	\$8,900	\$11,000		24%	\$10,600	
Nominating/Governance Chair						
Median	\$5,000	\$7,375	192	48%	\$7,000	252
Average	\$6,700	\$8,000		19%	\$7,700	

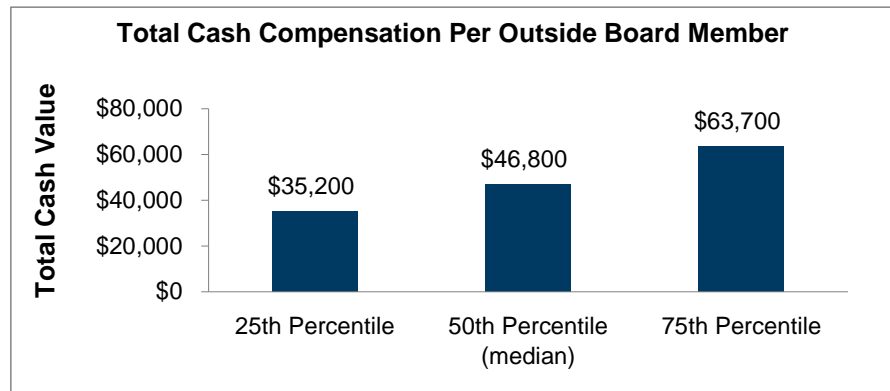
Source: Radford proprietary database

Total Cash Compensation

Total cash compensation (TCC) is a measure of all cash compensation delivered for both general Board service and committee service. It is calculated by adding all cash retainers and meeting fees, divided by the total number of Outside Directors serving on the Board.

The median total cash for life sciences Board members was \$46,800 in 2007, as seen in Figure 13. As has been noted above, company size and stage of development is a significant driver of total cash compensation, with a 1.81x difference between the 25th and 75th percentile.

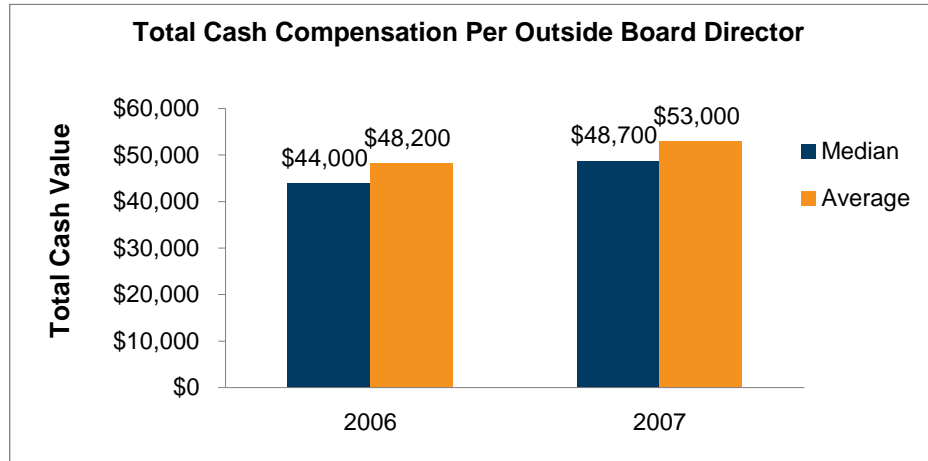
Figure 13



Source: Radford proprietary database

Total cash compensation increased about 10 percent from 2006 levels, which, while notable, is lower than the roughly 15 percent increases seen in years prior to 2007. Figure 14 displays changes in total cash compensation levels from 2006 to 2007.

Figure 14



Source: Radford proprietary database

Equity and Other Compensation Trends

Equity Compensation

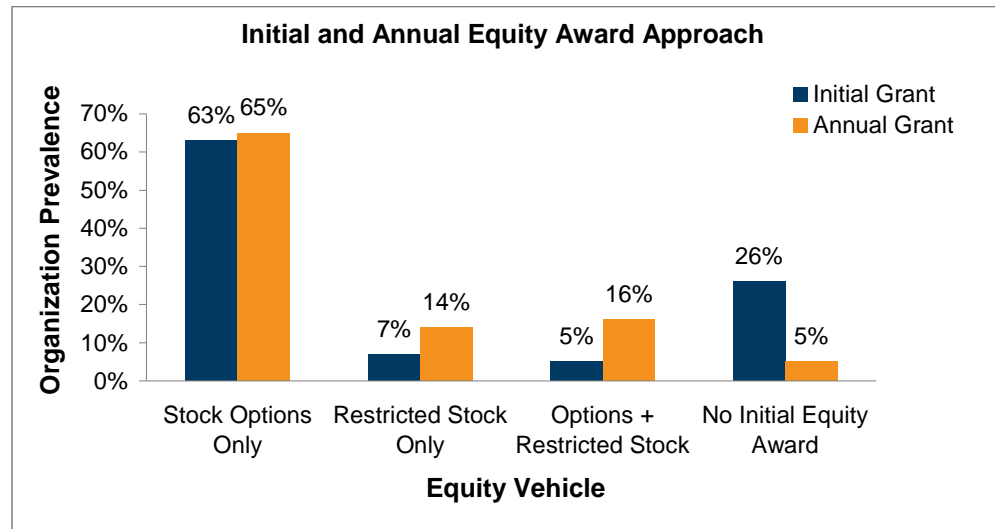
Equity compensation to Board members is widely used in the life sciences industries. About 75 percent of companies have formal initial appointment grant guidelines, while about 95 percent of companies provide annual grants.

Stock options have historically been the most prevalent form of equity compensation, and they continue to be, with about two-thirds of initial and annual equity granted in that form. However, Radford's analysis shows that the use of restricted stock continues to increase, reflecting a broader trend toward reliance on restricted stock to deliver equity compensation to employees at all levels in the volatile life sciences industry. Restricted stock provides a number of advantages; it creates a less negative draw on equity "burn rate" (the same value can be delivered with the grant of fewer shares) than stock options, it provides for protection against underwater options in an industry prone to volatility and it can be used to satisfy stock ownership requirements, if any. (About 48 percent of companies with ownership requirements use full value shares in their equity program (n= 40).)

Figure 15 provides the breakout of equity delivery vehicles in 2007 for both initial and annual grants.

Stock options continue to be the most prevalent form of equity compensation

Figure 15



Source: Radford proprietary database

In 2006, 68 percent of life sciences companies used stock options only and 10 percent used restricted stock only for their annual grants. (The balance of companies either used a combination of stock options and full value shares, or did not grant an annual award). In 2007, those percentages moved in opposite directions, with 65 percent of companies using stock options only and 14 percent using restricted shares when issuing the annual grant for Board service.

While we expect this trend to continue, life sciences companies are not expected to replace stock options with restricted stock at the same pace, or to the same degree, as for example high-technology. Biotechnology is, on a relative basis, at an earlier stage in its development cycle and is dominated by smaller research companies seeking their first product-on-market, and therefore has lower valuations and stock prices. These companies are often reluctant to trade off the leverage of 2-3 stock options for 1 restricted share (assuming a typical stock option-to-restricted stock exchange ratio), especially if their annual growth rate is expected to be 15 percent or more.

Figure 16

Baseline Board Equity	Year-Over-Year				Most Recent Year	
	2006	2007	N =	Percent Change	2007	N =
Initial/Appointment Grant						
Median	\$98,200	\$90,500	147	-8%	\$92,100	195
Average	\$190,700	\$177,800		-7%	\$173,300	
Annual Grant						
Median	\$67,000	\$62,900	190	-6%	\$62,000	250
Average	\$98,600	\$96,200		-2%	\$93,000	

Source: Radford proprietary database

Analysis of equity value delivered during the period is complicated by notable volatility in the underlying value of company stock. However, the analyses show that while the values dropped, the number of options/shares granted generally remained constant between 2006 and 2007, meaning that the target level of equity delivery remained unchanged. Similarly, director equity grants (stock options and equivalents, as defined by ISS) as a percent of total shares outstanding remained largely unchanged over the past year. Initial grant levels represented a median of 0.04% of total shares outstanding (n=146), and annual grants represented a median of 0.02% of total shares outstanding (n=188) in 2007, reflecting a 2.0x premium for new directors.

As Figure 16 above shows, at life sciences companies in 2007, the median value of initial grants was \$92,100, or 2.7x the Board member baseline cash, and the median value of annual grants was \$62,000, or 1.8x of the Board member baseline cash.

Figure 17

Board Leadership Equity Premiums

Premiums for Board Chairs	%	N =
Those Companies with Annual Premiums to Board Chairs	40%	128
Median Value of Premium	\$34,200	51
Median Value to Board Chair as a Multiple of Member Value	1.8x	51
Premiums for Lead Independent Directors	%	N =
Those Companies with Annual Premiums to Lead Independent Directors	12%	65
Median Value of Premium	\$26,300	8
Median Value to Lead Independent Director as a Multiple of Member Value	1.4x	8

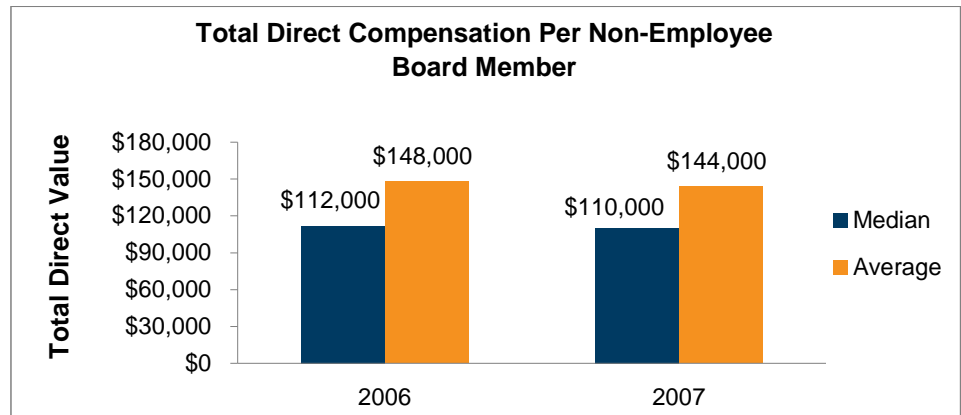
Source: Radford proprietary database

As shown in Figure 17, premiums for Board leadership is less prevalent in the case of equity than cash, as cash better reflects the increase in short-term additional contribution, given the typical one-year term of service for Board members. However, the practice is used for Board Chairs in about 40 percent of life sciences companies. For Board Chairs, the value of the premium is about a 1.8x multiple of the member value.

Total Direct Compensation and Aggregate Cost

Total Direct Compensation (TDC) is a measure of all cash compensation (retainers and fees), plus all annual equity compensation for the past fiscal year. In the analyses, average annual TDC is calculated by summing all cash and equity value (Black-Scholes stock option value plus restricted stock face value) delivered, and dividing that total by the number of Outside Directors on the Board.

Figure 18

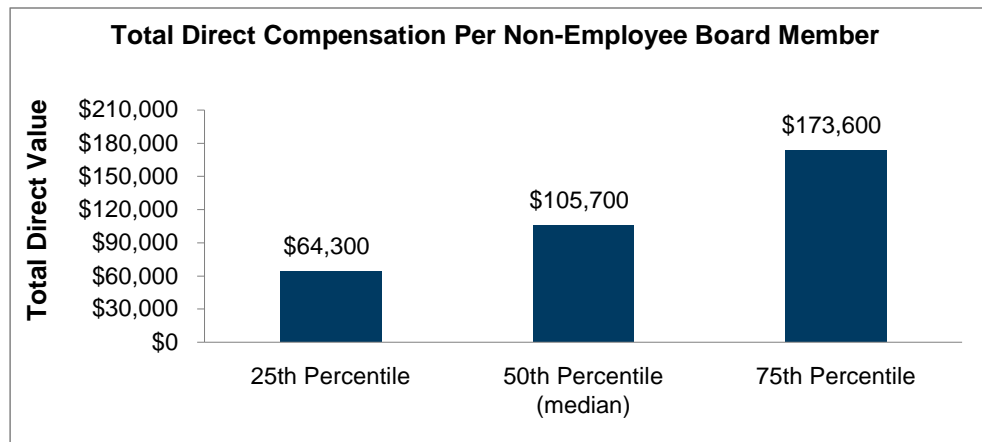


Source: Radford proprietary database

Reflecting nominal or negative stock value growth, TDC, in the main, was down slightly year-over-year, with the median TDC at \$112,000 in 2006 and \$110,000 in 2007 (Figure 19), which can be attributed to the decline in stock price rather than a reduction in target equity compensation.

When viewed in company size categories, TDC varied considerably in 2007, ranging from \$64,300 at the 25th percentile to \$173,600 at the 75th percentile, or about a 2.7x differential (Figure 19).

Figure 19

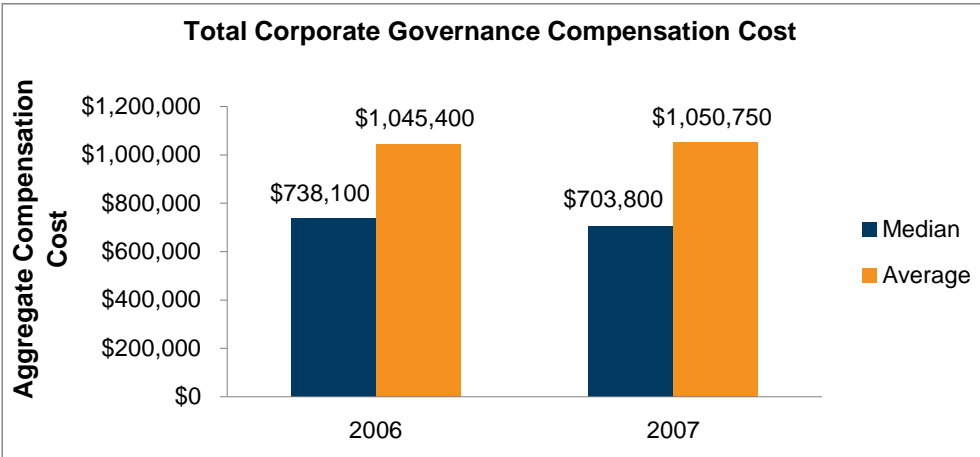


Source: Radford proprietary database

Companies and investors are also increasingly examining the total corporate governance cost, which measures the cash compensation delivered via retainers and/or fees, plus the aggregate value of annual equity awards paid to all Independent Directors in the last fiscal year. Total aggregate Board compensation answers the question of how much it costs a company to provide comprehensive fiduciary oversight (i.e., the cost of protecting shareholder interests), and has become an increasingly important focus of analyses since Sarbanes-Oxley was passed. This legislation further defined the fiduciary responsibilities and legal risks for Board members, a move which prompted an increase in Board compensation over recent years.

As expected considering the TDC findings, and as Figure 20 portrays, total corporate governance costs were relatively unchanged between 2006 and 2007 with modest increases in cash compensation offset by the reduction in equity values at time of grant as measured through stock price at time of grant.

Figure 20



Source: Radford proprietary database

Other Compensation Trends

Board compensation practices are being driven by shareholder advisor groups

To a notable extent, Board compensation practices are being driven by shareholder advisor groups, which can issue influential “withhold” or “no” votes in cases where compensation practices are out of alignment with their recommendations for equity ownership, vesting, the mix of cash to equity in the pay program, etc.

With respect to ownership guidelines, (the requirement to invest personally in the company’s stock) Boards are responding, though slowly and unevenly. A minority of companies (20 percent) has ownership guidelines in place, and even where the requirements are in place, there are considerable differences in how, or whether, the policies are enforced.

Figure 21 provides a typical market ownership guideline structure:

Figure 21

Approach	Design
Multiple	Typical guidelines set at 3-5x retainer (e.g., \$200K)
Number of shares	Set initial target levels of ownership that mimic the typical guidelines under multiple of pay (e.g., \$200K converted to 20,000 shares)
Percentage of company ownership	Set initial target levels of ownership that mimic the typical guidelines under multiple of annual retainer but has an ownership position
Retention ratio	Require retention of a specified percentage of the equity granted and/or sold (e.g., 75% of options/shares granted)
Combination program (multiple of pay and retention ratio)	Retention ratio program until multiple of annual retainer levels are met After standard is met, participant is free to exercise, as long as they maintain their ownership level

Source: Radford proprietary database

Additionally, best practice today holds that unvested and vested stock options be excluded from the ownership calculation, which represents a change from past thinking and practice.

With respect to vesting practices, the picture is similarly mixed. Most companies align vesting schedules of director grants to those of executives at the company since shares are granted under the same general plan. For initial grants, most companies adhere to the Risk Metrics/Institutional Shareholder Services' guidelines of at least a three-year vesting schedule. However, the same is not true for annual awards; about half of companies vest shares in one year or less, which typically matches the typical election term for directors.

Looking Forward

Many of the compensation trends that came into sharper focus in 2007 have been years in the making. As we look forward to the coming year, we believe we will see the following:

- > A continued shift to the use of role-based models for cash compensation delivery
- > A decrease in the pace of growth for Board cash compensation, as compensation levels reach parity with the increased level of director responsibilities
- > An increase in Compensation and Nominating/Governance Committee Chair and member compensation to reflect an increasing role and risk exposure
- > A continued migration to restricted stock to align with changing equity practices for company management, and also to support ownership requirements
- > Relatively stable target equity grants; though extreme market volatility has eroded the value of those equity grants, we expect companies to maintain last year's equity grant levels (number of shares/grant as a percent of the company)
- > A continued increase in the prevalence of ownership requirements, particularly in commercial life sciences companies, seeking to improve their overall governance profile

Summary

Board membership has become an increasingly demanding job, as corporate stakeholders look to Boards to play higher profile, more strategic and active roles in the oversight of companies. Director compensation – both in terms of pay philosophy and levels of compensation – has changed in the years since implementation of the Sarbanes-Oxley legislation that gave rise to these demands.

As more companies have come to rely on the Board for this strategic guidance, and on directors to meet the “on demand” responsibilities of the role, they are adopting role-based compensation models, differentiated pay levels for leadership roles and tighter standards in areas such as ownership and vesting guidelines.

While there is an apparent slowing of growth in the median pay data for a large group of companies, which might suggest a relative stabilization of director pay levels going forward, company-specific peer data bears out a continuing upward trend in many cases at the micro level. And, it remains to be seen what impact more recent market upheaval, continued changes in FDA approval standards, and additional mandatory governance-oriented regulation, will ultimately have on the evolution of corporate governance and Board compensation.

Edward J. Speidel

Senior Vice President

Edward J. Speidel has 20 years of experience in executive and equity compensation, corporate governance and employee benefits consulting. His clientele consists of companies of varying size and complexity, in a wide array of industries. He maintains a strong focus on the High-Technology communities, with emphasis in e-commerce, semiconductors, software, and Life Sciences firms.

Ed earned a bachelor of arts in economics/government from University of Delaware, a master of business administration from Lehigh University, a juris doctorate from the New England School of Law, and a master of laws in taxation from Boston University School of Law. He is based in Boston.

Matt Ward

Senior Vice President

Matt Ward has more than 25 years of consulting experience, focusing on strategic annual and long-term incentive plan design for both public and private companies. Matt serves clients of varying size and complexity, ranging from small start-ups to Fortune 100 firms. He has extensive experience with compensation planning issues resulting from mergers, acquisitions, IPOs, leveraged buyouts, and joint ventures.

Matt earned a bachelor of arts in accounting and finance from DePaul University, graduating magna cum laude. He also earned a juris doctorate from University of Utah. He is based in San Francisco.

Robert Surdel

Assistant Vice President

Rob Surdel has 10 years of compensation consulting experience on a broad range of human resources issues, including short- and long-term incentive design, executive compensation and sales effectiveness. In his current role, Rob consults with global organizations at various stages of development and maturity, with a focus on High-Technology and Life Sciences, as well as across general industry.

Rob earned a bachelor of arts in economics and environment sciences from Bowdoin College, graduating cum laude. He is currently pursuing a master of business administration from the Franklin W. Olin Graduate School of Business at Babson College. Rob holds the Certified Compensation Professional (CCP) and Global Remuneration Professional (GRP) designations. He is based in Boston.

ⁱ Sagient Research Systems, January 2008.

ⁱⁱ *Directorship*, February/March 2007.