Office of Inspector General
Pension Benefit Guaranty Corporation

September 10, 2015

WHITE PAPER
ENTERPRISE RISK MANAGEMENT AT PBGC

To: Board of Directors

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Consistent with the Office of Inspector General's responsibility to provide leadership to promote efficiency and effectiveness, this white paper is intended to provide the Board of Directors and Pension Benefit Guaranty Corporation senior leadership with insight on Enterprise Risk Management as PBGC moves forward with implementation of its statutory and soon to be Office of Management and Budget mandate regarding ERM.

EXECUTIVE SUMMARY: PBGC needs to designate a risk management officer to coordinate the risk management efforts of the Corporation. Best practices and lessons learned can be adopted from other organizations.

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Background

The Pension Benefit Guaranty Corporation is responsible for protecting the pensions of some 41 million American workers in nearly 24,000 private sector defined benefit plans. The Corporation receives no general tax revenues. It manages $90 billion in assets financed by insurance premiums from its single-employer and multiemployer pension insurance programs, investment income, and the assets of terminated plans. In 2014, the Corporation paid over $5 billion in monthly retirement benefits to nearly 813,000 retirees in some 4,600 single-employer plans and it paid financial assistance to 53 multiemployer plans.[1]

The PBGC faces significant, long-standing, and well-known risks. Both pension insurance programs face serious long-term funding challenges with the premium base declining as fewer employers offer defined benefit plans. In 2003, the Government Accountability Office designated the single-employer pension insurance program as high risk, and GAO added the multiemployer pension insurance program to its high risk list in 2009.[2] At the end of 2014, PBGC's net deficit in the combined programs was $62 billion with exposure of $184 billion for projected future underfunded plans. According to PBGC projections, it is more likely than not that the multiemployer pension insurance program will run out of money by 2025.[3] PBGC's most recent independent financial statement audit identified three material weaknesses (benefit payment management, IT security management, and IT access controls and configuration management), two significant deficiencies (financial reporting and present value calculation of future financial assistance), and one instance of noncompliance (with requirement to determine fair market value of plan assets as of date of plan termination). Two of the three material weaknesses were first reported in 2009. Our office has reported numerous times on PBGC's internal control environment and the number of open audit recommendations.

To address these risks and concerns, Congress mandated in 2012 that PBGC designate a *Risk Management Officer* "whose duties [shall] include evaluating and mitigating the risk that the corporation might experience. The individual in such position shall coordinate the risk management efforts of the corporation, explain risks and controls to senior management and the board of directors of the corporation, and make recommendations."[4]

This statutory requirement foreshadowed an initiative by the Office of Management and Budget to implement ERM government-wide. OMB is currently working with agencies on a revision to Circular A-123, *Management's Responsibility for Internal Controls*. At the heart of the revision is the introduction of ERM to provide for more effective risk management and internal control in the federal government. As one news headline put it, "OMB's A-123 rewrite to flip risk management on its head."[5]

The Changing Internal Control, Risk Management, and Performance Environment

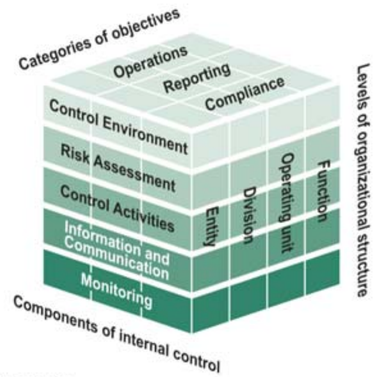
The Federal Managers Financial Integrity Act of 1982 requires (1) the Comptroller General to prescribe standards for internal control for the federal government, (2) the Office of Management and Budget to issue guidelines for the evaluation of internal controls, and (3) the heads of federal agencies to sign annual public assurance statements disclosing any material weaknesses. Significant changes are coming soon in all three of these requirements relating to risk management, and PBGC should be prepared to respond to these changes.

The Comptroller General standards are found in the *Standards of Internal Control for the Federal Government*, commonly known as the Green Book. The Green Book was revised in 2014 and the new standards are effective beginning fiscal year 2016. The Green Book adopts the Internal Control Integrated Framework (2013) developed by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), a joint initiative of private sector organizations that provide thought leadership through the development of frameworks and guidance on internal control, enterprise risk management, and fraud.

The revised Green Book contains significant changes. The prior Green Book was issued in 1999, before the Enron, WorldCom, and Tyco accounting scandals, before the enactment of the accounting and auditing reforms in the Sarbanes-Oxley Act of 2002, and before the Financial Crisis of 2007-2008. These events have moved risk management to the forefront.

There are five components to internal control systems under the COSO/GAO Framework, and a direct relationship exists among an entity's objectives, the five components of internal control, and the organization's structure. These relationships are represented in the following cube.

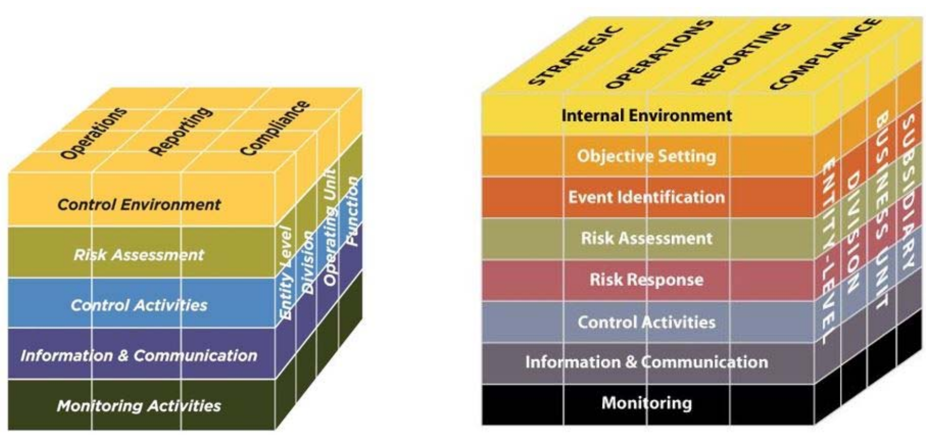
Figure 1: Relationships between Components of Internal Control, Categories of Objectives, and Organizational Structure.



Sources: COSO and GAO. | GAO-14-704G

The upcoming OMB A-123 revision will adopt the 2014 Green Book and introduce ERM across the federal government. ERM builds upon systems of internal control. ERM is a continuous and coordinated process which enables leaders to make better informed decisions about the risks facing their organization in order to achieve desired objectives and to avoid or minimize the impact of undesired events. ERM provides managers with data to identity risks, context to weigh risk responses across the organization, and documentation to help ensure accountability and consistency. The A-123 revision will likely adopt the concepts from the COSO Enterprise Risk Management Framework. This framework is similar to the COSO/GAO Internal Control Framework as reflected in Figure 2.

Figure 2: Comparison of the COSO Internal Control and ERM Frameworks



COSO - Internal Control Framework **COSO - Enterprise Risk Management Framework**

Source: COSO

The key differences between the two frameworks are that the ERM Framework adds a performance/risk dimension for Strategic Objectives and expands the components from 5 to 8 (adding Objective Setting, Event Identification, and Risk Response).

Under the ERM Framework, *Internal Environment* refers to the tone at the top, risk philosophy, and risk appetite. Management must set *objectives* to align strategy with mission and to identify risks and opportunities. Management must *identify events*, both internal and external, that may affect the achievement of objectives. *Risks* must be *assessed* to determine impact and likelihood before and after controls are applied. After risks are identified and assessed, management must *respond* by either avoiding, accepting, reducing, or sharing the risks. *Control Activities* are policies and procedures designed to achieve objectives and ensure risk responses are effectively carried out. *Information* must be captured and *communicated* in a timely manner up, down and across the organization, and ERM activities must be *monitored* on a continuous basis so that necessary modifications can be made. While risk identification and assessment tends to overshadow the other components, ERM does not begin or end with these components.

In addition to adopting the 2014 Green Book revision and COSO frameworks and introducing ERM, the A-123 revision will also:

- Emphasize the need to manage risks and internal controls in both non-financial and financial areas
- Reinforce corrective action plans to ensure management addresses root causes of control deficiencies
- Simplify FIMFIA annual assurance statements

ERM also builds upon the federal Performance Management Framework which is codified in the Government Performance and Results Modernization Act of 2010. This framework, as implemented by OMB Circular A-11, establishes leadership roles and responsibilities including the requirement to conduct "frequent data-driven reviews that guide decisions and actions to improve performance outcomes, manage risk, and reduce costs." When Circular A-11 is revised next year, it is likely to include risk responsibility language to harmonize the circular with both the updated Green Book and the updated A-123.

In summary, beginning in fiscal year 2016, PBGC management will be facing a significantly changing workspace, with risk management being the common thread woven throughout. These changes include enhanced requirements for internal control, introduction of ERM, simplification of the FMFIA assurance statements, and linkage of ERM to the federal Performance Management Framework and the preparation of the budget.

ERM Responsibilities within PBGC

The COSO Enterprise Risk Management – Integrated Framework (2004) defines ERM as "a process, effected by the entity's board of directors, management, and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within the risk appetite, to provide reasonable assurance regarding the achievement of objectives."

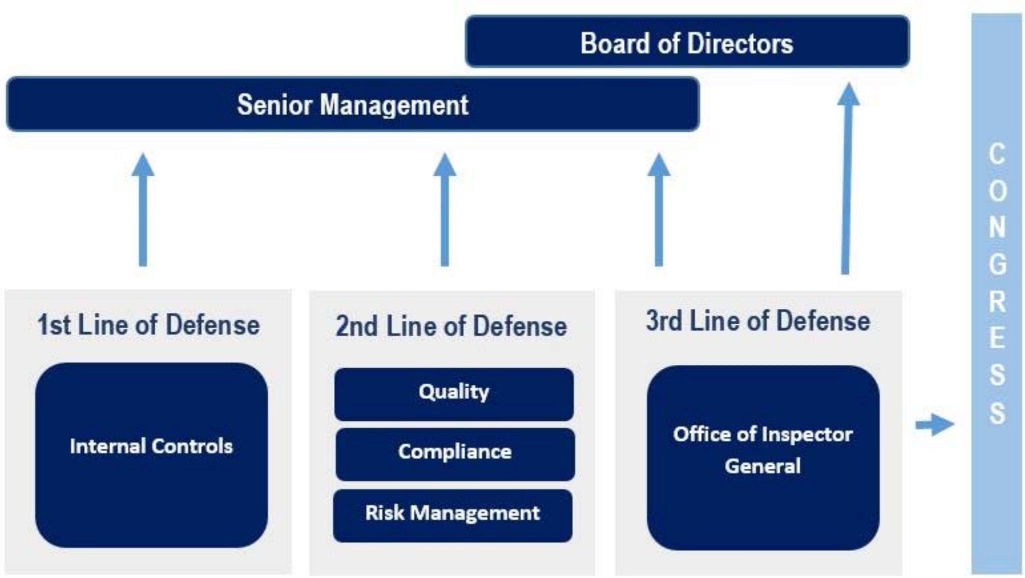
Within the Corporation's structure:

- The Board of Directors is responsible for governance, oversight, ensuring that PBGC management designates a risk management officer in accordance with the 2012 statutory requirement, and overseeing the implementation of the requirement that risk management activities are coordinated and communicated to the Board.

- PBGC senior leadership is responsible for governance, selecting a qualified risk management officer, ensuring the RMO has direct access to the Director and senior leadership, communicating and demonstrating a tone at the top commitment to ERM, setting the risk appetite and risk responses, aligning ERM with its system of internal controls and the federal Performance Management Framework, and implementing the requirement that risk management activities are coordinated and communicated to the Board.
- A risk management officer will be responsible for educating PBGC executives and managers on ERM practices, championing ERM, coordinating ERM activities across the organization, explaining risks and controls to senior management and the Board, and making recommendations.
- PBGC business unit managers are responsible for managing risk within their areas of responsibilities and communicating risks up, down, and across the organization.
- The Quality Management Department is responsible for assessing work processes, providing performance data to senior leadership, and preparing the annual and strategic plans.
- The Corporate Controls and Reviews Department (CCRD) is responsible for conducting internal control testing, risk assessments, and compliance evaluations.
- The Office of Inspector General is responsible for conducting independent and objective audits and investigations of programs and operations (including the ERM program), communicating risks to management, and keeping the Board and Congress fully and currently informed about problems and deficiencies.

Applying the Institute of Internal Auditors' Three Lines of Defense in Effective Risk Management and Control Model, figure 3 illustrates how these functions should relate to one another at PBGC.

Figure 3: Three Lines of Defense in Effective Risk Management and Control



Source: OIG, adapted from IIA Position Paper, *The Three Lines of Defense in Effective Risk Management and Control* (January 2013)

It is important to note that some risk management activities are currently taking place at PBGC. CCRD, for example, has contracted with KMPG to conduct the 2015 A-123 entity-wide risk assessment. The Office of Information Technology tracks IT inventory, risks, controls, and plan of actions and milestones as required by law and OMB guidance. In 2015, the Office of Benefits Administration began a universal risk assessment of its operations in response to an OIG recommendation. The 2012 law and upcoming OMB A-123 revision require more coordination of these activities and an enterprise-wide approach.

First Steps with ERM

The Institute of Management Accountants' risk management maturity model has three phases. PBGC will be entering this space at Phase I: Building a Foundation. In this phase, the objectives will be to build ERM awareness and executive level commitment; build capability through organizational structure, resources and operating model; and align expectations through a risk management commitment.[6]

ERM requires visible commitment from the top. Without this, ERM activities can quickly devolve into a wasteful, compliance-focused paper exercise which may actually place the organization at greater risk by creating the facade of risk management. In the 2014 book, *Managing Risk and Performance: A Guide for Government Decision Makers*,[7] the authors identify several recommendations for government leaders looking to move forward in implementing an ERM program. Among the recommendations for initial implementation are: understanding the importance of risk management as part of value delivery, developing a risk-accountable culture, and coordinating risk management policies and practices support from the top of the organization.[8]

A chief risk officer needs to be placed within an organizational structure at a high enough level to bridge silos and access top leadership. The upcoming OMB A-123 revision will not specify where a chief risk officer should be placed on an organizational chart. With PBGC, however, Congress provided some guidance in the 2012 law by requiring that the risk management officer "explain risks and controls to senior management and the board of directors." Designating the head of a risk organization as a member of executive management has been identified as an ERM best practice in federal agencies.[9] The authors of *Managing Risk* write, "whether running executive-level risk workshops, facilitating discussion linking strategic planning with a discussion of risk management, or other actions that seek to develop a portfolio view of enterprise risk, the CRO can serve as the agency leader's 'right hand' for ensuring the cross-functional approach to integrated risk management necessary for an effective ERM program."[10]

ERM requires a credible and engaging thought leader to serve as CRO (or RMO). Using the Core Competency Model from the Risk and Insurance Management Society, this leader must have strong interpersonal skills, "conceptual" or critical thinking skills, and be experienced in the use of risk management tools and techniques such as self-assessments, risk surveys, facilitated workshops, root cause analysis, quantitative analysis, risk mapping, and risk monitoring.[11] Unfortunately, as it has been observed by the president of the Association of Federal Enterprise Risk Management, "risk management professionals with risk management expertise as a whole are scarce in both the private and public sector."[12]

Case Examples

U.S. Department of Commerce

The ERM program at Commerce is managed by the Office of Program, Evaluation, and Risk Management (OPERM), which is part of the Office of the Chief Financial Officer and Assistant Secretary for Administration. The basic structure of the ERM program, as well as policies and procedures, are established in department orders. According to these orders, OPERM is responsible for advising department leadership and bureau management on risks, serving as a resource for best practices, and developing consistent policies and procedures. The Deputy Director for Risk Management at OPERM serves as the department's Chief Risk Officer. The department's governance structure includes a Risk Management Council that makes recommendations and advises on the identification, response, monitoring and reporting of risks throughout the department. Bureau heads are responsible for appointing a Risk Management Officer, ensuring the bureau implements ERM in accordance with department policy, and ensuring the timely submission of the annual FMFIA assurance statements. The RMOs serve as the champion for the implementation and management of the ERM framework within the bureau. The RMOs serve on the Risk Management Council, annually update the bureau's risk inventory, work with the bureau's Senior Assessment Team to address risks, and annually report on the bureau ERM maturity.

The Census Bureau at the Department of Commerce, viewed as a leader in ERM, increased its attention to ERM following a 2008 contracting scandal. At the Census Bureau, an Office of Risk Management and Program Evaluation reports directly to the Deputy Director and Chief Operating Officer. In a recent interview, the current COO discussed the challenges of creating a risk-based culture. "My biggest problem is getting information. By the time it gets to me, it's been filtered," she said. "People only want to tell me the good news story. That's bad from a risk-management standpoint. I want to address the problems before they become a crisis. Getting people to understand that it's their job to elevate that information, that they won't be punished, that they don't have to solve everything by themselves, is a huge culture change because people are used to, 'If I say something is wrong with my program, I will get punished.'"[13]

Department of Education

ED's Office of Federal Student Aid is also considered a leader in ERM. The Department demonstrated its commitment to ERM by making "improving the Department's efficacy through comprehensive risk management" a goal in its strategic plan.[14] FSA, which awards about $137 billion a year in direct student aid to about 14 million students, began enterprise risk management activities in 2004 with the selection of a Chief Risk Officer, and its ERM function has been maturing ever since. The CRO reported to the Enterprise Performance Management Office until 2009, when a new FSA chief operating officer was named. The new COO elevated the ERM function, making it a direct report to the COO and consisting of two groups: Risk Analysis and Reporting and Internal Controls. In addition to COO commitment, successful implementation of ERM at FSA has been attributed to a "phased approach," the creation of a Risk Management Committee chaired by the CRO and comprised of senior leadership; and "hiring, developing and retaining the right talent."[15]

Internal Revenue Service

An early adopter, the IRS has had an enterprise risk management function since at least 2000. In its 2000 Organization Blueprint, IRS aligned its ERM function in its Research Analysis and Statistics office. Over time, primary responsibility for risk management became the responsibility of standing and ad hoc Executive Steering Committees, however, with the Research Analysis office focused on conducting risk analyses for senior leadership. In 2011, an audit by the Inspector General for Tax Administration found that IRS' risk management efforts lacked clearly defined procedures and sufficient risk information sharing. IRS management disagreed with the OIG's recommendations regarding the need for a centralized and coordinated enterprise risk management function.

In 2013, following significant public and Congressional scrutiny of the inappropriate treatment of certain tax-exempt applications by IRS officials, the IRS Principal Deputy Commissioner released a report calling for the establishment of "an Enterprise Risk Management Program to provide a common framework for capturing, reporting, and addressing risk areas across IRS . . . to improve timeliness in bringing information to the attention of the Commissioner and other IRS leaders as well as stakeholders to help prevent future instances of inappropriate treatment or mismanagement."[16]

Currently at IRS, the Chief Risk Officer reports to the Commissioner, and individual ERM liaisons serve as risk management champion or advocate for their organization. Executives and managers have received ERM training, a set of enterprise risks has been developed for use in budget development, and a common Risk Acceptance Tool has been developed for documenting key decisions.[17]

National Archives and Records Administration

Following an OIG report on internal controls, NARA recently revised its Enterprise Governance, Risk Management and Compliance program (EGRC). This program incorporates the agency's internal control program, ERM program, and issues management practices. While NARA is still developing its ERM program, the EGRC policy designates the Chief Operating Officer as the Risk Officer to oversee the ERM program. The program is implemented by a Performance and Accountability group reporting to the COO. The COO also chairs a Management Controls Oversight Council, which is responsible for providing leadership and policy oversight regarding the implementation of FMFIA and Circular A-123 and ensuring that risks are appropriately identified and managed.[18]

U.S Small Business Administration

The ERM function at the SBA is coordinated by the Director for Disaster Planning and Enterprise Risk Management, who reports to the Deputy Administrator. The Deputy Administrator chairs an SBA Enterprise Risk Management Board that meets every two weeks and consists of C suite executives, program heads, and the ERM Director. In a recent interview, the Director stressed both the need to look ahead and the need to focus on "what's important now" and attributed SBA's developing risk management culture to strong commitment and leadership from the Deputy Administrator.[19]

CalPERS

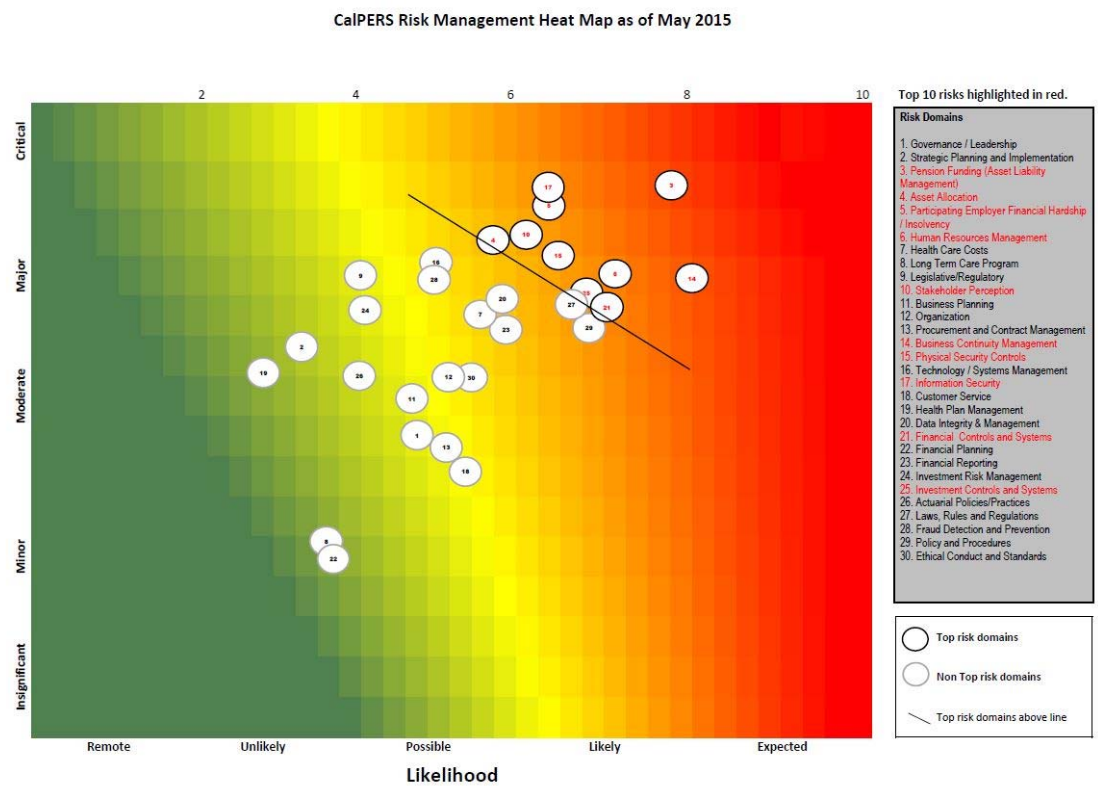
The final example is not from a federal agency but from the California Public Employees Retirement System (CalPERS), the nation's largest pension fund. CalPERS represents a more mature ERM function and a possible desired future state for PBGC's enterprise risk management program.

CalPERS has an Enterprise Risk Management Division that reports to the Chief Financial Officer. ERMD is responsible for "creating and maintaining a risk-intelligent culture" at CalPERS, which is incorporated as a goal in the organization's strategic plan. ERMD conducts risk management training, facilitates risk assessments, and develops tools to assist divisions in identifying, monitoring, and mitigating risks.

Similar to PBGC, CalPERS is overseen by a Board of Administration. ERMD provides risk management quarterly status reports and semi-annual dashboard reports and heat maps to the Board's Audit and Risk Committee.[20] Examples of these reports are found at Figure 3 on the following page.

Figure 3: Samples of ERM Reports Prepared for the CalPERS Board

a. Heat Map



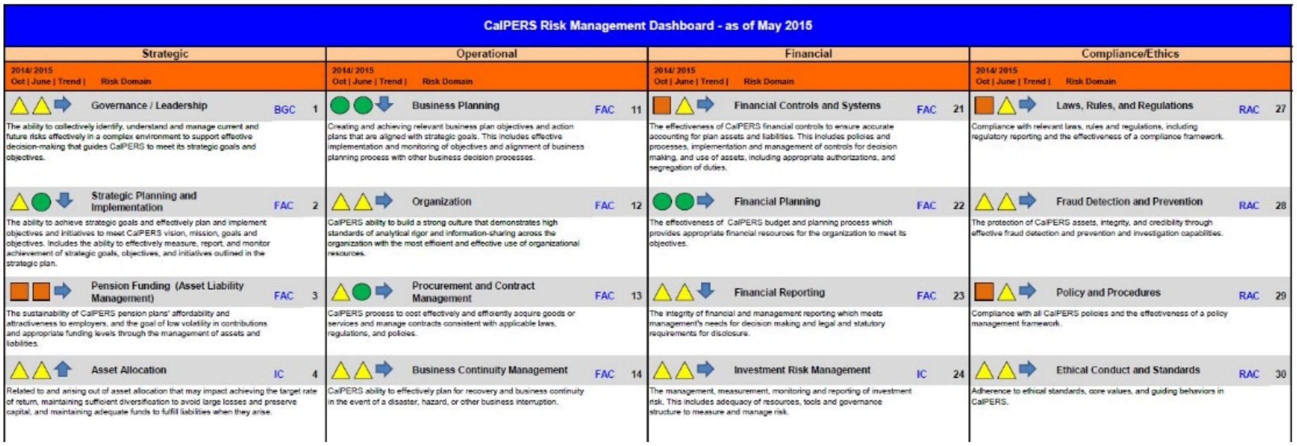
b. Top Risk Summary

CalPERS Risk Dashboard
Top Risk Summary as of May 2015

	Risk Category	Risk Domain	Risk Ranking Oct-13	May-14	Oct-14	May-15	Previous Trend	Projected Trend	Owner	Oversight
3	Strategic	Pension Funding (Asset Liability Management)	■	■	■	■	→	→	Chief Investment Officer Chief Actuary Chief Financial Officer	Investment Committee Finance and Administration Committee
4	Strategic	Asset Allocation	*	△	△	△	→	↑	Chief Investment Officer Chief Operating Investment Officer	Investment Committee
5	Strategic	Participating Employer Financial Hardship/Insolvency	⬣	■	■	■	→	↓	Chief Financial Officer	Finance and Administration Committee
14	Operational	Business Continuity Management	△	△	△	△	↓	→	Chief Financial Officer	Risk and Audit Committee
17	Operational	Information Security	△	△	△	△	→	→	DEO, Operations & Technology	Finance and Administration Committee
6	Strategic	Human Resources Management	△	△	△	△	→	↑	DEO, Operations & Technology	Performance, Compensation & Talent Management Committee

* Not identified as a risk domain during this reporting period

c. Risk Management Dashboard



CalPERS Risk Management Dashboard - as of May 2015

Strategic	Operational	Financial	Compliance/Ethics
2014/ 2015 Oct | June | Trend | Risk Domain	2014/ 2015 Oct | June | Trend | Risk Domain	2014/ 2015 Oct | June | Trend | Risk Domain	2014/ 2015 Oct | June | Trend | Risk Domain
Governance / Leadership BGC 1 The ability to collectively identify, understand and manage current and future risks effectively in a complex environment to support effective decision-making that guides CalPERS to meet its strategic goals and objectives.	Business Planning FAC 11 Creating and achieving relevant business plan objectives and action plans that are aligned with strategic goals. This includes effective implementation and monitoring of objectives and alignment of business planning process with other business decision processes.	Financial Controls and Systems FAC 21 The effectiveness of CalPERS financial controls to ensure accurate accounting for plan assets and liabilities. This includes policies and processes, implementation and management of controls for decision making, and use of assets, including appropriate authorizations, and segregation of duties.	Laws, Rules, and Regulations RAC 27 Compliance with relevant laws, rules and regulations, including regulatory reporting and the effectiveness of a compliance framework.
Strategic Planning and Implementation FAC 2 The ability to achieve strategic goals and effectively plan and implement objectives and initiatives to meet CalPERS vision, mission, goals and objectives. Includes the ability to effectively measure, report, and monitor achievement of strategic goals, objectives, and initiatives outlined in the strategic plan.	Organization FAC 12 CalPERS ability to build a strong culture that demonstrates high standards of analytical rigor and information-sharing across the organization with the most efficient and effective use of organizational resources.	Financial Planning FAC 22 The effectiveness of CalPERS budget and planning process which provides appropriate financial resources for the organization to meet its objectives.	Fraud Detection and Prevention RAC 28 The protection of CalPERS assets, integrity, and credibility through effective fraud detection and prevention and investigation capabilities.
Pension Funding (Asset Liability Management) FAC 3 The sustainability of CalPERS pension plans' affordability and attractiveness to employers, and the goal of low volatility in contributions and appropriate funding levels through the management of assets and liabilities.	Procurement and Contract Management FAC 13 CalPERS process to cost effectively and efficiently acquire goods or services and manage contracts consistent with applicable laws, regulations, and policies.	Financial Reporting FAC 23 The integrity of financial and management reporting which meets management's needs for decision making and legal and statutory requirements for disclosure.	Policy and Procedures RAC 29 Compliance with all CalPERS policies and the effectiveness of a policy management framework.
Asset Allocation IC 4 Related to and arising out of asset allocation that may impact achieving the target rate of return, maintaining sufficient diversification to avoid large losses and preserve capital, and maintaining adequate funds to fulfill liabilities when they arise.	Business Continuity Management FAC 14 CalPERS ability to effectively plan for recovery and business continuity in the event of a disaster, hazard, or other business interruption.	Investment Risk Management IC 24 The management, measurement, monitoring and reporting of investment risk. This includes adequacy of resources, tools and governance structure to measure and manage risk.	Ethical Conduct and Standards RAC 30 Adherence to ethical standards, core values, and guiding behaviors in CalPERS.

Source: CalPERS.ca.gov website[21]

Summary

The PBGC needs to designate a risk management officer and implement an ERM program. There is no one size fits all program. It must be tailored to PBGC's culture, size, and environment. Successful implementation will depend on the commitment of senior leadership in words and actions, the selection of a qualified ERM professional, and acceptance of the program by business unit leaders. While ERM is an emerging discipline across the federal government, there are lessons learned and best practices that can be adopted from other organizations.

[1] Some of these figures have been rounded for readability. All figures are based on the PBGC's 2014 Annual Report, available at http://pbgc.gov/documents/2014-annual-report.pdf#page=5 (accessed September 5, 2015)
[2] Government Accountability Office, "High Risk List," Report 15-230, available at http://gao.gov/assets/670/668415.pdf (accessed September 5, 2015)
[3] As the date of this white paper, the latest official projection was contained in the FY 2013 Projections Report, which was issued in 2014. According to this report, it is more likely than not that the multiemployer plan will run out of money by 2022. Based on information recently provided by PBGC management, it is believed the latest modeling indicates that this date is now projected to be 2025. "Fiscal Year 2013 PBGC Projections Report," available at http://pbgc.gov/documents/Projections-report-2013.pdf (accessed September 5, 2015)
[4] Pub. L 112-141, the Moving Forward for Progress in the 21st Century Act (MAP-21), section 40231.
[5] Kopp, Emily, "OMB's A-123 rewrite to flip risk management on its head," Federal News Radio, federalnewsradio.com, February 11, 2015, available at http://federalnewsradio.com/management/2015/02/ombs-a-123-rewrite-to-flip-risk-management-on-its-head/ (accessed September 5, 2015)
[6] Shenkir, William G. and Paul L. Walker, Statement on Management Accounting, "Enterprise Risk Management: Tools and Techniques for Effective Implementation," Institute of Management Accountants (2007), 35, available at http://www.imanet.org/docs/default-source/thought_leadership/governance_systems/erm_tools_and_techniques.pdf?sfvrsn=4 (accessed September 9, 2015)
[7] Stanton, Thomas H., and Douglas W. Webster*, Managing Risk and Performance: a Guide for Government Decision Makers* (New Jersey: Wiley, 2014)
[8] Stanton and Webster, 270-290
[9] Hardy, Karen, "Managing Risk in Government: An Introduction to Enterprise Risk Management," Financial Management Series, The IBM Center for the Business of Government (2010), 40.
[10] Stanton and Webster, 279-80
[11] Hardy, 43
[12] Stanton and Webster, 152
[13] Kopp, Emily, "Census bureau offers primer on enterprise risk management," Federal News Radio, federalnewsradio.com, March 10, 2015, available at http://federalnewsradio.com/management/2015/03/census-bureau-offers-primer-on-enterprise-risk-management/ (accessed September 5, 2015)
[14] U.S. Department of Education, "Strategic Plan for Fiscal Years 2014-2018," available at http://www2.ed.gov/about/reports/strat/plan2014-18/strategic-plan.pdf (accessed September 6, 2015)
[15] Stanton and Webster, 152
[16] Internal Revenue Service, "Highlights from the IRS Report," available at http://www.irs.gov/uac/Newsroom/Highlights-from-the-IRS-Report (accessed September 5, 2015)
[17] Brandt, Tom, "Enterprise Risk Management in a Complex World," American Society of Military Comptrollers 2015 Professional Development Institute, New Orleans, LA (May 29, 2015) available at http://www.asmconline.org/wp-content/uploads/2015/06/55-Grams-Wetklow-Brandt-Fletcher.pdf (accessed September 5, 2015)
[18] Agency policy and discussion with James Springs, Inspector General, National Archives and Records Administration, August 2015
[19] Steven G. Smith, Director of Disaster Planning and Enterprise Risk Management, Small Business Administration, interviewed by Robert Westbrooks, September 2, 2015
[20] These reports are publicly available online at https://www.calpers.ca.gov/page/about/board/board-meetings (accessed September 4, 2015)
[21] Semi-Annual Enterprise Risk Reports (dashboards), Risk and Audit Committee meeting, June 16, 2015, available at https://www.calpers.ca.gov/page/about/board/board-meetings/risk-201506 (accessed September 5, 2015)