

# Northrop Grumman

Analyst: Thomas Ujfalvi  
Sector Head: Jack Schaffer

**BUY:**  
NOC

**Current Price:**  
\$470

**Target Price:**  
\$549

**Upside:**  
17.1%

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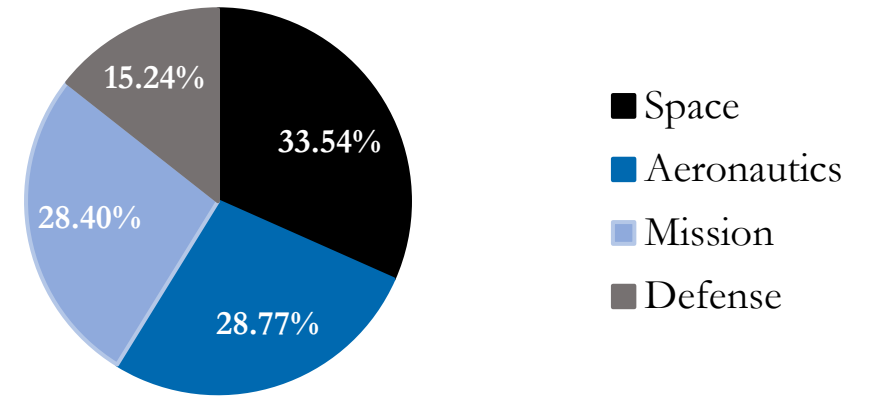
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# Company Overview

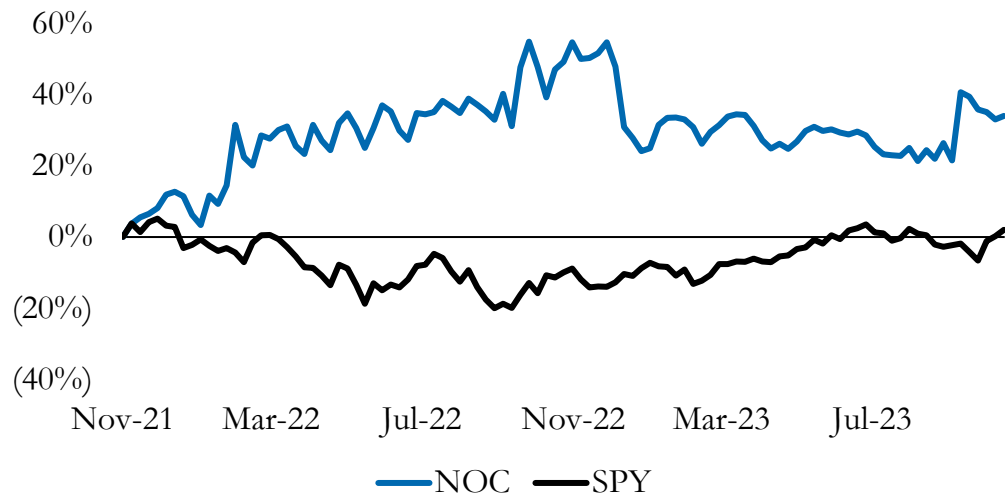
## Company Description

- 1 Multinational Aerospace & Defense corporation headquartered in Arlington, Virginia
- 2 Develops aircraft, rocket boosters, cybersecurity software, missile defense systems, etc.
- 3 85% of sales are to the U.S. Department of Defense, the remaining are to NATO allies

## Revenue Breakdown



## Stock Performance



## Notable Contracts



**\$80 Billion:**  
100 B-21  
Raiders



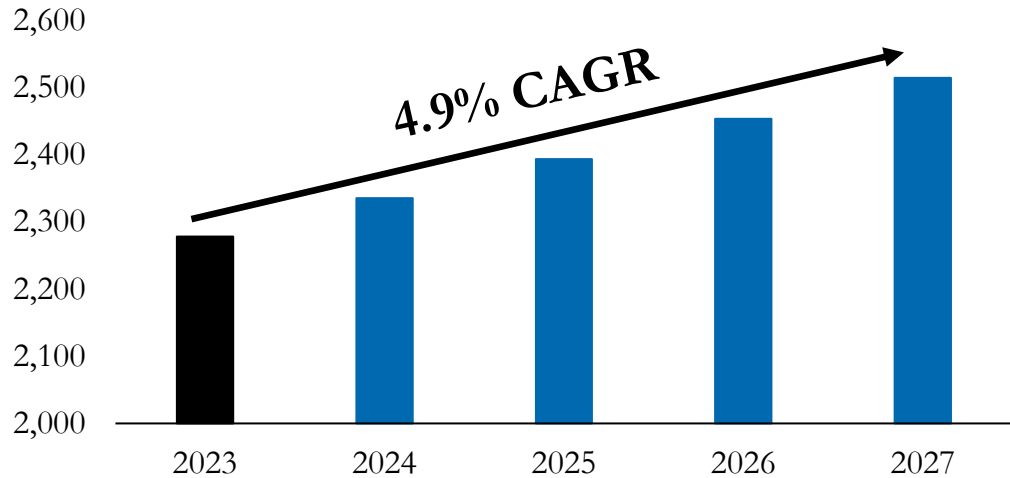
**\$3.19 Billion:**  
Space Launch  
System Rocket



**\$713 Million:**  
IBCS Missile  
Defense  
System

# Industry Overview

*Global Defense Spending (\$ Billions)*



*Military & Civilian Space Expansion*



**U.S. Space Force:**  
19.5% Funding CAGR '21-'23



**PLASFF:**  
“Capabilities are close to ours [US]” – US DoD



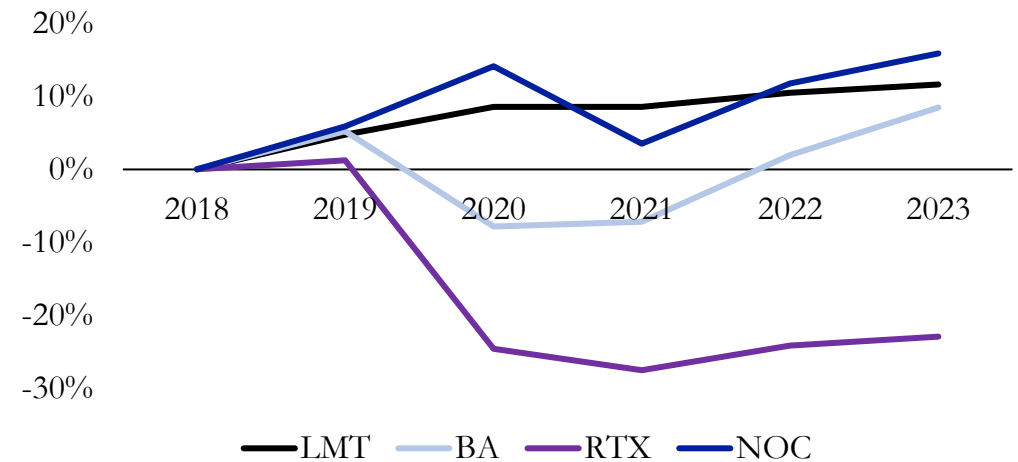
**Private Corporations:**  
Commercialize space travel

*Competitive Landscape*



- **Technological dominance** over rocket engine tech
- **Leadership** in military space vertical

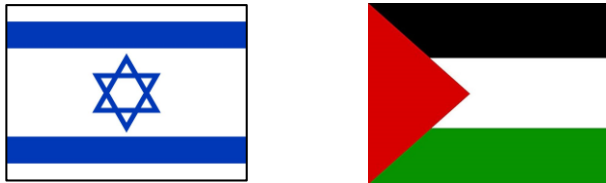
*Labor Force Growth % (Pre/Post-Pandemic)*



# Global Environment

## *Israel – Palestine Conflict Potential Spillover*

### *Current Belligerents*



### *Potential Belligerents*



## *Potential Conflict With Taiwan*

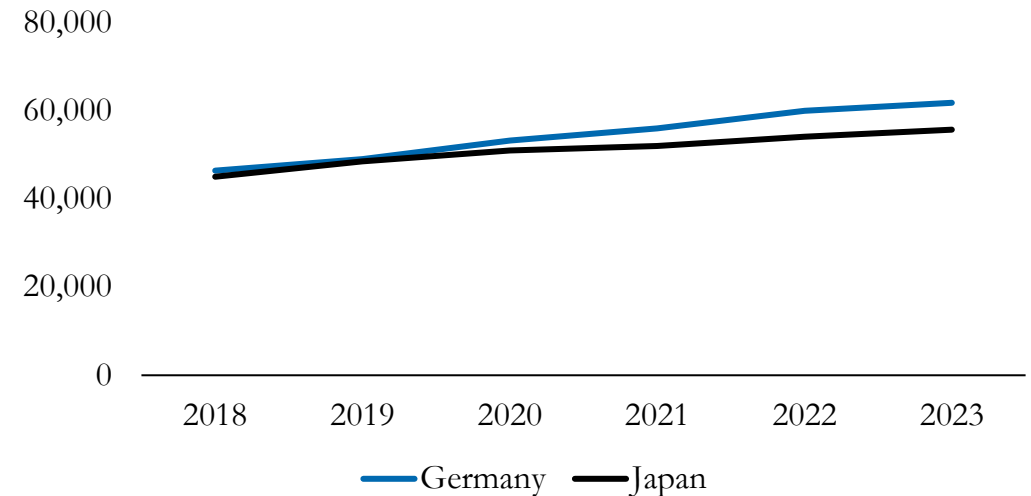
“My gut tells me **we will fight in 2025**...Xi’s team, reason, and opportunity are all aligned for 2025”  
– Gen. Mike Minihan



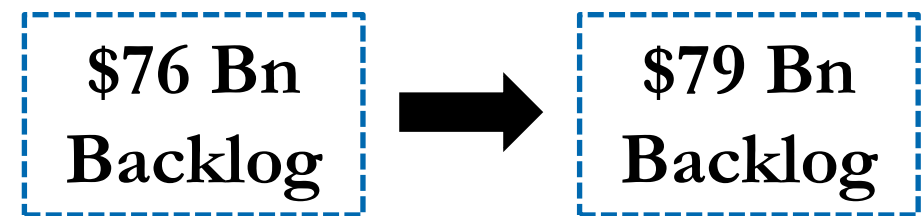
“China is determined to **annex Taiwan** on a much faster timeline”  
– Sec. Anthony Blinken



## *Militarization of Pacifist U.S. Allies (\$Mn)*



## *Effect on Northrop Grumman*



Strong **4% backlog growth** in 2022 due to breakout of Ukraine War and increased tensions with China, Iran, and North Korea

# Investment Thesis

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## **Stealth Bomber Dominance**

Northrop Grumman is the only company in history to develop a stealth bomber, and their successful B-21 program enables them to meet growing worldwide demand

## **Military - Space Vertical Focus**




Northrop Grumman's industry leading investments into their space segment will allow them to capitalize on expansion into space by both the U.S. DoD and NASA

## **Missile Defense Necessity**

Northrop Grumman's innovative IBCS missile defense system is poised to modernize NATO's aging missile defense in the face of rising tensions around the world

# Stealth Bomber Dominance

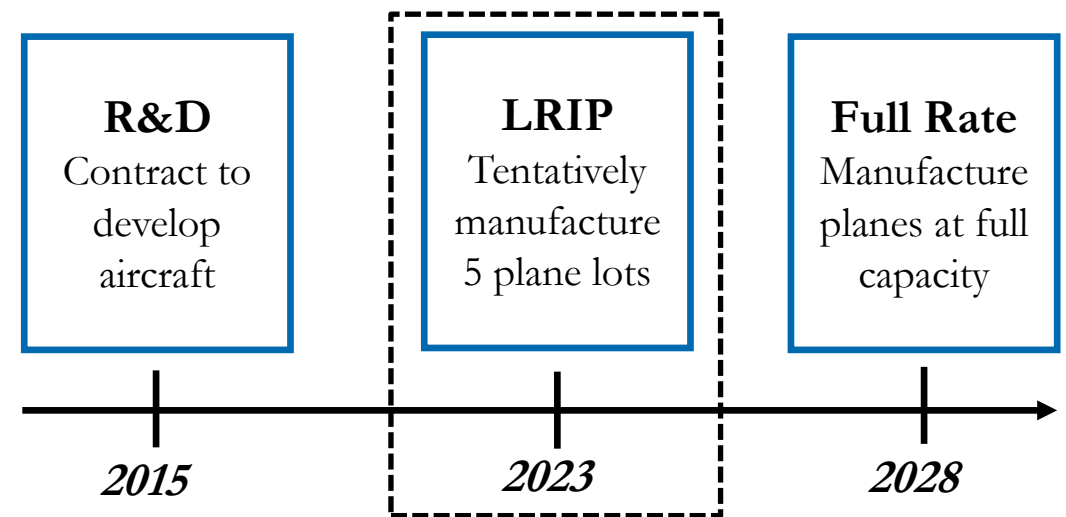
## *B-21 Raider Contract Overview*

	<b>\$80 Billion</b> Contract Value
	<b>100 B-21</b> Units Ordered Minimum
	<b>2040</b> Completion Date

## *Military Propensity to Re-Order*

<b>F-35</b>	<b>F/A-18</b>	<b>F-16</b>
<b>2001:</b> 2,400 units	<b>1995:</b> 783 units	<b>1974:</b> 650 units
<b>To Date:</b> 3,000 units	<b>To Date:</b> 1,480 units	<b>To Date:</b> 4,600 units

## *Low-Rate Initial Production*

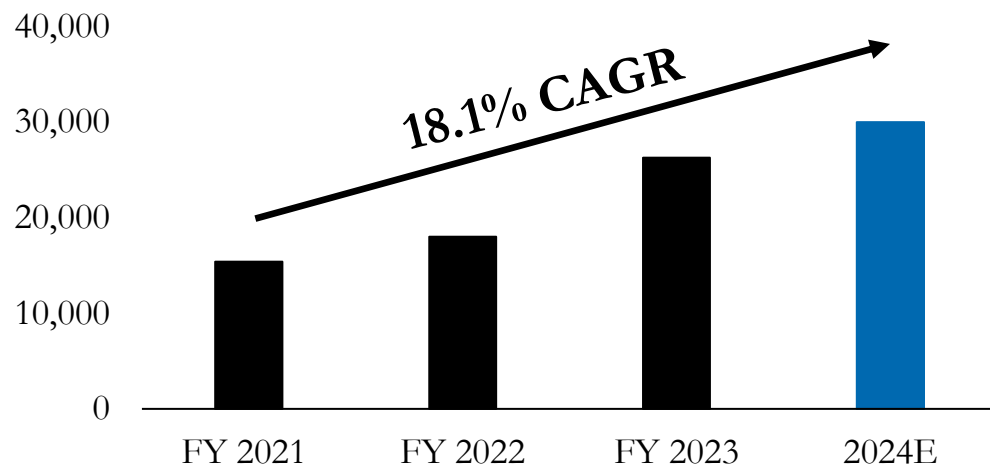


## *Potential International Export*

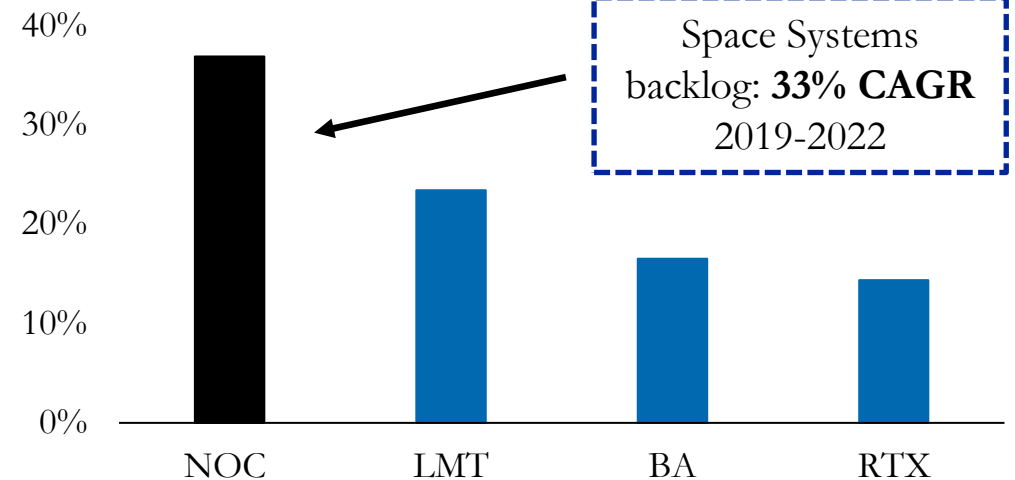
Strong interest from Australian Defense Minister Richard Marles in purchasing <b>12 units</b>	
U.S is willing to sell additional B-21 units to Australia under the <b>AUKUS partnership</b>	

# Military - Space Vertical Focus

*U.S. Space Force Funding (\$ Millions)*



*% of Capital Expenditures invested into Space*



*Sentinel ICBM*



High tech nuclear missile, **replaces** aging *Minutemen* missile stockpile



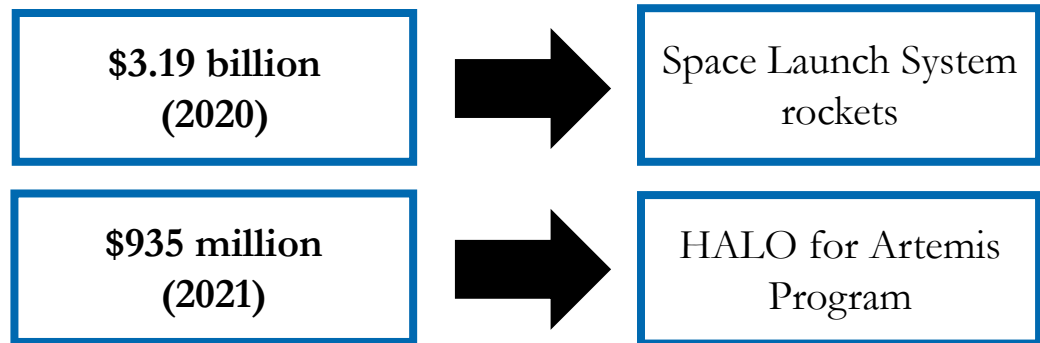
**\$13.3 Billion** R&D contract, manufacturing worth up to **\$100 Billion**



**Currently** in testing phase, initial rollout expected by **2029**

*Strong Ties with NASA*

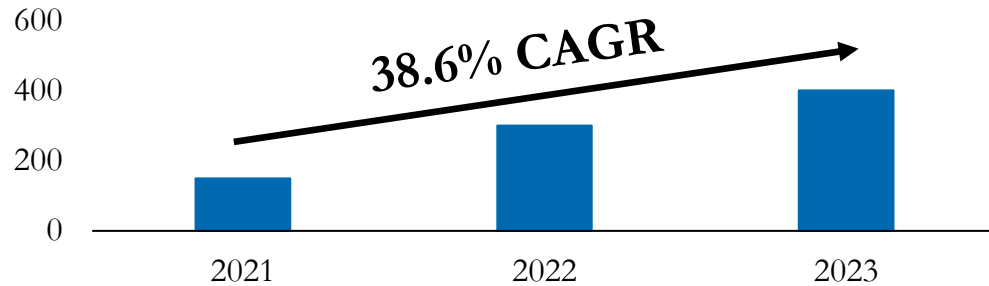
NASA's Purpose: "to go out beyond Earth's orbit for purposes of human exploration and scientific discovery"





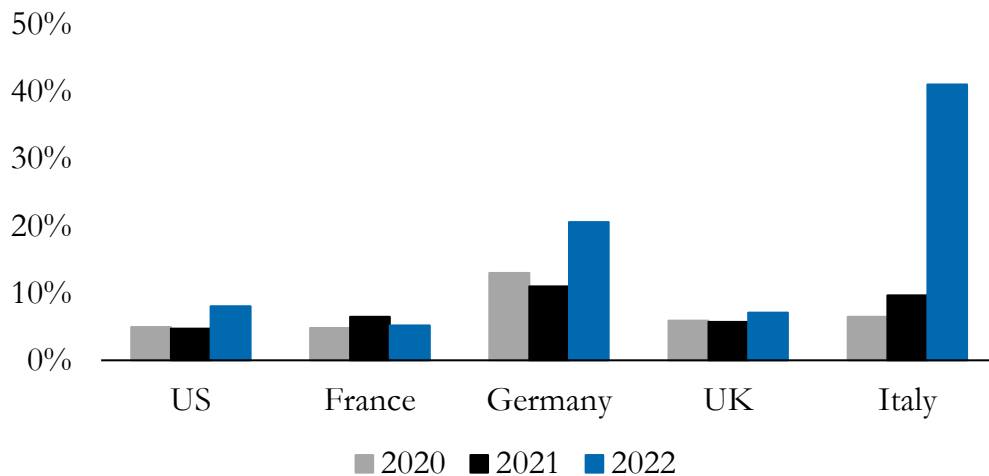
# Missile Defense Expansion

## Chinese Nuclear Missile Stockpile



“Effective ballistic missile defense capabilities serve to complicate hostile planning for potential adversaries”  
- NATO

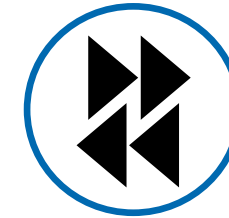
## NATO Missile Defense Spending Growth (%)



## IBCS Missile Defense System



“Keystone of all-domain operators” – U.S. Army



Fully integrated with past, future, and foreign systems



Quick, seamless, and universal detection and response

## International IBCS Expansion



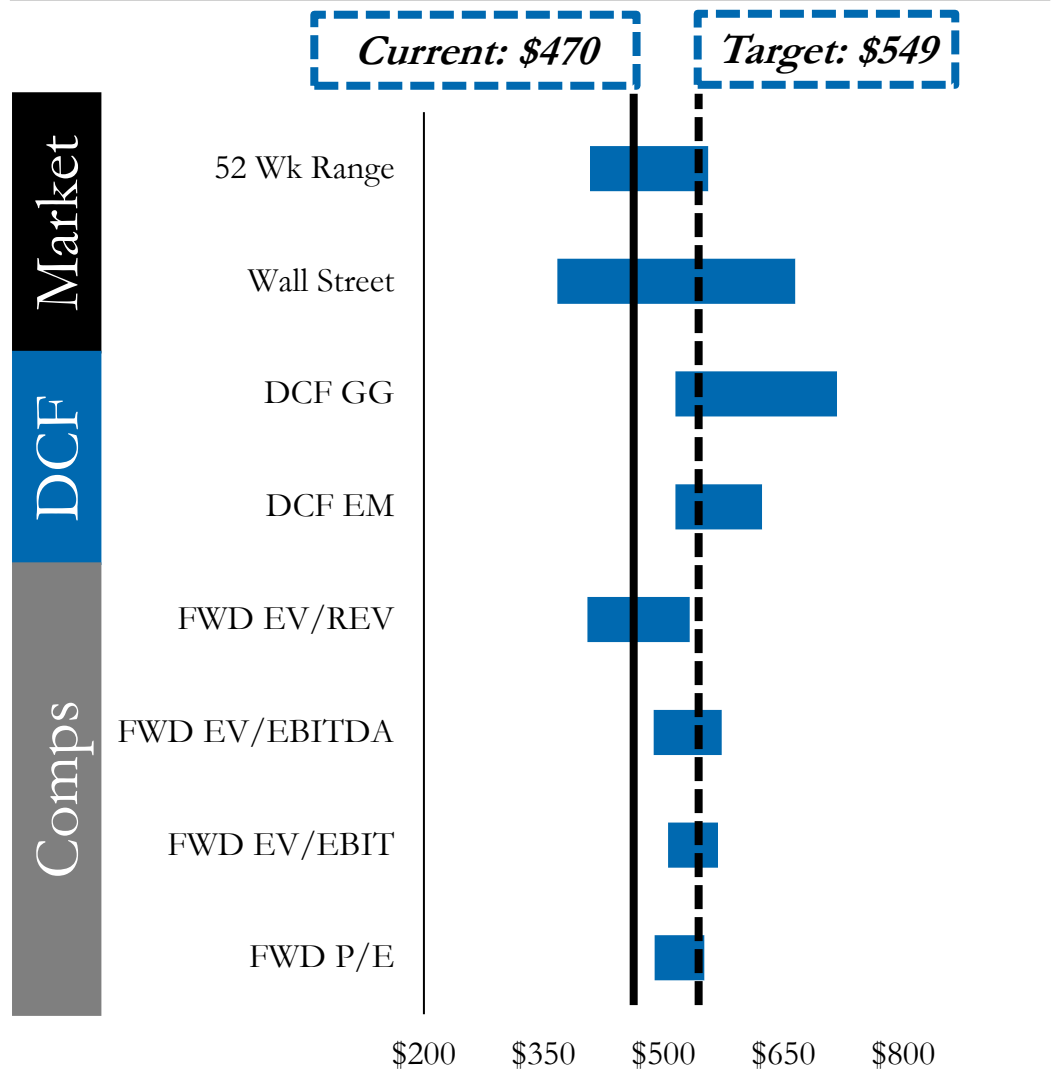
\$713 Million contract to produce IBCS for Polish Air Force (2019); Delivered 1<sup>st</sup> of 6 systems to Poland in 2022



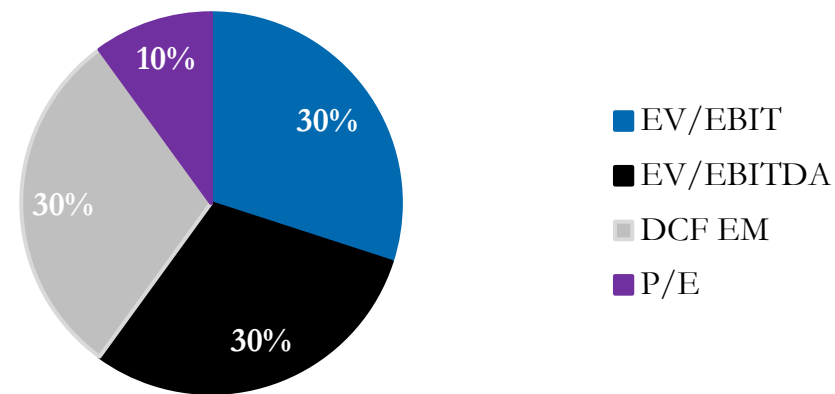
“We've seen a significant increase in interest across our global customer base with **10 additional countries** expressing interest in obtaining this system” – CEO Kathy Warden

# Valuation

## Football Field



## Valuation Weighting



## Multiples Comparison



EV/EBITDA:  
**16.2x**

EV/EBITDA:  
**20.1x**

EV/EBITDA:  
**17.5x**

EV/EBIT:  
**21.8x**

EV/EBIT:  
**46.3x**

EV/EBIT:  
**28.0x**

# Risks

- High U.S. Government debt could dissuade Congress from expanding U.S. defense spending in the future to trim costs
- Conflict could break out before Northrop can truly capitalize on the growing space market and could prevent it from investing into and dominating that high growth industry
- Firm fixed-price contracts could pose risk of making Northrop's major contracts unprofitable in the wake of increase cost pressure on raw materials and wages

## Bear Case

- EV/2024E EBITDA: **10.3x**  
(Share price of **\$435**)
- U.S. Government decides to cut defense spending in reaction to debt ceiling scare
- Persistent inflation in B-21 raw materials makes the project unprofitable

## Base Case

- EV/2024E EBITDA: **12.6x**  
(Share price of **\$549**)
- Defense spending grows at an annual rate of 3%
- B-21 exported to Australia
- Supply chain and labor issues ease and allow for a healthy profit margin on B-21

## Bull Case

- EV/2024E EBITDA: **14.6x**  
(Share price of **\$651**)
- Defense spending grows at a 5% annual rate
- B-21 exported to multiple NATO allies
- IBCS is also exported to numerous NATO allies

Thank you! Questions?

**BUY:**  
NOC

**Current Price:**  
\$470

**Target Price:**  
\$549

**Upside:**  
17.1%

# Appendix Overview

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# A: B-21 Contract

**Key Characteristics:**

**Primary Function:** Nuclear-capable, penetrating strike stealth bomber

**Lead Command:** Air Force Global Strike Command

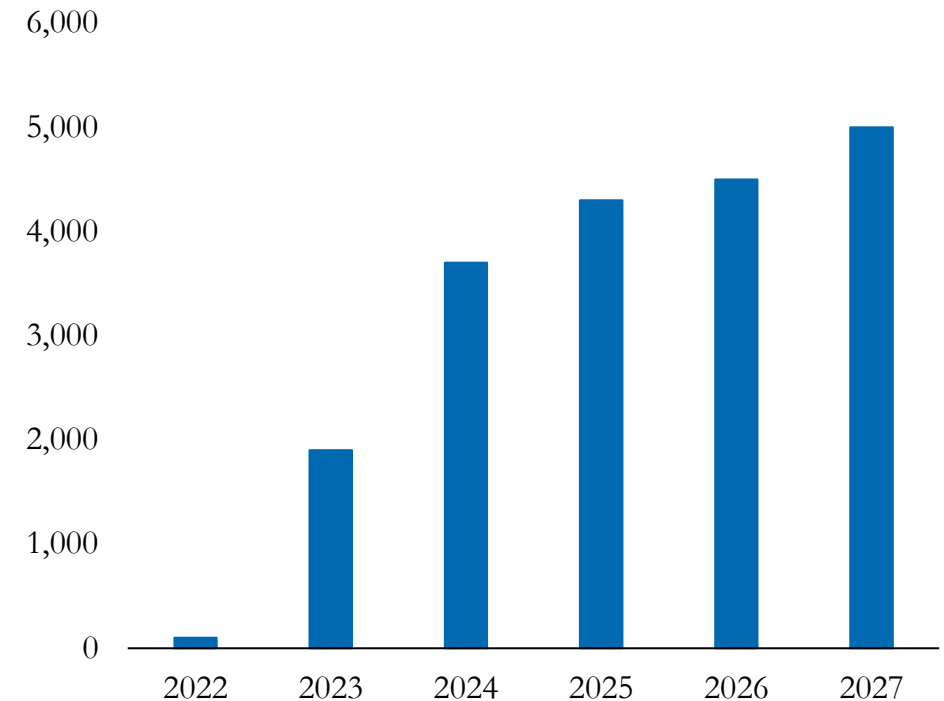
**Inventory:** Minimum of 100 aircraft

**Average Unit Procurement Cost:** \$692 million/B-21

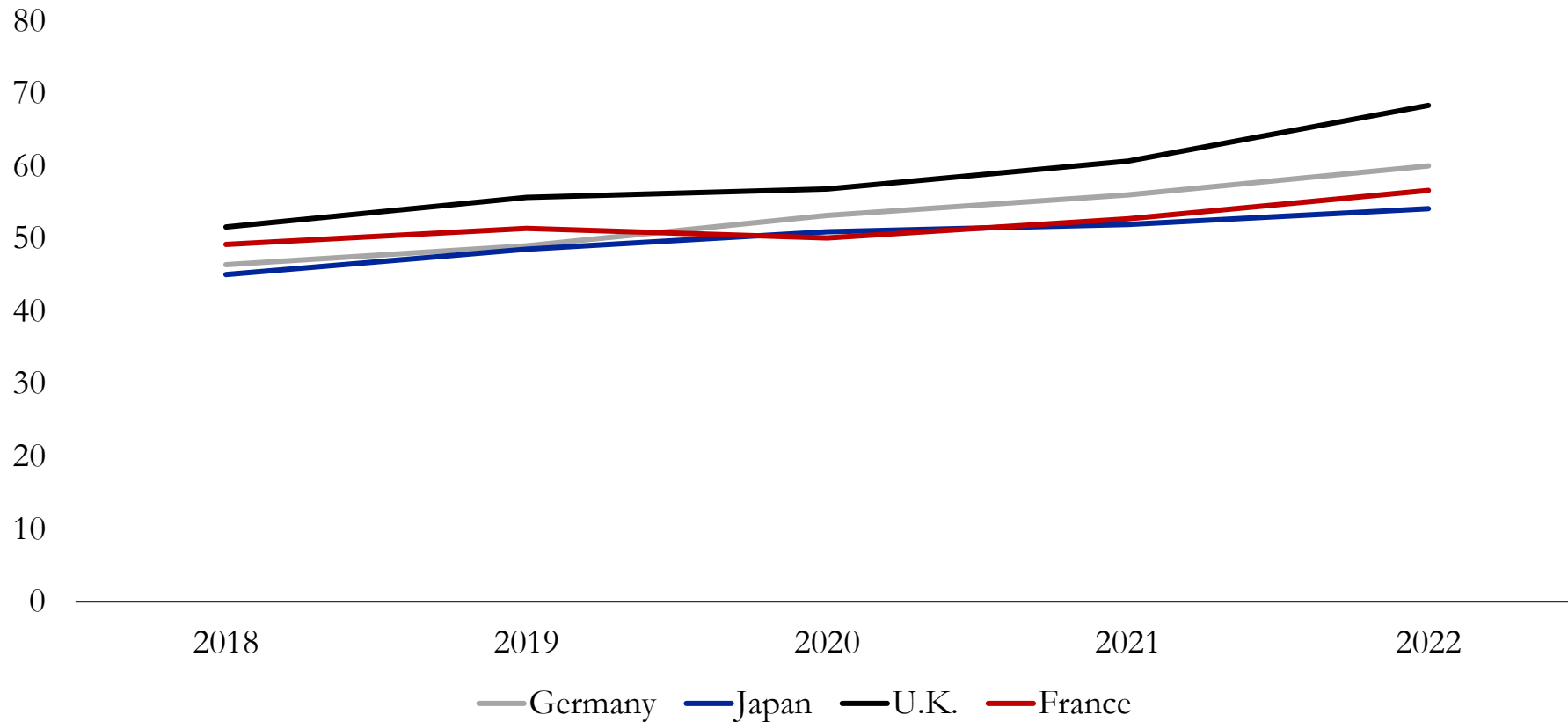
**Contract Value:** \$80 billion

The U.S Air Force awarded the B-21 Engineering and Manufacturing Development contract to Northrop Grumman on October 27, 2015. USAF expects to purchase at least **100 B-21's**, although this initial number may be expanded further. The contract has a value of **\$80 billion**

*B-21 Program Funding Growth (\$ Millions)*



# B: Foreign Defense Spending

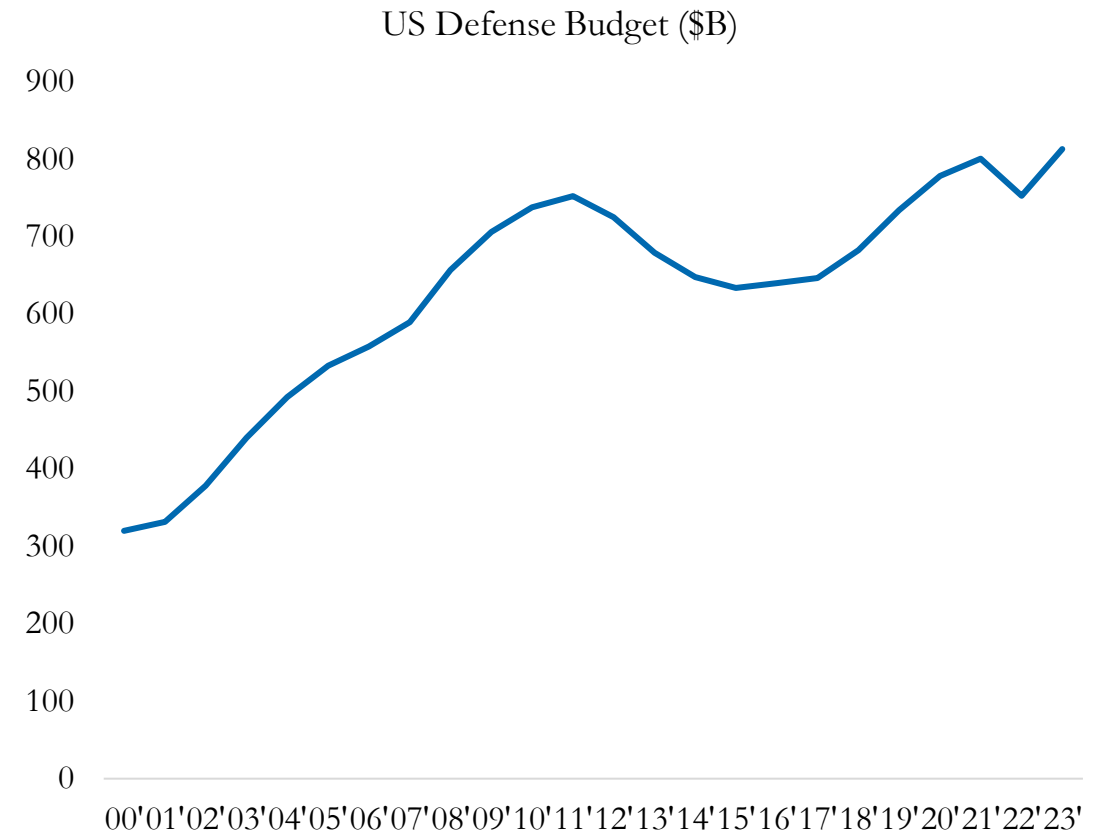


Japanese and German defense spending is currently <2% of GDP, both have pledged to increase their spending during this decade to meet the 2% of GDP NATO requirement

# C: Debt Ceiling

The Treasury has reached the current debt limit of \$31.4 trillion, meaning it has no room to borrow under its standard operating procedures. However, it is a likely scenario that the debt ceiling will be raised – According to the Treasury Department, the US “Congress has acted 78 separate times to permanently raise, temporarily extend, or revise the definition of the debt limit,” since 1960.

The Defense Budget tends to rarely get cut no matter the extent of the debt ceiling. The Biden Administration has requested a Pentagon budget for fiscal 2024 that will exceed the \$816 billion enacted for the Department of Defense – which is the biggest-ever defense budget in nominal terms, and one of the largest peacetime budget when adjusted for inflation.





# D: U.S. Space Force

## *Northrop Tops SpaceX*

In August 2022, SpaceX had expected to receive a contract by the Pentagon's Space Development Agency for satellites, however Northrop came in late and received half of the contract for **\$617 Million** with L3Harris receiving the other half of the contract

Northrop is clearly **more trusted** and **more reliable** in the eyes of the U.S. Government and will look to **further capitalize** on their already strong ties

## *Importance of Space Force*

“We find ourselves in a period of **great competition for space** with nations that don't share our view” and “we **cannot afford to lose space**; without it we will fail” – Chief of Space Operations John W. Raymond



## *Northrop ties with US Space Force*

Northrop is the **sole-source contractor** for the US Space Force's Evolved Strategic SATCOM (ESS) , and thus will be able to leverage years of its expertise in developing Military Satellite Communications Systems (MILSATCOM) payloads for joint security programs

In late 2022, Northrop Grumman played a critical role in the integration, launch and deployment of the United States Space Force-44 mission

## *Space Force Plans for Future*

- Space Force plans on implementing hundreds of new satellites in two-year tranches
- Specifically, low orbit missile tracking satellites
- Dramatically increasing their number of satellite launches per year

# E: Competitor Supply Chain



- Boeing has a **massive shortage of workers in their suppliers**
- Boeing has begun dispatching their own workers to help their suppliers, but **still do not expect full capacity until 2024-2025**
- Boeing supplier Precision Castparts is still **working 30% under capacity** and cannot make enough critical engine casts for Boeing



- **46% of Raytheon's suppliers are considered small suppliers**, saddled with high turnover and a resulting lack of workers
- Raytheon has had a lot of **trouble procuring missile motors** and expects these issues to continue deep into 2024
- Northrop can capitalize on Raytheon's inability to effectively deliver missiles



- Lockheed forecasted **2023 revenue that was lower than expectations** due to persisting supply chain bottlenecks and labor shortages
- Executives expect these issues to persist well into 2023, shrinking margins in all operating segments
- Many Lockheed programs, such as the F-16 program, have been **very slow due to labor shortages**

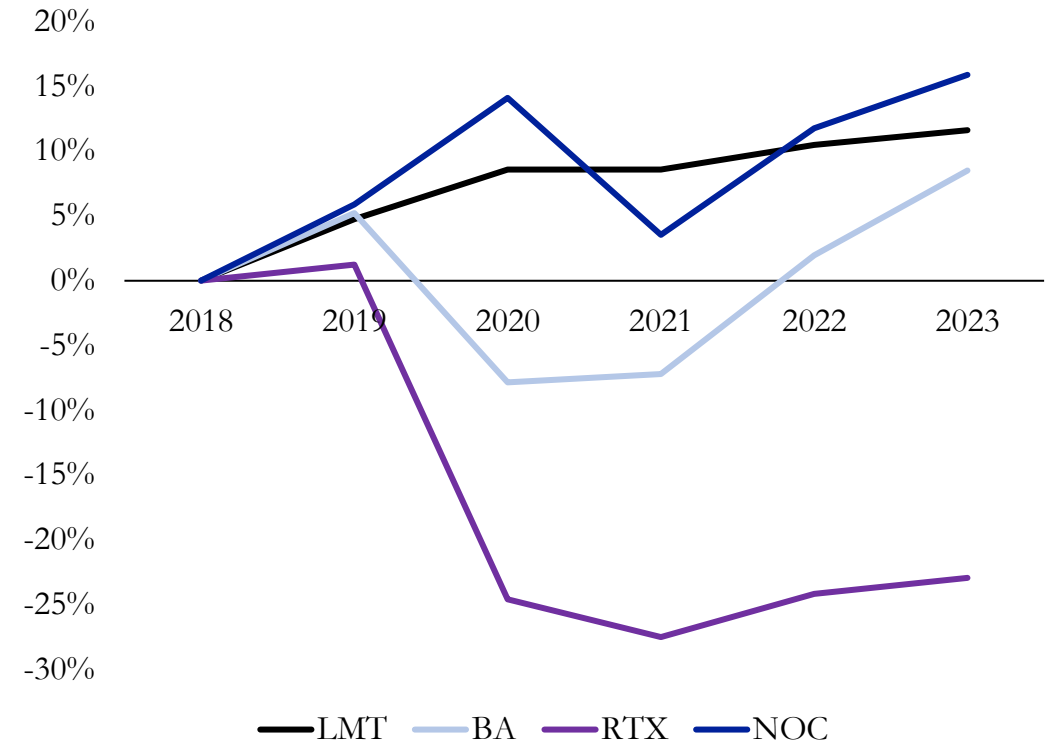
# F: Northrop Supply Chain

While many defense companies have had massive struggles with labor shortages, in the latter half of 2022 Northrop has seen **positive trends** in its labor force

Hiring has **increased** in Q4 2022, and their labor retention rate is also **improving significantly**

Additionally, **Northrop cut a smaller percentage of their workforce** during the pandemic compared to most of their competitors

*Defense Contractors' Workforce Changes*



# G: B-21 Profitability

According to management guidance, the LRIP phase of the B-21 contract is **expected to profitable**, and no loss is factored into their projections

CEO Warden and CFO Keffer have **been working with the government on inflation adjustments for future work on the B-21 program**, which will help enhance Northrop's efficiencies

**Northrop received a \$66 Mn performance incentive payment** on the last portion of the development contract, and it is indicative of their likely future good performance

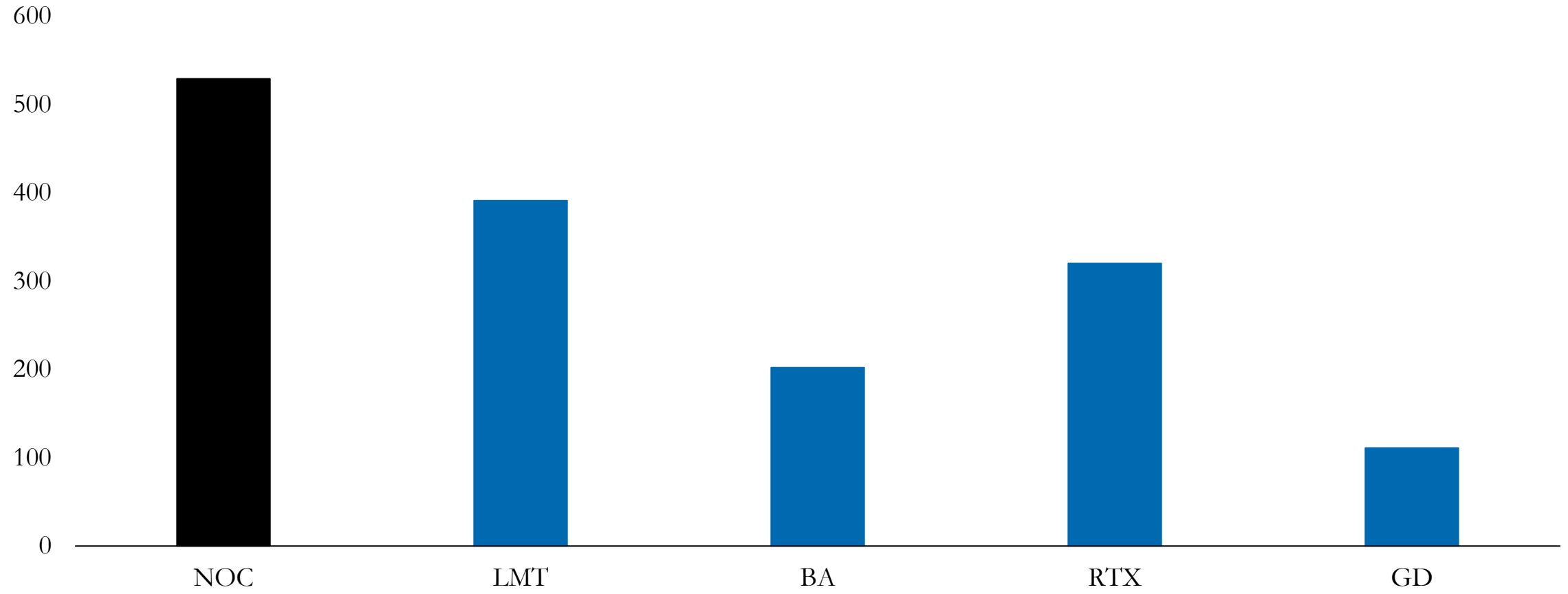


**Kathy J. Warden (CEO, Northrop Grumman)**

“Importantly, I want to highlight that our B-21 unit cost projections remain **below the government's independent cost estimates.**” (EOY 2022 Earnings Call)

# H: Absolute Space Investment

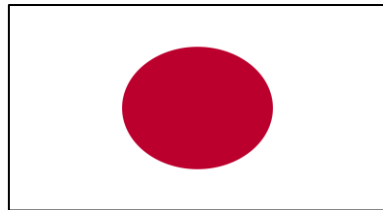
Defense Sector 2022 Investment into Space (\$ Millions)



# I: International IBCS



- Northrop submitted their IBCS system to a competition for a new Australian joint air battle management system
- Northrop expects Australia to determine a winner of the contract by this winter, and they are confident it will be their IBCS system



- Japan is seeking a U.S. solution for their lack of air defense battle command capability
- Japan is expected to issue a letter of request for the IBCS system from the U.S. Government



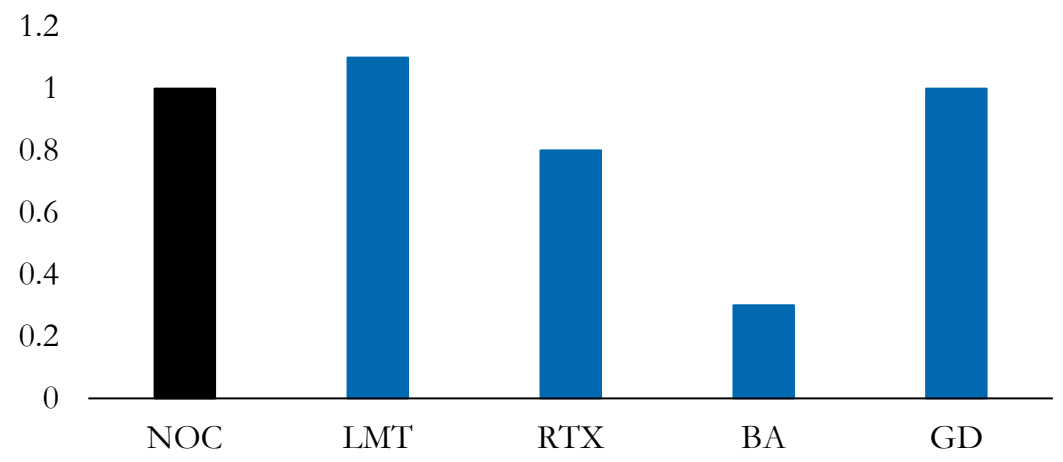
- The U.K. is likewise seeking a U.S. solution for their lack of air defense battle command capability
  - The U.K. has already posted a draft request for proposal to obtain the system



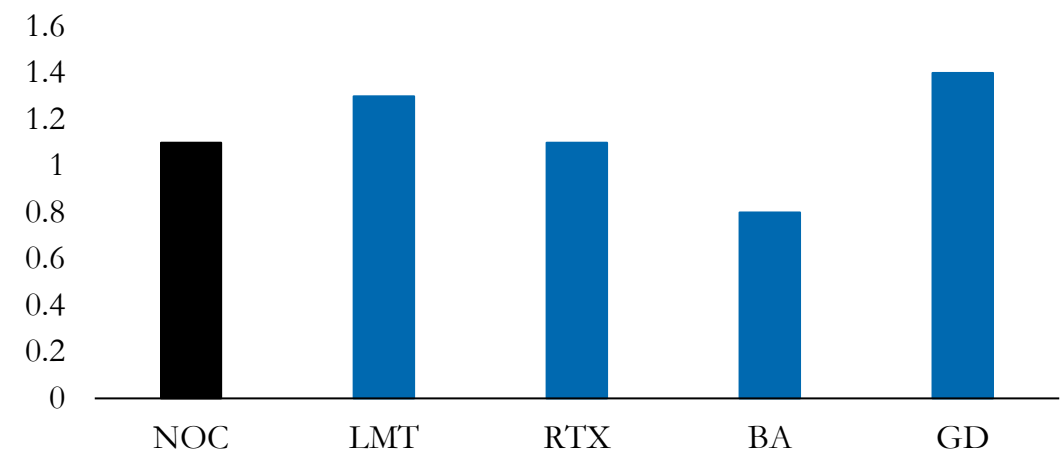
- Many European NATO Allies are eagerly awaiting the completion of the Northrop-Poland IBCS contract in anticipation of their ordering of the system next (Northrop IBCS Director Michael Hahn)

# J: Liquidity Ratios

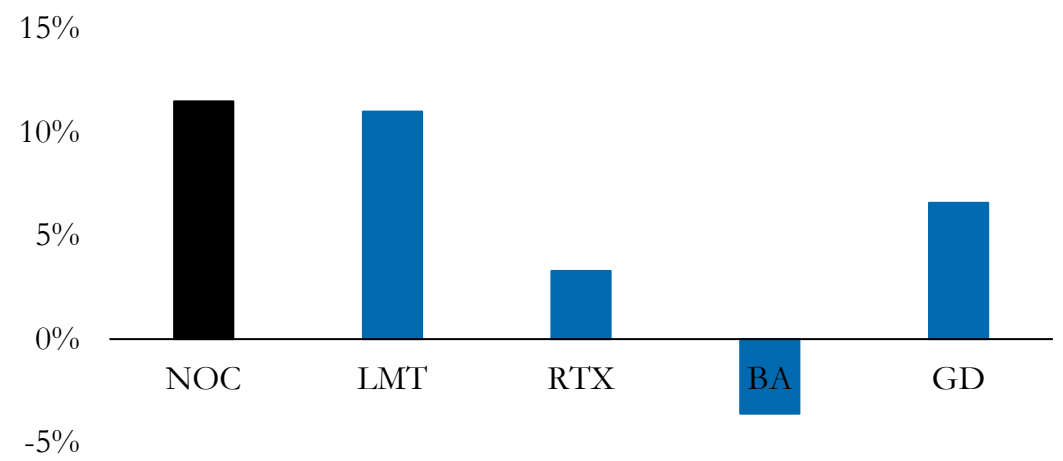
Quick Ratio



Current Ratio



Return on Assets



Return on Equity

