PBGC PIMS Peer Review
Request For Information (RFI)
RFI # RQ-32-18-000002

Overview:

PBGC is issuing this Request For Information (RFI) to request responses from qualified businesses with expert knowledge and a comprehensive understanding of financial simulations and modeling, which are capable of meeting the requirements below. The responses to this RFI will contribute to determining the method of procurement and contract type, identify the basic review approach, and identify parties having an interest in and the resources to support this requirement.

PBGC intends to award a contract in FY 2018 with a six to nine month period of performance, including major deliverables.

DISCLAIMER: This RFI is for planning purposes only. No solicitation document exists at this time. Issuance of this notice does not constitute any obligation on the part of the Government to procure these items or services or to issue a solicitation. In addition, the Government is under no obligation to pay for information submitted in response to this RFI, and in accordance with FAR 15.201(e), responses to this notice are not offers and cannot be accepted by the Government to form a binding contract. To the maximum extent possible, please submit non-proprietary information. Any proprietary information submitted should be identified as such and will be properly protected from disclosure.

Responses to this announcement will not be returned, and there will not be any ensuing discussions or debriefings of any responses. However, information obtained as a result of this announcement may be reflected in a subsequent solicitation, and PBGC may contact one or more respondents for clarifications or for information that will enhance the Government's understanding. This RFI is for Government market research, and may result in revisions in both its requirements and its acquisition strategy based on industry responses.

Background:
The Pension Benefit Guaranty Corporation (PBGC) was established to develop and administer the pension plan insurance programs as provided in Title IV of the Employee Retirement Income Security Act (ERISA) of 1974. PBGC's mission is primarily to: 1) encourage the continuation and maintenance of voluntary private pension plans for the benefit of their participants, 2) provide for the timely and uninterrupted payment of pension benefits to participants and beneficiaries under plans to which Title IV applies, and 3) maintain PBGC insurance premiums at the lowest level consistent with carrying out its obligations under Title IV.

ERISA established two insurance programs to be administered by PBGC. The single-employer program covers private sector defined benefit plans maintained by one employer, whether or not the pension plan is collectively bargained. The multiemployer program covers private sector defined benefit pension plans that are collectively bargained and cover the employees of two or more unrelated employers. The two insurance programs differ significantly in the level of benefits guaranteed, the insurable event, premium structure and rates, the mechanisms for delivering guaranteed benefits, and PBGC's authorities and role with respect to ongoing and terminated plans. By law, each insurance program is operated and financed separately from the other, and assets from one cannot be used to support the other.

The single-employer program is by far the larger of the two programs, insuring about 30 million workers and retirees covered by nearly 22,000 plans. This program guarantees payment of benefits, subject to limits set by law. If an insured plan terminates without enough money to pay all benefits, then PBGC trustees the plan, takes over any assets and assumes the responsibility to pay plan participants.

There are about 1,400 multiemployer plans that cover more than 10 million workers and retirees. Unlike the single-employer program, under which PBGC guarantees payment of benefits upon termination of an underfunded plan, under the multiemployer program, PBGC guarantees payment of benefits if a covered plan becomes insolvent, i.e., runs out of money, and is unable to pay basic PBGC guaranteed benefits when due. Also unlike the single-employer program, insolvent multiemployer plans are not trusteed by PBGC. Rather, PBGC provides financial assistance payments to insolvent plans in amounts necessary to enable them to continue paying guaranteed benefits themselves.

Single-Employer PIMS – PBGC's Policy Research & Analysis Department (PRAD) began development of the Pension Insurance Modeling System (PIMS) for the single-employer insurance program (SE PIMS) in 1992. The initial version went into production in 1997. SE PIMS is a stochastic (i.e., random) simulation model that PBGC uses to evaluate its exposure and likelihood of future claims and to quantify the amount of risk facing the single-employer insurance program. SE PIMS portrays PBGC's future financial condition as a function of a variety of economic parameters. For further discussion, please see the PIMS webpage at PBGC.gov. SE PIMS has over 55,000 lines of computer code written in C++ programming language and is currently run under Windows 7. The input database for the model includes significant details on a sample of about 500 pension plans, key financial variables from approximately 400 companies that sponsor those pension plans, details on the PBGC's current assets and benefit payment obligations, and recent history of key financial market returns. Pension plan and actuarial data are taken from the Form 5500, the Schedule SB (MB for Multiemployer PIMS, see below) and attachments, and includes benefit formulae, age-service matrices of active workers, numbers of retirees, benefit payouts, actuarial assumptions, and schedules of amortization bases.

The program simulates thousands of random scenarios of potential future outcomes using a pseudo-random number generator and measures of the volatility of key variables and the correlation among them. The scenarios projected in the simulation extend up to 20 years into the future. In each year of a scenario, the program simulates:

1. Annual returns of stock and bond market indices; changes to the financial variables of each plan sponsor.

2. Changes to each pension plan's liabilities reflecting advancements in age and service, as well as retirements and other employment separations, hiring and retirement rates consistent with changes to sponsors' total employment levels, advancement in ages and mortality rates among the retired population, benefit and/or salary level increases, and changes to valuation discount rates.

3. Changes to the asset level of each plan, including asset returns determined by plans' portfolio selections and the simulated market returns, benefit payments to retired participants, and contributions from the plan sponsor meeting the requirements of the Internal Revenue Code's pension funding rules.

4. Random occurrences of bankruptcy among the pension plan sponsors, with bankruptcy probabilities being determined by each firm's financial variables, and calculation of whether the funding levels of plans sponsored by bankrupt firms implies a claim on the PBGC insurance fund.

5. Changes to PBGC assets and liabilities that reflect premium revenues from plan sponsors, benefit payments to trusteed beneficiaries, asset returns and changes to liability discount rates, age advancement and mortality among beneficiaries, and new claims presented by underfunded plans of bankrupt firms.

The program stores output on key variables related to pension funding and PBGC assets and liabilities. The output is analyzed by the PBGC to develop probability distributions over the range of financial outcomes the PBGC could experience in the future.

The actuarial component of the program, which tracks plans' liabilities, assets, and contribution requirements through time, represents the most significant component of the model in terms of programming detail and complexity.

PBGC uses SE PIMS to satisfy statutory requirements under ERISA Section 4008, as amended by the Pension Protection Act of 2006 (PPA of 2006), to produce annually, an actuarial evaluation of PBGC's expected operations for the next five years for publication as part of PBGC's Annual Report. PBGC has chosen in the past to extend this projection to ten years instead of the required five. SE PIMS is updated regularly for legislative, regulatory and/or policy changes. The model was critical to PBGC's technical assistance in the legislative processes that led to enactment of the Deficit Reduction Act of 2005, PPA of 2006, and the Worker, Retiree and Employer Recovery Act of 2008. SE PIMS was used to evaluate the financial impact on ongoing pension plans, their sponsors and participants, PBGC finances, and the Federal budget of numerous and varied legislative proposals considered by the Executive and Legislative branches, the Congressional Budget Office, the Joint Committee on Taxation, and the Office of Management and Budget (OMB).

PBGC has also used SE PIMS at the request of the Government Accountability Office (GAO) and other Federal agencies/Departments to conduct special analyses to assess the financial condition of PBGC's single-employer program and evaluate legislative/regulatory/policy alternatives to eliminating PBGC's long-term single-employer deficit.

SE PIMS also interfaces with PBGC's deterministic Excel-based Budget Forecasting Model (Budget Model) to provide input on expected future claims and variable rate premium revenue for PBGC's Federal budget forecasts submitted to the Department of Labor (DOL) and OMB. The Budget Model is a microcosm of PBGC's accounting system, and can produce deterministic forecasts of the financial condition of PBGC's single-employer and multiemployer insurance programs for up to 30 years.

Multiemployer PIMS – PBGC's multiemployer insurance modeling system (ME PIMS) went into production in 2009. Like SE PIMS, ME PIMS is also a stochastic (i.e., random) simulation model that PBGC uses to evaluate its exposure and likelihood of future claims, to quantify the amount of risk facing the multiemployer insurance program, and to satisfy PBGC's statutory requirement under Section 4022 of ERISA (requires PBGC to conduct quinquennial studies of the multiemployer insurance program in order to determine the adequacy of multiemployer premium rates and benefit guarantees). For further discussion, please see the PIMS webpage at PBGC.gov.

ME PIMS shares many features of SE PIMS, as well as reflecting fundamental differences between the single-employer and multiemployer programs, including:

1. A different universe of plans – ME PIMS currently contains data for roughly 260 multiemployer pension plans.

2. The failure pattern for multiemployer plans: typically, but not exclusively mass withdrawal from participation by contributing employers followed by insolvency (i.e., plan running out of money), rather than bankruptcy of a single-employer sponsor.

3. The lack of availability of financial data on individual contributing employers participating in multiemployer plans, and the resulting need for stochastic modeling of the mass withdrawal event to use variables describing the condition of the plan rather than of its contributing employers.

4. The collective bargaining framework of multiemployer plans, in which employer contribution rates are set through collective bargaining.

5. The ERISA environment, where multiemployer plans have separate rules concerning cost methods (traditional methods still used under PPA), amortization periods, and Funding Improvement and Rehabilitation Plans associated with Endangered and Critical status plans under PPA.

6. Special computations for the Withdrawal Liability payments owed by employers who discontinue making contributions to a plan (individually or *en masse*).

7. Different levels of PBGC benefit guarantees than for single-employer plans.

8. Different PBGC premium structure and levels than single-employer plans pay.

9. A different employer obligation to failed plans than the single-employer model of sponsor-bankruptcy and PBGC trusteeship: in the multiemployer realm PBGC pays periodic cash assistance to allow insolvent plans to continue functioning as ongoing (if wasting) trusts, receiving withdrawal liability payments from former sponsors and continuing to pay participants' benefits but at the PBGC guarantee levels.

10. Different measurement criteria for booking claims against PBGC, which are computed as the present value of future financial assistance, booked when plans are in mass withdrawal and within 20 years of insolvency, or when they are ongoing but within 10 years of insolvency, and removed from PBGC's books if they emerge from these criteria.

As with SE PIMS, the actuarial component of the ME PIMS program, which tracks plans' liabilities, assets and contribution requirements through time, represents the most significant component of the model in terms of programming detail and complexity.

Requirement Objectives:

On July 6, 2012, President Obama signed the Moving Ahead for Progress in the 21st Century Act (MAP-21, Pub. L. No. 112-141). Section 40233(a) of MAP-21 requires the PBGC to contract with a capable agency or organization that is independent of the PBGC to conduct annual peer reviews of SE PIMS and ME PIMS.

The objectives of the next peer review are to provide PBGC and PRAD with a targeted peer review of the current modeling of bankruptcy and industry-wide clusters of bankruptcies (in the single-employer context) and contagion effects[1] (in the multiemployer context), and

[1] Contagion generally refers to the possibility that insolvency of one multiemployer plan may cause or accelerate the insolvency of another multiemployer plan with common contributing employers.

recommendations for modeling enhancements. Unlike the prior peer review, this review is not designed to be comprehensive, but instead targeted to bankruptcy and contagion effects. Specifically, for the single-employer program, the contractor should provide actionable recommendations in analyzing and modeling the impact on plan sponsors (and the pension plans) for bankruptcies and clusters of bankruptcies (industry-specific shocks). For the multiemployer program, the contractor should provide actionable recommendations in analyzing the contagion effect and impact on employers, unions, and the pension plans upon the failure of one or more large multiemployer pension plans or one or more large employer that participates in several pension plans.

The objective of this peer review is to:

- Summarize the current bankruptcy model
- Recommend enhancements to modeling of bankruptcy for sponsors of single-employer plans
- Recommend enhancements to modeling of employer withdrawal and/or decline in participation for multiemployer plans
- Assess the feasibility of modeling whether a multiemployer plan failure or the failure of a large employer may lead to failure of other multiemployer plans with common participating employers
- Provide actionable recommendations that
    - Discuss ways to address recommendations
    - Estimate feasibility of making model changes (time and cost)
- Construct recommendations and guidance based on industry standards for similar models

Requirements:

The targeted peer review of PBGC pension models examines and determines the technical soundness and adequacy of selected parts of the PBGC pension models, such as the extent to which assumptions are appropriate given the purposes of the models, and determine if these models use appropriate data to develop meaningful and useful statistical estimates of the probability of default of pension plans.

The contractor must provide evidence-based and actionable recommendations to address any weaknesses in the PBGC models uncovered by the targeted peer review. Deliverables will include a report that address the appropriateness and adequacy of selected aspects of the PBGC models. The report shall identify key findings and provide recommendations for improvements of the models.

The work the contractor provides will be to evaluate the current SE PIMS and ME PIMS modeling of bankruptcy and employer participation and to:

- Identify possible refinements to the current modeling and evaluate their effects and merits
- Identify alternatives to the current modeling and evaluate their effects and merit
- Identify data requirements for estimation of model parameters
- Provide recommendations, based substantially on empirical evidence, for actionable improvements to the current modeling, assistance with integrating selected improvements into the full SE PIMS and ME PIMS models and guidance for future parameter updates.

Recommendations for modeling improvements shall be based on criteria including:

- How realistically the modeling reflects relationships between pension plan contribution levels and plan sponsors' financial strength and other factors such as investment returns and market discount and borrowing rates.
- How realistically the models reflect interconnectedness or clustering (within industries, economic sectors, business cycles, etc.) of contributing employer bankruptcies and employer participation changes
- How accurately the model identifies which sponsors experiencing bankruptcy then terminate their pension plans or instead continue to sponsor their plans after reorganization. Also, how realistically the modeling reflects the expected future bankruptcy rates of plan sponsors that continue to sponsor plans after reorganization (SE PIMS only).
- The ability of the modeling to provide reasonable measures of bankruptcy probabilities for non-publicly traded pension plan sponsors such as privately held corporations, mutual insurance groups or non-profit organizations (SE PIMS only).

SUBMISSION INSTRUCTIONS

<u>Cover Sheet – 1 page</u>

Please provide the following information:

1) Organization name, address, DUNS number, and web site.
2) Point of contact to include e-mail address and telephone number.
3) Business size (large or small). If small, please provide type of small business (SDVOSB, VOSB, 8(a), HUBZone, etc.).
4) GSA, or any government GWAC (NITAAC CIO-SP3, e.g.), contract number, schedule, and SIN category(s), if applicable.

<u>Index – 1 page</u>

Please provide an index to assist the Government in identifying where you have addressed each question below in your Capabilities Statement and Market Information. Please provide question number and corresponding page and section heading and/or paragraph number.

Capabilities Statement and Market Information – 5-10 pages (maximum)

Please respond to the following questions by providing a Capabilities Statement and Market Information:

1) Please describe your organization's breadth of expertise/competency to respond to or support the above requirement.
2) Please describe your experience providing comprehensive predictive financial simulations and analysis.
3) Please describe your experience with providing peer reviews of similar size and complexity. Identify the customers involved.
4) Based on your understanding of the requirements, provide your labor categories with qualifications best able to provide the requisite expertise.
5) Provide a Rough Order of Magnitude regarding pricing, how you developed your estimate, and a summary description of deliverables.
6) What contract types have you used before? What contract type is best for this requirement?
7) The Government contemplates using North American Industry Classification System (NAICS) code NAICS code 541611 - Administrative Management and General Management Consulting Services for this acquisition (GSA Special Item Number 520-13, Complementary Financial Management Services, falls under this NAICS code). Is this the best code to classify this requirement?
8) What information gaps or analytic barriers may complicate the review, particularly regarding the contagion issue, and how would you propose to deal with those barriers.
9) In addition to the responses above, provide any other information germane to the requirement that you believe should be included.

POINT OF CONTACT

The Point of Contact (POC) for this RFI is:

Mark Miller
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Pension Benefit Guaranty Corp.
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Responses to this RFI shall be submitted via e-mail to miller.mark@pbgc.gov **no later than 2:00 p.m. on May 23, 2018**