  
  
**Bulls Say**

* General Dynamics’ Gulfstream franchise has top tier volume share and margin in the large-cabin business jet market and has successfully transitioned to the G500 and G600, and G600.
* General Dynamics has decades of revenue visibility, thanks to the long cycle nature of shipbuilding.
* Defense prime contractors operate in an a cyclical business, which could offer some protection as we look closer to a recession than we have in the past.

**Bears Say**

* General Dynamics depends on U.S. military funding, which is inherently political and thus uncertain process.
* The business jet market is highly cyclical and this segment would suffer if there were a recession.
* General Dynamics is still working on delivering the synergies from the CSRA acquisition.

Defense Is Defensive; We Initiate on Defense Primes with Ideas for Investors to Keep on Their Radars

**Analyst Note** | by Burkett Huey Updated Mar 16, 2020

We’ve taken a fresh look at Lockheed Martin, Northrop Grumman, and General Dynamics, and give the firms fair value estimates of $429 per share, $329 per share, and $195 per share, respectively. We assign these defense primes wide moats and a stable trends, predicated on product complexity-based intangible assets and switching costs stemming from a lack of alternatives. Our top picks in the industry are Lockheed Martin, which has a substantial growth runway from the F-35 and missile-related programs, and General Dynamics, which is trading at a deeper discount to our fair value but faces cyclical risk from its business jet exposure. For General Dynamics, our fair value implies a price/2020 earnings multiple of 15.2 times and an enterprise value to forward EBITDA multiple of 12.8 times.

We think that defense primes are an intelligent play for investors concerned about unfavorable cyclical turns for a few reasons. First, defense primes are not exposed to the business cycle, as their revenue is almost entirely funded by the U.S. and international government spending. We estimate about 25% of sales are to non-government customers and General Dynamics increased sales and its dividend throughout the 2008-09 financial crisis. The company has a business jet segment that makes up a quarter of sales, so the consolidated firm is more cyclical than peers. Second, the increased focus on great-powers competition through the National Defense Strategy indicates that the military will continue to prioritize modernization. Third, since customers fund much of the company’s research and development, defense primes can consistently return substantial cash to shareholders. The trailing five-year compound growth rate of General Dynamics' dividend per share is 8.1% and the company delivered roughly $8.8 billion to shareholders through share repurchases during the same period, which reduced the diluted weighted average share count from 2015 to 2019 by about 11%.

**Business Strategy and Outlook** | by Burkett Huey Updated Mar 16, 2020

General Dynamics is about three quarters long-cycle defense prime contractor and one quarter business jet manufacturer. Defense primes rely on the defense budget for revenue, and we favor companies with tangible growth profiles through a steady stream of contract wins, ideally to contracts that are fulfilled over decades. General Dynamic’s crown jewel of long-cycle contracts, the Columbia-class submarine, exemplifies this with planned procurement through 2042. Regulated margins, mature markets, customer-paid research and development, and long-term revenue visibility allow the defense primes to deliver a lot of cash to shareholders, which we view positively because we don’t see substantial growth in this industry.

Defense primes are implicitly a play on the defense budget, which we think is ultimately a function of both a nation’s wealth and perception of danger. After a boom in defense spending over 2018-19 to modernize the military, we’re expecting a slowdown in defense budget growth to inflationary levels. However, we think that prime contractors will still grow because of a shift in focus toward defending against great-powers conflict. We recognize there is substantial political uncertainty in the budget, but we think that it will be difficult to materially decrease the defense budget without sweeping political change. The Budget Control Act of 2011, which has provisions for automatic budget sequestration, has effectively expired. We expect that the Senate will still need to compromise to pass a budget after the 2020 election, and one of the most common compromises of the previous decade has been more nondefense spending for more defense spending.

General Dynamics’ business jet segment mostly produces long-range wide-cabin business jets. This market is low volume, at roughly 200 global deliveries each year and many repeat customers. New, quality product drives deliveries in this segment, so the company must continuously convince customers that it has built a better aircraft. Gulfstream dominates volume in this segment, with roughly 50% market share, which leads to superior margins due to progression along the learning curve.  
**Economic Moat** | by Burkett Huey Updated Mar 16, 2020  
At first glance, an analyst may believe that the defense prime contractors operate in an industry where it is difficult to earn excess returns. Defense prime contractors generate products on the cutting edge of technology, yet pricing can often be deflationary on a per-unit basis. These companies effectively operate in a near-monopsony, with a customer that has rapidly evolving needs and a tendency to change product requirements. While these are undoubtedly challenges, we believe that wide moats are prevalent in the defense business. They exist because of intangible assets: product complexity that thwarts new entrants, contract structures that reduce risk for the contractor, decades long product cycles, a lack of alternative suppliers, and the switching costs of a risk-averse customer facing a significant time investment to switch over products.

We believe that intangible assets in the defense industry ensure that incumbent firms are the only companies capable of servicing the military’s large need to purchase arms, which manifests as a material barrier to entry. In terms of keeping out competitors, we believe the primary source of intangible assets is product complexity. First, the technology used in arms production requires extensive expertise and lacks commercial viability outside of the defense industry (aside from commercial aerospace manufacturing), so a new entrant would likely need to develop this know-how entirely from the ground up. Second, the development of a military program is long and expensive; a would-be competitor would face material sunk costs ranging from the time spent developing a prototype to pitch for a contract, to the challenge of developing a workforce that has the required security clearances to enter the space. We note that the only serious outside threat to a small subsegment of this business, space launches, are the pet projects of multibillionaires. Further, a material portion of revenue comes from classified contracts, which a potential new entrant would be entirely unaware of. We use the Stockholm International Peace Research Institute’s dataset on the arms industry as evidence that the arms production industry is insulated from outside competition. Lockheed Martin, along with Boeing’s defense unit, BAE Systems, Raytheon, Northrop Grumman, Airbus, and General Dynamics have essentially remained the top seven global arms producers for the past 15 years.

The second major intangible asset in the defense industry is the contract structure that allows excess return generation. Generally, the defense prime contractors compete fiercely within initial bidding rounds to win a contract for a new program. After an original round of purchasing is completed, it is quite rare to see a government switch contractors. During the early stages of development and production, the government generally purchases using cost-plus contracts, which shift the financial burden of cost overruns to the customer, but the potential profit is lower. Given the immense risk of cost overruns in designing complex products such as bomber aircraft, this dynamic frequently works in the contractor’s favor. While fixed-price development programs are not unheard of, as programs age, they tend to move toward fixed-price contracts. That said, one factor that mitigates some risk on fixed-price development programs is the tendency for the military to issue change orders for work unspecified by the original contract, which allows the contractor to request additional payment. Although these fixed-price contracts carry more financial risk, as the burden of cost overruns shifts toward the contractors, because many of these contracts are for mature programs, they tend to be more profitable because manufacturing costs are better understood as a program ages. These mature program contracts often become long-standing cash cows because program life cycles can last decades.

Switching costs for the customer are generally predicated on the mission-criticality of the product, extended product cycles, a lack of viable alternative products, and the substantial time investment required for switching. The major products for U.S.-based defense contractors include military vehicles (including land, air, and sea-based vehicles), intelligence-gathering systems, radars and sensors, and munitions. The ability for a military to succeed at its strategic objectives and defeat an adversary, as well as the lives of soldiers and civilians, are contingent on these products working as intended, which we think protects the proven suppliers from upstart competition. As the contract structure essentially grants a monopoly on the product once the product is granted, we also see some modest switching costs stemming from a lack of viable alternatives, but this is partially mitigated by the government’s right to license patents to third parties. More important to us is the extended time required to replicate a product that fulfills a mission. Product development in this industry ranges from years to decades, and if the military is dissatisfied with the product, it is much faster and easier to work with the existing contractor than to fund the development of a greenfield replacement program. Product cycles are a source of differentiation. We view the products with the longest procurement cycles, such as fighter jets and submarines, as the moatiest because contracts with decades-long fulfillments give us decades-long visibility into revenue without the need to consider the potential for an unfavorable recompete. We see short-cycle products, such as defense IT contracting less favorably. Defense IT contracts come up for competition once every few years, there are viable competitors in this space outside the prime contractors, and the contract value may be competed down even if the incumbent receives a renewed contract.

Following this framework, we view the moatiest segments as those with the most difficult-to-replicate products with the longest upgrade cycles and the longest production cycles. We think the combat systems segment is wide-moat. This segment generally produces land-based vehicles such as tanks and the Stryker family of wheeled combat vehicles. Product complexity for land-based combat vehicles prohibits new entrants, even among defense contractors. We use the recently canceled Next-Generation Combat Vehicle contract to replace the Bradley Fighting Vehicle as a demonstration of this segment’s complexity-based barrier to entry. This $45 billion contract would be a juicy addition to any contractor’s portfolio, but it only received two bids. The non-General Dynamics bid was disqualified because the contractor could not ship a prototype by the deadline, leaving only General Dynamics as the sole source capable of delivering a product. Though the army recently canceled the competition due to lack of competition, we believe this example demonstrates the difficulty of entering the market. Land combat systems are incredibly long cycle, for example, the military has procured General Dynamics’s M1 Abrams tank consistently since the 1980s to be the Army’s main battle tank, which gives us confidence in General Dynamics revenue-generating potential for years into the future. This segment benefits from switching costs stemming from the mission criticality of the product, as lives would be endangered if the product does not work as intended. We also believe that this segment benefits from the long length of time required for the customer to switch, as the Bradley replacement has been solicited in various iterations for over a decade, and a replacement would need likely take quite a while to fully develop.

We believe the marine segment enjoys one of the widest moats in the defense industry. The company is one of two major shipbuilders in the U.S. Though shipbuilding is not a growth market, the segment benefits from steady, decades-long procurement cycles and uses technology that is unique even among defense contractors. This segment receives about two-thirds of revenue from the Virginia-class submarine, a nuclear-powered boat and is a contractor on the navy’s highest priority development program, the Columbia-class nuclear submarine, which is also powered through a nuclear reactor and will have a carbon dioxide removal system so that these submarines can remain submerged for substantial periods. We believe few firms possess the technological capabilities to replicate these products over any time horizon. As the navy plans to procure Columbia-class boats through 2042, we remain confident in the cash flow-generating capacity of the segment without needing to consider future contract wins.

We think the IT Services segment lacks a moat. Moats in the defense business are generally predicated on product complexity acting as a barrier to entry, and an unlikeliness for the customer to switch due to mission criticality, contract structure that grants monopolies, and long product cycles. None of these moaty qualities apply to the IT services business, which does data processing, provides cybersecurity, and intelligence services to the military. While we agree that specialized individuals are required to service these contracts, we believe specialized human capital is substantially easier for a business to replicate than specialized engineering capacity combined with a specialized supply chain. As evidence of this, there are several more pure-play defense IT contractors than defense prime contractors, including Leidos, Booz Allen Hamilton, CACI, Science Applications International, as well as segments of other prime contractors such as Raytheon and Northrop Grumman. Further, government IT contracts are frequently recompeted periodically, which is not conducive to the generation of excess returns, as even if the contractor wins the contract it is likely to drive returns down closer to the cost of capital. This segment, along with competing IT segments at defense primes, tend to earn lower margins than the rest of the portfolio (except for the Marine segment in General Dynamics case), which had been able to earn low teen margins, which we think demonstrates the difficulty of generating excess returns in this business.

We believe that General Dynamics’ mission systems segment is wide-moat. This segment produces various sensors, secure communication systems, and military electronics. The ability for soldiers to effectively communicate and navigate is a force-multiplier for the military. Since adversaries actively work to disrupt the ability of sensors to function as intended, we expect that the customer is highly sensitive to changes in the quality of the sensor or jammer. While product complexity does prevent new entrants into the industry, we do not believe the product complexity is insurmountable in this segment. We believe the primary moat source for this segment is switching costs stemming from a large installed base on long-cycle products such as satellites, ships, and aircraft as well as a highly mission-critical product. The company produces the radomes or the encrypted communication systems on almost every U.S. military aircraft. Reoutfitting every military aircraft and retraining pilots on the new system would take years and would not accomplish much given the company’s stellar track record. Although this is a single example, we believe that reoutfitting the disparate communications hardware on various military products in various locations on earth or in space, along with commonality issues with other military products would make it incredibly difficult for the customer to change to a new provider, and the cost at failure for improperly implementing the change would be incredibly high risk for the military.

General Dynamics’ aerospace segment, which is dominated by Gulfstream Business Jets, requires a different framework because it is a civilian product. The business jet market as a whole is more fragmented than the commercial aircraft market, but product complexity ensures that only Gulfstream, Dassault, and Bombardier can compete in the long-range large-cabin jet market. The business jet market is only about 700 deliveries annually (roughly 200 of which are long-range large-cabin) and demand is generally driven by new, high-quality products, as previous customers must be convinced to upgrade. General Dynamics' aerospace division has outpaced competitors in terms of revenue and margins in this segment, through taking substantial volume share since the introduction of the G650 in 2012, and has successfully managed the risk of making the transition to new aircraft, as it moved from the G450 and G550 to the G500 and G600. Though Dassault and Bombardier have produced newer large-cabin products, we have not seen much evidence that these offerings have resonated with customers. Gulfstream has gained unit share within the large cabin segment and now has about half of total deliveries. The company consistently generates superior margins to competitors, likely due to progressing further along the learning curve than competitors. Gulfstream has an extensive, global product support network that allows them to regularly take the top position among product support networks, which creates a sticky stream of aftermarket revenue, representing about a quarter of segment sales. We believe that substantial service network benefits bolster the company’s moat by boosting the product line’s image as a luxury brand. We see some switching costs in the time it takes to retrain a pilot on the new aircraft, but believe intangible assets is the primary moat source for this segment.

**Fair Value and Profit Drivers** | by Burkett Huey Updated Mar 16, 2020

After taking a fresh look at General Dynamics, we assign the firm a fair value of $195 per share, which implies a price-to-2020 earnings multiple of 15.2 times and an enterprise value to forward EBITDA multiple of 12.8 times.

We think top-line growth will slow materially from the exceptional growth of 2018-19, averaging roughly 4.0% from 2020-2024. We think the big growth drivers will be the aerospace and marine segments. In aerospace, we expect the replacement of G450s and G550s with G500 and G600s as well as the introduction of the G700, though we recognize there is cyclical risk in this segment. We see the Columbia-class submarine’s development driving growth in marine.

We’re anticipating some margin expansion over the short term, with operating margins normalizing somewhat below the trailing five year mean at 12.3%, 50 basis points higher than 2019’s 11.8% operating margin. The lion’s share of margin expansion is in the aerospace segment, which should benefit from learning curve improvements in the G500 and G600, though this would be tempered by the introduction of the new G700. We anticipate margin expansion in the IT services division, which should benefit from lower intangible asset amortization stemming from the CRSA acquisition.

We’re expecting an increasing effective tax rate and anticipate that it will settle around 18.5% in a normalized period. General Dynamics received several tax benefits in 2018 and 2019 in addition to the tax cuts, which we do not think are sustainable. We’re anticipating that the R&D tax credit and the excess tax benefits on stock compensation are sustainable over the longer term, which knocks off a few percentage points from our estimated effective tax rate.

We’re anticipating that the company will maintain its relatively high capital expenditures as a percent of sales over the next few years as the company builds out capacity for the Columbia-class submarine. We don’t think that the company will need to add capacity for this into perpetuity, as these boats are produced quite slowly, and we anticipate capital expenditures will normalize at around 2% of sales longer term.

We think an 8.3% WACC, somewhat higher than comparable defense primes, is justified for this high-quality business. General Dynamics faces some revenue cyclicality as they have a sizable cyclical business jet segment, which justifies an above-peer cost of equity, and has a topnotch balance sheet, so we use a low cost of debt.

**Risk and Uncertainty** | by Burkett Huey Updated Mar 16, 2020

The major risks we see for General Dynamics are political risk relating to the defense budget, execution risk on the defense portfolio, and cyclical risk in aerospace. The company effectively operates in a monopsony with a customer that works to serve the public. If the United States government decided to wind down or not grow military operations for an extended period, the company’s growth prospects would suffer. Many of the contracts that the company delivers on can be terminated at the government’s convenience. Though the government has moved away from lowest cost technically viable contracts in recent years, there is no reason why they could not move toward this contract procurement structure or some other procurement structure in the future.

In 2019, about 12% of the company’s non-aerospace sales were to international customers. All of the company’s international arms sales are subject to approval from the U.S. government, which presents a geopolitical risk if alliances break down, or if the government decides it is no longer in its strategic interest to share military technology.

General Dynamics also faces execution risk related to properly completing their contracts. While fixed-price contracts are generally reserved for more mature programs that have well-understood costs, fixed-price development programs such as Boeing’s KC-46a tanker are not unheard of. The contractor bears the financial risk of cost overruns for these programs, so a poorly executed development would financially strain General Dynamics.

General Dynamics faces revenue-based cyclical risk in the aerospace segment. As business jets are discretionary luxury goods, orders dry up and get canceled during cyclical turns. Further, it becomes more difficult to justify lavish executive travel when times are tight. This reduces margin expansion as well due to a lack of progression along the learning curve.

**Stewardship** | by Burkett Huey Updated Mar 16, 2020

We assign a Standard stewardship rating to General Dynamics. Phoebe Novakovic has led the firm since 2013 and has had a long career with the firm. She has had roles leading the firm’s marine segment as well as in strategic planning. Given the classified nature of the defense business and the unique business model that defense primes have, we appreciate having a longtime insider run the company.

We view General Dynamics’ recent M&A activity somewhat unfavorably. The major transaction of the past few years was the purchase of CSRA at a reasonable multiple of 11.6 times EBITDA, which was about where other defense services companies were trading at the time, in 2018. From a moat-perspective, we view the transaction as dilutive to the company’s wide moat, as it expanded the company’s exposure to a no-moat competitive business with margin-dilutive recompetes. Management’s thesis was that additional scale would allow the firm to better compete in a changing market that favored larger contracts, but this has not flowed through to the financials quite yet. 2019 was a challenging transition year for the IT services segment, so we recognize that the thesis still has quite a bit of time to play out. That noted, we would need to see tangible evidence of improvement before we accept the thesis that additional scale fundamentally changes a historically difficult business.

We don’t expect much M&A going forward, due to structural factors preventing more consolidation, primarily because the industry is already highly consolidated. There are fewer digestible targets and we expect the customer is taking hard looks at potential transactions before approving them, as in many cases there are only one or two companies capable of servicing the customer’s need.

General Dynamics is the only defense prime that is a Dividend Aristocrat and has historically delivered quite a bit of cash to shareholders, which we view favorably. The trailing 5-year compound growth rate of General Dynamics’s dividend per share is 8.1%. Simultaneously, the company delivered roughly $8.8 billion in cash to shareholders through share repurchases, which reduced the diluted weighted average share count from 2015-2019 by about 11%. Given this solid history of delivering cash to the shareholder and the stability of the business model, we think long term investors can expect these activities to continue. We’re positive on this aggressive shareholder compensation, as we do not see substantial growth in the defense prime contracting industry.