

Glossary of Abbreviations

A

A2/AD	anti-access/area-denial
AAMDS	Aegis Ashore Missile Defense System
AAV	Amphibious Assault Vehicle
ABCT	Armored Brigade Combat Team
ABM	Ansar Bayt al-Maqdis
ABMS	Airborne Battle Management System
ACF	Army contingency force
ACV	Amphibious Combat Vehicle
ADIZ	Air Defense Identification Zone
ADMM-Plus	ASEAN Defence Ministers Meeting-Plus
AEHF	Advanced Extremely High Frequency (satellite system)
AEW	airborne early warning
AFAFRICA	U.S. Air Forces Africa
AFP	Armed Forces of the Philippines
AFRICOM	U.S. Africa Command
AFSOC	U.S. Air Force Special Operations Command
AFTA	ASEAN Free Trade Area
AIP	Air Independent Propulsion
AIT	American Institute in Taiwan
AMDR	Air and Missile Defense Radar
AMPV	Armored Multipurpose Vehicle
ANSF	Afghan National Security Forces
AN/TPY-2	Army Navy/Transportable Radar Surveillance
ANZUS	Australia–New Zealand–U.S. Security Treaty
AUSMIN	Australia–United States Ministerial
AOR	area of responsibility
APC	armored personnel carrier
APS	Army Prepositioned Stocks
AQAP	Al-Qaeda in the Arabian Peninsula
AQI	Al-Qaeda in Iraq
AQIM	Al-Qaeda in the Islamic Maghreb
ARF	ASEAN Regional Forum
ARG	amphibious ready group
ARNG	Army National Guard

ASAT	anti-satellite
ASBM	Anti-ship ballistic missile
ASEAN	Association of Southeast Asian Nations
ASG	Abu Sayyaf Group
ASW	anti-submarine warfare
ASUW	anti-surface warfare
AW	air warfare
AWACS	Airborne Warning and Control System

B

BBA	Bipartisan Budget Act of 2015
BCA	Budget Control Act of 2011
BCT	brigade combat team
BCW	biological and chemical weapons
BDCA	border defense cooperation agreement
BECA	Basic Exchange and Cooperation Agreement
BJP	Bharatiya Janata Party
BMD	ballistic missile defense
BUR	Bottom-Up Review
BVR	beyond visual recognition

C

C2	command and control
C4ISR	command, control, communications, computers, intelligence, surveillance, and reconnaissance
CA	civil affairs
CAB	combat aviation brigade
CAPE	Cost Assessment and Program Evaluation
CATOBAR	Catapult Assisted Take-Off, Barrier Arrested Recovery
CBO	Congressional Budget Office
CCG	Chinese Coast Guard
CCT	Combat Controller Team
CELAC	Community of Latin American and Caribbean States
CENTCOM	U.S. Central Command
CFC	Combined Forces Command (South Korea–U.S.)
CFSCC	Combined Force Space Component Command
CFT	Cross-Functional Team
CHAMSI	Cooperative Humanitarian and Medical Storage Initiative

CI	Counterinsurgency
CIA	Central Intelligence Agency
CISMOA	Communications and Information Security Memorandum of Agreement
CJTF-HOA	Combined Joint Task Force-Horn of Africa
CLF	Combat Logistics Force
CMRR	Chemistry and Metallurgy Research Replacement
CMT	combat mission team
COCOM	Combatant Command
CONUS	continental United States
COVID-19	Coronavirus Disease 2019
CPMIEC	China Precision Machinery Import-Export Corporation
CPT	Cyber Protection Team
CRS	Congressional Research Service
CSF	coalition support funds
CSG	carrier strike group
CSO	Critical Skills Operator
CT	counterterrorism
CTC	Combat Training Center
CTF	Combined Task Force
CTIC	Counter Terrorism Information Center
CVN	Aircraft Carrier, nuclear powered
CVW	carrier air wing
CW	chemical warfare
CYBERCOM	U.S. Cyber Command
CYOC	Cyberspace Operations Centre

D

D2D	deployment-to-dwell
DA-KKV	direct-ascent kinetic-kill vehicle
DCA	defense cooperation agreement
DDPR	Deterrence and Defense Posture Review
DIME	diplomatic, informational, military, and economic
DMZ	demilitarized zone
DNI	Director of National Intelligence
DOAF	Department of the Air Force
DOD	U.S. Department of Defense
DOE	U.S. Department of Energy
DOS	denial of service

DDOS	distributed denial of service
DPRK	Democratic People's Republic of Korea (North Korea)
DTTI	Defense Trade and Technology Initiative
DSG	Defense Strategic Guidance
DSR	Defense Strategic Review

E

EAC	enhanced air cooperation
EADRCC	Euro-Atlantic Disaster Response Coordination Centre
EAS	European Activity Set
EBO	effects-based operations
ECP	engineering change proposal
EDA	excess defense articles
EDCA	Enhanced Defense Cooperation Agreement
EDI	European Defense Initiative
EEZ	exclusive economic zone
EFP	enhanced forward presence
EFV	Expeditionary Fighting Vehicle
EOD	explosive ordnance disposal
EMD	engineering and manufacturing development
EMP	electromagnetic pulse
ERIP	European Recapitalization Incentive Program
ESG	Expeditionary Strike Group
EU	European Union
EUCOM	U.S. European Command
EW	electronic warfare

F

FATA	Federally Administered Tribal Areas
FATF	Financial Action Task Force
FCS	Future Combat System
FOC	full operational capability
FONOP	freedom of navigation operation
FRAGO	fragmentary order
FTA	free trade agreement
FY	fiscal year
FYDP	Future Years Defense Program

G

GAO	Government Accountability Office (formerly General Accounting Office)
GATOR	Ground/Air Task Oriented Radar
GCC	geographic combatant commander
GCC	Gulf Cooperation Council
GCV	Ground Combat Vehicle
GDP	gross domestic product
GEO	geosynchronous orbit
GFMAP	Global Force Management Allocation Plan
GMV	Ground Mobility Vehicle
GPF	general purpose forces
GPS	Global Positioning System

H

HA/DR	humanitarian assistance/disaster relief
HEO	highly elliptical orbit
HMMWV	High Mobility Multipurpose Wheeled Vehicle (HUMVEE)
HVE	homegrown violent extremist

I

IAMD	Integrated Air and Missile Defense
IBCT	Infantry Brigade Combat Team
ICBM	intercontinental ballistic missile
ICS	industrial control systems
ICT	information and communications technology
IDF	Israel Defense Forces
IED	improvised explosive device
IFPC	indirect fire protection capability
IFV	infantry fighting vehicle
INDOPACOM	U.S. Indo-Pacific Command
IMF	International Monetary Fund
INEW	Integrated Network Electronic Warfare
INF	Intermediate-Range Nuclear Forces (treaty)
INFSA	Integrated Naval Force Structure Assessment
IOC	initial operating capability
IRGC	Islamic Revolutionary Guard Corps

ISAF	International Security Assistance Force
ISIL	Islamic State of Iraq and the Levant
ISIS	Islamic State of Iraq and Syria
ISR	intelligence, surveillance, and reconnaissance

J

JCPOA	Joint Comprehensive Plan of Action
JOAC	Joint Operational Access Concept
JeM	Jaish-e-Mohammed
JP	joint publication
JSF	Joint Strike Fighter (F-35 Lightning II)
JSOC	Joint Special Operations Command
JSOTF-P	Joint Special Operations Task Force-Philippines
JSTARS	Joint Surveillance and Target Attack Radar System
JLTV	Joint Light Tactical Vehicle
JTF North	Joint Task Force North
JTF-SD	Joint Task Force-Space Defense
JuD	Jamaat-ud-Dawa

K

KATUSA	Korean Augmentees to the United States Army
KFOR	Kosovo Force

L

LAC	Line of Actual Control
LAF	Lebanese Armed Forces
LAV	Light Armored Vehicle
LCAC	Landing Craft Air Cushion Vehicle
LCS	Littoral Combat Ship
LEMOA	Logistics Exchange Memorandum of Agreement
LeT	Lashkar-e-Taiba
LHA	landing helicopter assault (amphibious ship)
LHD	landing helicopter dock (amphibious ship)
LNG	liquefied natural gas
LoC	Line of Control
LPD	landing platform/dock or amphibious transport dock (amphibious ship)

LRA	Lord's Resistance Army
LRASM	long-range anti-ship missiles
LRDR	long-range discrimination radar
LRS-B	Long-Range Strike Bomber
LRIP	Low-Rate Initial Production
LSD	landing ship dock (amphibious ship)

M

MAGTF	Marine Air-Ground Task Force
MANPADS	man-portable air-defense systems
MARCENT	U.S. Marine Corps Forces Central Command
MARFORAF	U.S. Marine Corps Forces Africa
MARFOREUR	U.S. Marine Corps Forces Europe
MARFORPAC	U.S. Marine Corps Forces Pacific
MARSOC	U.S. Marine Corps Special Operations Command
MCM	mine countermeasure (ship)
MCO	major combat operation (see MRC, MTW)
MCMV	mine countermeasure vessel (ship)
MDAP	Major Defense Acquisition Program
MDO	multi-domain operations
MDT	mutual defense treaty
MEB	Marine Expeditionary Brigade
MEF	Marine Expeditionary Force
MEU	Marine Expeditionary Unit
MIRV	multiple independently targetable reentry vehicles
MISO	Military Information Support Operations
MNLA	National Movement for the Liberation of Azawad
MNLF	Moro National Liberation Front
MNNA	major non-NATO ally
MOJWA	Movement for Oneness and Jihad in West Africa
MPC	Marine Personnel Carrier
MPS	Maritime Prepositioning Ships
MRC	major regional conflict (see MTW, MCO)
MRAP	Mine-Resistant Ambush-Protected (vehicle)
MRBM	medium-range ballistic missile
MRF	Marine Rotational Force
MSI	Maritime Security Initiative
MTW	major theater war (see MCO, MRC)

N

NAP	National Action Plan
NASIC	U.S. National Air and Space Intelligence Center
NATO	North Atlantic Treaty Organization
NAVAF	U.S. Naval Forces Africa
NAVEUR	U.S. Naval Forces Europe
NDN	Northern Distribution Network
NDAA	National Defense Authorization Act
NDP	National Defense Panel
NDS	National Defense Strategy
New START	New Strategic Arms Reduction Treaty
NGI	Next Generation Interceptor
NMI	NATO Mission Iraq
NNSA	National Nuclear Security Administration
NPR	Nuclear Posture Review
NPRIS	Nuclear Posture Review Implementation Study
NSC	National Security Council
NSR	Northern Sea Route
NSWC	Naval Special Warfare Command

O

OAR	Operation Atlantic Resolve
OAS	Organization of American States
OCO	overseas contingency operations
OEF	Operation Enduring Freedom
OIF	Operation Iraqi Freedom
O-FRP	Optimized Fleet Response Plan
ONA	Office of Net Assessment
ONE	Operation Noble Eagle
OPCON	operational control
OPE-P	Operation Pacific Eagle-Philippines
OPIR	Overhead Persistent Infrared
OPLAN	operational plan
OPTEMPO	operational tempo
OSCE	Organization for Security and Co-operation In Europe
OTFSTM	Operating Tempo Full Spectrum Training Miles
OT&E	Operational Test and Evaluation

P

PACAF	U.S. Pacific Air Forces
PACFLT	U.S. Pacific Fleet
PACOM	U.S. Pacific Command
PAF	Philippine Air Force
PDD-15	Presidential Decision Directive-15
PGM	precision-guided munitions
PIM	Paladin Integrated Management
PLFP	Popular Front for the Liberation of Palestine
PLFP-GC	Popular Front for the Liberation of Palestine-General Command
PKK	Kurdistan Workers' Party
PKO	peacekeeping operation
PLA	People's Liberation Army
PLAAF	People's Liberation Army Air Force
PLAN	People's Liberation Army Navy
PLARF	PLA Rocket Forces
PLASSF	PLA Strategic Support Force
PLO	Palestine Liberation Organization
PNI	Presidential Nuclear Initiative
PNT	positioning, navigation, and timing
PRC	People's Republic of China
PRT	Provisional Reconstruction Team
PSA	Port of Singapore Authority
PSF	Peninsula Shield Force

Q

QDR	Quadrennial Defense Review
QNSTR	Quadrennial National Security Threats and Trends

R

RAF	Royal Air Force
RAP	readiness action plan
RBA	Ready Basic Aircraft
RCOH	refueling and complex overhaul (nuclear-powered ship)
RDJTF	Rapid Deployment Joint Task Force
RDT&E	Research, Development, Test, and Evaluation

RFP	Request for Proposals
RIMPAC	Rim of the Pacific
RKV	redesigned kill vehicle
RMA	revolution in military affairs
ROK	Republic of Korea (South Korea)
RP	Republic of the Philippines
RPG	rocket-propelled grenades

S

SAARC	South Asia Association of Regional Cooperation
SAC	strategic airlift capability
SAM	surface-to-air missile
SAR	search and rescue
SBCT	Stryker Brigade Combat Team
SBIRS	Space-Based Infrared System (satellite system)
SCN	Shipbuilding and Conversion, Navy (budget category)
SEAL	Sea Air Land operator (Navy)
SEATO	Southeast Asia Treaty Organization
SFA	Strategic Framework Agreement
SFAB	Security Force Assistance Brigades
SIGINT	signals intelligence
SIPRI	Stockholm International Peace Research Institute
SLBM	submarine-launched ballistic missile
SMU	special mission unit
SOCAFRICA	U.S. Special Operations Command Africa
SOCCENT	U.S. Special Operations Command Central
SOCEUR	U.S. Special Operations Command Europe
SOCPAC	U.S. Special Operations Command Pacific
SOF	U.S. Special Operations Forces
SOP	Standard Operating Procedure
SORT	Strategic Offensive Reductions Treaty
SOTFE	Support Operations Task Force Europe
SPE	Sony Pictures Entertainment
SPMAGTF	Special-Purpose Marine Air-Ground Task Force
SRBM	short-range ballistic missile
SRM	Sustainable Readiness Model
SSBN	ballistic missile submarine, nuclear-powered
SSGN	guided missile submarine, nuclear-powered

SSN	attack submarine, nuclear-powered
SSP	Stockpile Stewardship Program
STA-1	Strategic Trade Authorization-1
STRATCOM	U.S. Strategic Command
SUW	surface warfare

T

TACAIR	tactical air
TAFWN	The Air Force We Need
TAI	total active inventory
TANAP	Trans-Anatolian Natural Gas Pipeline
TAP	Trans-Adriatic Pipeline
TCO	transnational criminal organization
TDY	stateside temporary duty
THAAD	Terminal High Altitude Area Defense
TPP	Tehrik-e-Taliban Pakistan
TLAM/N	Tomahawk Land Attack Missile/Nuclear
TMP	technical modernization program
TNW	tactical nuclear weapon
TPP	Trans-Pacific Partnership
TRA	Taiwan Relations Act
TRANSCOM	U.S. Transportation Command
TSOC	Theater Special Operations Command

U

UAV	unmanned aerial vehicle
UAE	United Arab Emirates
UCLASS	Unmanned Carrier-Launched Airborne Surveillance and Strike
UCP	Unified Command Plan
UNASUR	Unión de Naciones Suramericanas (Union of South American Nations)
UNC	United Nations Council
UNCLOS	U.N. Convention on the Law of the Sea
USAF	U.S. Air Force
USAFCENT	U.S. Air Forces Central
USAFE	U.S. Air Forces Europe
USARAF	U.S. Army Africa
USARCENT	U.S. Army Central

USARPAC	U.S. Army Pacific
USAREUR	U.S. Army Europe
USASOC	U.S. Army Special Operations Command
USFJ	U.S. Forces Japan
USFK	U.S. Forces Korea
USMC	U.S. Marine Corps
USNAVCENT	U.S. Naval Forces Central
USNORTHCOM	U.S. Northern Command
USSF	U.S. Space Force
USSOCOM	U.S. Special Operations Command
USSOUTHCOM	U.S. Southern Command
USSPACECOM	U.S. Space Command
USV	unmanned surface vessel
USW	undersea warfare

V

VEO	violent extremist organizations
VFA	U.S.-Philippines Visiting Forces Agreement
VLS	vertical launching system

W

WGS	Wideband Global SATCOM (satellite system)
WMD	weapons of mass destruction
WRM	wartime readiness materials
WWTA	Worldwide Threat Assessment

Methodology

The assessment portion of the *Index of U.S. Military Strength* is composed of three major sections that address America's military power, the operating environments within or through which it must be employed, and threats to U.S. vital national interests.

The authors of this study used a five-category scoring system that ranged from "very poor" to "excellent" or "very weak" to "very strong" as appropriate to each topic. This particular approach was selected to capture meaningful gradations while avoiding the appearance that a high level of precision was possible given the nature of the issues and the information that was publicly available.

Some factors are quantitative and lend themselves to discrete measurement; others are very qualitative in nature and can be assessed only through an informed understanding of the material that leads to a judgment call. Further, because conditions in each of the areas assessed are changing throughout the year, any measurement must necessarily be based on the information at hand and viewed as a snapshot in time. While this is not entirely satisfactory when it comes to reaching conclusions on the status of a given matter, especially the adequacy of military power (and will be quite unsatisfactory for some readers), we understand that senior officials in decision-making positions will never have a comprehensive set of inarguable hard data on which to base a decision.

Purely quantitative measures alone tell only part of the story when it comes to the relevance, utility, and effectiveness of hard power. In fact, assessing military power or the nature of an

operating environment using only quantitative metrics can lead to misinformed conclusions. Raw numbers are a very important component, but they tell only a part of the story of war. Similarly, experience and demonstrated proficiency are often decisive factors in war, but they are also nearly impossible to measure.

The assessment of the **global operating environment** in this *Index* focuses on three key regions—Europe, the Middle East, and Asia—because of their importance relative to U.S. vital security interests.

For **threats to U.S. vital interests**, the *Index* identifies the countries that pose the greatest current or potential threats to U.S. vital interests based on two overarching factors: behavior and capability. The classic definition of "threat" considers the combination of intent and capability, but intent cannot be clearly measured, so "observed behavior" (including historical behavior and explicit policies or formal statements vis-à-vis U.S. interests) is used as a reasonable surrogate because it is the clearest manifestation of intent. The countries selected according to these criteria are scored in two areas: the degree of provocative behavior that they exhibited during the year and their ability to pose a credible threat to U.S. interests irrespective of intent.

Finally, the **status of U.S. military power** is addressed in three areas: capability (or modernity), capacity, and readiness. All three are fundamental to success even if they are not de facto determinants of success, something we explain further in the section. Also addressed is the condition of the United States' nuclear weapons capability, which is assessed in areas

that are unique to this military component and critical to understanding its real-world viability and effectiveness as a strategic deterrent.

Assessing the Global Operating Environment

Not all of the factors that characterize an operating environment are equal, but each contributes to the degree to which a particular operating environment is favorable or unfavorable to future U.S. military operations. Our assessment of the operating environment utilized a five-point scale that ranges from “very poor” to “excellent” conditions and covers four regional characteristics of greatest relevance to the conduct of military operations:

- 1. Very Poor.** Significant hurdles exist for military operations. Physical infrastructure is insufficient or nonexistent, and the region is politically unstable. The U.S. military is poorly placed or absent, and alliances are nonexistent or diffuse.
- 2. Unfavorable.** A challenging operating environment for military operations is marked by inadequate infrastructure, weak alliances, and recurring political instability. The U.S. military is inadequately placed in the region.
- 3. Moderate.** A neutral to moderately favorable operating environment is characterized by adequate infrastructure, a moderate alliance structure, and acceptable levels of regional political stability. The U.S. military is adequately placed.
- 4. Favorable.** A favorable operating environment includes good infrastructure, strong alliances, and a stable political environment. The U.S. military is well placed for future operations.
- 5. Excellent.** An extremely favorable operating environment includes well-established and well-maintained infrastructure; strong, capable allies; and

a stable political environment. The U.S. military is exceptionally well placed to defend U.S. interests.

The key regional characteristics consisted of:

- Alliances.** Alliances are important for interoperability and collective defense as allies would be more likely to lend support to U.S. military operations. Indicators that provide insight into the strength or health of an alliance include whether the U.S. trains regularly with countries in the region, has good interoperability with the forces of an ally, and shares intelligence with nations in the region.
- Political Stability.** Political stability brings predictability for military planners when considering such things as transit, basing, and overflight rights for U.S. military operations. The overall degree of political stability indicates whether U.S. military actions would be hindered or enabled and reflects, for example, whether transfers of power in the region are generally peaceful and whether there have been any recent instances of political instability in the region.
- U.S. Military Positioning.** Having military forces based or equipment and supplies staged in a region greatly facilitates the ability of the United States to respond to crises and, presumably, achieve successes in critical “first battles” more quickly. Being routinely present in a region also makes it easier to maintain familiarity with its characteristics and the various actors that might try to aid or thwart U.S. actions. With this in mind, we assessed whether or not the U.S. military was well positioned in the region. Again, indicators included bases, troop presence, prepositioned equipment, and recent examples of military operations (including training and humanitarian) launched from the region.

d. Infrastructure. Modern, reliable, and suitable infrastructure is essential to military operations. Airfields, ports, rail lines, canals, and paved roads enable the U.S. to stage, launch operations from, and logistically sustain combat operations in a region. We combined expert knowledge of regions with publicly available information on critical infrastructure to arrive at our overall assessment of this metric.

Assessing Threats to U.S. Vital Interests

To make the threats identified in this *Index* measurable and relatable to the challenges of operating environments and adequacy of American military power, *Index* staff and outside reviewers, working independently, evaluated the threats according to their level of provocation (i.e., their observed behavior) and their actual capability to pose a credible threat to U.S. interests on a scale of 1 to 5, with 1 representing a very high threat capability or level of belligerency. This scale corresponds to the tone of the five-point scales used to score the operating environment and military capabilities in that 1 is bad for U.S. interests and 5 is very favorable.

Based on these evaluations, provocative behavior was characterized according to five descending categories: benign (5); assertive (4); testing (3); aggressive (2); and hostile (1). Staff also characterized the capabilities of a threat actor according to five categories: marginal (5); aspirational (4); capable (3); gathering (2); and formidable (1). Those characterizations—behavior and capability—form two halves of the overall threat level.

Assessing U.S. Military Power

Also assessed is the adequacy of the United States' defense posture as it pertains to a conventional understanding of "hard power," defined as the ability of American military forces to engage and defeat an enemy's forces in battle at a scale commensurate with the vital national interests of the United States. The assessment draws on both quantitative and qualitative aspects of military forces, informed by

an experience-based understanding of military operations and the expertise of the authors and internal and external reviewers.

It is important to note that military effectiveness is as much an art as it is a science. Specific military capabilities represented in weapons, platforms, and military units can be used individually to some effect. Practitioners of war, however, have learned that combining the tools of war in various ways and orchestrating their tactical employment in series or simultaneously can dramatically amplify the effectiveness of the force committed to battle.

The point is that the ability of a military force to locate, close with, and destroy an enemy depends on many factors, but relatively few of them are easily measured. The scope of this specific project does not extend to analysis of everything that makes hard power possible; it focuses on the status of the hard power itself.

This *Index* assesses the state of military affairs for U.S. forces in three areas: capability, capacity, and readiness.

Capability. Scoring of capability is based on the current state of combat equipment. This involves four factors: the age of key platforms relative to their expected life spans; whether the required capability is being met by legacy or modern equipment; the scope of improvement or replacement programs relative to the operational requirement; and the overall health and stability (financial and technological) of modernization programs.

This *Index* focused on primary combat units and combat platforms (e.g., tanks, ships, and airplanes) and elected not to include the array of system and component upgrades that keep an older platform viable over time, such as a new radar, missile, or communications suite. New technologies grafted onto aging platforms ensure that U.S. military forces keep pace with technological innovations relevant to the modern battlefield, but at some point, the platforms themselves are no longer viable and must be replaced. Modernized sub-systems and components do not entirely substitute for aging platforms, and it is the platform itself that is usually the more challenging item to field. In

this sense, primary combat platforms serve as representative measures of force modernity just as combat forces are a useful surrogate measure for the overall military that includes a range of support units, systems, and infrastructure.

In addition, it is assumed that modernization programs should replace current capacity at a one-to-one ratio; less than a one-to-one replacement assumes risk, because even if the newer system is presumably better than the older, until it is proven in actual combat, having fewer systems lessens the capacity of the force, which is an important factor if combat against a peer competitor carries with it the likelihood of attrition. For modernization programs, only Major Defense Acquisition Programs (MDAPs) are scored.

The capability score uses a five-grade scale. Each service receives one capability score that is a non-weighted aggregate of scores for four categories: (1) Age of Equipment, (2) Modernity of Capability, (3) Size of Modernization Program, and (4) Health of Modernization Program. General criteria for the capability categories are:

Age of Equipment

- **Very Weak:** Equipment age is past 80 percent of expected life span.
- **Weak:** Equipment age is 61 percent–80 percent of expected life span.
- **Marginal:** Equipment age is 41 percent–60 percent of expected life span.
- **Strong:** Equipment age is 21 percent–40 percent of expected life span.
- **Very Strong:** Equipment age is 20 percent or less of expected life span.

Capability of Equipment

- **Very Weak:** More than 80 percent of capability relies on legacy platforms.
- **Weak:** 60 percent–79 percent of capability relies on legacy platforms.

- **Marginal:** 40 percent–59 percent of capability is legacy platforms.
- **Strong:** 20 percent–39 percent of capability is legacy platforms.
- **Very Strong:** Less than 20 percent of capability is legacy platforms.

Size of Modernization Program

- **Very Weak:** Modernization program is significantly too small or inappropriate to sustain current capability or program in place.
- **Weak:** Modernization program is smaller than current capability size.
- **Marginal:** Modernization program is appropriate to sustain current capability size.
- **Strong:** Modernization program will increase current capability size.
- **Very Strong:** Modernization program will vastly expand capability size.

Health of Modernization Program

- **Very Weak:** Modernization program faces significant problems; too far behind schedule (five-plus years); cannot replace current capability before retirement; lacking sufficient investment to advance; cost overruns including Nunn–McCurdy breach, which occurs when the cost of a new item exceeds the most recently approved amount by 25 percent or more or if it exceeds the originally approved amount by 50 percent or more.¹
- **Weak:** Modernization program faces procurement problems; behind schedule (three–five years); difficult to replace current equipment on time or insufficient funding; cost overruns enough to trigger an Acquisition Program Baseline (APB) breach.

- **Marginal:** Modernization program faces few problems; behind schedule by one–two years but can replace equipment with some delay or experience some funding cuts; some cost growth but not within objectives.
- **Strong:** Modernization program faces no procurement problems; can replace equipment with no delays; within cost estimates.
- **Very Strong:** Modernization program is performing better than DOD plans, including with lower actual costs.

Capacity. To score the capacity of the Army, Navy, and Air Force, each service’s size (be it end strength or number of platforms) is compared to the force size required to meet a simultaneous or nearly simultaneous two-war or two-major regional contingency (MRC) benchmark. This benchmark consists of the force needed to fight and win two MRCs and a 20 percent margin that serves as a strategic reserve. The Marine Corps is handled a bit differently, and the explanation for this difference is provided both in note 2 below and in a more expanded discussion within our assessment of the Corps.² A strategic reserve is necessary because deployment of 100 percent of the force at any one time is highly unlikely. Not only do ongoing requirements like training or sustainment and maintenance of equipment make it infeasible for the entirety of the force to be available for deployment, but committing 100 percent of the force would leave no resources available to handle unexpected situations.

Thus, a “marginal” capacity score would exactly meet a two-MRC force size, a “strong” capacity score would equate to a plus–10 percent margin for strategic reserve, and a “very strong” score would equate to a 20 percent margin.

Capacity Score Definitions

- **Very Weak:** 0 percent–37 percent of the two-MRC benchmark.

- **Weak:** 38 percent–74 percent of the two-MRC benchmark.
- **Marginal:** 75 percent–82 percent of the two-MRC benchmark.
- **Strong:** 83 percent–91 percent of the two-MRC benchmark.
- **Very Strong:** 92 percent–100 percent of the two-MRC benchmark.

Readiness. The readiness scores are derived from the military services’ own assessments of readiness based on their requirements. For many reasons, not least of which is concern about informing a potential enemy’s calculations on sensitive, detailed aspects of a force’s readiness for combat, the services typically classify their internal readiness reporting. However, they do make some public reports, usually when providing open testimony to Congress. Thus, the *Index* does not delve into comprehensive reviews of all readiness input factors, but rather relies on the public statements of the military services regarding the state of their readiness.

It should be noted that even a “strong” or “very strong” score does not indicate that 100 percent of the force is ready; it simply indicates that the service is meeting 100 percent of its own readiness requirements. Often, these requirements assume that a percentage of the military at any one time will not be fit for deployment. Because of this, even if readiness is graded as “strong” or “marginal,” there is still a gap in readiness that will have significant implications for immediate combat effectiveness and the ability to deploy quickly. Thus, anything short of meeting 100 percent of readiness requirements assumes risk and is therefore problematic.

Further, a service’s assessment of its readiness occurs within its size or capacity at that time and as dictated by the Defense Strategic Guidance, National Military Strategy, and related top-level documents generated by the Administration and senior Defense officials.

It does not account for the size-related “readiness” of the force to meet national security requirements assessed as needed by this *Index*. Consequently, for a service to be assessed as “very strong” would mean that 80 percent–100 percent of the existing force in a service meets that service’s requirements for being “ready” even if the size of the service is less than that required to meet the two-MRC benchmark. Therefore, it is important that the reader keep this in mind when considering the actual readiness of the force to protect U.S. national security interests against the challenges presented by threats around the world.

Readiness Score Definitions

- **Very Weak:** 0 percent–19 percent of service’s requirements.
- **Weak:** 20 percent–39 percent of service’s requirements.
- **Marginal:** 40 percent–59 percent of service’s requirements.
- **Strong:** 60 percent–79 percent of service’s requirements.
- **Very Strong:** 80 percent–100 percent of service’s requirements.

Endnotes

1. See 10 U.S. Code § 2433, Unit Cost Reports, <https://www.law.cornell.edu/uscode/text/10/2433> (accessed June 3, 2020).
2. As noted in the introduction to the chapter assessing military power, the three large services (Army, Navy, and Air Force) are sized for global action in more than one theater at a time. The Marines, by virtue of overall size and most recently by direction of the Commandant, focus on one major conflict while ensuring that all Fleet Marine Forces are globally deployable for short-notice, smaller-scale actions. Having assessed that the Indo-Pacific region will continue to be of central importance to the U.S., and noting that China is a more worrisome “pacing threat” than any other competitor and that the Joint Force lacks the ability to operate within the range of intensely weaponized, layered defenses featuring large numbers of precision-guided munitions, the Corps is reshaping itself to optimize its capabilities and organizational structures for this challenge. This *Index* concurs with this effort but assesses that the Corps will still need greater capacity to succeed in war in the very circumstances for which the Marines believe they must prepare. Consequently, we assess the Marine Corps’ capacity against a one-war metric.