GLOBAL X INSIGHTS

Defense Technology: Shielding the Modern World

Ido Caspi
icaspi@globalxetfs.com

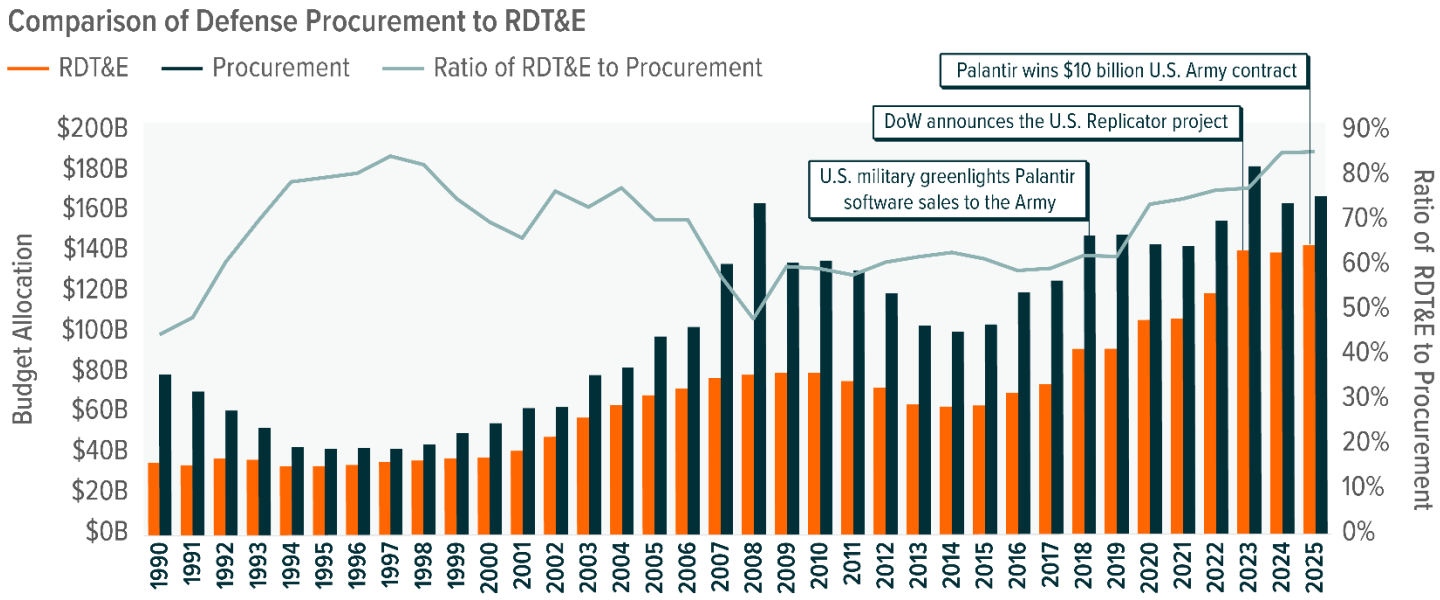
Date: November 3, 2025
Topics: Thematic, Charting Disruption, Disruptive Technology

This piece is one in a series that delves further into the leading themes emerging from this year's iteration of our flagship research project, Charting Disruption.

The global defense sector is entering a new super-cycle, driven by intensifying geopolitical pressures and a structural shift toward technology-led military capabilities. The world's rising military burden – the share of global GDP spent on defense – rose to a record 2.5% in 2024, underscoring the growing urgency.[1] In the United States, the defense budget could reach $1 trillion nearly five years ahead of schedule, signaling a dramatic fiscal reprioritization under the current administration.[2] Meanwhile, North Atlantic Treaty Organization (NATO) allies are pursuing greater self-reliance, committing to raising defense spending targets from 2% to 5% of GDP by 2035.[3]

Yet the most meaningful aspect of this transformation lies not in how much is being spent, but in *how* it's being spent. Historically, defense budgets focused on weapons procurement. Today, as militaries seek to digitally modernize their defense stack, spending is increasingly allocated towards Research, Development, Test, and Evaluation (RDT&E) in an effort to integrate AI, autonomous systems, and cybersecurity. Militaries are moving beyond conventional weapons platforms, channeling investment into advanced command networks and defense frameworks designed to deliver the speed, precision, and resilience modern warfare demands.

U.S. DEFENSE BUDGET DESIGNATION REDISTRIBUTION IN RECENT YEARS PRIMARILY BENEFITS R&D AND DEFENSE TECH SOLUTIONS



Source: Office of the Under Secretary of Defense (Comptroller). (2024, April). National Defense Budget Estimates for FY 2025.

Key Takeaways

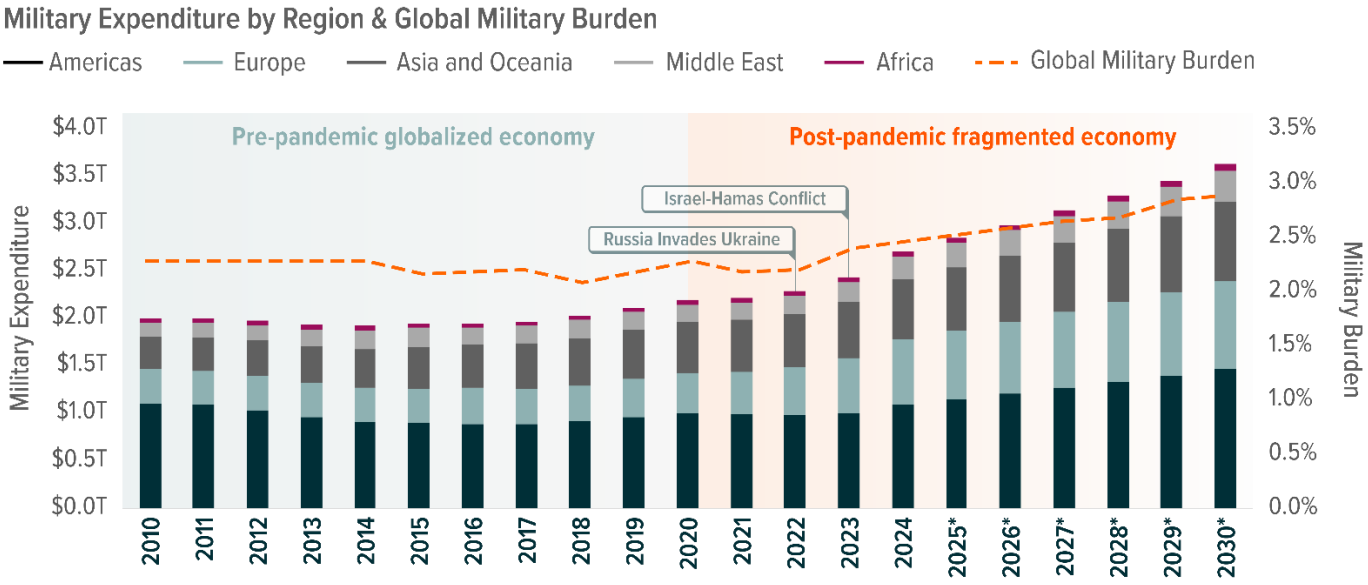
- Global military expenditures have increased every year for a decade, reaching a record $2.7 trillion in 2024.[4] This broad-based surge represents a global phenomenon not limited to leading military nations.
- NATO allies are undertaking their largest defense spending expansion in history, which could inject hundreds of billions of dollars annually into defense modernization programs and accelerate Europe's shift toward greater military self-reliance.[5]
- Defense spending is increasingly flowing toward digital modernization, AI systems, autonomous platforms, and cybersecurity rather than traditional weapons and vehicles.

Global Defense Spending Reaches Record Highs and Shows No Signs of Slowing

Global military expenditures have climbed for 10 consecutive years, reaching a record $2.7 trillion in 2024 and marking the sharpest annual increase since the end of the Cold War.[6] This surge extends far beyond leading powers like the United States and China, with over 100 countries increasing their defense spending in 2024 in response to rising geopolitical tensions and regional instability.[7] Last year, there were 61 active state-based conflicts, the most since World War II.[8]

Amid this heightened geopolitical volatility, global defense spending is projected to increase by approximately $900 billion to over $3.6 trillion by 2030 and raise the global military burden to roughly 3%.[9] In the United States, the One Big Beautiful Bill Act adds an additional $150 billion to the defense budget.[10] As a result, total U.S. defense expenditures are expected to reach $1 trillion as early as fiscal year 2026, years ahead of the Congressional Budget Office's original estimate.[11,12]

GLOBAL MILITARY EXPENDITURES GREW 9.4% YOY IN 2024, THE FASTEST GROWTH RATE SINCE THE END OF THE COLD WAR



*Forecast
Note: Military burden refers to the proportion of GDP allocated to military expenditures.
Sources: Global X ETFs forecast as of September 19, 2025 with information derived from: Liang, X., Tian, N., Lopes da Silva, D., Scarazzato, L., Karim, Z. A., & Ricard, J. G. (2025, April). Trends in World Military Expenditure, 2024. Stockholm International Peace Research Institute (SIPRI).

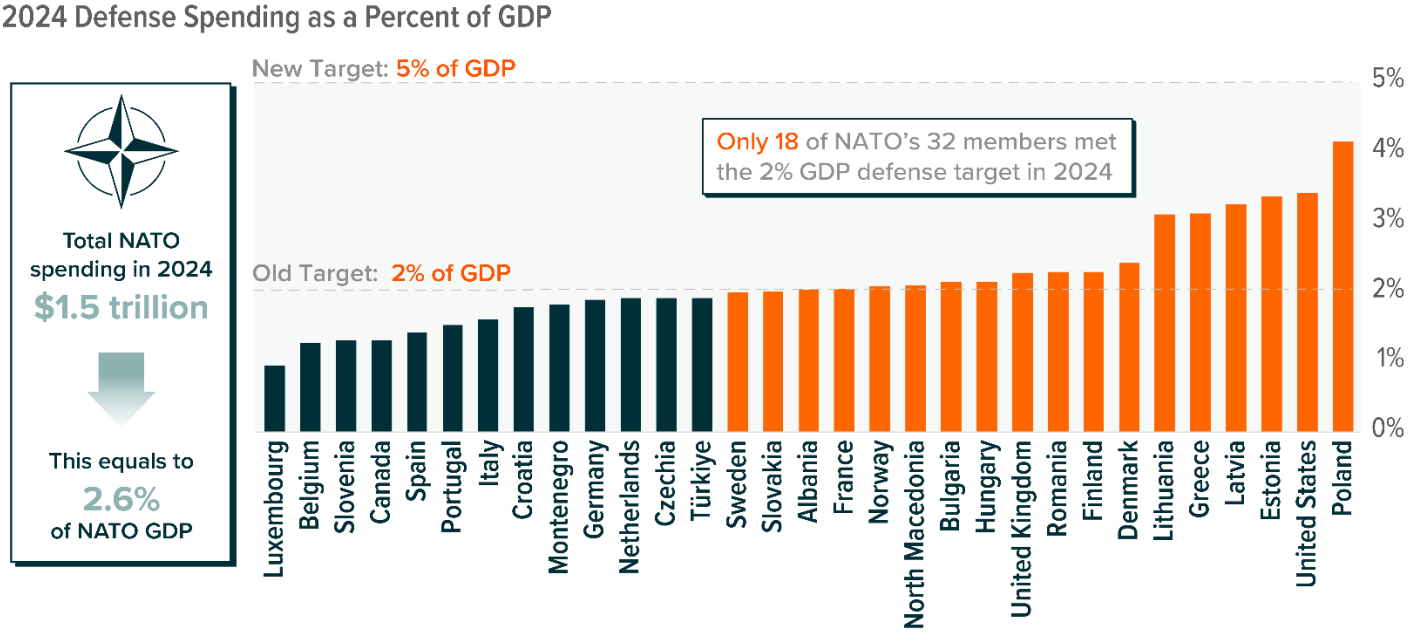
NATO Defense Budgets Set for Secular Expansion

In 2025, NATO members committed to their most significant defense-spending expansion in modern history, agreeing to raise annual targets from 2% to 5% of GDP by 2035. The increase represents a structural, long-term rearmament that could add hundreds of billions of dollars each year to the alliance's combined military budgets.[13] For comparison, the U.S. allocated 3.4% of its GDP to defense in 2024. Total NATO defense spending reached roughly $1.5 trillion in 2024, or about 2.6% of the bloc's GDP, yet only 18 of 32 members currently meet the previous 2% goal.[14] The new 5% benchmark is designed not only to rebuild readiness after years of underinvestment but also to accelerate Europe's transition toward a more self-reliant and technologically advanced defense posture.

NATO's new 5% target includes at least 3.5% for core military capabilities such as troops, weapons, and defense technologies, with the remaining 1.5% directed toward critical digital infrastructure like cybersecurity.[15] The move comes as regional threats escalate along

NATO's eastern flank and as alliance leaders seek to reduce dependence on U.S. capabilities by expanding shared infrastructure, logistics, and industrial capacity across Europe.

REARM EUROPE: NATO ALLIES AGREE TO MAJOR SPENDING BOOST



Source: Stockholm International Peace Research Institute (SIPRI). (2025). SIPRI Military Expenditure Database. Data as of December 31, 2024.

Technology Is Poised to Capture a Larger Share of Rising Defense Budgets

Despite record military spending worldwide, defense remains one of the least digitized industries. U.S. military budgets, for example, allocated less than 1% to software and digital capabilities in 2024.[16] Historically, defense spending revolved around conventional hardware and ammunition supplies. This focus remains true, but budgets increasingly reflect the shift towards digitization.

Recent conflicts, such as those in Ukraine and the Middle East, have highlighted the critical advantages and strategic importance of technology, particularly real-time, data-driven decision-making, which is likely to drive massive upgrades in defense software infrastructure. Beyond operational superiority, technology also delivers cost advantages on the battlefield.

Highlighting these trends, the U.S. defense budget is undergoing a historic transformation as digital modernization becomes a new core pillar of military deterrence. For fiscal year 2026, the Pentagon has proposed $179 billion for Research, Development, Test, and Evaluation – a 27% year-over-year increase and one of the largest allocations in history.[17] This shift reflects a long-term realignment of defense priorities as policymakers redirect funding from traditional procurement toward research-intensive technologies that can deliver asymmetric advantages in future conflicts.

Key initiatives include investments in AI, autonomous systems, cybersecurity, drone technology, and advanced communications networks, all aimed at building the next generation of software-defined warfare. Over the past decade, the ratio of R&D spending to procurement has climbed roughly 24%, signaling that defense tech innovation is now a strategic imperative rather than a discretionary line item.[18]

A New Era of Defense Technology Could Power Decades of Growth

The modernization of defense marks one of the most profound industrial shifts in generations. As global powers invest in AI, cybersecurity, and autonomous systems, the defense sector is entering an era that combines traditional arsenals with digital deterrence, where physical strength is reinforced by data-driven superiority. This structural transformation is expected to sustain elevated defense budgets for years to come, fueling innovation across hardware, software, and critical infrastructure. For investors, the convergence of technology and defense represents a multi-year growth theme that could redefine both global security and a key sector of the economy.

For additional insights, please view our full report, Charting Disruption: Outlook for 2026 and Beyond.

Footnotes

1. SIPRI. (2025, April.) Trends in World Military Expenditure, 2024.
2. Bloomberg. (2025, April 7). Trump, Hegseth Tout $1 Trillion in US Defense Budget.
3. CNBC. (2025, June 25). NATO Allies Agree to Higher 5% Defense Spending Target.
4. Global X ETFs estimate with information derived from: SIPRI. (2025, April). Trends in World Military Expenditure, 2024.
5. CNBC. (2025, June 25). NATO Allies Agree to Higher 5% Defense Spending Target.
6. SIPRI. (2025, April.) Trends in World Military Expenditure, 2024.
7. Ibid.
8. Institute for Economics & Peace (IEP). (2025, June). Global Peace Index 2025.
9. Global X ETFs estimate with information derived from SIPRI. (2025, April.) Trends in World Military Expenditure, 2024.
10. Congress.gov. (2025, May 20). H.R.1 – One Big Beautiful Bill Act.
11. Bloomberg. (2025, April 7). Trump, Hegseth Tout $1 Trillion in US Defense Budget.
12. Congressional Budget Office. (2022, January). Long-Term Costs of the Administration's 2022 Defense Budget.
13. CNBC. (2025, June 25). NATO Allies Agree to Higher 5% Defense Spending Target.
14. SIPRI. (2025, April.) Trends in World Military Expenditure, 2024.
15. CNBC. (2025, June 25). NATO Allies Agree to Higher 5% Defense Spending Target.
16. Benzinga. (2025, March 11). Palantir Calls for 'Software-First Approach' As Pentagon Spends Under 1% On Modern Warfare.
17. Breaking Defense. (2025, June 9). Exclusive: Pentagon's RDT&E Budget Revealed – Which Next-Gen Systems Get a Cash Influx in FY26?
18. Office of the Under Secretary of Defense (Comptroller). (2024, April). National Defense Budget Estimates for FY 2025.
