

# RESEARCH INSIGHTS



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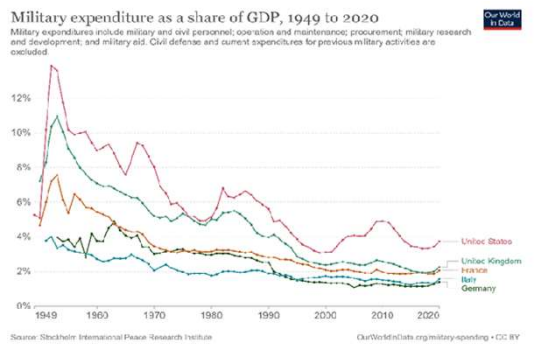
## Answering the Call

*The defense sector's outlook in a rearming world*

The 2020's has seen the world return to great power competition between the USA and a rising China. A resurgent Russia brings war to Europe. As international tensions both old and new heat up across the globe, there are some who stand to gain from these turbulent times

### An Elusive Peace

"Only the dead have seen the end of war" is a quote that has rung true ever since the first chimp picked up a rock with hostile intent. The resulting trade in weapons and military technology is as old as the history of war itself. Since then, mankind's perpetual conflicts has resulted in the creation of the modern arms industry. The production of military equipment would eventually shift from state arsenals to the private sector in the 19<sup>th</sup> century. Post-Cold-War spending on defense had been on a downward trend due to the "peace dividend" since the collapse of the USSR and the resulting decrease in international tension. For example, the USA as the leading military power globally saw a decrease in defense spending as a share of GDP from a high of 13.86% in 1952 to a low of 3.2% in 1998.



The turn of the millennium has seen new and old tensions resurgent despite the collapse of the Soviet Union and the end of the cold war. The Middle east has seen a spending spree fueled by oil revenue as the gulf states seek to counterbalance Iranian attempts at regional hegemony. Further east, defense budgets have skyrocketed buoyed by the strong economic growth in East and South-east Asian economies. The People's Republic of China alone has seen its defense budget nearly double in a decade from almost \$130B in 2010 to \$245B in 2020.

This has led to a scramble by regional rivals attempting to counterbalance the rapidly modernizing PLA. Nowhere else is this more clearly seen than historically pacifist Japan, the world's third largest economy. It has earmarked almost \$320B to be set aside for defense spending over the next 5 years citing concerns over an increasingly nuclear capable North Korea and China's rapidly growing military capabilities.

***"We will recommit to the pledge we made in 2014. To spend at least 2% of GDP on defence. More Allies now reach – or exceed – this target. A majority have clear plans to reach it."***

- NATO Secretary General, Jens Stoltenberg

In the meantime, Russia's annexation of Crimea in 2014 and its subsequent invasion of Ukraine in 2022 has revived fears of armed conflict in a continent that for 30 years had neglected its armed forces. Perhaps indulging in the naïve assumption European wars were condemned to the dustbin of history. Russian aggression has ironically accomplished what the recent Trump administration could not. Reviving Europe's moribund defense budgets with multiple NATO members lead by an once pacifist Germany pledging defense increases of at least \$133B since the war in Ukraine with more nations soon to follow.

## About the Arms Industry

***"Whoever said the pen is mightier than the sword obviously never encountered automatic weapons."***

— Douglas MacArthur, 1880-1964, American general

The arms industry, also known as the defense industry, refers to companies and organizations that design, manufacture, and sell military equipment, weapons, and related technologies. This includes everything from small arms, ammunition, and armored vehicles to aircraft, ships, and advanced electronics systems.

Investing in the arms industry can be a complex and controversial decision, as the industry is closely tied to national security and global politics. It can also be subject to significant regulatory and legal constraints, particularly with regards to the export of arms and related technologies.

However, the arms industry can also be a lucrative investment opportunity, as governments around the world typically allocate a significant portion of their budgets to defense spending. In addition, the industry is often seen as relatively stable, as demand for military equipment and technologies tends to be relatively consistent over time.

### Economic Moats

The arms industry faces challenges and opportunities unique to the sector. Defense companies inherently possess a wider economic moat compared to firms in other sectors. "Economic moat" being a term that refers to a business's ability to maintain its competitive edge over potential competitors. The main economic moat faced by companies seeking to enter the defense industry would be the high barrier to entry. The reasons are manifold.

First would be the necessity of security clearances, as defense of the state can rightfully be considered of utmost national importance, it is important to ensure that only information about defense procurement does not fall into hostile hands. This means that firms could potentially be limited in their attempts at sourcing talent as compared to firms in other sectors. Even companies such as SpaceX are limited to hiring only American citizens as the rockets it designs and produces are considered military equipment and therefore a state secret. Security clearances therefore pose a large barrier to entry for any potential new competitors.

Secondly, the long-term nature of government contracts when it comes to arms procurement and maintenance can often be a double-edged sword. An example would be the American Lightweight Fighter Program in the 1970's. General Dynamics (now Lockheed Martin) won the contract with their F-16 fighter which resulted in a decades long production run from 1974 till the present. When factoring in the associated lucrative maintenance and upgrade programs for the F-16 which is expected to fly well past the middle of the 21st century, it is easy to see how securing a contract could mean a gravy train that lasts decades.

Another example of the vast economic moat enjoyed by some firms in the defense sector would be Huntington Ingalls Industries. As the only shipyard with the expertise and Infrastructure to build the US navy's gargantuan nuclear aircraft carriers, Huntington Ingalls Industries is in the enviable position of being America's sole designer and builder of nuclear-powered aircraft carriers. Huntington also provides mid-life overhaul and refueling services for the carriers. As carriers average about 50 years in active service, one could argue that the shipyard is guaranteed business well into the second half of the 21st century.



Furthermore, big ticket items such as jets and tanks exist within the military ecosystem in ways not unlike other consumer goods such as Apple's ecosystem for its many products. For example, in the same way an iPhone is limited to a certain type of charger or headphones, a fighter Jet must use missiles that are compatible. This benefits the manufacture of any weapon system as any sale would come with additional follow-on sales for munitions and maintenance agreements. As such, relationships between the arms manufacturer and their customers tend to be long lasting since changing to another supplier could result in uprooting an entire supply chain with the resulting negative effect on national defense preparedness.

In addition, the arms industry can be capital-intensive, and it may be difficult for new companies to enter the market due to the high cost of research and development. This is especially important as the arms industry is constantly evolving, and companies that can develop and produce innovative products may have a competitive advantage over their rivals. A good example of the tremendous sums of money involved in the development of modern weaponry would be the once-controversial F-35 Joint Strike Fighter program. Current American planning calls for an eventual fleet of 2,456 F-35s and allies are expected to purchase hundreds of additional F-35s, eight of which are cost-sharing partners in the program. The total research and development costs were estimated at 71.9 billion USD when adjusted to 2019 dollars. For comparison, the 2 trillion-dollar Apple corporation's entire research and development budget for 2019 totaled a mere 16 billion.

## Investing in the defense sector

Retail and institutional investors are spoilt for choice when it comes to the arms industry. Despite the general trend of consolidation in the sector, many hundreds or even thousands of firms depending on definition remain. A surprising amount of diversification can be achieved through the defense sector alone. Many firms are not limited to the Defense sector alone. For example, the behemoths of the Aviation Sector Airbus and Boeing produce aircraft for both civil and military uses.

Boeing is an American company that designs and produces fixed-wing and rotary-wing aircraft along with missiles and rockets. A further look at Boeing's financials reveals that of the 92.3 billion in revenue earned in 2019, 27.4 billion or 30%, was earned through its defense, space & security wing. (Forbes) By revenue alone, Boeing in 2021 was the world's 3<sup>rd</sup> largest defense company behind Lockheed Martin and Raytheon.

Mitsubishi Heavy Industries is a Japanese corporation that by revenue in 2021 was the world's 24<sup>th</sup> largest defense contractor. Mitsubishi business dealings involve the manufacturing and design of both civilian and military equipment. It has designed indigenous military aircraft in the past for the Japanese Air Self Defense force and has more recently been involved in the licensed production of American aircraft for Japan such as the F-15J. It has also designed and built warships and armored vehicles for the Japanese Ground Self Defense Forces. Mitsubishi is also well placed to from the planned major increases in Japanese defense spending.

BAE Systems is a British aerospace and security firm ranked as the largest in Europe and 7<sup>th</sup> globally. Its past products include the Eurofighter, Queen Elizabeth class carriers and the United Kingdom's nuclear submarines. It is also a major partner in the F-35 program and benefits strongly from the program's commercial success. BAE's role in maintaining the UK's nuclear deterrent also helps ensure it plays a leading role in the British military for the decades to come.

### Morality

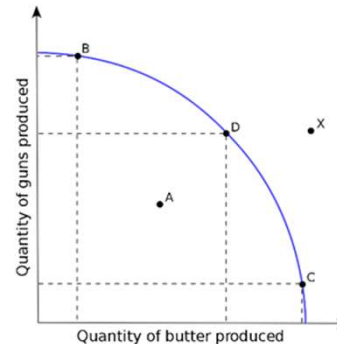
*"I do not love the bright sword for its sharpness, nor the arrow for its swiftness, nor the warrior for his glory. I love only that which they defend."*

— J.R.R. Tolkien, *The Two Towers*

The morality of investing in or working with the arms industry is inevitably intertwined with the morality of War itself. Some would argue that war is justified so long as it furthers the interests of the state, others think war is only justifiable in self-defense. Pacifists may even go as far as to profess that violence is never justified no matter the circumstance and the arms industry is at fault for producing tools that enable great violence. Such arguments have gone on since the dawn of man and will likely go on far into the future. Nonetheless, most would agree that resources wasted on waging war could have been more productively spent elsewhere.

*"Every gun that is made, every warship launched, every rocket fired, signifies in the final sense a theft from those who hunger and are not fed, those who are cold and are not clothed."*

— Dwight D. Eisenhower



Those familiar with the study of economics would have heard of the guns and butter model. The guns and butter model is itself an example of a production-possibility frontier. The model illustrates how the country must choose between two options when spending its limited resources. It may buy either guns (military spending) or butter (other civilian goods), or any combination of both goods. Therefore, every dollar spent on the military is one less dollar spent on goods such as healthcare or education, making the quote above by President Eisenhower especially apt. It remains up to Governments and individuals to decide which side of the fence they stand on when it comes to this longtime issue.

## Writer's Opinions

### Riding the Storm

The 2020's will be a time of great turbulence and uncertainty. Black swan events such as the covid-19 pandemic has renewed Policy makers, investors and layman interest in the healthcare sector. The Russian invasion of Ukraine and Taiwan's role as a potential flash point between Great Powers has raised the specter of large-scale inter-state conflict. The growing wealth across Asia and the pacific rim has led to a greater willingness to spend on weaponry to brandish over long-running disputes.

The suave investor can expect to reap the benefits of loose wallets when it comes to military spending across the globe. While some might balk at the idea of investing in the tools of war, it remains the writer's opinion that the ending quote by Tolkien rings true even today .

*"It needs but one foe to breed a war, not two, Master Warden," answered Éowyn. 'And those who have not swords can still die upon them."*

— J.R.R. Tolkien, *The Lord of the Rings*

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