

# Glossary of Abbreviations

## A

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

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

## B

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

## C

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

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

## D

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

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

## E

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

## F

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

# G

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

# H

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

# I

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

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

## J

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

## K

<b>KATUSA</b>	Korean Augmentees to the United States Army
<b>KFOR</b>	Kosovo Force

## L

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

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

## M

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

# N

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

# O

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



## P

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

## Q

<b>QDR</b>	Quadrennial Defense Review
<b>QNSTR</b>	Quadrennial National Security Threats and Trends

## R

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

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

## S

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

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

## T

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

## U

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

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

## V

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

## W

<b>WGS</b>	Wideband Global SATCOM (satellite system)
<b>WMD</b>	weapons of mass destruction
<b>WRM</b>	wartime readiness materials
<b>WWTA</b>	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:

- a. **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.
- b. **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.
- c. **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.<sup>1</sup>
- **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.
- **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.

**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.<sup>2</sup> 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.

**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.