Investing in National Defense

An overview of defense market trends and opportunities
Since World War II, America’s unmatched military might has underpinned its security, prosperity and standing as a global leader.

After several years in decline, the U.S. defense budget has been steadily increasing and is projected to outpace former highs, due to rising security risks and growing threats to regional stability. The National Defense theme invests in companies that provide the goods and services that enable the U.S. and its allies to defend their interests at home and abroad.

National Defense: At a glance

With the world’s biggest military budget by a sizable margin, the United States spent $611 billion on national defense in 2016, roughly three times more than China, the next biggest spender. It also outspends the next eight highest-spending countries combined. This makes national security a very big business: The U.S. Department of Defense (DoD) awards more than $300 billion annually in contracts—typically as part of the acquisitions and investment accounts in the budget—for goods and services, ranging from missiles, submarines and drones, to military base and mission support, information technology, and consulting services.

Defense Spending - Top 10 Countries in 2016 ($ in billions)

National Defense by the numbers:

$611 billion
Amount the U.S. spent on defense in 2016, more than the next eight highest spending countries combined
Source: SIPRI¹

54%
Percent of U.S. discretionary budget that is spent on defense
Source: National Priorities Project²

+7.6%
U.S. defense spending growth in 2009, during the Great Recession, compared to a 9.0% decline in sales for the companies in the S&P 500 index
Source: SIPRI¹, Bloomberg
A promising defense budget outlook

Amid pressures to contain the U.S. federal deficit after the market crash of 2009, a consistent theme in the DoD’s annual budget request in recent years had been a defense drawdown, removal of “boots on the ground” from the Middle East, and slashing excess costs. After operating on lean and shrinking budgets marked by a peak-to-trough decline of 19%, the DoD has been increasing funding requests from Congress. Indeed, the FY 2018 budget was 4.8% higher than FY 2017, and projections for future years show continued growth.

Prior defense spending had been a casualty of past sequestration the last few years. Congress later loosened the purse strings with the Bipartisan Budget Acts of 2013 and 2015, leading to the rising budgets seen today. The Congressional Budget Office (CBO) estimates the cap on the defense budget will continue to shrink in coming years, and forecasts a “steep” increase in acquisition costs starting in 2021.

A number of senior military leaders have spoken at Senate hearings this year explaining that a large challenge to the military’s readiness has been the years of sequestration, which mandates spending cuts if Congress and the White House cannot agree on more targeted cuts to reduce the budget deficit. Secretary of Defense James Mattis and high-ranking military officers have made it known that it will take years of stable, continued growth in DoD budgets to make up for the effects of past budget cuts.

Investment Implications

The military’s budget is a significant driver of the stock price performance of defense contractors. As the budget rises, the outlook gets rosier—as we would expect sales growth to drive earnings growth and expand valuation multiples. With 2015 representing the trough of the budget cycle, and subsequent budgets trending upwards, many experts predict spending growth in coming years, especially with the foreign policy challenges that continue to confront the West.

While budgets are unpredictable, subject to politics and other events, the pressure faced by the U.S. to sustain its military leadership in the face of rising security challenges should mandate greater funding. This expectation is supported by CBO projections that the DoD budget will continue to grow after years of declines. This anticipated stronger growth in the defense budget in the near- and mid-terms will benefit companies that supply the DoD with the goods and services necessary to maintain the U.S. military’s strength and superiority.
Rising global risks and security threats

From the civil strife in the Middle East to North Korea’s nuclear ambitions, the U.S. is wrestling with security threats in nearly every corner of the world. Most notably, an aggressive China and a resurgent Russia are posing growing risks to regional stability as they seek to expand their spheres of influence. China, whose military budget is estimated to have grown annually at an average of 9.5 percent between 2005 to 2014, is engaged in territorial spats over the control of energy resources in Asia Pacific. It is tussling with several southeast Asian countries over its claim of more than 80 percent of the South China Sea and wrangling with Japan over the sovereignty of the East China Sea.

Russia too has flexed its muscles in recent years, beginning with the annexation of Crimea in 2014 and the stationing of troops along its border with Ukraine. Russia seeks veto authority over neighboring nations' governmental, economic, and diplomatic decisions. Additionally, Russia continues to oppose NATO and looks to influence European and middle eastern geopolitical and economic structures. While Russia has always been a threat with its arsenal of weapons, including nuclear arms that could hit U.S. soil, it has also sought to neutralize America’s influence in the Middle East by aligning with Syria’s ruling government. Additionally, Russia has been on the forefront of cyber warfare, using cyber attacks to destabilize democratic processes in Eastern Europe.

North Korea’s pursuit of nuclear weapons has caused panic amongst allies in the region, and despite the United Nation’s efforts and sanctions, the tension seems to have reached a head. While no physical conflict has ensued yet, an attack from the rogue nation has been threatened multiple times.

Continuing to root out the Islamic State (ISIL) and other terrorist organizations remains a priority
for the U.S. military, even after the destruction of the ISIL physical caliphate. While the U.S. and its allies continue to focus on Iraq and Syria, they will also take the fight into Africa and Afghanistan.

**Investment Implications**

The U.S. Navy is continuing the growth of its fleet, aircraft, and weapon systems that experts say are aimed at defusing China's growing maritime capabilities. The 2018 budget request calls for a $2.6 billion increase in Space-Based Systems, a $2.2 billion increase in ship construction, and a $2.1 billion increase in Aircraft construction. In particular, the DoD is eyeing anti-ship missiles for destroying enemy warships from afar. The fiscal year 2018 budget also continues the 2017 budget's start of the advanced procurement of the Navy's $100 billion ballistic missile submarine replacement program.

The 2018 DoD budget asked for $4.8 billion compared to $3.4 billion last year (a 41% increase) to fund the European Reassurance Initiative, designed to contain Russia, highlighting the increased focus on Russia's actions in Europe.

The “Primes,” which are large defense contractors that dominate big ticket items such as aircrafts and missile systems, stand to win if these initiatives continue to expand. Suppliers and subcontractors with scale and technical prowess hired by these big players, the so-called “second-tier” vendors that deliver systems and parts requiring specialized technical capabilities, should also benefit.

**Major programs in 2017 budget proposal:**

1. F-35 Joint Strike Fighter - $10.7 bn
2. Ballistic Missile Defense - $6.0 bn
3. Virginia Submarine - $7.4 bn
Cyber warfare and technologies of the future

The aims of China and Russia are observable by their rising presence across sea, air, land, space—and now—on the new battleground of cyberspace. Online warfare has been called the top threat to U.S. national security and economic interests as cyber actors can wreak havoc on political systems, electric power grids, air-traffic control, and other critical infrastructure. While Russia and China are the most sophisticated nation-state actors, Iran, North Korea and various terrorist groups are also getting adept at using cyber warfare12.

Warfare has turned unconventional in other ways. For example, unmanned and autonomous systems can fly aircrafts and carry out offensives, while combatting the use of lethal chemical weapons. Other new, disruptive technologies will also need to be considered in the context of the country’s defense strategy. Drones, in particular, are reshaping modern warfare as they play a greater role in military operations, including combatting terrorist organizations, providing real-time surveillance, supporting reconnaissance, and intelligence-gathering missions. Additionally, cyber attacks have played a large role in the advancement of warfare, with the ability to wreck havoc on political systems and infrastructure from afar.9

In the latest budget, Secretary Mattis said one of the main goals would be to continue leveraging technological advancements in the private sector to help solve complex military challenges, more specifically, to continue growing and developing the Government’s Defense Innovation Experimental Unit (DIUx), which focuses on using technology to make the military “more lethal and more capable of defending the United States of America13.”

Investment Implications

Innovative, digital technologies and services that deliver an edge to the military should see strong growth over the years. For cyber programs, the DoD has earmarked $8.2 billion for fiscal year 2018—up from $6.7 billion last year—with almost $35 billion planned over the next five years14,15. The cybersecurity industry as a whole is pegged to grow between 12-15 percent annually through 2021, with $1 trillion expected to be spent globally between 2017 to 202116.

The worldwide military drone market is expected to be worth $6.8 billion by 2022 compared to $4.4 billion in 201517. Underlining the prospects for unmanned systems, about two-thirds of defense industry executives surveyed by McKinsey say their companies will target the drones market18.
Deeper Dive: The future of America's defense strategy

For years, the DoD focused on fighting terrorism and rooting out violent insurgencies using conventional warfare. But as security risks grow and evolve around the world, and beyond the traditional battlefield, military leaders are calling for a “more lethal, resilient, and rapidly innovating Joint Force, combined with a robust constellation of allies and partners” as outlined in the Fiscal Year 2018 National Defense Strategy.²⁰

Secretary Mattis has cited the following as the U.S. military's key challenges²⁰:

- Balancing capability, capacity and readiness, with compensation and retention for the forces;
- The weakening of the post-WWII international order against fascism;
- Russia using cyber warfare to undermine elections;
- Globalization of advanced technology;
- Rebalancing Asia-Pacific and keeping China in check;
- Cyber defense, attribution and response;
- Rogue regimes such as North Korea and Iran are destabilizing regions through their pursuit of nuclear weapons or sponsorship of terrorism.

Expanding the Competitive Space

After a period of budget cuts, the Department of Defense has emphasized the need to revamp America's military to separate it from competing countries who have been increasingly investing in their arsenals²⁰. “Modernization” efforts include everything from standard upgrades, to the replacements of obsolete planes, ships, and ground vehicles. It is clear that modernization remains on the agenda, as there are budget line items for the upgrades of ships and planes³.

Staying ahead of the curve with cutting-edge technology

Research and development spend has increased steadily over the last two decades to bolster the military's technological advancements ranging from biological warfare defense to neuroscience.

Besides cyber technologies and unmanned systems, the U.S. is also investing in other warfare innovations. For example, the Navy is currently developing three new weapons systems for defending its ships against enemy missiles: solid state lasers, the electromagnetic railgun, and the hypervelocity projectile²². Other innovation projects include 3D-printed swarming microdrones, advanced munitions like the maritime-strike Tomahawk, and long-range anti-ship missiles. Future defense budgets are likely to increase investments in science and technology, building new pathways for innovation and staying ahead of future threats¹⁰.
The case for the National Defense theme

The National Defense theme invests in companies that provide critical goods and services to the defense industry, which include aircraft and ship manufacturers, suppliers of aerospace and electronic components, weapons manufacturers, as well as providers of information technology and cybersecurity systems.

Defense Industry Overview:

- **High barriers to entry with wide, technology-driven “moats.”** The nature of defense products and services are made-to-order, proprietary, technology-driven and innovative. In most cases, they have few, if any, replacements or substitutes. Examples include fighter jets, submarines, and missile defense systems that are technologically advanced and require significant research and development.

- **Stability and transparency thanks to multi-year contracts.** The industry's stability is supported by the DoD's budget, the long-term nature of contracts, and consequently, reduced exposure to the fluctuations in the broader economy and market cycles. In fact, defense contractors are arguably a “defensive” sector, maintaining strong sales growth despite economic downturns.

- **Strong industry dynamics.** The industry's consolidation over the years has led to fewer players, oligopolistic industry characteristics, and rational competition. One key result has been rising profit margins, which should persist going forward and support consistent earnings growth. The defense industry has attractive fundamentals supported by healthy balance sheets, strong cash flows, and shareholder-friendly policies which include ample share repurchase and dividend programs.


Risks to the National Defense Theme:

- **Budget Risk.** The unpredictability of the DoD budget represents the biggest risk for companies that sell to the U.S. government. Since budgets are developed annually, and subject to a number of factors at any given time, they are difficult to forecast.

Source: Stockholm International Peace Research Institute (SIPRI), Bloomberg
Cyclicality Risk. Defense contractors grapple with cyclicality in which defense spending rises during wartime and declines during peacetime.

Contract Risk. When a large portion of revenues is secured by contracts, losing a previously awarded contract could be detrimental for an incumbent. However, because prime contractors tend to have multiple contracts with the DoD, they can often absorb the losses. Additionally, defense contracts are subject to complex regulation with burdensome compliance requirements and failure to comply can result in punitive measures.

Government Buyer Risk. In a market that relies heavily on a single buyer, bargaining power for defense companies is limited, and pricing is unlikely to obey the laws of supply and demand.

Investing in companies focused on National Defense

Defense contractors are poised to benefit from the favorable defense spending outlook driven by a rising budget after years of budget cuts. These companies produce critical products and provide essential services that will safeguard American national interests.

These are the segments that we have identified as relevant to the investment theme and stand to benefit from increased defense spending:

- **Diversified Defense Contractors**
  Provides diversified products and solutions related to aircrafts, ships, and technology systems—includes prime contractors which service a variety of defense needs.

- **Aircrafts & Components**
  Manufactures aircrafts ranging from fighter jets to transport aircrafts, and also includes companies that supply aircraft parts and components.

- **Communications**
  Provides critical communication technologies which enable lines of communication across land-sea-air missions and military bases across the globe.

- **IT Services & Consulting**
  Provides information technology and consulting services to defense organizations, relating to infrastructure, intelligence, and cybersecurity operations & logistics.

- **Ships and Submarines**
  Manufactures ships and submarines and related parts, systems, and components.

- **Electronics Systems**
  Supplies electronic components and subsystems for a variety of defense products.

- **Military Vehicles**
  Manufactures military ground vehicles for land missions, such as combat and transport vehicles.

- **Surveillance**
  Provides technology related to the digital capture, processing, and monitoring of information and imagery.

- **Weapons**
  Manufactures traditional weapons such as guns, rifles, munitions, and other weapons.
Motif Capital: Portfolio Construction

Motif’s thematic investment philosophy is underpinned by technology, helping us process and derive investment insights in an objective, systematic manner. The portfolio construction process starts with theme discovery and theme validation through rigorous fundamental and quantitative research. Motif then employs the same systematic, data driven approach to create the theme universe and identify thematic exposure. Our starting point is to use publicly available data such as government reports, industry publications, and company filings. We also utilize alternative data sets, which have traditionally not been used by investors, and often come raw and unstructured. We leverage technology and a variety of computing techniques to extract valuable information from these sources.

We built our National Defense portfolios based on the DoD budget proposals to provide systematic, targeted exposure to firms across key industry segments that we believe stand to benefit from increasing defense spending, a technological shift from the traditional battlefield to a cyber one, and rising global tensions.

Our approach to constructing this portfolio includes these key steps:

- Analyze the DoD budgets annually to determine the universe of companies addressing U.S. Military needs
- Identified U.S.-listed stocks and ADRs of companies involved in the defense sector of the United States, ranging from defense contractors to technology and consulting firms,
- Segmented companies by their defense-related product or service type,
- Determined each company’s percentage of total revenue derived from products and services that are provided for National Defense,
- Calculated the company’s adjusted market capitalization by multiplying the market capitalization by the percentage of revenue derived from defense-related products and services,
- Finally, created the portfolio by weighting each company by its adjusted market capitalization relative to the total adjusted market capitalization of all companies and by satisfying investability constraints.

Conclusion

As global instability rises and geopolitical relations continue to insensify, America's national defense budget - and thus sector - will likely continue to grow. Warfare continues to evolve beyond the traditional battlefield, and as defense spending evolves with it not all companies in the sector will benefit. Motif Capital has applied systematic, objective analysis in selecting the firms we believe stand to benefit from an evolving national defense strategy.

Representative Companies:

**Raytheon**
*Diversified Contractor*
Raytheon focuses on five strategic areas: Homeland Security, Missile Defense, Precision Engagement, Intelligence and Reconnaissance, and Process Improvement, and recently has been increasing focus on Raytheon Cyber Products

**Northrop Grumman Corp**
*Diversified Contractor*
Northrop Grumman is one of the largest defense contractors in the world, made up of three units: Aerospace, Mission Systems (focusing on radar and sensors), and Technology Services

**Leidos Holdings**
*IT Services and Consulting*
A leader in the integration and application of IT and cybersecurity, they specialize in large scale defense and intelligence solutions covering air, land, sea, space, and cyberspace

**Harris Corp**
*Communications*
Harris provides tactical communications solutions ranging from ocean to orbit, with three main business segments: Communications Systems, Electronic Systems, and Space and Intelligence Systems

**Huntington Ingalls Industries**
*Ships and Submarines*
Huntington Ingalls is America's largest military shipbuilding company. It's the sole builder of U.S. Navy aircraft carriers, and one of two builders of nuclear-powered submarines
References

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