Incentive Compensation Practices: A Report on the Horizontal Review of Practices at Large Banking Organizations

October 2011

Board of Governors of the Federal Reserve System

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Executive Summary

Risk-taking incentives provided by incentive compensation arrangements in the financial services industry were a contributing factor to the financial crisis that began in 2007. To address such practices, the Federal Reserve first proposed guidance on incentive compensation in 2009 that was adopted by all of the federal banking agencies in June 2010.

To foster implementation of improved practices, in late 2009 the Federal Reserve initiated a multidisciplinary, horizontal review of incentive compensation practices at 25 large, complex banking organizations.[1] One goal of this horizontal review was to help fill out our understanding of the range of incentive compensation practices across firms and categories of employees within firms. The second, more important goal was to guide each firm in implementing the interagency guidance.

Given the variety of activities at these complex firms, and the number and range of employees who are in a position to assume significant risk, our approach has been to require each firm to develop, under our supervision, its own practices and governance mechanisms to ensure risk-appropriate incentive compensation that accords with the interagency guidance throughout the organization. Supervisors assessed areas of weakness at the firms, in response to which the firms have developed comprehensive plans outlining how those weaknesses will be addressed. These plans, as modified based on comments from supervisors, will be the basis for further progress and evaluation.

As explained in more detail in this report, every firm in the review has made progress during the review in developing practices and procedures that will internalize the principles in the interagency guidance into the management systems in each firm. Many of these changes are already evident in the actual compensation arrangements of firms. For example, senior executives now have more than 60 percent of their incentive compensation deferred on average, higher than illustrative international guidelines agreed by the Financial Stability Board, and some of the most senior executives have more than 80 percent deferred with additional stock retention requirements after deferred stock vests. Moreover, firms are now attentive to risk-taking incentives for large numbers of employees below the executive level—at many firms thousands or tens of thousands of employees—which was not the case before the beginning of the horizontal review, when most firms paid little attention to risk-taking incentives, or were attentive only for the top employees.

Yet every firm also needs to do more. As oversight of incentive compensation moves into the regular supervisory process, the Federal Reserve will continue to work to ensure progress continues both in the implementation of the firms' plans and in the risk-appropriate character of actual compensation practices.

Steps Taken by Firms

With the oversight of the Federal Reserve and other banking agencies, the firms in the horizontal review have implemented new practices to make employees' incentive compensation sensitive to risk. The following is a brief progress report on four key areas of the review. More details can be found in the report:

[1] The financial institutions in the Incentive Compensation Horizontal Review are Ally Financial Inc.; American Express Company; Bank of America Corporation; The Bank of New York Mellon Corporation; Capital One Financial Corporation; Citigroup Inc.; Discover Financial Services; The Goldman Sachs Group, Inc.; JPMorgan Chase & Co.; Morgan Stanley; Northern Trust Corporation; The PNC Financial Services Group, Inc.; State Street Corporation; SunTrust Banks, Inc.; U.S. Bancorp; and Wells Fargo & Company; and the U.S. operations of Barclays plc, BNP Paribas, Credit Suisse Group AG, Deutsche Bank AG, HSBC Holdings plc, Royal Bank of Canada, The Royal Bank of Scotland Group plc, Societe Generale, and UBS AG.

- **Effective Incentive Compensation Design.** All firms in the horizontal review have implemented new practices to balance risk and financial results in a manner that does not encourage employees to expose their organizations to imprudent risks. The most widely used methods for doing so are risk adjustment of awards and deferral of payments.

  —*Risk adjustments* make the amount of an incentive compensation award for an employee take into account the risk the employee's activities may pose to the organization. At the beginning of the horizontal review, no firm had a well-developed strategy to use risk adjustments and many had no effective risk adjustments. Every firm has made progress in developing appropriate risk adjustments, but most have more work to do to ensure the full range of risks are appropriately balanced. An example of a leading-edge practice that is now used by a few firms is including in internal profit measures used in incentive compensation awards a charge for liquidity risk that takes into account stressed conditions. This reduces incentives to take imprudent liquidity risk. An example of a challenge for many firms is development of policies and procedures to guide judgmental adjustments of incentive compensation awards. Such internal guidelines help promote consistency and effectiveness in incentive compensation decisionmaking.

  —*Deferring payout* of a portion of incentive compensation awards can help promote prudent incentives if done in a way that takes into account risk taking, especially bad outcomes. Deferring payouts was fairly common before the crisis, especially for senior executives and highly paid employees. However, pre-crisis deferral arrangements typically were not structured to fully take account of risk or actual outcomes. Almost all firms now use vehicles for some employees that adjust downward the amount of deferred incentive compensation that is paid if losses are large. However, most firms still have work to do to implement such arrangements for a larger set of employees and to more closely link such reductions to individual employees' actions, particularly for employees below the senior executive level.

- **Progress in Identifying Key Employees.** At most large banking organizations, thousands or tens of thousands of employees have a hand in risk taking. Yet, before the crisis, the conventional wisdom at most firms was that risk-based incentives were important only for a small number of senior or highly paid employees and no firm systematically identified the relevant employees who could, either individually or as a group, influence risk. All firms in the horizontal review have made progress in identifying the employees for whom incentive compensation arrangements may, if not properly structured, pose a threat to the organization's safety and soundness. All firms in the horizontal review now recognize the importance of establishing sound incentive compensation programs that do not encourage imprudent risk taking for those who can individually affect the risk profile of the firm. In addition, slightly more than half of the firms have identified groups of similarly compensated employees whose combined actions may expose the organization to material amounts of risk. However, some firms are still working to identify a complete set of mid- and lower-level employees and to fully assess the risks associated with their activities.

- **Changing Risk-Management Processes and Controls.** Because firms did not consider risk in the design of incentive compensation arrangements before the crisis, firms rarely involved risk-management and control personnel when considering and carrying out incentive compensation arrangements. All firms in the horizontal review have changed risk-management processes and internal controls to reinforce and support the development and maintenance of balanced incentive compensation arrangements. Risk-management and control personnel are engaged in the design and operation of incentive compensation arrangements of other employees to ensure that risk is properly considered. Some firms have further work to do to provide sufficiently active and robust engagement by risk management and control staff.

- **Progress in Altering Corporate Governance Frameworks.** At the outset of the horizontal review, the boards of directors of most firms had begun to consider the relationship between incentive compensation and risk, though many were focused exclusively on the incentive compensation of their firm's most senior executives. Since then, all firms in the horizontal review have made progress in altering their corporate governance frameworks to be attentive to risk-taking incentives created by the incentive compensation process for employees throughout the firm. The role of boards of directors in incentive compensation has expanded, as has the amount of risk information provided to boards related to incentive compensation. The

appropriateness of the degree of engagement of the boards will be evaluated after a few years of experience.

Scope and Status of Reform Effort

Supervisors in the horizontal review gathered confidential supervisory information from all firms and found important differences in practices across business lines and banking organizations. Additionally, practices are changing rapidly in response to the Federal Reserve's efforts and industry developments. Therefore, a moment-in-time, comparative analysis of individual firms from the horizontal review is not possible and could be misleading. That said, the Federal Reserve is working to foster market discipline in the area of incentive compensation. On this front, the Federal Reserve intends to implement the Basel Committee's recent "Pillar 3 disclosure requirements for remuneration," issued in July 2011,[2] which will provide more complete information about risk-related elements of incentive compensation practices of individual institutions.

In part spurred by the horizontal review, incentive compensation practices at banking organizations are continuing to evolve and develop. We expect this evolution to continue. The Federal Reserve will continue to work with these firms through the supervisory process to ensure improvement and progress are sustained.

[2] See "Pillar 3 disclosure requirements on remuneration issued by the Basel Committee," *Bank for International Settlements*, (www.bis.org/press/p110701.htm).

Introduction

Risk-taking incentives provided by incentive compensation arrangements in the financial services industry were a contributing factor to the financial crisis that began in 2007. To address such practices, the Federal Reserve first proposed guidance on incentive compensation in 2009 that was adopted by all of the federal banking agencies in June 2010. In 2009, the Federal Reserve announced a horizontal review of incentive compensation practices at a group of large, complex banking organizations. (See "Principles of the Interagency Guidance and Supervisory Expectations" on page 9 and "Incentive Compensation Horizontal Review" on page 11.)

Pre-Crisis Conditions and Response

As discussed in the interagency guidance, the activities of employees may create a wide range of risks for a banking organization, such as credit, market, liquidity, operational, legal, compliance, and reputational risks, as well as other risks to the viability or operation of the organization. Some of these risks may be realized in the short term, while others may become apparent only over the long term. For example, future revenues that are booked as current income may not materialize, and short-term profit-and-loss measures may not appropriately reflect differences in the risks associated with the revenue derived from different activities. In addition, some risks—or combinations of risky strategies and positions—may have a low probability of being realized but would have highly adverse effects on the organization if they were to be realized ("bad tail risks"). While shareholders may have less incentive to guard against bad tail risks because of the infrequency of their realization and the existence of the federal safety net, these risks warrant special attention for safety-and-soundness reasons given the threat they pose to the organization's solvency and the federal safety net.

Before the crisis, large banking organizations did not pay adequate attention to risk when designing and operating their incentive compensation systems, and some employees were provided incentives to take imprudent risks. For example, an employee who made a high-risk loan may have generated more revenue in the short run than one who made a low-risk loan. Incentive compensation arrangements based solely on the level of short-term revenue paid more to the employee taking more risk, thereby incentivizing employees to take more, sometimes imprudent, risk. Led by supervisors in the horizontal review, over the past two years banking organizations have improved their incentive compensation arrangements to take appropriate account of risk. The two most common ways to do so—risk adjustments and deferral— make use of risk information that becomes available at different points in time.

Risk-Based Adjustments to Compensation

Information about risks taken that is known before incentive compensation is awarded can be used to make risk adjustments to those awards. For example, if an employee in a lending unit makes many high-risk loans during a year, the estimated profit from the loans can be adjusted when designing the employee's incentive compensation package, using either quantitative or qualitative information. In all cases, risk adjustments should consider likely losses under stressed conditions, and not merely business-as-usual, so that larger, but lower-probability, loss outcomes can be taken into account.

Both quantitative and qualitative risk information can be used in making such adjustments. They can be applied either through use of a formula or through the exercise of judgment and may play a role in setting amounts of incentive compensation pools (bonus pools), in allocating pools to individuals' incentive compensation, or both. The effectiveness of the different types of adjustments varies with the situation of the employee and the banking organization, as well as the thoroughness of their implemen-

tation. Banking organizations in the horizontal review have made significant progress in improving their risk adjustments, but most still have work to do. The first topic in "Balancing Incentives at Large Banking Organizations" on page 13 describes the main types of risk adjustments and some areas in which further work is needed.[3]

Deferred incentive compensation can contribute to prudent incentives because risk taking and risk outcomes often become clearer over time. If payout of a portion of incentive compensation awards is deferred for a period of time after the award date, late-arriving information about risk taking and outcomes of such risk taking can be used to alter the payouts in ways that will improve the balance of risk-taking incentives. Banking organizations in the horizontal review have made progress in improving deferral practices, but many still have work to do on performance conditions for vesting. Deferral practices are described in the second topic in "Balancing Incentives at Large Banking Organizations" on page 15.

Risk adjustments and deferral are not the only ways of improving the balance of risk-taking incentives. Some alternatives, such as the use of longer performance periods when evaluating employees' performance and awards and reducing the sensitivity of awards to measures of short-term performance are briefly described in the third topic in "Balancing Incentives at Large Banking Organizations" on page 17.

At the beginning of the horizontal review, the conventional wisdom at most firms was that risk-taking incentives were important only for a small number of senior or highly paid employees. Though the decisions and incentives of senior executives are indeed very important, the combined risk taking by a group of similarly compensated employees can also be material to the firm's risk profile. Thus, identifying the set of employees, who may individually or collectively expose the firm to material amounts of risk, is a key element of practice. The interagency guidance notes that such "covered employees" should include not only those who can individually affect the risk profile of the firm, but also groups of similarly compensated employees whose actions when taken together can affect the risk profile. Examples of such groups may include many types of traders and loan originators. Most firms in the horizontal review have made progress in identifying covered employees, but some still have work to do. The fourth topic in "Balancing Incentives at Large Banking Organizations" on page 18 discusses covered employees and progress in identifying them.

As described in the interagency guidance, establishment of prudent risk-taking incentives should be critically supported by risk-management and control personnel. In addition, practices to promote improvements in the reliability and effectiveness of incentive compensation systems over time can usefully support development of prudent risk-taking incentives on a sustained basis. These elements are described in "Risk Management, Controls, and Corporate Governance" on page 21, which notes progress in most areas.

Some observers have been particularly interested in comparing progress of incentive compensation practices of firms headquartered in different jurisdictions. Approximately one-third of the large banking organizations included in the horizontal review are headquartered outside the United States (foreign banking organizations, or FBOs). In general, progress in conforming to the interagency guidance is similar at the U.S. banking organizations and at the FBOs in the horizontal review, and progress in conforming to the Financial Stability Board's (FSB) *Principles for Sound Compensation Practices* (Principles) and the related *Implementation Standards*,[4] which are somewhat less demanding than the interagency guidance, is also similar, as described in "International Context" on page 25.

As the horizontal review of incentive compensation practices draws to a close, further work on incentive compensation will continue through the normal supervisory process. Much supervisory work is already focused on risk management and control systems. Risk-taking incentives are a complementary focus for supervisors. However, incentive compensation practices are likely to evolve rapidly over the next several years, so both firms and supervisors must continue to adapt and improve. The Federal Reserve also intends to implement the Basel Committee's recent "Pillar 3 disclosure requirements for remuneration," issued in July 2011. Increased public disclosure about risk-related incentive compensation practices at major firms may improve market disci-

[3] Employees sometimes take risk in pursuit of goals other than short-term financial performance. In such cases, risk adjustments may also contribute to balanced risk-taking incentives.

[4] The FSB issued the *Principles* in April 2009 and the *Implementation Standards* in September 2009. These FSB documents are available at www.financialstabilityboard.org/list/fsb_publications/tid_123/index.htm.

pline of such practices. Finally, the Federal Reserve is working with other banking and financial regulatory agencies to develop an interagency rule on incentive compensation practices, as mandated by the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act).

Principles of the Interagency Guidance and Supervisory Expectations

The interagency guidance is anchored by three principles:

1. **Balance between risks and results.** Incentive compensation arrangements should balance risk and financial results in a manner that does not encourage employees to expose their organizations to imprudent risks;
2. **Processes and controls that reinforce balance.** A banking organization's risk-management processes and internal controls should reinforce and support the development and maintenance of balanced incentive compensation arrangements; and
3. **Effective corporate governance.** Banking organizations should have strong and effective corporate governance to help ensure sound incentive compensation practices, including active and effective oversight by the board of directors.

The interagency guidance is consistent with both the FSB *Principles* and *Implementation Standards* adopted in 2009.[5]

Affected Bank Personnel: Executive and Non-Executive Employees

Incentive compensation arrangements for executive and non-executive employees able to control or influence risk taking at a banking organization may pose safety-and-soundness risks if not properly structured. Accordingly, the interagency guidance applies to senior executives as well as other employees who, either individually or as part of a group of similarly compensated employees, have the ability to expose the banking organization to material amounts of risk. In identifying employees covered by the interagency guidance, banking organizations are directed to consider the full range of inherent risks associated with an employee's work activities, rather than just the level or type of risk that may remain after application of the organization's internal controls for managing risk ("residual risk").

Four Methods for Linking Compensation and Risk

The interagency guidance discusses four methods that banking organizations often use to make incentive compensation more sensitive to risk: (1) risk-adjusting incentive compensation awards based on measurements of risk; (2) deferring payment of awards using mechanisms that allow for actual award payouts to be adjusted as risks are realized or become better known; (3) using longer performance periods (for example, more than one year) when evaluating employees' performance and granting awards; and (4) reducing the sensitivity of awards to measures of short-term performance.[6] Each method has advantages and disadvantages.

A key premise of the interagency guidance is that the methods used to achieve appropriately risk-sensitive incentive compensation arrangements likely will differ across and within firms. Employees' activities and the risks associated with those activities vary significantly across banking organizations and potentially across employees within a particular banking organization. Differences across firms may be based on their principal chosen lines of business and the char-

[5] On April 14, 2011, as mandated by the Dodd-Frank Act, the Federal Reserve, along with the Office of the Comptroller of the Currency, the Federal Deposit Insurance Corporation, the former Office of Thrift Supervision, the National Credit Union Administration, the Securities and Exchange Commission, and the Federal Housing Finance Agency, issued for comment a proposed rule on incentive compensation practices. The proposed rule builds off the interagency guidance. This report focuses on the observations from the horizontal review, which was conducted in the context of the interagency guidance and does not discuss the proposed rule. The proposed rule is available at www.gpo.gov/fdsys/pkg/FR-2011-04-14/pdf/2011-7937.pdf.

[6] As noted in the interagency guidance, this list of methods is not intended to be exhaustive—other methods may exist or be developed.

acteristics of the markets in which they operate, among other factors, affecting both the types of risk faced by the firm and the time horizon of those risks. Even within firms, employees' activities and the attendant risks can depend on many different variables, including the specific sales targets or business strategies and the nature and degree of control or influence that different employees may have over risk taking. These differences naturally create different opportunities and different potential incentives, broadly speaking, for employees to take or influence risk. Thus, the use of any single, formulaic approach to incentive compensation by banking organizations or supervisors is unlikely to be effective at addressing all incentives to take imprudent risks.

Avoiding "One-Size-Fits-All" Limits or Formulas

The interagency guidance helps to avoid the potential hazards or unintended consequences that would be associated with rigid, one-size-fits-all supervisory limits or formulas. Subject to supervisory oversight, each organization is responsible for ensuring that its incentive compensation arrangements are consistent with its safety and soundness. Methods for achieving balanced incentive compensation arrangements at one organization may not be effective at another organization, in part because of the importance of integrating incentive compensation arrangements with the firm's own risk-management systems and business model. Similarly, the effectiveness of methods is likely to differ across business lines and units within a large banking organization. In general, large banking organizations are likely to need multiple methods to ensure that incentive compensation arrangements do not encourage imprudent risk taking.

Well-Designed Management and Control Functions

The interagency guidance also places great emphasis on the role of risk-management and internal control functions in providing for balanced risk-taking incentives. Poorly designed or implemented incentive compensation arrangements can themselves be a source of risk to banking organizations and undermine existing controls. For example, unbalanced incentive compensation arrangements can place substantial strain on the risk-management and internal control functions of even well-managed organizations. Therefore, risk-management and internal control functions should be involved in designing, implementing, and evaluating incentive compensation arrangements to ensure that the arrangements properly take risk into account.

The interagency guidance recognizes that large banking organizations tend to be significant users of incentive compensation arrangements, and that flawed approaches to incentive compensation at these institutions are more likely to have adverse effects on the broader financial system. Accordingly, the interagency guidance elaborates with greater specificity certain supervisory expectations for large banking organizations.[7]

Timelines for Adoption

In adopting the interagency guidance, the banking agencies recognized that achieving conformance with its terms and principles would likely require significant changes and enhancements to firm practices and that fully implementing such changes would require some time. For the large banking organizations in the horizontal review, we communicated our expectation that each firm should demonstrate significant progress toward consistency with the interagency guidance in 2010, should achieve substantial conformance with the interagency guidance by the end of 2011 (affecting the award of incentive compensation awards for the 2011 performance year), and should fully conform thereafter.

[7] For example, the interagency guidance states that large banking organizations should have a systematic approach to incentive compensation supported by formalized and well-developed policies, procedures, and systems to ensure that incentive compensation arrangements are appropriately balanced and consistent with safety and soundness. Such institutions should also have robust procedures for collecting information about the effects of their incentive compensation programs on employee risk taking, as well as systems and processes for using this information to adjust compensation arrangements to eliminate or reduce unintended incentives for risk taking. Similarly, the interagency guidance urges large banking organizations to actively monitor industry, academic, and regulatory developments in incentive compensation practices and theory and be prepared to incorporate into their incentive compensation systems new or emerging methods that are likely to improve the organization's long-term financial well-being and safety and soundness.

Incentive Compensation Horizontal Review

In late 2009, in conjunction with its initial proposal of principles-based guidance on incentive compensation, the Federal Reserve launched a special simultaneous, horizontal review of incentive compensation practices and related risk management, internal controls, and corporate governance practices at a group of large complex banking organizations. These firms were chosen because flawed approaches to incentive compensation at these institutions are more likely to have adverse effects on the broader financial system and because of their extensive use of incentive compensation practices. The special work associated with the horizontal review is now nearing completion, but supervisory work on incentive compensation will continue through the ongoing supervisory process.

The Federal Reserve has communicated to the firms our assessment of their practices and our expectations for remediation in areas where improvements are needed. The firms, with the oversight and input of the Federal Reserve, have each developed remediation plans. These remediation plans, along with updates and discussion around them, have been a key mechanism for bringing clarity about needed changes.

Scope of the Horizontal Review and Feedback Provided

To carry out this major supervisory initiative, the Federal Reserve made a substantial commitment of staff resources and senior management attention. More than 150 individuals from the Federal Reserve and the other banking agencies have been involved in the horizontal review. In addition to senior supervisory staff, these included a multidisciplinary group of professionals, including supervisors, economists and lawyers, several specially constituted incentive compensation on-site review teams, and the permanent supervisory teams assigned to each of the involved banking organizations. Federal Reserve staff has coordinated with other banking regulators in conducting the horizontal review and communicating with the firms.

To perform the supervisory assessments of conformance with the interagency guidance, we gathered extensive information from the firms on their incentive compensation arrangements and associated processes, policies, and procedures. We reviewed internal documents governing existing incentive compensation practices as well as self-assessments of incentive compensation practices relative to the interagency guidance. We conducted many face-to-face meetings with senior executive officers and members of boards of directors' compensation committees. To supplement this information and to evaluate specifically how incentive compensation programs were implemented at the line-of-business level, the Federal Reserve conducted focused examinations of incentive compensation practices in trading and mortgage-origination business lines at a number of the organizations involved in the horizontal review.

The Federal Reserve has continued to provide individualized feedback to each of the firms as additional information and updates of remediation plans have been received. All of the firms have made progress toward achieving consistency with the interagency guidance. The nature and extent of remaining work varies across organizations and sometimes within organizations. Achieving conformance with the interagency guidance depends on the successful build-out of systems and processes, achievement of intermediate implementation milestones, and successful completion of remediation plans. Even then, in many cases, it will be important for the firms to keep in mind that new systems and practices have not been fully tested by experience, so ongoing monitoring of these new systems and practices will be important.

With regard to FBOs with activities in the United States, we have acknowledged the particular challenges that arise as they seek to conform their U.S. operations with the details of their home-country

consolidated regulator's expectations and those of the interagency guidance. As noted, the interagency guidance is consistent with international regulatory efforts on incentive compensation practices, including the FSB *Principles* and *Implementation Standards*. We have indicated our intent to follow the complementary principles of effective consolidated supervision and national treatment of banking organizations operating in the United States.[8]

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[8] For observations regarding incentive compensation practices at FBOs, see "International Context" on page 25.

Balancing Incentives at Large Banking Organizations

This section describes methods firms use to provide employees with prudent risk-taking incentives, as well as identifies the relevant set of employees. It is mostly related to the first of the three principles in the interagency guidance.

Incentive compensation arrangements achieve balance between risk and financial reward when the amount of money ultimately received by an employee depends not only on the employee's performance, but also on the risks taken in achieving this performance. Firms often determine the dollar amount of incentive compensation awards for a performance year immediately after the end of the year. Part of the award may be paid immediately and part may be deferred. Risk adjustments (see Topic 1 below) are features of incentive compensation arrangements that incorporate information about risks taken into decisions about the total amount of awards. Deferred payouts can also be adjusted for risk using information that becomes available during the deferral period, as described under Topic 2. Topic 3 focuses on other balancing methods, and Topic 4 on identification of covered employees (those employees for whom prudent risk-taking incentives are particularly important).

Topic 1: Risk Adjustment and Performance Measures

At the beginning of the horizontal review, no firm had a well-developed strategy to use risk adjustments and many had no effective risk adjustments. Currently, all firms in the horizontal review employ some sort of risk adjustment for at least some subset of employees, but the role of risk adjustments in the overall mix of balancing strategies varies across firms and across businesses within firms. Some adjustments rely on quantitative measures of risk, while others are based on perceptions of risks taken by employees or business units. Quantitative measures of risk may be applied mechanically (although this is relatively unusual) or as an element in judgment-based decisions. Risk adjustments may play a role in setting amounts of bonus pools, in allocating pools to individuals' incentive compensation, or both. In all cases, risk adjustments should consider likely losses under stressed conditions, and not merely business-as-usual, so that larger, but lower-probability loss outcomes can influence incentives to take risk.

Every firm has made progress in developing and implementing appropriate risk adjustments, but the progress is uneven, not only across firms, but within firms. Substantial work remains to be done to achieve consistency and effectiveness of such adjustments in providing balanced risk-taking incentives. Because most incentive compensation decisions involve some judgment, a key element of that work is improved written policies and procedures and improved monitoring practices.

Disciplined, Judgment-Based Decisionmaking

Judgment is an element of decisionmaking at every firm and at nearly every step in the design and operation of incentive compensation arrangements.[9] This poses two challenges: (1) ensuring that decisions based on judgment are made consistently can be difficult and (2) risk adjustments may be only one of many inputs into decisionmaking about incentive compensation awards. Without appropriate restraint, judgments about other aspects of an employee's performance, such as achieving a certain level of market share, could be made in a way that would undermine the desired incentive effects of the risk adjustments. To promote consistency and effectiveness of the impact of judgment on balanced risk-taking incentives, the interagency guidance notes that firms are expected to have robust policies and procedures to guide the consistent use of judgment, and that decisions should be documented so that firms can review

[9] An exception is formulaic compensation plans, such as commission sales plans, which sometimes specify amounts of incentive compensation according to a specific formula set at the beginning of the year.

whether policies and procedures are being followed and can assess the effectiveness of the policies and procedures over time.[10]

At the beginning of the horizontal review, most firms lacked written policies and procedures to guide managers in making risk adjustments, and policies and procedures for incentive compensation decisionmaking often did not clearly identify the weight to be given to risks taken during the performance year. Such policies and procedures, along with training for managers and *ex post* review of decisions, are important to achieving consistent application of *risk* adjustments. Some firms have made progress in developing written policies and procedures and related processes, but others are still in the process of completing this work.[11]

Quantitative and Qualitative Risk Measures

In cases where risk adjustments are applied based on a formula, incentive compensation decisions are made using measures of financial performance that are net of a risk charge based on a quantitative measure of risk. Such adjustments balance incentives to take risk to the extent that such charges offset increases in financial performance (or reductions in costs) that are associated with increased risk taking. The use of mechanical risk adjustments is possible when suitable quantitative risk measures are available, and the effectiveness of this type of risk adjustment depends on the quality of the risk measure. One leading edge practice, observed at some firms, is to assess a charge against internal profit measures for liquidity risk that takes into account stressed conditions and to use this adjusted profit measure in determining incentive compensation awards.

Most firms in the horizontal review also used quantitative risk measures as an input to judgment-based incentive compensation decisionmaking. For example, boards of directors usually take into account available risk measures when making decisions about bonus pools for the firm or about awards for senior executives. Some risk measures can be difficult to convert into quantitative risk charges, but nevertheless convey useful information. However, as noted previously, achieving a consistent balancing impact through judgmental decisionmaking is a challenge. Firms with more well-developed policies and procedures to guide decisionmakers in judgmentally using quantitative risk information seemed more likely to achieve a consistent balancing impact. This is an area in which many firms are working to improve effectiveness.

Almost all firms in the horizontal review use non-quantitative perceptions of risk taking as a basis for some risk adjustments. Such adjustments have the potential to address hard-to-measure risks and limitations of existing data and risk-measurement methods. For example, the manager of a lending business might be aware that some employees of the business make riskier loans and others safer loans, even though the quantitative risk measures available to the manager do not show it. Based on this information, the manager could risk adjust by giving lower incentive compensation awards per unit of revenue to the employees making the riskier loans. As in other cases where incentive compensation awards are based on judgment-based decisionmaking, they are more likely to be consistently effective where firms have clear policies and procedures to guide application. Developing such policies and procedures is particularly challenging because the information about risk is qualitative and the nature of the information tends to change over time.

Risk Adjustment and Bonus Pools

Incentive compensation practices of firms differ in the process of determining the total bonus pools and the allocation of incentive compensation to individuals. In a top-down process, senior management and the board of directors determine the size of an overall amount of funding for the firm as a whole near the end of the performance year, and this bonus pool is then split into sub-pools for each business. Pools

[10] For example, an organization should have policies and procedures that describe how managers are expected to exercise judgment to achieve balance, including a description, as warranted, of the appropriate available information about the employee's risk-taking activities to be considered in making informed judgments. Such policies and procedures need not involve a precise analysis to be followed in developing discretionary risk adjustments, but should provide enough structure and instruction that decisions can be justified and documented on a clear and consistent basis and thereby allow for *ex post* monitoring.

[11] Some firms have identified in their policies and procedures specific factors appropriate to the line of business and employee role, including reference points, to be considered by management when making discretionary risk adjustments. Some firms have introduced new management processes aimed at governing discretion-based risk adjustments and aimed at providing documentation sufficient to support review of such decisions by Internal Audit. Some firms also have assigned control-function employees to focus on compliance with enhanced policies and procedures, and on documentation processes. They have improved communication to managers and employees about how risk adjustments work, which is crucial to full impact on risk-taking decisions.

are allocated to individual employees in a manner related to their individual performance. In a bottom-up process, the firm assesses performance of each employee and assigns him or her an incentive compensation award, with the total amount of incentive compensation for the year for the firm as a whole simply being the sum of individual incentive compensation awards. Most firms' processes are a mixture of top-down and bottom-up, but the emphasis can differ markedly.[12]

Risk adjustments balance incentive compensation arrangements to the extent they affect the incentives provided to individuals. The impact on incentives may be limited in cases where a firm makes risk adjustments only when deciding amounts of pools because the award to each employee under the pool will receive the same adjustment. This is appropriate when the nature and extent of risk taking of all employees under the pool is the same, such as cases where a pool applies to a business unit in which all risk decisions are influenced in the same way by all employees. Where individual employees in a single pool can have varied levels of impact on the amount of risk, the differences will not be fully addressed by risk adjustments to the pool alone. In such cases, additional adjustments incorporated into decisions about individual incentive compensation awards would be needed to make the risk adjustment fully effective.

Next Steps

Most of the firms in the horizontal review have made significant changes to their risk adjustment practices for awards for the 2011 performance year. Still, most continue to have work to do, including development of appropriate policies and procedures to guide judgmental adjustments of incentive compensation awards. Most firms should continue to evaluate the effectiveness of the quantitative and qualitative risk adjustments they are using and whether risks are appropriately balanced. Additionally, in 2012 firms should evaluate how effective the risk adjustments used for the 2011 awards were, and make improvements as necessary. The Federal Reserve will continue to work with the firms to make sure progress continues and to evaluate best practices in this area as they evolve.

Topic 2: Deferred Incentive Compensation

Another method for balancing incentive compensation arrangements is to defer the actual payout of a portion of an award to an employee significantly beyond the end of the performance period, adjusting the payout for actual losses or other aspects of the employee's performance that are realized or become better known only during the deferral period. Such deferral arrangements make it possible for the amount ultimately paid to the employee to reflect information about risks taken that arrives during the deferral period.

The interagency guidance does not require that deferral be used for all employees; does not suggest any specific formula for deferral arrangements; and does not mandate the use of any specific vehicle for payment, such as stock. However, the interagency guidance does have some specific suggestions relating to deferral arrangements for senior executives. A substantial fraction of incentive compensation awards should be deferred for senior executives of the firm because other methods of balancing risk-taking incentives are less likely to be effective by themselves for such individuals.

Elements of Deferral Practices

The proportion of incentive compensation awards to be deferred was substantial at the firms in the horizontal review. For example, senior executives now have more than 60 percent of their incentive compensation deferred on average, higher than illustrative international guidelines agreed by the FSB, and some of the most senior executives have more than 80 percent deferred with additional stock retention requirements after deferred stock vests. Most firms assign deferral rates to employees using a fixed schedule or "cash/stock table" under which employees receiving higher incentive compensation awards generally are subject to higher deferral rates, though deferral rates for the most senior executives are often set separately and are higher than those for other employees.

Deferral periods generally range from three to five years, with three years the most common. Most organizations in the horizontal review use the same deferral period for all employees in a given incentive com-

[12] Even at firms with a bottom-up emphasis, budget constraints place a practical limit on the size of the aggregate bonus for the firm as a whole, so some top-down element is present. Similarly, top-down firms take some account of perceived performance of key individuals in setting pools.

pensation plan and often for all employees. Some firms transfer ownership of the entire deferred award to the employee at the end of the vesting period ("cliff vesting"), while others adopted a schedule under which a portion of the award vests at given intervals.

The most common vehicles for conveying deferred incentive compensation to employees are shares of the firm's stock, stock options, and performance units (an instrument with a payout value that depends on a measure of performance during the deferral period, often an accounting measure like earnings or return-on-equity). Some firms use deferred cash or debt-like instruments.

Performance-Based Deferral

At the beginning of the horizontal review, few firms adjusted payouts of deferred awards for risk outcomes or other information about risks taken that became available during the deferral period. Without such performance conditions, deferral arrangements are unlikely to contribute to balancing risk-taking incentives (for ease of reference, deferral with performance conditions is referred to as "performance-based deferral").[13]

Firms in the horizontal review have made progress in implementing performance-based deferral arrangements that promote balanced risk-taking incentives. Each firm's setup is somewhat different, but three broad styles of arrangement were observed—formulaic, judgment-based, and a hybrid of the two. In a formulaic approach, the percentage of the award that vests is directly related to a measure of performance during the deferral period. In a judgment-based arrangement, the circumstances under which less than full vesting will occur are decided judgmentally rather than being linked to fixed values of performance metrics, and the amount of incentive compensation paid out under those circumstances is also decided through a judgment-based process. In a hybrid setup, a specific trigger value of performance is set at the beginning of the deferral period, and if performance falls below that trigger value, a judgment-based process determines how much of the deferred incentive compensation will not vest.[14] To the extent that judgment plays a role in the vesting decision, firms are expected to have robust policies and procedures to guide the consistent use of judgment, and decisions should be appropriately documented so that firms can monitor whether their policies and procedures are being followed.[15] Policies and procedures need to be clear to employees, or they will not have a clear understanding when risk-taking decisions are made of which outcomes will lead to forfeiture, in which case deferral arrangements are not likely to have a significant impact on risk-taking behavior. Many firms still have work to do on their policies and procedures in this area.

Most firms in the horizontal review have clawback arrangements for at least some employees that are triggered by malfeasance, violations of the firm's policies, and material restatement of financial results.[16] Such clawback provisions can contribute to

[13] Two common issues with performance-based deferral became clear during the horizontal review. The first is related to payment of deferred incentive compensation in share-based instruments. Where vehicles are share-based, at the time shares are awarded, risk-taking actions during the performance year might have either upside or downside effects on the stock price in the future, so the net effect on incentives is not clear. Moreover, most employees below the senior executive level are not likely to believe that their own risk-taking decisions will have a material impact on the firm's stock price. For example, if the leader of a business unit knows that a particular strategy may lead to losses that are large from the standpoint of the unit, the leader may believe any such losses would be more than offset by profits from other business units. Thus, the leader would not expect the losses to affect the ultimate value of deferred pay received, and deferral would have little impact on his or her risk-taking incentives. In order for a deferral arrangement to meaningfully contribute to balance, vesting triggers should be based on measures of performance that are linked to the employee's risk-taking activities, especially those taken before the incentive compensation award.

The second common issue that became clear during the horizontal review related to the particular performance conditions (triggers) chosen by firms. Some firms have performance-based deferral arrangements that allow for a large or outsized payout when the values of triggers reflect positive performance. However, these arrangements may encourage employees to take more risk during the deferral period, in order to maximize the value of such triggers and thus may not balance risk-taking incentives. One example of a trigger that may be appropriate is one that reduces the amount of deferred compensation that is vested if the firm (or business line or unit, depending on the level of the employee) experiences negative net income in any fiscal year during the deferral period. The relevant triggers for any performance-based deferral arrangement also should be clearly explained to employees covered by those arrangements.

[14] In a common variant of the hybrid process, once the trigger is met for a particular group (e.g., a business unit), the discretionary process determines not only the percentage of incentive compensation that vests, but also which employees are subject to less than full vesting, usually based on which employees were responsible for losses or for imprudent risk taking.

[15] Concerns about the use of discretion in deferral arrangements are similar to concerns about the use of discretion in *ex ante* risk adjustment, as discussed under Topic 1 of this report.

[16] The word "clawback" is sometimes used to refer to any deferral-of-payment method. The term "clawback" also may refer specifically to an arrangement under which an employee must return incentive compensation payments previously received by the employee if certain risk outcomes occur. Section 304 of the Sarbanes-Oxley Act of 2002 (15 U.S.C. 7243), which applies to

balanced risk-taking incentives by discouraging specific types of behavior. While potentially effective, they do not affect most risk-related decisions and are not triggered by most risk outcomes—the narrow focus of these arrangements mean that they are unlikely to contribute meaningfully to balance.

Progress on performance-based deferral for the 2010 performance year was most common for senior executives. Many firms are now in the process of revising arrangements to be used for the 2011 performance year and are extending performance-based deferral coverage to more employees as a mechanism to provide prudent risk-taking incentives. Some firms have implemented, or are implementing, performance-based deferral for all employees receiving deferred incentive compensation, while others are doing so mainly for employees whose authorities and influence over risk taking are such that risk adjustments might have only limited effectiveness in balancing risk-taking incentives, such as senior managers within business lines and other employees engaged in activities that involve risks over a long duration.

Next Steps

Most of the firms in the horizontal review have made significant changes to their deferral arrangements. Many firms in the horizontal review have increased the fraction of incentive compensation that is deferred for both senior executives and other employees. All firms have more work to do to improve their performance-based deferral arrangements. Firms may also fine-tune the role of deferral relative to risk adjustments as they gain experience with how the two work together. As firms develop and fine-tune deferral arrangements, firms should evaluate how well these deferral arrangements have worked and make improvements as necessary. The Federal Reserve will monitor and encourage progress and work to ensure that practices are effective.

Topic 3: Other Methods that Promote Balanced Risk-Taking Incentives

Risk adjustments and deferral with performance-sensitive features represent important mechanisms for achieving balanced incentives for taking risk. The interagency guidance also identifies the use of longer performance periods (for example, more than one year) and reduced sensitivity of awards to short-term performance as methods for achieving balance. During the horizontal review, we observed the use of both methods, though neither was universally used.

Evaluating Performance: Emphasis on Long-Term over Short-Term

Firms used longer performance periods (that is, a backward-looking multiyear assessment horizon), for example, for senior executives in some cases, and in others for non-executive employees. Measuring and evaluating performance or awards on a multiyear basis allows for a greater portion of risks and risk outcomes to be observed within the performance assessment horizon, thus garnering many of the benefits of a deferral arrangement with performance-sensitive features. One simple variation involves using risk outcomes from prior-year actions as a consideration in reducing current-year incentive compensation award decisions. To be effective, multiyear assessments should be based on policies and procedures that give appropriate weight to poor outcomes due to past decisions. Otherwise, adverse outcomes may be effectively ignored due to an emphasis on current-year performance.

Damping the sensitivity of incentives to measures of short-term performance was a choice made by some institutions to rein in incentives when, for example, concerns arose about the significance of the incentives or risks involved. For example, increasing bonus pools or individual award amounts at a lower rate when financial performance is well above target levels can limit incentives to take large risks to achieve extreme levels of performance. A cap on incentive compensation awards beyond a certain level of performance is another example. However, in the horizontal review, there were few instances where such caps and reduced sensitivity were sufficient by themselves to balance risk-taking incentives.

Next Steps

The interagency guidance urges large banking organizations to actively monitor industry, academic, and regulatory developments in incentive compensation practices and theory to identify new or emerging methods that are likely to improve the organization's long-term financial well-being and safety and sound-

chief executive officers and chief financial officers of public banking organizations, is an example of this more specific type of "clawback" requirement. Nearly all U.S.-based firms in the horizontal review are publicly traded, and therefore subject to this provision.

ness. The Federal Reserve will do the same and will encourage firms to use methods that are most appropriate for their circumstances.

Topic 4: Covered Employees

Identifying the full set of employees who may individually or collectively expose the firm to material amounts of risk is a crucial step toward managing risks associated with incentive compensation. Without identifying the relevant employees, a firm cannot be sure it has properly designed its incentive compensation arrangements to provide appropriate risk-taking incentives.

Three Categories of Covered Employees

The interagency guidance describes three categories of such employees, which together are referred to as "covered employees":

- senior executives;
- other individual employees able to take or influence material risks; and
- groups of similarly compensated individuals who, in aggregate, can take or influence material risks.

Incentive compensation arrangements for all covered employees should be appropriately balanced, regardless of whether the covered employee is a senior executive, an individual, or part of a group of similarly compensated individuals. Though the Federal Reserve has no target number or quota of covered employees for any firm, many of the largest firms have determined they have thousands or tens of thousands of covered employees.

Standard Approaches to Covered Employee Identification

Firms follow one of two general approaches to identify covered employees. One approach involves developing and following a systematic process that identifies types of risk that each employee (or group of employees) takes or influences and that assesses the materiality of the risks. Such a process should "cast a wide net" and should consider the full range of types and severities of risk. Some firms have invested in enhanced information systems to facilitate this process. Many firms in the horizontal review follow this approach.

The second approach designates a very large set of employees as covered, such as all employees receiving any incentive compensation, or all employees subject to a subset of the firm's incentive compensation plans. Although this reduces the effort required to identify covered employees, firms still need to identify the relevant types and severities of risks that are incentivized through incentive compensation arrangements to be sure incentives to take such risks are balanced.

Many firms appropriately identify at least some groups of similarly compensated employees who may collectively expose the firm to material risk. Examples include originators of mortgages, commercial lending officers, or groups of traders subject to similar incentive compensation arrangements.

Establishing Robust Processes Going Forward

Several firms have yet to establish robust processes for identifying covered employees that are consistent with the interagency guidance, especially for identifying groups of covered employees. Some firms rely heavily on mechanical materiality thresholds in their identification process. For example, only employees able to make decisions that commit at least $1 billion of the firm's economic capital might be eligible for consideration as covered employees, or only employees above a given level of total compensation. Such materiality thresholds as applied by most firms to exclude employees from being considered covered employees have three common weaknesses: (1) they often fail to capture the full extent to which an employee may expose the firm to risk, (2) they tend to exclude potential covered employees who may significantly influence risk taking but do not make final risk decisions, and (3) they often ignore groups of similarly compensated employees. In reviewing the firms' use of thresholds, we found that under some circumstances, a suitably chosen materiality threshold could appropriately play a complementary role in identifying covered employees if used to include employees as covered employees.

FBOs with U.S. operations that were part of the horizontal review face special challenges in developing procedures for identifying covered employees for purposes of the interagency guidance. Generally, home-country supervisors expect their standards to be met by the consolidated organization, and so in its

U.S. operations, an FBO must meet both home-country and U.S. regulatory expectations. Many of these firms have home-country supervisors whose regulations focus on a more limited set of employees than described in the interagency guidance.[17] As a result, these firms need to develop processes to identify both covered employees in their U.S. operations for application of the interagency guidance and those employees subject to home-country regulation. The number of covered employees for purposes of the interagency guidance in U.S. operations of an FBO may exceed the number of employees subject to home-country regulation.

Next Steps

All firms in the horizontal review now recognize the importance of establishing sound incentive compensation programs that do not encourage imprudent risk taking for those employees who can individually affect the risk profile of the firm. In addition, many firms have identified groups of similarly compensated employees whose combined actions may expose the organization to material amounts of risk. Some firms have put in place a robust process for identifying relevant individuals and groups of employees, with the flexibility to adapt to the changing business environment over time. However, some firms are still working to identify a complete set of mid- and lower-level employees, and others are working to ensure their process is sufficiently robust. The Federal Reserve will work with the firms to ensure that progress continues.

[17] Supervisors in many other jurisdictions require their firms to identify only their equivalent of individual covered employees, often using materiality standards that restrict attention to a relatively small number of individuals.

Risk Management, Controls, and Corporate Governance

Establishment of balanced risk-taking incentives should be supported by the engagement of risk-management and control personnel in the design and implementation of incentive compensation arrangements, incentive compensation for such personnel that is independent of the financial performance of the businesses they oversee (in order to limit conflicts of interest), practices to promote improvements in the reliability and effectiveness of incentive compensation systems over time, and improvements in corporate governance. These features are discussed in topics 5 through 8 below.

Topic 5: Risk-Management and Control Personnel and the Design of Incentive Arrangements

Properly identifying risks attendant to employees' activities and setting suitable balancing mechanisms are critical elements of providing balanced risk-taking incentives. The interagency guidance notes that risk-management processes and internal controls should reinforce and support the development and maintenance of balanced incentive compensation arrangements. Risk-management and control personnel (including Internal Audit) should be involved in the design, operation, and monitoring of incentive compensation arrangements because their skills and expertise provide essential perspective and support. Risk-management staff, in particular, should participate in the firm's analysis and decisionmaking regarding the identification of covered employees, the selection of any risk-sensitive performance metrics, the development of risk-adjustment methodologies and vesting triggers, and the overall effectiveness of the firm's balancing efforts.

At all firms in the horizontal review, certain functions, such as human resources and finance, traditionally were involved in incentive compensation decisions and in the design and implementation of incentive compensation arrangements. However, this role traditionally involved little or no focus on incentives to take risk or the risk associated with the employee's activities. Risk-management personnel traditionally had relatively little involvement in incentive compensation design, and their involvement in decisionmaking was often limited, for example, to only supplying information about breaches of internal policy and procedure by individual employees or units. However, a few firms did incorporate risk measures produced by risk-management personnel into financial performance measures used in incentive compensation decisionmaking before the crisis.

Increased Involvement of Risk-Management Personnel in Design and Decisionmaking

Risk-management personnel are now involved in incentive compensation system design and decisionmaking at virtually all firms in the horizontal review. However, the intensity and nature of involvement varies. For example, risk-management functions now provide significant risk-related input to the board-level decisionmaking process for individual senior executive incentive compensation at all firms and for bonus pool size decisions at firms at which pools play a role. Most firms consider some quantitative risk measures in making at least some incentive compensation decisions; and these are usually provided by the risk and finance functions. Nonetheless, at some firms, risk experts primarily play a peripheral or informal role

Control, finance, and risk-management staff members provide some input to individual employee performance reviews at many firms. For example, they report breaches of policy and procedure or rate the "risk awareness" or adherence to the firm's risk appetite of individual employees or business units. At firms that use committee structures in their incentive compensation decisionmaking process, control, finance, or risk-management personnel usually are among the members of committees. At most firms in

the horizontal review, risk-management and control functions are also involved in identification of covered employees.

At firms where risk-management personnel are intensely involved in basic design decisions for the incentive compensation system, as well as in determining details of the risk-related elements of the incentive compensation process overall, progress on risk-taking incentives has tended to be faster. At firms where risk experts play a peripheral, informal role, progress has tended to be slower, primarily because other personnel tend to have less experience and expertise in designing risk identification and measurement features. Several firms remain in the latter category.

Next Steps

The main challenge going forward is to ensure that risk-management and control personnel are actively engaged with incentive compensation and that improvements in risk management and in recognition of risks the firm takes are incorporated into incentive compensation decisionmaking. The Federal Reserve will continue to work with firms to ensure that such personnel have an appropriate role.

Topic 6: Incentive Compensation Arrangements for Staff in Risk-Management and Control Roles

Improper incentive compensation arrangements can compromise the independence of staff in risk-management and control roles. For example, a conflict of interest is created if the performance measures applied to them, or the bonus pool from which their awards are drawn, depend substantially on the financial results of the lines of business or business activities that such staff oversee. Such dependence can give staff an incentive to allow or foster risk taking that is inconsistent with the firm's risk-management policies and control framework or the safety and soundness of the firm. Thus, risk-management and control personnel should be compensated in a way that makes their incentives independent of the lines of business whose risk taking and incentive compensation they monitor and control. Such staff includes not only employees assigned to firmwide risk-management or control functions, but also employees who perform similar roles while embedded within individual lines of business within the firm.

Maintaining the Independence of Risk-Management and Control Personnel

The firms in the horizontal review have completed much of the necessary work in this area. Performance measures applied to staff in risk-management and control roles are usually oriented to the performance of their oversight duties and not the performance of the line of business they oversee. Their incentive compensation may be indirectly related to financial performance, if, for example, the bonus pool is drawn from the firmwide pool, which is related to firmwide performance. In most cases, linkage to firmwide performance is likely to be too weakly linked to control and risk-management decisions to pose a significant conflict of interest.

Where more direct or substantial potential conflicts of interest have arisen, some firms achieved independence by moving risk-management and control function personnel out of line-of-business incentive compensation plans or line-of-business bonus pools, establishing separate plans or pools for them. Other firms established separate bonus pools for staff in risk-management and control roles, the sizes of which do not depend directly on the financial performance of a particular line of business or business activity.

At some firms, lower-level risk-management or control staff members who are embedded in business lines receive their incentive compensation awards from the business line bonus pool. Such practices can be acceptable if the relevant staff members perform functions that are unrelated to risk-taking decisions and if the product of their work is unrelated to incentive compensation decisionmaking.

Some firms include comments from cross-function reviews (such as 360 degree reviews) in incentive compensation decisionmaking for all staff members. This raises the possibility that business line reviews could influence incentive compensation decisions for risk-management and control staff members even if no formal link to financial performance exists. In addition, some firms have incentive compensation arrangements for staff in risk-management and control functions that are subject to adjustments based on management judgment. Clear guidance from policies and procedures, clear documentation of indi-

vidual judgment-based adjustments (and decisions made under such policies and procedures), and review by internal audit help to ensure the incentive compensation awards are not swayed by business line results.

Next Steps

As part of its normal supervision of the independence of risk and control functions, the Federal Reserve will continue to be attentive to the risk-related incentives provided by the incentive compensation arrangements for their personnel.

Topic 7: Practices Promoting Reliability

Firms should regularly review whether the design and implementation of their incentive compensation systems deliver appropriate risk-taking incentives and should correct deficiencies and make improvements that are suggested by the findings. The interagency guidance mentions several practices that can contribute to the effectiveness of such activity, including internal reviews and audits of compliance with policies and procedures, monitoring of results relative to expectations, and simulation of the operation of incentive compensation arrangements before implementation.

Importance of Internal Reviews and Audits

Internal reviews and audits of compliance with policies and procedures are important to ensure that the incentive compensation system is implemented as intended by those employees involved in incentive compensation decisionmaking. For example, if procedures require that specific quantitative measures of risk are to be included in financial performance measures used in decisionmaking, but they are not, the sensitivity of decisions to risk taking probably would not be as intended. Though the internal audit function should play a key role in this activity, other functions such as risk management, finance, and human resources also should be involved.

An incentive compensation system may be implemented as intended, but it may still fail to achieve the desired relationship between risk and reward because features of its design and operation do not work out as expected. Detecting such problems requires that a firm monitor relationships among measures of short- and long-run financial performance, amounts of incentive compensation awards, measures of risk and risk outcomes, amounts of ultimate payments of deferred incentive compensation, and other factors relevant to incentive compensation decisions. Such monitoring bears some resemblance to the "backtesting" that is often done for risk-management models and systems. To be effective, such monitoring should include some quantitative analysis, but because all incentive compensation systems involve some exercise of human judgment in decisionmaking, effective monitoring is not likely to be purely quantitative or mechanical. Large banking organizations are more likely to require some use of automated systems to adequately monitor the effectiveness of incentive compensation arrangements in balancing risk-taking incentives, especially systems that support capture of relevant data in databases that support monitoring and analysis.

Next Steps

All organizations in the horizontal review have considerable work remaining to fully implement practices promoting balanced risk incentives in their incentive compensation arrangements. Few organizations performed extensive reviews and analyses related to risk-taking incentives before the crisis. In some cases internal audit reviewed other aspects of incentive compensation activities, such as incentive compensation award disbursement practices or adherence to vesting policies related to time-of-service.

Over time, as incentive compensation is awarded and paid out and risk outcomes become better known, firms and their supervisors will learn more about the reliability of methods for balancing risk-taking incentives and the effectiveness of different methods of assessing reliability. In the meantime, the Federal Reserve will work with firms as they develop the necessary systems and capabilities and will promote experimentation and innovation.

Topic 8: Strong Corporate Governance

Active and effective oversight of incentive compensation practices by the board of directors is a key element of the interagency guidance. The board of directors of a large banking organization, or its delegated committee, should actively oversee the development and operation of the organization's incentive compensation policies, systems, and related control

processes. The board of directors or the delegated committees of such organizations should also monitor the effectiveness of incentive compensation arrangements in balancing the risk-taking incentives of covered employees.

Most of the firms in the horizontal review already had in place a board-level compensation committee composed of independent directors. While historically these committees have been actively engaged in decisions relating to the incentive compensation arrangements for certain senior executives, their involvement in overseeing the incentive compensation practices and arrangements relating to other covered employees (including non-executives) has increased considerably during the horizontal review. All firms in the horizontal review have enhanced the role of the board in overseeing the incentive compensation system for all covered employees and are now paying increased attention to risk-related aspects of incentive compensation. Some firms have established management committees that include representatives of risk-management and control functions to support their efforts. Notwithstanding progress made to date, firms indicated that they will continue to implement enhanced corporate governance practices and that these practices will continue to evolve.

Progress in Facilitating Effective Internal Communications

Most firms have established mechanisms to facilitate communication between the compensation committee and the risk and audit committees. Many firms have members of the compensation committee that are also members of the risk and audit committees. Other firms rely on regular meetings between the compensation and risk committees, while others have not yet enhanced their communications systems and rely on communications that are more ad hoc in nature.

The board of directors or its delegated committee should review and approve policies and procedures that appropriately address corporate standards and processes governing the design, approval, administration, and monitoring of incentive compensation arrangements for covered employees. At some firms in the horizontal review, the relevant body is not yet consistently reviewing and approving these standards.

The board of directors should regularly review the results of monitoring of incentive compensation arrangements described in the previous section and results of other activities undertaken to promote reliability of the incentive compensation system. For example, boards should receive periodic reports that review incentive compensation awards and payments relative to risk outcomes on a backward-looking basis to determine whether the organization's incentive compensation arrangements may be promoting imprudent risk taking. As noted previously, at most firms such reports are at a relatively early stage of development. While some boards undertake an annual review of the effectiveness of incentive compensation in avoiding inappropriate incentives to incur risk, many currently rely on periodic presentations by the chief risk officer or other risk-management staff to the board of directors or its compensation committee, the content of which varies considerably from firm to firm.

Next Steps

Though firms have implemented improved corporate governance practices, the effectiveness of such practices will not be known until some years of experience have been accumulated. Effectiveness will depend on the attentiveness of members of compensation committees to risk-taking incentives. The Federal Reserve will continue to work to promote effective governance of incentive compensation practices at banking organizations.

International Context

Some observers have been interested in comparing progress of firms headquartered in different jurisdictions in improving their incentive compensation practices, for example, in progress relative to the FSB *Principles* and *Implementation Standards.*

About one-third of the large banking organizations included in the horizontal review are headquartered outside the United States. Almost all of the FBOs in the horizontal review are headquartered in Europe (including the United Kingdom). We observed progress in implementing the interagency guidance, which is consistent with the FSB documents, at both U.S. banking organizations and FBOs. However, the interagency guidance, while consistent with the FSB *Principles* and *Implementation Standards*, is more detailed and demanding in many respects. Thus, satisfying the expectations implied by the FSB documents is not necessarily enough to satisfy the expectations in the interagency guidance.

Conformance with Interagency Guidance

In general, progress on conforming to the interagency guidance is similar at the U.S. banking organizations and at the FBOs in the horizontal review. Firms that are more and less far along can be found in both sets of firms. With respect to particular aspects of the guidance, the FBOs have had more difficulty in identifying covered employees in their U.S. operations (as noted previously, few foreign supervisors employ the concept of groups of covered employees, instead focusing their attention on relatively small numbers of senior and highly paid employees). Progress on conforming to the elements of the interagency guidance that focus on corporate governance and the role of risk-management and control personnel is similar at FBOs and U.S. banking organizations.

Progress on achieving balanced incentive compensation arrangements is similar on the whole across the two groups, but the balancing methods employed and the rate of innovation are different between the groups. For risk adjustments, some foreign supervisors have emphasized risk adjustments mainly at the level of firmwide or business line bonus pools. Thus, some FBOs have made progress risk adjusting such pools but have made less progress implementing risk adjustments down to the level of the individual employee.

Some observers have been particularly interested in the details of deferral practices, focusing on the share of incentive compensation awards that is deferred and the use of equity as a vehicle for deferred incentive compensation. Numerical examples of deferral fractions set out in the FSB *Principles* and *Implementation Standards* are sometimes used as a benchmark (60 percent or more for senior executives, 40 percent or more for other individual “material risk takers,” which are not the same as covered employees). Deferral fractions are at or above these benchmarks at both the U.S. banking organizations and the FBOs in the horizontal review.

In some cases, substantial deferral fractions are achieved in different ways. As noted previously, most U.S. firms and some FBOs use a cash-stock table that increases the deferral rate as the amount of incentive compensation increases. As a practical matter, this results in substantial deferral rates for senior executives and for some employees. In contrast, as noted previously, some European Union (EU) supervisors prescribe some elements of pay structure for some employees at EU banking organizations. This also results in substantial deferral rates for those employees.

European Union Approach to Deferred Incentive Compensation

In many cases the pay structure under the EU regulation is somewhat different than that seen at U.S. banking organizations. Under some national implementations within the EU, the deferred portion of an

incentive compensation award is required to be granted half in an equity-linked instrument and half in cash or a cash-like vehicle. The upfront portion of the incentive compensation award is required to be paid half in cash and half in stock subject to a retention requirement of six months to one year. Though the overall fraction of the incentive compensation award granted in stock is substantial in such implementations, the upfront stock subject to a retention requirement is likely to have a limited balancing impact on risk-taking incentives due to the short retention period. The impact of the deferred portion depends on performance conditions; in the absence of performance conditions, deferred cash will have only a modest balancing impact since the amount ultimately received by the employee is reduced only in the event of the firm's failure.

Overall, the net exposure of an employee to a firm's performance over time is not necessarily larger under the EU regulation than under the simpler structures often seen at U.S. firms. For example, if 60 percent of an incentive compensation award is deferred for three years, half in stock and half in cash that vests unless the firm fails, then only 30 percent of the incentive compensation award is exposed to poor performance short of failure. In contrast, suppose all deferred awards are in stock deferred for three years, as is common in the United States. If the same 60 percent of the incentive compensation award is deferred, the whole 60 percent is exposed to the variation in the value of the stock. If the stock is also subject to effective performance conditions, the whole 60 percent is exposed to the conditions. The details of vesting and other performance conditions are particularly important to the overall balancing impact.

Conclusion

Reinforced by the supervisory activities undertaken through the horizontal review, the large banking organizations in the review have made significant progress toward enhancing their incentive compensation arrangements in ways that provide appropriately balanced incentives to take risks (as outlined in the interagency guidance) and promote safety and soundness. As described in this report, however, most firms still have significant work to do to achieve full conformance with the interagency guidance.

The Federal Reserve remains committed to helping move the industry forward in developing and implementing incentive compensation practices that are consistent with prudent risk management and safety and soundness. Continued supervisory attention will be focused on further refinement and implementation and on making appropriate changes as business conditions change and business strategies evolve.