Introduction

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The belief that the world has become increasingly dangerous has been a staple in national security circles for some time. Russia's invasion of Ukraine spread awareness of this harsh reality to the broader public. Adding Chinese president Xi Jinping's increasing assertiveness, especially toward Taiwan but also far beyond; continued terrorist threats from multiple corners; North Korea's nuclear weapons and ballistic missile tests; Iran's coming ever closer to acquiring nuclear-weapon capability and continued sponsoring of terrorism; risks in the cyber and space domains; and of course the potential of an "unknown unknown" military conflict leaves America's geopolitical strategy and military preparedness stretched and challenged.

The foundation of America's ability to deter aggression and, if necessary, defeat aggressors is the strength of our military, combined with high-quality intelligence and diplomatic capabilities and alliances. Military capability rests on the nation's defense budget, which provides the resources and authorities necessary to protect national security. The navy cannot send ships it does not have to keep sea-lanes open. The army cannot deploy troops it has been unable to recruit, train, and equip. Ditto for the capacity of the air force, marines, coast guard, space force, and, if necessary, the Reserves and National Guard. And for each and all the services, in cooperation with the private sector, rapidly developing and deploying technology and recapitalizing and equipping with surge capacity have become urgent priorities. As former chairman of the Joint Chiefs and secretary of state Colin Powell summarized, "Show me your budget, and I'll show you your strategy."

Simultaneously, adversaries have been strengthening their military capabilities, often with sophisticated technology and directly focused on potential conflict with the United States. Thus, threats evaluation and strategy must be based on this unfortunate reality, with a healthy dose of humility, when

forecasting where, how, when, and with whom conflict may arise. The essays, panel presentations, and discussions in this volume, featuring contributions from many of the nation's leading experts, address these concerns.

The volume brings together and interweaves the main contemporary topics in national security budgeting. These include the geopolitical, military, and fiscal context for defense budget reforms; the threats the nation faces and might face; the strategies necessary to enable effective actions to deal with those threats; and the technology, recapitalization, and innovation challenges the services face and the opportunities for better harnessing new technologies. Also covered are personnel strengths and weaknesses, from recruiting to training and retaining the active-duty force; to the best mix of active-duty and reserve personnel and private contractors, including highly technical talent. There are also overviews of reform possibilities and the checkered history of previous reform attempts and a discussion of the politics of enacting defense budgets that are adequate, flexible, and incentivized enough to do the job without the undue burden of non-core-mission spending that crowds out mission-critical imperatives.

We have encountered many people who believe they need to know more about national security and defense budgeting but seek help in cobbling together a comprehensive view from disparate places and sources. In a poll jointly coordinated last year by the Hoover Institution's Tennenbaum Program for Fact-Based Policy and YouGov, respondents ranked national security and the defense budget as among the five most important public policy topics (out of the fifteen surveyed) about which they would most value more objective information.

We hope bringing these commentaries and analyses from leading experts together in one place can serve that purpose, adding to the significant individual insights and independent value that each brings. Their collective wisdom should prove valuable not just to those in the national security community and those interacting with it directly but also to those who would benefit from deeper knowledge on these issues in dealing with the economy, the budget, politics, and international relations as citizens and voters.

Setting the stage for the intensive discussions ahead, we lead off by laying out the geopolitical, military, and fiscal context for efforts to reform the defense budget. The wide military capability gap over potential adversaries the United States has enjoyed for decades is narrowing. While partly due to the underinvestment in America's military and defense industrial base, this situation is mostly due to our adversaries' increasing capabilities and

sophistication. In short, while America retains the world's strongest military, other nations have been gaining ground. And while they are targeting specific theaters, we as a country must remain alert to several simultaneously. So we must deter, and if necessary defeat, not just their current greatly improved capabilities but where those capabilities will be in future years. And we must do so while also facing a trifecta of fiscal issues—the large and growing national debt, the predictable insolvency of the Social Security and Medicare trust funds over the next nine or ten years, and the dilemma that budgetary pressure will create for making the necessary investments in defense. But we note some reasons for cautious optimism on rightsizing the budget's adequacy, flexibility, and accountability.

On threats, Oriana Skylar Mastro focuses on what the United States can and should do to successfully deter China from invading Taiwan. She warns that because China has failed to convince Taiwan to willingly unify with the People's Republic of China, it has enlarged, modernized, and upgraded its military to take the island by force. While invading Taiwan likely exceeds current People's Liberation Army capabilities, by 2027 it may be able to take the island and defeat US intervention. She recommends in-theater bases of operation, purchasing significantly more long-range precision-guided munitions to attrite Chinese forces, expanding military sales to regional allies, and improving joint operations capabilities.

Leading intelligence expert Amy Zegart examines the adaptation challenges facing US intelligence agencies. She focuses on the crucial question: How much does money matter? Despite record spending, US intelligence agencies are losing their relative advantage. When budget scarcity and budget abundance both lead to the same suboptimal outcomes, more systemic problems exist, which she labels "organizational pathologies." Intelligence agencies' structures, cultures, and incentives persist as the silent but deadly killers of innovation in the defense space. After reviewing the most significant challenges facing the intelligence community, she recommends the creation of a new and dedicated open-source intelligence agency.

Joseph H. Felter captures the activities and threats posed by jihadist groups such as al-Qaeda, ISIS, and state-sponsored organizations, then suggests guiding principles for future counterterrorism policies, and finally identifies the strategy, policies, and resources necessary to address the danger. He argues for a better understanding of threats and US current counterterrorism capabilities and limitations, combined with deeper coordination with allies.

General Keith Alexander warns that the worst national security threat our nation faces today is having Russia and China working together, becoming powerful enough to challenge the world order and accomplish their respective goals in their spheres of influence. He urges the United States to develop a more robust strategy—showcasing US cyber capabilities—to confront China's and Russia's objectives, which could counter their next moves, as well as Iran's. He warns of Russia's continued antagonism unless the United States more energetically thwarts its hostile actions. At the same time, he predicts that China will continue to grow its military with the end goal of taking Taiwan in Xi Jinping's lifetime. He ends by recommending that our partners and allies, especially Japan, play a larger role alongside the United States as these threats continue to grow and predicts that public-private partnerships will be the future for cybersecurity.

Admiral Gary Roughead encourages the United States to look longer term and more broadly in its strategic planning and to better assess US power, presence, and influence in reshaping Eurasia as we counter the moves from Russia and China, as well as Iran and Turkey. He implores a focus on replenishing our military, both in equipment and personnel, and laments that development efforts around the world, historically US led, are being replaced by China and its Belt and Road Initiative. He is encouraged by Japan's adoption of new national security and defense strategies, as well as its commitment to spending more on national defense. This changing landscape, with its rising threats, requires coordinated action by allies and partners around the world working together with the United States.

Ambassador Michael McFaul asserts that the United States would benefit from a holistic approach to threat assessment, supported by an adequate national security budget. He highlights the intelligence community's excellent work in predicting the Russian invasion of Ukraine but also points out that the West underestimated Ukraine's strength relative to Russia. The United States should improve its ability to assess threats, including the capabilities, intentions, will to fight, and command-and-control effectiveness of our adversaries. He recommends that US intelligence agencies utilize more open-source intelligence in future assessments.

On strategy, Michael O'Hanlon argues that the current geostrategic situation is as complex as any the United States has ever faced, but he cautions against overreacting. He frames grand strategy around a return to great-power competition and agrees with national security leaders that China is America's "pacing challenge." Rightsizing the China threat includes the ability to deter

China from attacking Taiwan. As for Russia, its influence and ambitions in key parts of Europe extend well beyond Ukraine. But he sees little likelihood of having to confront both Russia and China militarily at the same time and places a high priority on protecting Eastern Europe with US and NATO military deployments and the ability to fend off a Chinese amphibious assault effectively. In short, the system of treaty-based alliances and forward-based military forces can continue to keep the peace among the great powers.

Nadia Schadlow explains how, in most domains, American power has gone from virtually uncontested to contested over the last three decades. Although its defense budget is the largest in the world, America's relative advantages are declining. She analyzes four main challenges: resetting US strategic forces; rightsizing and integrating US and allies' conventional forces; restoring the US defense industrial base; and preserving freedom of action in space. For each, she describes the shift from Cold War times, highlights current Department of Defense (DoD) and private-sector imperatives and solutions, and examines their defense budget implications.

Admiral Mike Mullen argues that now is the most dangerous time since the 1962 Cuban Missile Crisis. Russia and China really are together, and Russia's invasion of Ukraine has fundamentally changed the global security structure. Despite legitimate criticisms of the acquisition system, the weapons we have provided to Ukraine have performed quite well. Vladimir Putin will keep going, so we need more US troops in Eastern Europe. The US-China relationship is at its lowest point since 1972. We need to avoid drifting into war, and the best way to do that is to create more capability, including logistics, and support, particularly among Japan, Australia, and South Korea. To sustain domestic support for these necessary actions, we need to educate the American people that they are relevant to our security and economic prosperity. The importance of Taiwan Semiconductor to America's and China's economies provides some deterrent effect against a potential skirmish on the island, but it is critical that we learn how to think from the Chinese perspective to understand how to deter and help Taiwan defend itself from an amphibious assault. On the budget, the problem is less about the topline number than where those funds are allocated. The relevant committees of Congress need to help the Pentagon move away from its tendency to divvy up changes in resources roughly equally among the services.

H.R. McMaster argues that the biggest strategic challenge is that we don't know *how* to think about a future war. For example, the choice whether to fight two wars simultaneously will be imposed upon us—we won't get to

pick. It is important to integrate all elements of national power—military, diplomatic, and economic—to deter an adversary. But without military forces forward positioned at scale for sufficient duration to ensure a potential enemy cannot accomplish its objectives at an acceptable cost, such an adversary will not be deterred. Arguments that the next war will be "fast, cheap, efficient, and waged from standoff range," he maintains, haven't been the case in Afghanistan, Iraq, or Ukraine. War is an extension of politics; people fight for the same reasons they have for thousands of years: fear, honor, and interest. War is uncertain and a contest of wills; enemies will adapt, so we too must learn to adapt. National leadership must explain the rationale and develop and sustain will. The ability to implement solutions in the necessary time frame is paramount and requires a size of force, currently too small, to be rightsized, along with its readiness and capabilities.

On technology, innovation, and procurement, Jacquelyn Schneider draws lessons from history, explaining how unmanned systems were adopted by the military. Contrary to popular belief that militaries adopt the most potent or effective technologies, she concludes that "human beliefs, organizational preferences, exogenous shocks, and domestic political processes ultimately determine winners and losers."

James M. Cunningham explains how the Pentagon has taken a procurement holiday of more than three decades since the Reagan administration's defense buildup in the 1980s. He details how this disinvestment has caused a dangerous readiness crisis—precisely when our adversaries have grown increasingly bellicose and capable. He questions whether we can afford to wait for "promised game-changing technology [that remains] years away from maturity," particularly when the "window of maximum danger" lies within the next five years.

Christopher Kirchhoff recounts the Pentagon's checkered history of adapting to technologically advanced warfare. While organizations like the Defense Innovation Unit have successfully procured close to $50 billion of goods and services from start-ups, the DoD at large has been reluctant to embrace commercial technology. "The stalling of the innovation agenda," he warns, "may spell a future strategic surprise for the United States."

Michael Brown asserts that our sclerotic defense procurement system is a national security threat in and of itself, because it precludes the Pentagon from adopting innovative technologies at the necessary speed and with sufficient agility. He advocates for the Defense Department to implement a "hedge strategy," where it more rapidly procures lots of smaller complements

to major weapons systems. He also proposes a fast-follower strategy for acquiring commercial technology.

Michèle Flournoy focuses on the "realistic" "near-term" changes the military should adopt to deter China from invading Taiwan over the next five years. She proposes marrying legacy systems and new technologies to achieve the best outcomes. The Pentagon needs to put more emphasis on protecting Taiwan, and senior DoD executives should be focused on preventing China from going to war in the Taiwan Strait, just as many in the building are now focused on supporting Ukraine's resistance.

Eric Fanning argues that improving the procurement process will require the collaboration of Congress, the defense industrial base, and the DoD. Congress will need to get back to regular order and pass budgets on time to send predictable demand signals to defense contractors. The defense industrial base—comprising companies from $100 billion defense primes to fledgling start-ups—must collaborate to meet the department's most pressing needs. And finally, bureaucrats in the Pentagon will need to take risks, which they often are not conditioned or incentivized to do.

Raj Shah suggests that to get better military outcomes, the "best software engineers" should be working on the military's problems. A quarter to a third of spending on platforms is devoted to software. He sanguinely notes that the Russian invasion of Ukraine and the reemergence of great-power competition have caused a sea change in sentiment in Silicon Valley. Many of the nation's top technical minds now want to leverage their talent to help defend the nation.

In a moderated discussion, Secretary Condoleezza Rice, Secretary Jim Mattis, and Secretary Leon Panetta assess national security and the defense budget and the fundamental issues in which they are embedded. Both Mattis and Panetta highlight the incredible capabilities and dedication of those in the military and intelligence communities. And they lament the decline in the sense of duty to the nation among the broader population, with Panetta calling for two years of national service for young adults. Rice raises the nature of the threats democracies face, the role of allies in protecting our—and their—national security, the need to move more nimbly on technology, and the fusion of intelligence, diplomacy, and the military. Panetta emphasizes that we need to better understand how our allies and adversaries think about their own security challenges.

Both Panetta and Mattis detail the damage done to national security from the dysfunctional budget process, e.g., continuing resolutions that cause

delay and create confusion. Panetta believes significant procurement efficiencies, efforts to reduce duplication and bloated bureaucracy, and greater funding to modernize core functions must be applied to dealing with the full set of budget issues, with "everything on the table." Mattis had three main goals as secretary of defense: to make the military more lethal so our diplomats were listened to; to reform business practices; and to expand the number of allies and deepen trust and cooperation with them. On that score, he recalls Winston Churchill's famous dictum: "There is only one thing worse than fighting with allies, and that is fighting without them."

On personnel, David S. C. Chu, former under secretary of defense for personnel, shines a light on how vast the Pentagon's workforce truly is. In addition to the 1.3 million active-duty soldiers, 1 million reservists, and 800,000 civilians, many more work as contractors. The Pentagon needs to better optimize the "best mix of personnel communities—active, reserve, federal civilian, and contractor—to provide the capabilities needed," he argues. And he imparts lessons to future personnel reformers from efforts of the past—both those that succeeded and those that failed.

Vishaal "V8" Hariprasad and Casey "Waldo" Miller note that while members of cyber armed forces earn a fraction of the pay they would in private-sector cyber roles, many still enjoy the work, because they are able to complete missions that would not be possible outside of the military. But several reforms would enable better recruitment and retention. Squadron-level commanders should be entrusted with making hiring and firing decisions on their own; the services need to do a better job of providing bonuses to highly skilled workers; and those with a particular passion for cyber operations should be placed on a dedicated "technical track."

Tim Kane observes that since the establishment of the all-volunteer force, the US military does not "look like America," because enlistees surpass average Americans on a number of measures. He is therefore opposed to a relaxation in military standards. But he suggests that antiquated compensation and retirement structures, which hinder the military from retaining personnel, should be reformed. Finally, he advocates for continued US troop deployments overseas, which he says ultimately save the Pentagon money by deterring conflict.

Mackenzie Eaglen notes that many defense personnel are performing "non-core" functions. The focus of the military should be on "things that the Defense Department can do that only it's expected to do": deter and, if necessary, fight and win. Money could be saved by eliminating jobs that fall outside

of this scope. She also suggests linking the size of the civilian workforce in the DoD to that of the active-duty force. The number of civilians, she argues, should not "bulge when active duty gets squeezed."

On reform possibilities, Eaglen notes that DoD has been undergoing constant reforms for decades but has not achieved enough lasting results. Removing barriers is more important than adding new layers of manpower or organization, so slashing calcified procedures, regulations, and bureaucracy is essential. She recommends a two-year budget deal for defense and non-defense discretionary spending to offer clarity and certainty to the Pentagon and contractors to plan and allocate resources more efficiently. A topline defense budget growing by inflation plus 3 percent would more rapidly support the national defense strategy. More reprogramming and carryover authority would provide greater agility and flexibility. And she proposes a solution to debilitating continuing resolutions: sequestering congressional paychecks until appropriations are passed.

Elaine McCusker highlights three weaknesses in defense budgeting: it is burdened with too many programs that do *not* produce military capability; it is not structured to meet needs at the necessary speed; and it falls short of meeting important management and oversight responsibilities. She identifies $109 billion in annual spending not directly related to military needs, including items related to domestic, environmental, and social policy, as well as indirect costs of supporting the all-volunteer force, such as community services and family housing. Continuing resolutions (CRs) extending more than 1,600 days since 2010 have taken a heavy toll; the fall 2022 CR cost DoD $17 billion in buying power, as well as the lost time. She suggests that consideration be given to moving defense-related entitlements to a separate budget.

Mark R. Wilson provides a revealing history of US defense budget reforms, successful and not. Four goals have dominated: coherence, adequacy, stability, and agility. Most of today's budgeting elements were put in place in the 1950s through the 1970s, so major reform seems overdue, and suggestions will come from the current PPBE Commission. But given the endurance of the old system, modest reforms are more likely. As late as 1970, the defense authorization bill was about ten pages and passed with little debate on a voice vote. A decade later, it contained hundreds of line items; now, it is thousands. Repeated attempts to move to multiyear budgeting and to consolidate the authorization and appropriations committees have gone nowhere, despite influential support. Modest procedural workarounds providing more

flexibility in funding outside the budget and special acquisition authorities within it have helped reduce the constraints.

Roger Zakheim notes that the United States has not committed to a substantial multiyear military rebuilding since the Reagan era, nearly four decades ago. Reforms and efficiencies, while important, will not be enough, he argues. Considerably more funding is necessary and urgent for a robust strategy that seeks to deter adversaries on multiple fronts. Rebuilding today's force must be done simultaneously with investing in future modernization, so targeting defense spending of up to 5 percent of GDP, a level last reached (indeed, exceeded) in the Reagan buildup, is necessary, and six priority areas are identified. He notes that the results of the Reagan National Defense Survey conducted after the 2022 election revealed that majorities of both parties support increased defense spending.

Admiral Gary Roughead emphasizes the perception problems of the defense budget. The topline is large, and much of the public wonders why it isn't sufficient for DoD to do what it needs to get done. Pulling out the investment account from the total budget would more closely align with how people think about budgets. He also thinks that the DoD should embrace commercial technology because the DoD no longer is—contrary to the beliefs of many of its leaders—the center of the technology universe. Roughead agrees with Admiral Mike Mullen that there is huge overhead on the civilian force. But equally important is how onerous it has become for people in the private sector—for example, those with substantial experience in running businesses—to come in and out of the military. Also baleful is the fact that promising officers risk seeing their careers stall if they work in the acquisition or budgeting systems as opposed to taking battlefield commands. The system incentivizes people to move around for promotion purposes even if they leave a program before milestones are achieved, something the private sector wouldn't do. Vital military technology, from the Manhattan Project to the Nuclear Navy, transformed warfare by "betting on horses," not on processes. The industrial-base workforce requires trade skills, such as those of welders and electricians, but our society has not incentivized people to train for skills despite the substantial pay involved.

Ellen Lord analyzes three vital budgeting reform issues, the first of which is the problem of overall communications to the general public to help them understand that the benefits they enjoy from our economic strength are tightly interwoven with our national security. This theme resurfaces in many of the presentations, including Mac Thornberry's outlining how Congress

makes defense budget decisions; Admiral Mullen's expressions of concern that after fifty years of the all-volunteer force, there is a risk that the military is too separated from the general public; and Secretary Panetta's call for broadening requirements for national service. Lord emphasizes that public awareness is not only important for general understanding but also for the choices citizens make to study, work in, or otherwise become involved in national security. Second, regarding technology, she observes that decades ago, most critical technology was developed by the government and rolled out for commercial use. Now most of it is commercially developed. Congress has put some reforms in place, but too often they have not been followed through on and translated into policy, implementation guidance, and workforce training. Third, she spoke about the importance of close cooperation with our allies, who want to develop capabilities in order to compete against our major common adversaries.

David L. Norquist shares how, in his time as under secretary (controller) and CFO of defense, he implemented a key reform: the first DoD audit. A defense strategy in excess of funding creates vulnerabilities, and an audit can help identify such cases. For example, it could find supplies a service did not know it had because it hasn't been logged into the system. Senior leaders that once viewed audits as a waste of money and time now view them as central to running the department. Norquist describes methods he used to get the DoD to embrace audits including: asking lots of questions; scouting for obstacles; having schedules and plans and being a champion for the change; paying attention to incentives; and understanding that the transition likely will outlast you, so it's worthwhile if the next administration continues it. He also stresses the importance of the defense industrial base as part of national security planning, a point also emphasized by many others.

On the view from Congress, former House Armed Services Committee chairman Mac Thornberry, who authored bipartisan National Defense Authorization Act (NDAA) legislation, reflects on his experience in that role and lessons learned for laying out the "art of the possible" in future defense budget levels and reforms. It's the money and where it goes that make the difference, and under the US Constitution, it's Congress that spends the money. So you will not be able to implement a strategy without Congress having a role. There are four key issues: how much we spend; what we spend it on; the process used to spend it; and the time it takes, especially given the pace at which technology and our adversaries are moving. While waiting for the PPBE Commission to recommend broad reform, there is interest in Congress

for greater budget flexibility *if* matched with greater transparency. For acquisition reform, another commission that can get down into the details of what regulations and laws need to be changed would be useful. Thornberry responds to specific questions, ranging from the best avenues for greater flexibility, advance appropriations, a separate capital budget, the growth of the NDAA to thousands of pages, the difficulty of recruiting highly skilled talent, and many other issues.

The perspectives, concerns, ideas, and solutions offered by these leading experts form a comprehensive, readily accessible overview of the major interrelated issues in defense budgeting upon which America's national security and the prospects for a safer world depend. On some issues, there is a range of disagreement—for example, on the time frame within which China might attempt a military takeover of Taiwan, or the need to expand active-duty personnel and weapons systems, by how much, and for which services.

But on most issues, there is general widespread, if importantly nuanced, agreement among these experts, most of whom have served in key leadership positions, encompassing administrations of both major political parties. They agree that the geopolitical environment is increasingly dangerous and complex; that adversaries are devoting ever-greater resources to closing the military gap with the United States in their respective theaters of interest, as we must contend with multiple adversaries in multiple theaters; that it is important to better coordinate with allies; that greater adequacy, flexibility, and accountability are needed in the defense budget; that strengthening the defense industrial base while investing in modernization to replace aging systems and equipment is urgent; that we can and should better integrate commercial technology, more rapidly, in the acquisition process; that more flexible incentive-based reforms are necessary to more readily recruit, train, promote, and retain human resources, including those with advanced technical and business skills; that there is considerable opportunity for reforms to lead to efficiencies and to reductions of non-DoD-core-mission spending to help free up resources to complement necessary topline funding; and that there is a vital need to better educate the public on the role that its investment of tax dollars in the defense budget plays in enabling the military, along with intelligence and diplomacy, to keep America safe, free, and prosperous.