GENERAL DYNAMICS

GENERAL DYNAMICS STOCK REPORT

NYSE: GD

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OVERVIEW

General Dynamics Corp. operates as an aerospace and defense company that offers a broad portfolio of products and services in business aviation; combat vehicles, weapons systems, and munitions; shipbuilding; and communication and information technology systems and solutions. The company operates through the following business groups: Aerospace, Combat Systems, Marine Systems, and Information Systems and Technology.

- The Aerospace group designs, manufactures and outfits a comprehensive family of Gulfstream business.
- The Combat Systems group designs, develops, and produces tracked and wheeled military vehicles, weapons systems, and munitions.
- The Marine Systems group designs, builds and supports submarines and surface ships.
- The Information Systems and Technology group provides critical technologies, products, and services.

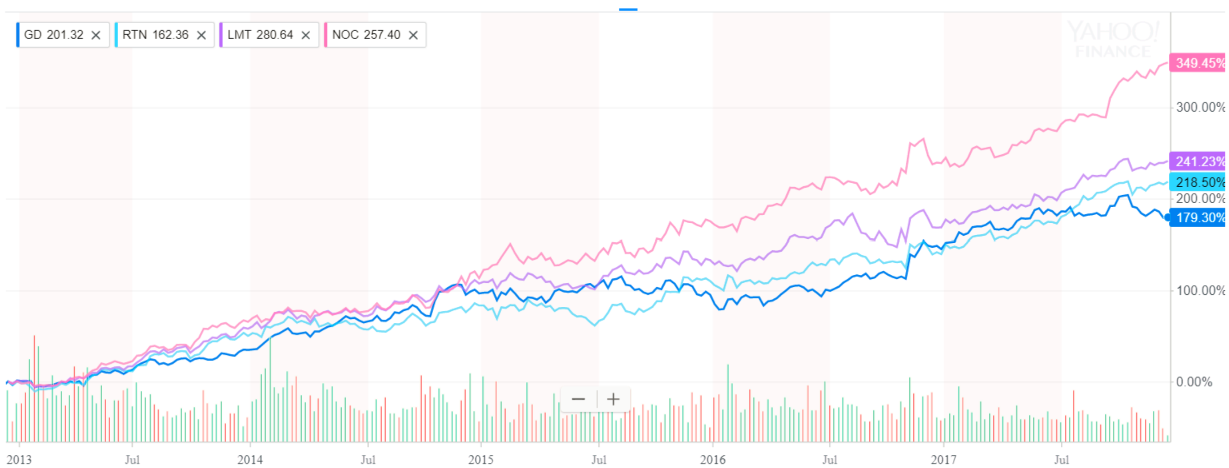
Growth in the Defense sub-sector is expected to be primarily driven by the newly elected US Administration's increased focus on strengthening the nation's military. Furthermore, rising global tensions has led to international demand for defense and military products is increasing in the Middle East, Eastern Europe, North Korea, and the East and South China Seas. This is in turn resulting in increased defense spending globally, especially, in the United Arab Emirates (UAE), Saudi Arabia, India, South Korea, Japan, India, China, Russia – many of these countries have already started to increase purchases of next generation military equipment.

The top 100 aerospace & defense (A&D) companies accounted for $709 billion in revenue, resulting in $69 billion in profits for 2016 – an increase from $689 billion in revenue and $64 billion in profits compared with 2015. President Trump has further stated he intended to increase defense spending by about $25 billion in 2017 and is also looking for a 10% increase in US defense spending for 2018.

From **order book** perspective, Electric Boat division recently secured a $45.9-million contract for the New England Maintenance Manpower Initiative. As per the contract terms, Electric Boat will not only provide non-nuclear repair services to support submarine overhauls, but also deliver supplies, ancillary, corrective, and preventative maintenance services.

GD has a healthy backlog of $63.9 billion in Q3 ($5.4 billion/9% increase over the second quarter). There was very good contract activity in all their groups, with particularly strong order intake in the Marine group. Each of GD's defense businesses enjoy backlog growth, apart from NASSCO, and it doesn't miss by much.

The EPS performance in Q3 2017 was $0.16 better than the year ago quarter. The last quarter's operating margin at 13.9% is 60 basis points better than the third quarter of 2016. Also, they enjoy very positive operating leverage.



PERFORMANCE

Taking a little of a closer look at some of the fundamentals of General Dynamics, they have an Earnings per Share that has grown year over year for several years, and is expected to continue to grow into the future.

Cal-endar	EARNINGS PER SHARE A Mar.Per	Jun.Per	Sep.Per	Dec.Per	Full Year
2014	1.71	1.88	2.05	2.19	7.83
2015	2.14	2.27	2.28	2.39	9.08
2016	2.33	2.44	2.48	2.62	9.87
2017	2.48	2.45	2.52	*2.45*	*9.90*
2018	*2.45*	*2.45*	*2.55*	*2.70*	*10.15*

Similarly, their dividends declared per share have grown every year since 2001, and nearly doubled in the last 7 years. Similar trends apply to both Cash Flow and Sales.

2010	2011	2012	2013	2014	2015	2016	2017	2018	© VALUE LINE PUB. LLC	20-22
87.26	91.68	89.58	88.34	93.01	101.13	103.67	*104.35*	*110.45*	Revenues per sh	*118.65*
8.59	8.82	8.27	8.61	9.55	11.08	11.63	*11.60*	*11.95*	"Cash Flow" per sh	*14.50*
6.82	6.94	6.48	7.03	7.83	9.08	9.87	*9.90*	*10.15*	Earnings per sh A	*12.45*
1.68	1.88	2.04	2.24	2.48	2.76	3.04	*3.20*	*3.32*	Div'ds Decl'd per sh B	*3.86*

Looking at other competitors within the industry, such as Lockheed Martin, Raytheon, and Northrop Grumman, we can see a similar trend.

Lockheed Martin:

2010	2011	2012	2013	2014	2015	2016	2017	2018	© VALUE LINE PUB. LLC	20-22
132.38	143.80	146.98	142.19	145.22	152.25	163.49	*180.65*	*193.35*	Sales per sh	*239.60*
10.08	11.36	11.63	12.35	14.68	15.28	17.19	*17.75*	*18.80*	"Cash Flow" per sh	*26.75*
7.23	7.82	8.36	9.57	11.21	11.46	12.38	*13.10*	*13.70*	Earnings per sh A	*20.70*
2.64	3.25	4.15	4.78	5.49	6.15	6.77	*7.46*	*8.20*	Div'ds Decl'd per sh B■	*11.50*

Raytheon:

2010	2011	2012	2013	2014	2015	2016	2017	2018	© VALUE LINE PUB. LLC	20-22
70.15	73.32	74.43	75.38	74.28	77.75	82.15	**88.75**	**94.90**	**Sales per sh**	**112.00**
6.20	6.83	7.15	7.56	8.52	8.53	9.30	**9.50**	**10.10**	**"Cash Flow" per sh**	**13.40**
4.79	5.28	5.65	5.96	6.97	6.75	7.44	**7.65**	**8.15**	**Earnings per sh A**	**11.15**
1.50	1.72	2.00	2.20	2.42	2.68	2.93	**3.12**	**3.22**	**Div'ds Decl'd per sh B ■**	**3.40**

Northrop:

2010	2011	2012	2013	2014	2015	2016	2017	2018	© VALUE LINE PUB. LLC	20-22
119.46	104.03	106.35	113.78	120.86	129.76	139.99	**148.25**	**155.90**	**Revenues per sh**	**170.60**
8.52	10.36	10.49	11.29	12.76	13.55	15.17	**16.05**	**16.50**	**"Cash Flow" per sh**	**21.10**
5.80	7.41	7.81	8.35	9.75	10.39	12.19	**13.20**	**13.40**	**Earnings per sh A**	**17.15**
1.84	1.97	2.15	2.38	2.71	3.10	3.50	**3.90**	**4.20**	**Div'ds Decl'd per sh B■**	**5.10**

COST EFFICIENCY

General Dynamics also has a very strong Operating and net Profit Margin. Given that the company is later in the development of several large contracts, we expect operating efficiencies to really be coming into play in the future.

32466	32677	31682	31218	30852	31469	31353	**31100**	**32800**	**Revenues ($mill)**	**35000**
13.9%	13.5%	13.3%	13.6%	14.2%	14.8%	15.2%	**15.0%**	**14.5%**	**Operating Margin**	**17.0%**
569.0	592.0	620.0	556.0	496.0	482.0	454.0	**500**	**530**	**Depreciation ($mill) E**	**600**
2628.0	2552.0	2305.0	2486.0	2673.0	2965.0	3062.0	**2950**	**3020**	**Net Profit ($mill)**	**3680**
30.7%	31.4%	32.7%	31.1%	29.7%	27.7%	27.6%	**27.5%**	**27.0%**	**Income Tax Rate**	**29.5%**
8.1%	7.8%	7.3%	8.0%	8.7%	9.4%	9.8%	**9.5%**	**9.2%**	**Net Profit Margin**	**10.5%**

While all of GD's competitors have similar trends upward, none compare in terms of the percentages of increase expected in the future.

INVESTMENT EFFICIENCY

General Dynamics does an excellent job at increasing the percentage returned on their Capital. The company is expected to continue growing that percentage well into the future. Furthermore, the Return on Equity has also benefited from consistent growth over the previous 7-year period. While 2017 will not be as high in either RoE or RoA as it was the previous year, the company does see future numbers growing steadily.

17.2%	15.2%	15.6%	13.7%	17.8%	22.0%	22.3%	**19.5%**	**20.0%**	**Return on Total Cap'l**	**24.5%**
19.7%	19.3%	20.2%	17.1%	22.6%	27.6%	27.9%	**25.5%**	**25.5%**	**Return on Shr. Equity**	**29.0%**

When looking at General Dynamics competitors in regard to their investment efficiencies, GD sits in the middle of the road. Lockheed far exceeds the competition in terms of Return on Capital with a percentage rate of 26% this year and 33% expected in the future, while Raytheon will hit just 15% this year, and 19% in the future.

VALUATION

Unlike most of its peers, General Dynamics has seen its Dividend Yield maintain in the same relative percentage for many years. Its peers on the other hand, have seen their yield declining. Since all four peers have seen explosive growth of their stock price over the past seven years, this signifies that only GD is committed to continuing to reward their investors with sustained dividend growth.

Further, General Dynamics' Price to Earnings ratio remains the lowest among its peers, at just 14.8 at the end of 2016. While the trend over the previous 7 years has seen this number increasing, all industry peers have seen the same trend, and while most peers were around a 10.5 P/E ratio in 2010, compared to GD's 9.9, the closest peer today is NOC with a 17.4 and then LMT and RTN are at 19.2 and 18 respectively.

While General Dynamics' retention ratio has fallen in recent years to 67.68% from a high of 77.71%, it is still well above industry peers. Lockheed Martin reports just 62% in its most recent year, and Raytheon is at just 61%. This higher number for GD indicates that there is still a tremendous growth opportunity, and the company will continue to have cash on hand.

GD:

9.9	9.9	10.4	11.3	15.2	15.5	14.8	*Bold figures are*	Avg Ann'l P/E Ratio	***12.0***
.63	.62	.66	.63	.80	.78	.78	*Value Line*	Relative P/E Ratio	***.75***
2.5%	2.7%	3.0%	2.8%	2.1%	2.0%	2.1%	*estimates*	Avg Ann'l Div'd Yield	***2.6%***

LMT:

10.5	9.9	10.6	11.8	15.1	17.7	19.2	*Bold figures are*	Avg Ann'l P/E Ratio	***15.0***
.67	.62	.67	.66	.79	.89	1.01	*Value Line*	Relative P/E Ratio	***.95***
3.5%	4.2%	4.7%	4.2%	3.2%	3.0%	2.8%	*estimates*	Avg Ann'l Div'd Yield	***3.7%***

RTN:

10.6	8.9	9.5	11.7	14.0	16.2	18.0	*Bold figures are*	Avg Ann'l P/E Ratio	***12.0***
.67	.56	.60	.66	.74	.82	.95	*Value Line*	Relative P/E Ratio	***.75***
3.0%	3.7%	3.7%	3.2%	2.5%	2.5%	2.2%	*estimates*	Avg Ann'l Div'd Yield	***2.6%***

NOC:

10.5	8.3	8.2	10.4	12.9	16.1	17.4	*Bold figures are*	Avg Ann'l P/E Ratio	***16.0***
.67	.52	.52	.58	.68	.81	.91	*Value Line*	Relative P/E Ratio	***1.00***
3.0%	3.2%	3.4%	2.7%	2.1%	1.9%	1.6%	*estimates*	Avg Ann'l Div'd Yield	***1.9%***

RISK ANALYSIS

General Dynamics currently has $3.9 Billion in Long Term Debt outstanding, and approximately $11.5 Billion of Shareholders equity giving them an effective D/E ratio of 33.91%. This number is quite a bit higher than 7 years ago, when their ratio was 18.25%, however it should return to normalized levels within the next 5 years, when almost half of their outstanding debt comes due.

Regarding their ability to cover interest payments, General Dynamics had $4.4B of operating profit in 2017, yet their interest payments were just $91 Million giving them an interest coverage ratio of 51.257.

With respect to cash, they have an efficient conversion recently. In the last quarter they had net cash provided by operating activities of $871 million and free cash flow from operations of $751 million. For the year-to-date, they have cash flow from operations slightly exceeding $1.6 billion.

Business Groups:

1. Aerospace: For the first 3 quarters, earnings are up $120 million, with 1.5% improvement in operating margin. Last quarter shows a good 0.8 to 1 **book to bill ratio** measured on a dollar value of orders basis.
2. Combat systems: This group is showing excellent trend. For the first 3 quarters, Operating earnings are up 12.6%, with 0.6% improvement in operating margin. Combat Systems remains on course for a very good year, and looks promising for growth both internationally and domestically for the group.
3. Marine group: While the revenue has shown a declining trend recently, the higher operating margin coupled with the improved **order book** initiatives mentioned above look encouraging from sustainability standpoint for this group.
   The risk perceived in the Marine group is that of diluted margin, because of fixed-price incentive fee contracts.
4. IS&T: This group has managed to overcome less than anticipated revenue with very strong operating performance.

From Cash flow perspective, GD also made several small acquisitions in aerospace and IS&T groups this year totaling $364 million. Because of smaller acquisitions, the Balance Sheet of GD is preserved in terms of leverage, with no net increase in leverage from M&A recently. Whether large or small acquisitions, GD's focus is on accretive core deals along the way. The management has shown intention to continue to anticipate free cash flow this year to approach 100% of earnings from continuing operations, and continue to deploy 100% of that free cash flow, less the amount spent on acquisitions, to dividends and share repurchases.

The single biggest driver that brings GD down the curve is the working capital. The transition to billing and delivery and collection on the major international programs will be interesting to look in Q4 performance, as GD tries to unwind a good bit of that working capital in the short term.

While emerging markets are showing signs of activity, GD's core continues to be North America, and that's where over half of our order activity and backlog is centered.
From geopolitical standpoint, If Gulfstream questions are not resolved in the near term, it can be a red flag for GD stock.

SUMMARY

Overall, we feel the General Dynamics stock is undervalued. Their earnings, revenue and dividends per share are growing at a faster pace than their competitors, and at the same time, are increasing their net profit and operating margins at levels that far surpass their peers.

While their Return on Equity and Capital can be improved to further increase the value of their company, they are by no means laggards in this category. Increasing their Investment Efficiency will come naturally as more of their large projects reach their mid-life span. A smaller investment in new R&D costs related to those projects will continue to help drive the margins higher.

General Dynamics also benefits from having the highest retention ratio of any of its peers. This signifies that the company has capital on hand should they see worthwhile opportunities to pursue and allows them to continue investing in the company. At the same time, their Price to Earnings ratio is among the lowest of their peers signifying there is value to be had.

FUNDAMENTAL ANALYSIS

(A-D)
Calculate the CAGR of Revenue, Earnings, and Dividend
Calculate the Payout Ratio and the Retention Ratio
Calculate the Return on Capital
Calculate the Fundamental Growth Rate

	Per Share			Payout	Retention					Fundamental
	Revenue	Earnings	Dividend	Ratio	Ratio	Debt	Equity	Shares	RoC	Growth Rate
2010	$ 87.26	$ 6.82	$ 1.52	22.29%	77.71%	$2,430.00	$13,316.00	372.05	12.523%	9.73%
2011	$ 91.68	$ 6.94	$ 1.88	27.09%	72.91%	$3,907.00	$13,232.00	356.44	10.523%	7.67%
2012	$ 89.58	$ 6.48	$ 2.04	31.48%	68.52%	$3,908.00	$11,390.00	353.67	10.265%	7.03%
2013	$ 88.34	$ 7.03	$ 2.24	31.86%	68.14%	$3,908.00	$14,501.00	353.40	9.195%	6.27%
2014	$ 93.01	$ 7.83	$ 2.48	31.67%	68.33%	$3,410.00	$11,829.00	331.70	11.645%	7.96%
2015	$ 101.13	$ 9.08	$ 2.76	30.40%	69.60%	$2,898.00	$10,738.00	311.16	14.422%	10.04%
2016	$ 103.67	$ 9.87	$ 3.04	30.80%	69.20%	$2,988.00	$10,976.00	302.42	14.792%	10.24%
2017	$ 104.35	$ 9.90	$ 3.20	32.32%	67.68%	$3,900.00	$11,500.00	298.00	12.965%	8.77%
CAGR	2.59%	5.47%	11.22%					AVG	12.041%	8.463%

E – CAPM

= $R_f + \beta (R_m - R_f)$
= 2.36% + .96 (5.5%)
= .0236 + .96(.055)
= 0.0764
= **7.64%**

F – Cost of Debt
= Interest / Debt
= 91 / 3979
= 0.02287
= **2.287%**

G – WACC
= RD × WD × (1 - tC) + RE × WE
= 0.02287 * (3979/61000) * (1-.275) + 0.0764 * ((61000-3979)/61000)
= 0.0725
= **7.25%**

H – FCFF
= Operating Margin + Depreciation – CAPEX (+/-) increase/decrease in NWC
= 4675 + 500 – 447.875 + 4200
= **$3752.125 Million**

I – TWO STAGE MODEL / RELATIVE VALUATION

General Dynamics (Growth or Margin)			
10-year T-Bond (12/14/2017)			
12/14/2017			
11/15/2027	2.250%	99.156	99.172
YTM =	2.34%	(= Rf)	
(Rm - Rf) =	5.5%		
Cash Flow =	3.752		
Cap spending =	0.448		
FCF =	3.304		
Beta =	0.96		
Cost of Equity (CAPM) =		7.62%	
10-year GD Bond	11/15/2027		
2.625%	98.97	YTM =	2.74%
Long-term debt (B) =		$ 4.07	b

Market Cap (E) =		$ 61.00	b
Enterprise value (V) =		$ 65.07	
Weight of debt =		6%	
Weight of Equity =		94%	
Tax Rate		28%	
WACC =		7.27%	
Total Cash Flow =		$ 6.28	b
Determine g		-2.38%	
1% increase in constant growth			
New EV with 1% higher growth =		$ 72.60	
Extra value =		$ 7.53	
1% increase in Margin			
Total Revenue =		$ 31.41	b
Increase in FCF =		$ 0.23	b
Value of margin increase =		$ 2.36	b
(RVG) =		**3.2**	

Assumptions and Inputs		
2016 Earnings ($mm)	$ 2,955	*(Fiscal Year 2016 Earnings from 10-K Filing)*
Predicted LT Growth Rate	8%	*(From Tab 1)*
2021 Implied Earnings ($mm)	$ 4,436	
2021 P/E Multiple	20	*(Arbitrary but inline with current S&P 500 Index multiple)*
2021 Implied Market Value ($mm)	$ 89,604	*(2021 Earnings multiplied by P/E multiple to arrive at equity value or "P")*
Current Market Value ($mm)	$ 59,050	*(Current Price multiplied by shares outstanding)*
Annual return to current shareholders	**8.7%**	*(Implied IRR over ten years of GD share price/equity value)*
Current 10 year treasury bond yield	2.4%	*(Proxy for risk free investment)*
Inflation Rate Estimate	2.2%	*(Spot inflation rate - arbitrary)*
Real Return to Current Shareholders	***4.1%***	*(Annual Return adjusted for risk and inflation)*

Sensitivity Analysis on Annual Return to Shareholders

		Long-Term Growth Rate					
		15%	**17%**	**19%**	**21%**	**23%**	**25%**
	10	0.1%	1.9%	3.6%	5.4%	7.1%	8.8%
	15	8.6%	10.5%	12.4%	14.3%	16.1%	18.0%
	20	15.0%	17.0%	19.0%	21.0%	23.0%	25.0%
Terminal	**25**	20.3%	22.4%	24.5%	26.5%	28.6%	30.7%
P/E Multiple	**30**	24.7%	26.9%	29.1%	31.2%	33.4%	35.6%
	35	28.6%	30.9%	33.1%	35.4%	37.6%	39.8%
	40	32.1%	34.4%	36.7%	39.0%	41.3%	43.6%
	45	35.3%	37.6%	40.0%	42.3%	44.7%	47.0%
	50	38.2%	40.6%	43.0%	45.4%	47.8%	50.2%

Enterprise Value = 65.07B
<u>Value of Debt = 4.072B</u>
Value of Equity = 60.998

Implied Stock Price = Value of Equity / Number of Shares
= 60.998 B / 298,582,883
= **$204.29** Share Price

CORPORATE GOVERNANCE

The General Dynamics Board of Directors is comprised of 11 individuals. Chairman of the Board is the company's CEO, Phebe Novakovic. She has been with the company since 2002 and has serves a variety of roles throughout her tenure.

Of the remaining 10 members of the Board, only one has direct ties to the company, and that is Nicholas Chabraja, who was the former CEO. However, there are four others with direct senior military connections which might be a potential conflict given that the U.S. Government accounts for 60% of GD's revenues.

Also, worth noting is that Phebe Novakovic also serves as a director on the boat for Abbott Laboratories, along with two other board members. Therefore, certain allegiances might be formed.

INSIDER TRANSACTIONS

Insiders of General Dynamics currently hold approximately 17.61 Million shares which equates to just under 6% of all holdings. Within the past 6 months, insiders have purchased more shares than they have sold, but in general the amount of insider shares transacted amount to just over 1% of their entire holdings, so not very significant.

Nicholas Chabraja and Phebe Novakovic together hold approximately 950,000 shares, and neither has made a significant disposition of their holding within the past two years. This indicates that both feel the stock is still undervalued and through their leadership will continue to grow.

RISK FACTORS

As with any stock primarily in the defense sector, there are quite a few risks present. Firstly, their revenue stream is significantly dependent on a single customer, the U.S. Government. Should the U.S. Government fail to pass a budget, or significantly decrease spending to the defense sector, GD will be severely impacted. Luckily the current President has vowed to continue increasing spending within this area.

A second risk factor that coincides with the first would adversely impact General Dynamics' business would be world peace, or prolonged periods without conflict. General Dynamics however is better situated for such a situation however as they do have Gulfstream Aerospace which primarily serves the commercial sector, whereas most of their direct peers deal mostly with militaries.

Speaking of Gulfstream, should there be a significant design failure of one of its aircraft designs that results in either a significant loss of life, or a recall, the company will likely see decreased sales from that unit which would of course hurt the companies diversified earnings.

Lastly, given the numerous security breaches happening around the country, such as Uber or Equifax, should there be a cyber intrusion of one of GD:IT's managed clients it could potentially result in significant negative publicity for the company. This organization has been growing steadily and a breach like this could halt future growth.

Recommendation

Given all the information contained within this report, we feel that at this time you should **BUY** General Dynamics' stock. The stocks implied value of $204.29 per share is below where the stock is currently trading ($197.99). Furthermore, given the company's order backlog and projected growth from new projects in the pipeline, as well as the proposed budget increases, we see the enterprise value continuing to rise. Lastly, in relation to other companies within this sector General Dynamics has more reliable dividend growth and better, more consistent revenue growth. For those reasons, we affirm the Buy rating.