

Highlights of a GAO Forum:

**Strengthening the Use of Risk
Management Principles in
Homeland Security**

Strengthening the Use of Risk Management Principles in Homeland Security

- Background
- Forum Highlights
 - Current Risk Management Practices
 - Homeland Security Risk Management Challenges
 - Addressing Homeland Security Risk Management Challenges
 - Suggested Next Steps
- Questions
- Appendix I:
Relevant Ongoing GAO Work

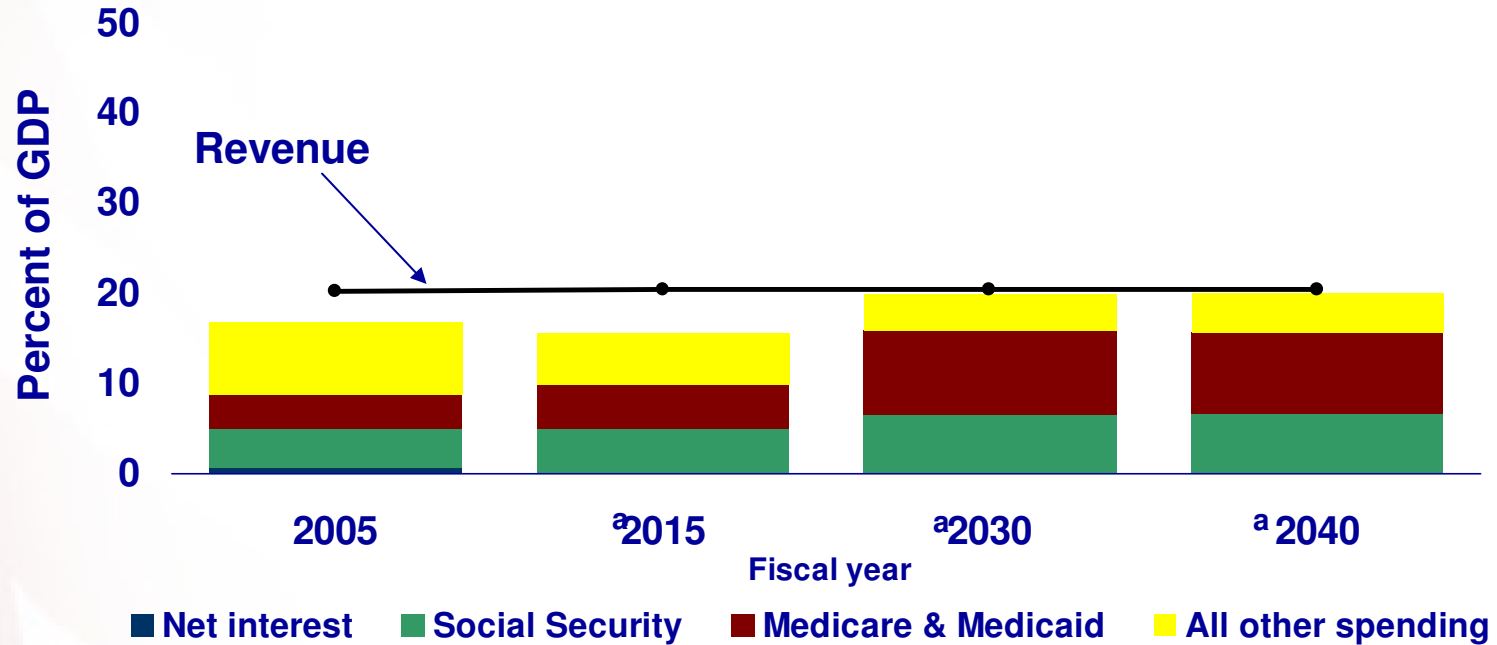
Why a Comptroller General Forum?

- From the terrorist attacks of September 11, 2001, to Hurricane Katrina, homeland security risks vary widely.
 - The nation can neither achieve total security nor afford to protect everything against all risks.
- Managing these risks is especially difficult in today's environment of globalization, increasing security interdependence, and growing fiscal challenges for the federal government.
- It is increasingly important that organizations effectively target homeland security funding—totaling nearly \$65 billion in 2008 federal spending alone—to address the nation's most critical priorities.

Potential Fiscal Outcomes

Under Baseline Extended (January 2001)

Revenues and Composition of Spending as a Share of GDP

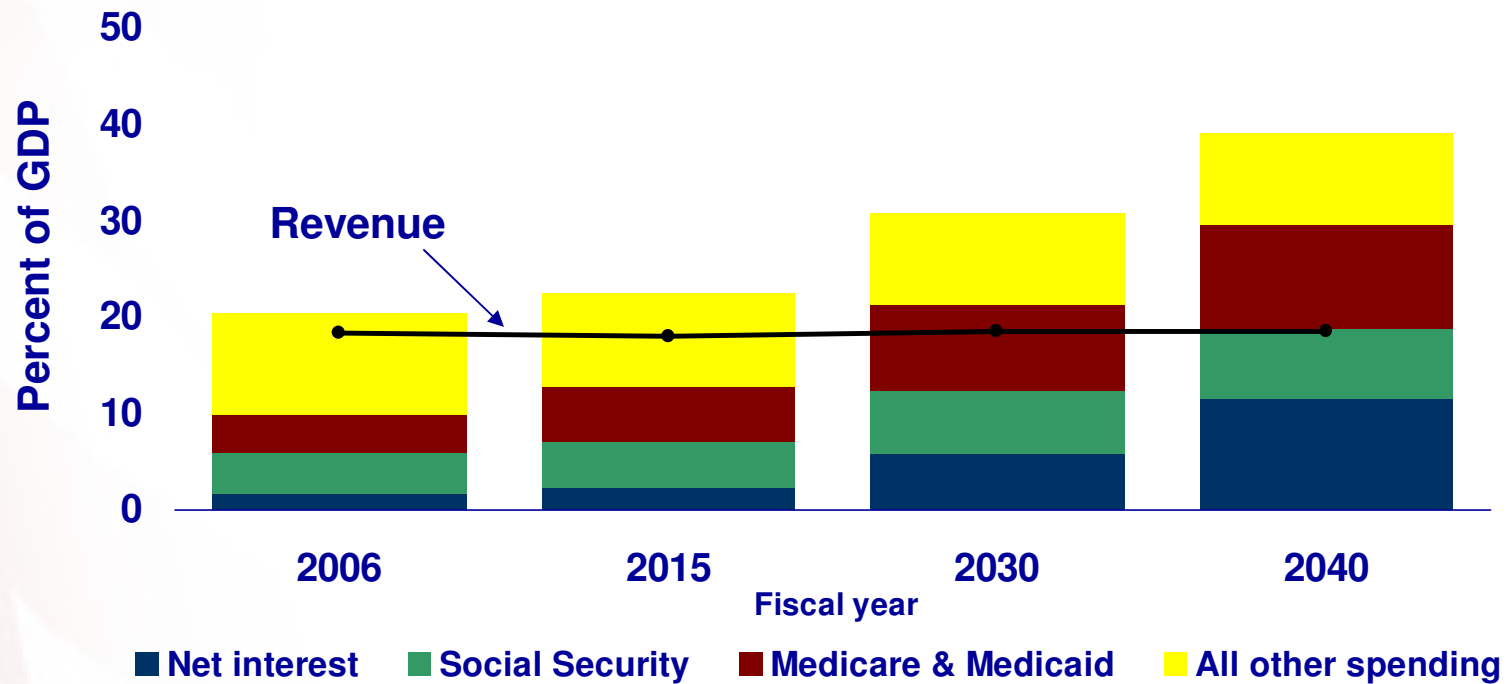


Source: GAO's January 2001 analysis.
^a All other spending is net of offsetting interest receipts.

Potential Fiscal Outcomes

Under Alternative Simulation

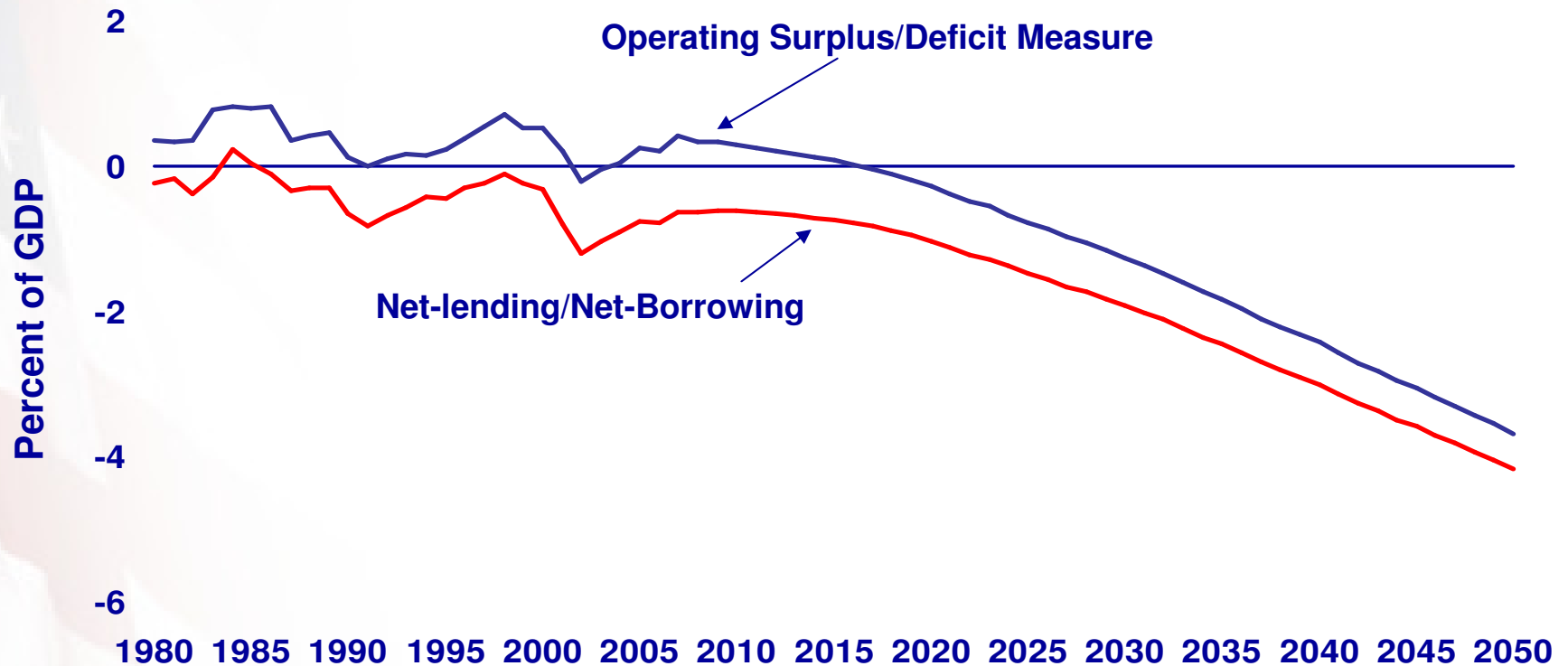
Revenues and Composition of Spending as a Share of GDP



Source: GAO's August 2007 analysis.

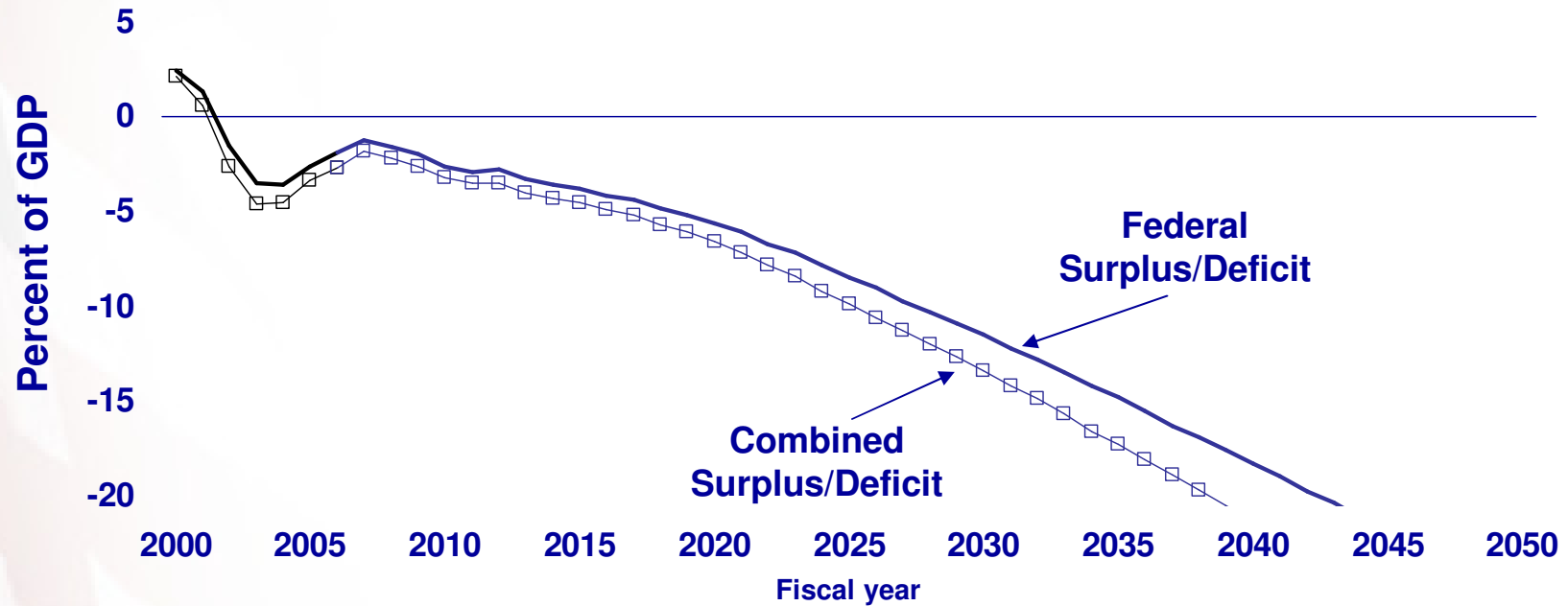
Notes: AMT exemption amount is retained at the 2006 level through 2017 and expiring tax provisions are extended. After 2017, revenue as a share of GDP returns to its historical level of 18.3 percent of GDP plus expected revenues from deferred taxes, i.e. taxes on withdrawals from retirement accounts. Medicare spending is based on the Trustees April 2007 projections adjusted for the Centers for Medicare and Medicaid Services alternative assumption that physician payments are not reduced as specified under current law.

State and Local Governments Face Increasing Fiscal Challenges



Sources: Historical data from National Income and Product Accounts. Historical data from 1980 – 2006, GAO projections from 2007 – 2050 using many CBO projections and assumptions, particularly for next 10 years.

State and Local Fiscal Challenges Add to the Federal Government's Fiscal Challenge



Source: Historical data from National Income and Product Accounts, GAO Analysis.

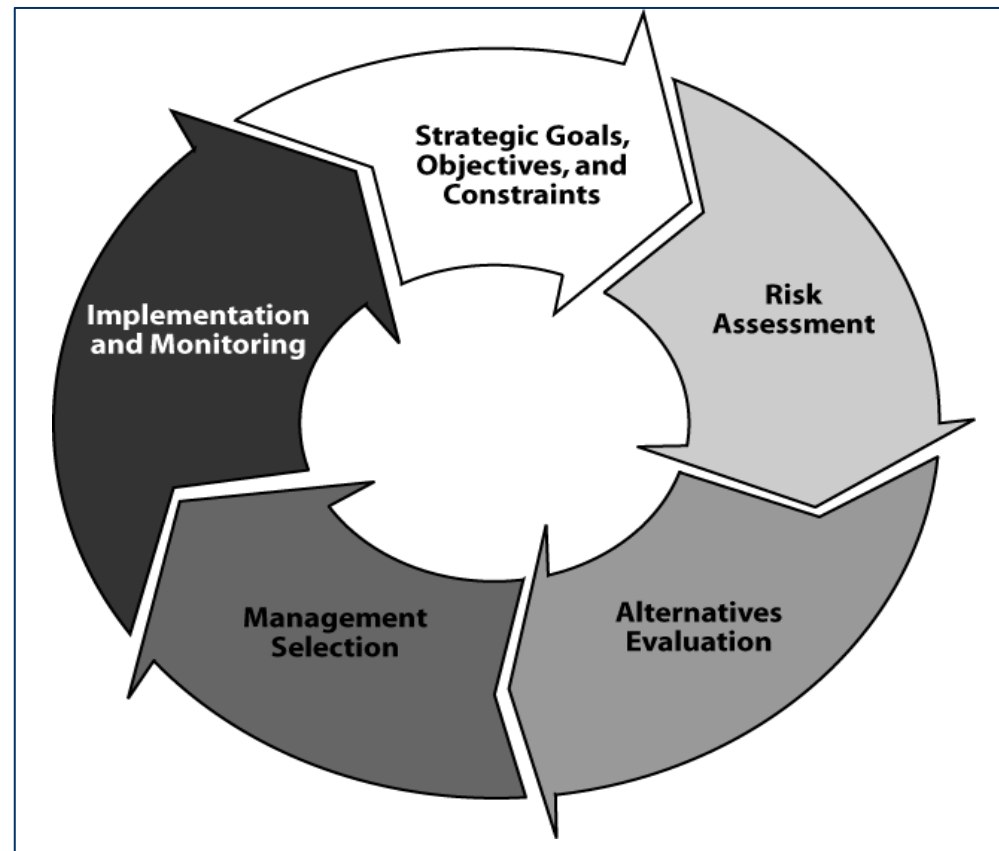
Note: Historical data from 2000 – 2006, projections from 2007 – 2050; state and local balance measure is similar to the federal unified budget measure. Federal Simulation Assumptions: Discretionary spending grows with GDP after 2007. AMT exemption amount is retained at the 2006 level through 2017 and expiring tax provisions are extended. After 2017, revenue as a share of GDP returns to its historical level of 18.3 percent of GDP plus expected revenues from deferred taxes, i.e. taxes on withdrawals from retirement accounts. Medicare spending is based on the Trustees' April 2007 projections adjusted for the Centers for Medicare and Medicaid Services' alternative assumption that physician payments are not reduced as specified under current law.

Risk Management Can Improve Resource Allocation

- Using approaches that may not consider risk, such as Congressional direction (earmarks), compound these potential fiscal outcomes.
- Congress, the President, and the Secretary of DHS have endorsed risk management.
- DHS is making progress in applying risk management to guide its operational and resource allocation decisions.

Risk Management Framework

- Risk management is a strategic process for helping policy makers allocate finite resources.
- Risk Management consists of 5 phases: setting strategic goals and objectives, assessing risks, evaluating alternatives, management selection, and implementing and monitoring results.



Moving Forward: Challenges in Using Risk Management

- Applying risk management to a homeland security context is a relatively new endeavor.
- Choices must be made about protection priorities given the risk and how to best allocate available resources.
- Strengthening the use of risk management principles in homeland security remains a challenge for many stakeholders.

Forum Participants

- GAO convened a forum of experts on October 25, 2007, to advance a national dialogue on applying risk management to homeland security.
- Expert participants represented diverse organizations, backgrounds and applications of risk management, including:
 - Carnegie Mellon University
 - University of Pennsylvania, Wharton School of Business
 - University of Southern California
 - New York University
 - Swiss Re
 - Former Governor of Virginia
 - JP Morgan Chase
 - Westfield Group
 - Talisman, LLC
 - Highland Risk & Crisis Solutions, Ltd.
 - Wal-Mart Stores, Inc.
 - New York Office of Public Safety
 - Port Authority of New York & New Jersey
 - Ohio Homeland Security
 - National Research Council
 - National Intelligence Council
 - U.S. National Protection and Preparedness Directorate
 - U.S. Federal Emergency Management Agency
 - U.S. Coast Guard
 - U.S. Army Corps of Engineers
 - U.S. Government Accountability Office
 - RAND Corporation

Forum Agenda

- **Session I:** Presentation on effective risk management practices used by leading organizations
 - Group discussion: What lessons can be learned from leading organizations about the effective use of risk management practices?
 - **Session II:** Presentation on the homeland security risk management challenges faced by federal agencies
 - Group discussion: What are the greatest homeland security risk management challenges facing the public and private sectors?
 - **Session III:** Moderated discussion on ways to strengthen homeland security risk management practices
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Swiss Re Presentation: “Risk Management in the Private and Public Sectors”

- Swiss Re’s model for applying risk management to reinsurance is based on three conceptual pillars: quantitative risk management; risk governance; and risk disclosure or transparency.
- Public and private sector roles in risk management include risk identification, assessment, mitigation, and adaptation.
- The unique role of the private sector is to “pre-fund” and diversify risk through insurance and to support risk prevention by reflecting the quality of such measures in premiums.
- Public sector responsibilities include regulating land use and organizing protection, response, and recovery.
- Given the interdependent nature of public and private sector roles, coordination and partnership is important for providing insurance for natural catastrophes and terrorism.

The Role of a Chief Risk Officer (CRO)

- Many private sector organizations, including Swiss Re, have designated CROs whose role is to focus on understanding and communicating information about risks to the business managers responsible for mitigating risk and to steer risk mitigation efforts.
- A public sector CRO could address the need for leadership in public sector risk management initiatives.
- Challenges to the CRO position include:
 - Balancing the responsibilities for protection against seizing opportunities for long-range risk reduction;
 - Creating a champion but not another silo that is not integrated with other components of the organization; and
 - Generating leadership support for the position.

Public Sector Organizations with Effective Risk Management Practices

- The U.S. Coast Guard uses its long-standing principles of risk management at the highest levels of the organization to prepare for the impact of high-risk scenarios and to balance security needs with the need to ensure an efficient flow of commerce.
- The U.S. Army Corps of Engineers developed flood risk management practices that have been used to digest and share critical information with the public.
- The Port Authority of New York and New Jersey has developed and implemented a risk assessment program that has guided its management in setting priorities for a 5-year, \$500 million security capital investment program.
- China requires security risk assessments of maritime liquid natural gas shipping operations before granting operating permits.

Comparing and Contrasting Public and Private Sector Risk Management Practices

- For both sectors, the development of risk management capabilities requires a multidisciplinary approach involving a range of skills.
- The private sector has the flexibility to choose which risks to insure against and tends to naturally consider opportunity analysis as an important part of risk management.
- In contrast, the public sector must accommodate the public's beliefs about risks and preferences for risk management, which are often based on incomplete information and seen through the filter of complex political processes.

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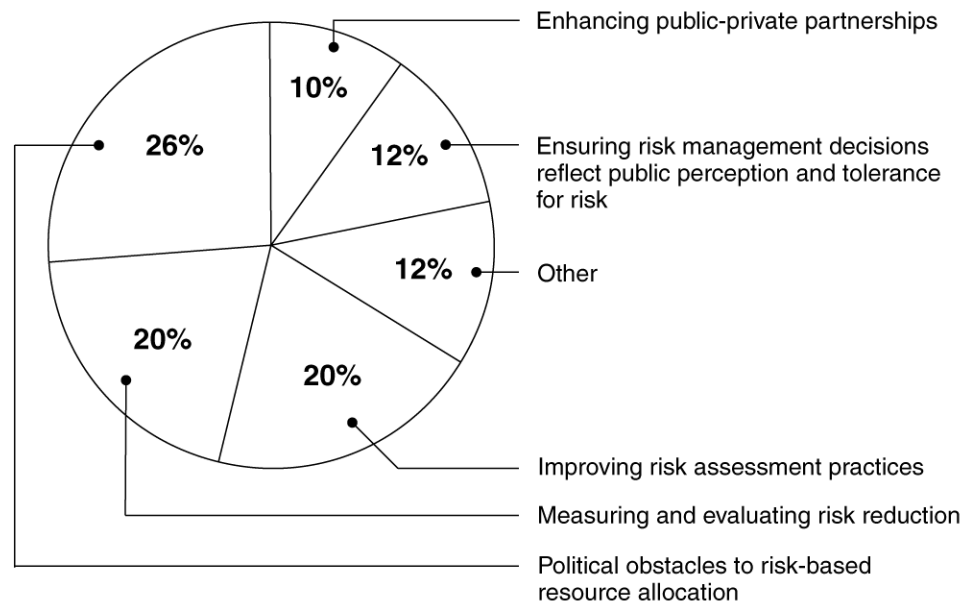
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RAND Presentation: “Homeland Security Risk Management Challenges Faced by Federal Agencies”

- Assessing each factor of terrorism risk—threat, vulnerability, and consequence—poses challenges:
 - It is difficult to anticipate changes in threats.
 - It is difficult to develop practical vulnerability assessment methods while satisfying feasibility and cost constraints.
 - Consequences can be spread widely.
- We also have to better understand how to manage risk.
- Terrorism risk management challenges can be addressed in number of ways:
 - Homeland security programs should be accountable to standards of effectiveness;
 - Risk management must be analytic and deliberative; and
 - Sufficient resources must be provided to enable capacity within DHS for homeland security risk analysis and strategic planning.

Pre-Forum Participant Poll Results: Most Critical Risk Management Challenge

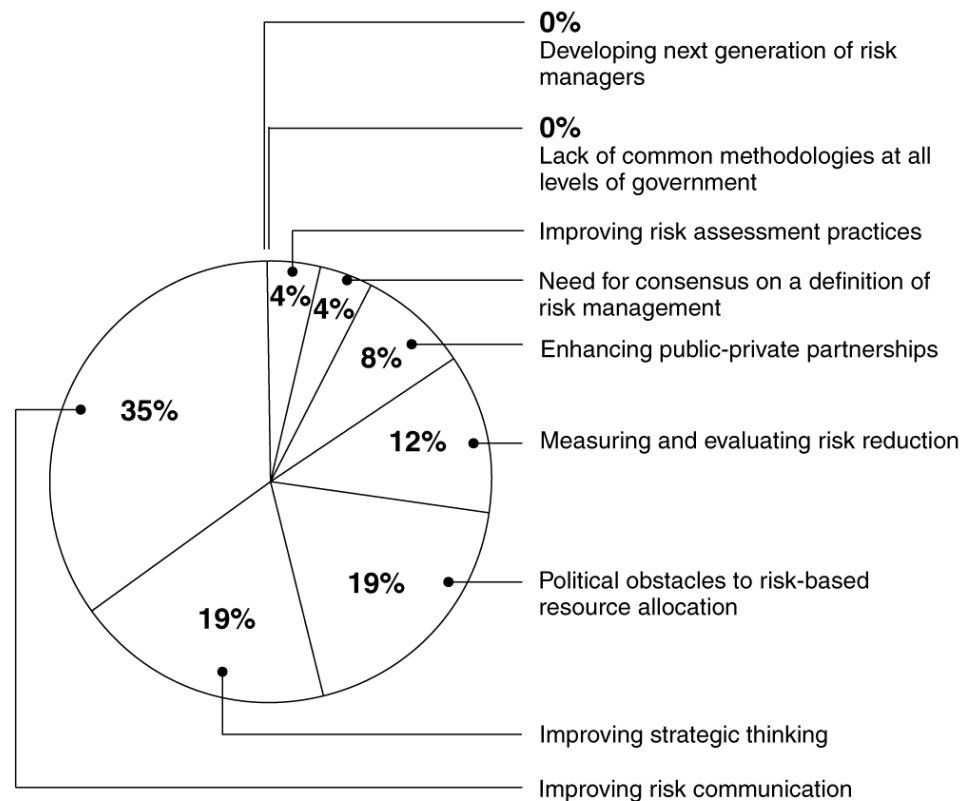
- Prior to the forum, we asked participants what they considered the single most critical challenge in applying principles of risk management to homeland security.
- Our pre-forum poll results demonstrated a lack of consensus regarding the most critical challenges, with responses fairly evenly distributed among challenges.



Source: GAO analysis of participants' pre-forum polling responses.

Forum Participant Poll Results: Most Critical Risk Management Challenge

- Participants were also polled during the forum, following the discussion on challenges in applying risk management principles to homeland security.
- That vote identified that a consensus began to emerge that the most critical challenge in applying risk management to homeland security was improving risk communication.



Source: GAO analysis of participants' forum polling responses.

Note: For the poll taken during the forum, "Ensuring that risk management decisions reflect an understanding of the public's perception of and tolerance for risk" was abbreviated as "Improving risk communication," and the two most common pre-forum responses suggested under the open-ended "Other" option were added as close-ended options: "Improving strategic thinking" and "Need for consensus on risk management definition."

Risk Communication Challenges

- As shown through the forum polling, 35 percent of participants responded that improving risk communication was the most critical challenge in applying risk management to homeland security.
- A number of risk communication challenges were identified:
 - The lack of a common lexicon for risk management;
 - A focus on unlikely risks with dramatic consequences;
 - The need to engage the public in a dialogue about an acceptable level of risk; and
 - A lack of consideration of behavioral impacts.

Political Obstacles to Risk-Based Resource Allocation

- Overcoming political obstacles is necessary to allocate homeland security resources based on risk.
- Political obstacles to risk-based resource allocation include:
 - Reluctance of politicians and others to focus on long-term trade-offs and shifts in perceptions of risk over time;
 - Absence of clarity related to federal spending decisions;
 - Federal grant programs may conflict with national priorities; and
 - Inconsistent resource allocation across the country.

Lack of Strategic Thinking

- A lack of strategic planning is a key challenge to incorporating risk-based principles in homeland security investments.
- In particular, challenges exist in the following areas:
 - Need for public discourse to create a strategy for homeland security;
 - Public sector lacks opportunity analysis;
 - Lack of a single public risk manager discourages coordination; and
 - Governmentwide risk management guidance is insufficient.

Partnership and Coordination Challenges

- Risk management should be viewed as both a public and private sector issue—rather than being an isolated, government-centered challenge.
- Challenges to partnership and coordination include:
 - Public and private sector flexibility and expectations differ;
 - Public-private partnerships need to be strengthened; and
 - Lack of intergovernmental partnerships.

Need for Risk Management Education

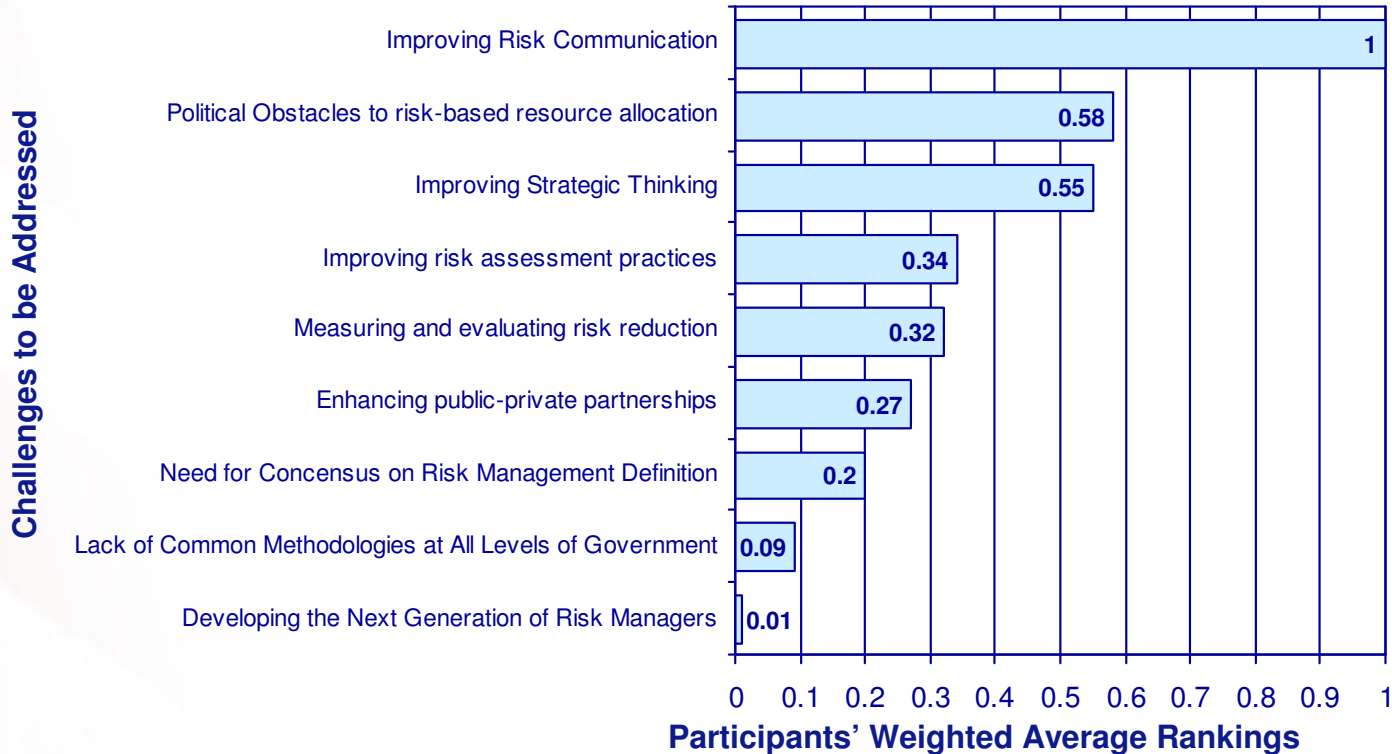
- Increased efforts to promote risk management education are necessary, both to educate future practitioners and to inform stakeholders in the short term about the value of applying risk management to homeland security decision making.
- A number of risk management education challenges were identified:
 - Lack of risk management educators;
 - Intelligence analysts need risk analysis training; and
 - Federal government needs to collaborate with state and local governments in risk management education.

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Participant Poll Results: Ranking the Order to Address Challenges

- When asked to indicate the order in which challenges should be addressed, participants' responses paralleled those from the previous polls



Using Risk Communication Practices to Educate and Inform the Public

- It is important to empower people with fact-based risk analysis, rather than leaving them to make decisions based on perceived risk.
- The dissemination of factual information will help decision makers in all sectors.
- Outreach to the public will help inform and educate citizens while enhancing risk communications.
- The events of Hurricane Katrina showed the importance of and need for a good risk communication strategy.

Overcoming Political Obstacles to Risk Management

- Participants were generally sympathetic to the complexity of the political process, where leaders must reconcile competing resource demands from the public as well as the sometimes conflicting priorities of the administration and members of Congress.
- However, political obstacles can be overcome by highlighting the importance of risk management to policymakers.
- Policymakers should gain a better understanding of what has worked and what has not worked in the private sector in order to stop reacting to past events by better anticipating and preparing for probable future events.

Additional Suggestions to Address Other Identified Challenges

- **Improve strategic thinking:** Strategic thinking could be improved by focusing on defining the problems to be addressed, a set of principles to guide decisions, goals in addressing the problems, and the trade-offs required to achieve these goals.
 - **Use risk assessments as a tool for decision making:** Risk assessments are useful tools that can be used to inform decisions made by business leaders and policymakers.
 - **Enhance information sharing through public-private partnerships:** Partnerships between the public and private sectors can enhance information sharing and need to result in structured communications that address the goals of diverse groups.
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Suggested Next Steps

- **Creating an Advisory Board**, composed of some subset of Forum participants, to assist the federal government in thinking about and advancing risk management practices.
- **Developing a List of Effective Practices**, lessons learned, and risk management models for a possible audience at OMB and the staff of the next administration.
- **Reviewing DHS's Risk Management Efforts** to assess any gaps between current practices and known effective practices identified by the preceding effort.
- **Developing an Informal White Paper**, prior to the 2008 elections, to stress the need for risk management, acknowledge risk management actions already taken at DHS, give examples of effective private sector practices, and detail budgetary concerns.

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