



**MAGELLAN**  
**A E R O S P A C E**

## Buy Presentation

Industrials

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WESTERN INVESTMENT CLUB

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# Company Overview

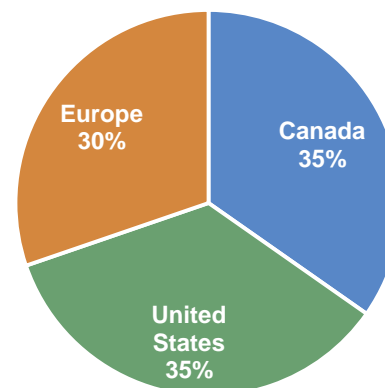


*Magellan Aerospace is a diversified manufacturer of components to the aerospace and defence industry*

## Key Financials – CAD

<b>Ticker</b>	TSX:MAL
<b>Stock Price (\$)</b>	\$18.05
<b>52-Week Range</b>	\$14.03-\$19.87
<b>Market Cap (\$)</b>	\$1,083M
<b>P/E (LTM)</b>	14.9x
<b>EV/EBITDA (LTM)</b>	7.8x

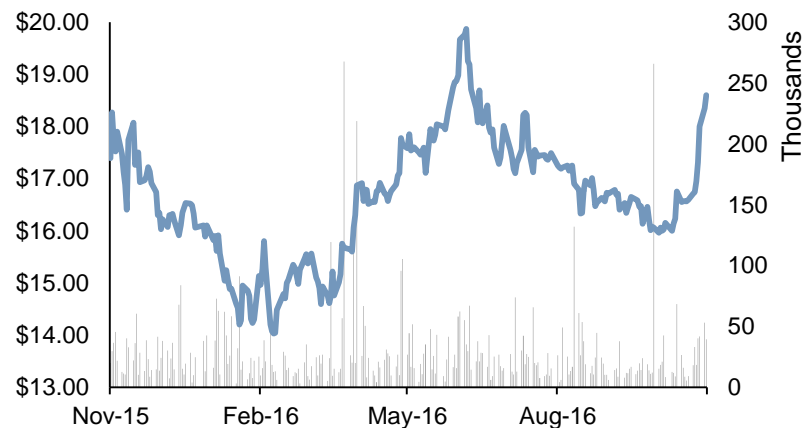
## Geographic Revenue Breakdown



## Business Overview

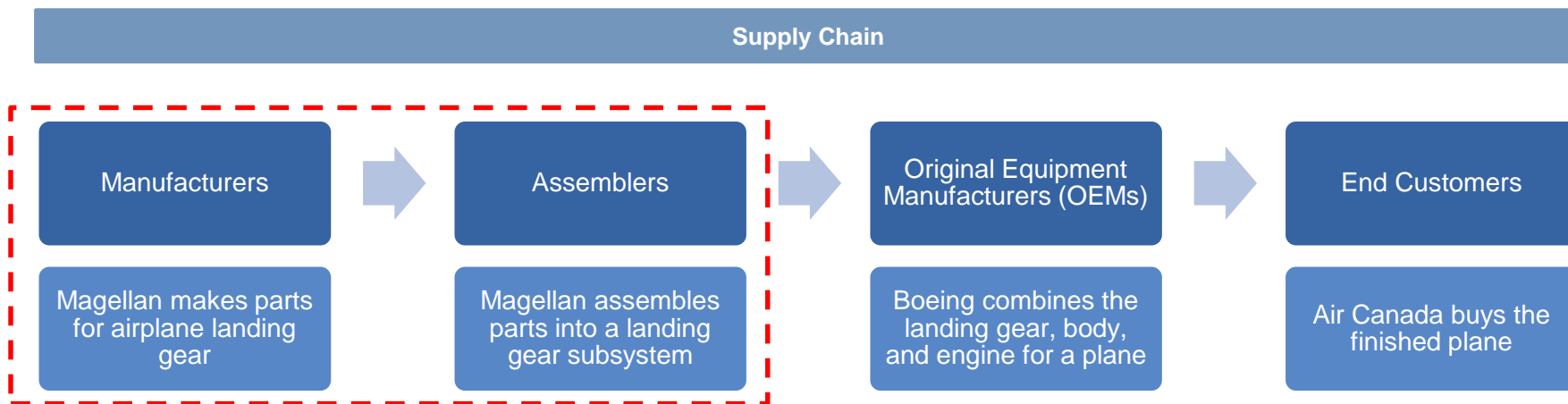
- Magellan engages in the designing, engineering, manufacturing, and repairing and overhauling of components and assemblies for the aerospace industry
- Magellan derives 75% of revenue from commercial markets and 25% from defence markets

## Stock Chart



# Company Overview

*Magellan operates as a supplier in the aerospace and defense industry*



## Contracts

- OEMs typically negotiate multi-year contracts to purchase from manufacturers and assemblers
- Important to deliver on time and on specifications in order to get contracts renewed
- Contracts can be for new or replacement/maintenance parts

## End Customers

- Governments and militaries are the main consumers of aerospace and defense products including fighter jets and missiles
- Airlines purchase new commercial aircraft and maintenance parts
- Telecom and government agencies purchase satellites for data transmission and scientific purposes



# Company Overview

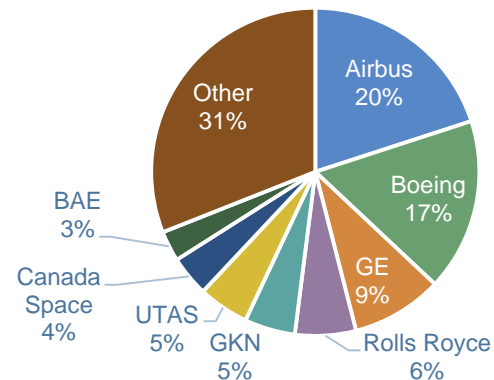
*Magellan is a supplier to major players in the aerospace industry*

## Products

- **Aerostructure**
  - Landing gear
  - Airplane wings and tails
  - Designing and engineering
  - Stress analysis and testing
- **Aeroengine**
  - Engine frames
  - Gear systems
  - Engine maintenance
- **Casting**
  - Power transmission housing
  - Engine mounted gearbox housings
- **Space/Other**
  - Satellites and satellite subsystems



## Revenue Split by Customer



## Product Specialties

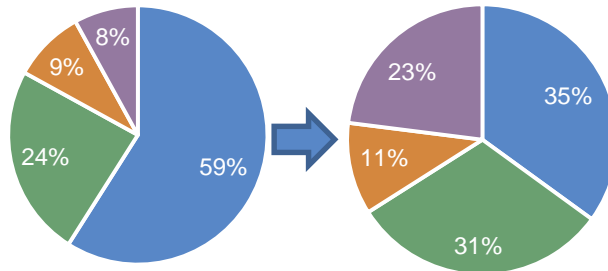
- Precision metal manufacturing
- Complex metal castings
  - Titanium
  - Magnesium
  - Aluminium

# Investment Thesis – Improving Margins

*Magellan is positioned for a more balanced business mix by 2020 through organic growth and M&A that should result in increased margins*

## Balanced Growth Profile

- Aerostructure
- Aeroengine
- Casting
- Space/Other



- Magellan’s goal to reduce Aerostructure’s % of revenue should improve margins as this segment is more susceptible to pricing pressure from OEMs
- 2015 acquisitions of Euravia (UK maintenance, repair, and overhaul solutions for aircraft and helicopter engines) and Ripak (New York aerospace processing facility) have yet to reach full run-rate providing further margin upside
- Greater exposure to aftermarket services when compared to comps will yield higher margins as well

## Growth Segments

- Magellan has exposure to other commercial aircraft platforms through Pratt & Whitney, which include Bombardier’s C-Series, Embraer’s E-Jet E2, and Mitsubishi’s MRJ
- Although its current contract is coming to an end, there is the potential for further contracts from Macdonald, Dettweiler and Associates for satellites as well as with the Canadian Space Agency
- Leveraging expertise in space sector to target new markets for satellite buses, spacecraft avionics, and broadband internet service satellites; Magellan is established as Canada’s sole supplier of small satellite buses (frames)
- Signed an agreement with Atlas Elektronik in May 2016 to collaborate on the development of rocket motor sections for the SeaSpider Anti-Torpedo-Torpedo

# Investment Thesis – F-35 Fighter Jet

*Risks surrounding the F-35 fighter jet program are overblown and the Canadian government is unlikely to purchase another fighter jet to satisfy its military needs*

## F-35 Fighter Jet

- **F-35 is the most current generation of fighter jet and is made by Lockheed Martin**
  - Additional sensors, data sharing capabilities, and stealth technology; this is crucial to securing Canada's role in NATO and its national security
- **Canadian Military is to complete purchase of F-35 fighter jets starting this year, but Trudeau is trying to change this**
  - 66 F-35 jets are scheduled to replace Canada's aging fleet of 77 CF-18 jets made by McDonnell Douglas, but the Liberal government has pledged to not buy the jet and is considering other jets such as Boeing's F/A-18 Super Hornet
- **Magellan produces horizontal tails for the F-35 fighter jet**
  - Under sub-contract with BAE Systems which offers the potential for > 1,000 horizontal tails from 2014 to 2034, implying a CAD\$2B revenue opportunity

## Unlikely to Leave the F-35

- **Arguments against the F-35's performance are weak**
  - Concerns about the reliability of the F-35's single engine compared to the F/A-18's twin engines are reduced as Denmark announced its purchase of 27 F-35 jets, reinforcing the jet's ability to perform in arctic regions
- **Canada has already paid CAD\$311M to support the F-35, with its most recent payment this year of CAD\$30M**
- **F-35 is important to the Canadian military and economy**
  - Value of Canadian parts and sustainment contracts for the F-35 program is expected to reach CAD\$1B by the end of the year, with an expected lifetime value of > CAD\$10B, for approximately 110 Canadian companies
  - "Not selecting the F-35 will set off a chain of events that will see hundreds of millions of investment dollars lost and high-tech jobs leaving Canada, going to countries who are buying the F-35" — Lockheed Martin's Open Letter



# Investment Thesis – F-35 Fighter Jet



**DCF analysis of the scenario where Magellan loses the F-35 contract suggests that there is minimal impact of the loss of F-35 fighter jet on Magellan's free cash flow**

Revenue Build	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020
Canada	\$ 365.9	\$ 337.5	\$ 301.5	\$ 325.2	\$ 330.4	\$ 340.4	\$ 314.5	\$ 287.9	\$ 296.5	\$ 305.4
<i>Growth</i>		-8%	-11%	8%	2%	3%	3%	3%	3%	3%
United States	187.7	199.9	232.3	272.6	333.1	359.7	381.3	400.4	416.4	428.9
<i>Growth</i>		7%	16%	17%	22%	8%	6%	5%	4%	3%
Europe	137.9	166.6	218.4	245.2	287.9	311.0	332.8	352.7	366.8	377.8
<i>Growth</i>		21%	31%	12%	17%	8%	7%	6%	4%	3%
<i>FX Effect</i>						0%	0%	0%	0%	0%
Lost F-35 Revenue							-35.0	-35.0		
<b>Revenue</b>	<b>691.4</b>	<b>704.0</b>	<b>752.1</b>	<b>843.0</b>	<b>951.5</b>	<b>1,011.1</b>	<b>1,028.6</b>	<b>1,041.0</b>	<b>1,079.8</b>	<b>1,112.1</b>
<i>Revenue Growth</i>		1.8%	6.8%	12.1%	12.9%	6.3%	1.7%	1.2%	3.7%	3.0%
<b>EBIT</b>	<b>57.3</b>	<b>59.6</b>	<b>65.5</b>	<b>85.6</b>	<b>107.6</b>	<b>123.3</b>	<b>126.5</b>	<b>129.1</b>	<b>135.0</b>	<b>139.0</b>
<i>EBIT Margin</i>	8.3%	8.5%	8.7%	10.1%	11.3%	12.2%	12.3%	12.4%	12.5%	12.5%
Effective Tax Rate	9.6%	5.6%	25.1%	26.6%	20.9%	21.0%	21.0%	21.0%	21.0%	21.0%
<b>EBIAT</b>	<b>51.8</b>	<b>56.2</b>	<b>49.1</b>	<b>62.8</b>	<b>85.1</b>	<b>97.4</b>	<b>99.9</b>	<b>102.0</b>	<b>106.6</b>	<b>109.8</b>
D / A	32.8	31.2	33.3	35.3	45.0	45.5	46.3	46.8	48.6	50.0
<i>% of Revenue</i>	4.7%	4.4%	4.4%	4.2%	4.7%	4.5%	4.5%	4.5%	4.5%	4.5%
CapEx	59.3	33.7	31.3	35.5	43.9	46.5	51.4	52.0	51.8	51.2
<i>% of Revenue</i>	8.6%	4.8%	4.2%	4.2%	4.6%	4.6%	5.0%	5.0%	4.8%	4.6%
Change in NWC	12.5	22.9	10.3	23.2	40.9	38.4	39.1	39.6	41.0	42.3
<i>% of Revenue</i>	1.8%	3.3%	1.4%	2.8%	4.3%	3.8%	3.8%	3.8%	3.8%	3.8%
<b>Free Cash Flow (Ex-F-35)</b>	<b>12.8</b>	<b>30.8</b>	<b>40.8</b>	<b>39.3</b>	<b>45.3</b>	<b>58.0</b>	<b>55.7</b>	<b>57.2</b>	<b>62.4</b>	<b>66.5</b>
<b>Free Cash Flow (Base)</b>	<b>12.8</b>	<b>30.8</b>	<b>40.8</b>	<b>39.3</b>	<b>45.3</b>	<b>62.1</b>	<b>67.2</b>	<b>72.4</b>	<b>77.1</b>	<b>81.6</b>
<b>Difference</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>(4.0)</b>	<b>(11.5)</b>	<b>(15.2)</b>	<b>(14.7)</b>	<b>(15.1)</b>



# Investment Thesis – F-35 Fighter Jet

*Sensitivity analysis suggests there is limited downside in the event Magellan loses work from the F-35*

## Sensitivity Analysis for Loss of F-35

### Sensitivity Analysis – Loss of F-35

		Exit Multiple				
		7.0x	7.5x	8.0x	8.5x	9.0x
WACC	6.6%	-3.9%	2.8%	9.6%	16.3%	23.1%
	7.1%	-6.1%	0.5%	7.1%	13.7%	20.3%
	7.6%	-8.3%	-1.8%	4.7%	11.2%	17.6%
	8.1%	-10.3%	-4.0%	2.3%	8.7%	15.0%
	8.6%	-12.4%	-6.2%	0.0%	6.2%	12.4%

### Sensitivity Analysis – Loss of F-35

		Annual FX Effect				
		-5.0%	-2.5%	0.0%	2.5%	5.0%
WACC	6.6%	-9.7%	-0.5%	9.6%	20.6%	32.7%
	7.1%	-11.8%	-2.8%	7.1%	17.9%	29.7%
	7.6%	-13.8%	-5.0%	4.7%	15.3%	26.9%
	8.1%	-15.8%	-7.2%	2.3%	12.7%	24.1%
	8.6%	-17.7%	-9.3%	0.0%	10.2%	21.3%



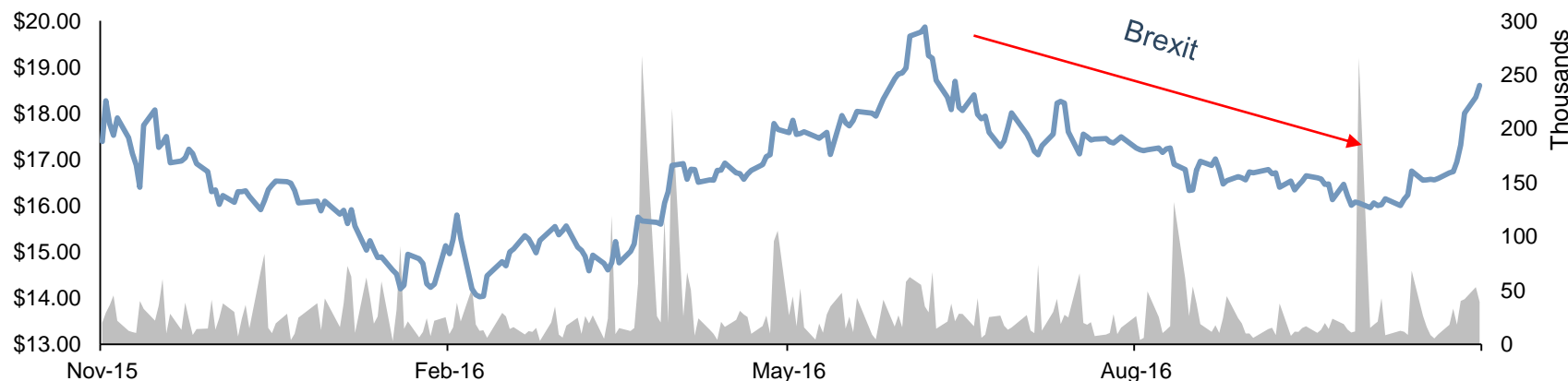
# Investment Thesis – Brexit

*Despite Magellan having minimal exposure to effects of Brexit, shares have sold off since the event*

## Unjustly Punished for Brexit

- **GBPCAD exchange rate is down 16.35% YTD as a result of Brexit, but does not affect Magellan's profitability**
  - Share price has declined over concerns that Magellan's revenues from the UK will be reduced due to the exchange rate
  - Magellan's UK revenue is mainly denominated in USD with non-labour costs in USD and labour costs in GBP
  - Impact is minimal as UK operations lean towards manufacturing, which is more material intensive
- **Risks caused by changes in trade regulation are low**
  - If UK competitiveness or activity decreases, Magellan's new and growing operations in Poland, which is a lower-cost region, can still serve the European market
  - European aerospace industry relies on the UK and executives are working to secure the industry
  - UK could strike a new trade deal, or alternatively, World Trade Organisation rules could come into force whereby they enforce zero tariffs on aerospace component makers

## Annotated Stock Chart



# Internal Analysis

*Magellan has landed major contracts, grown revenue, delivered quality products, and increased profitability*

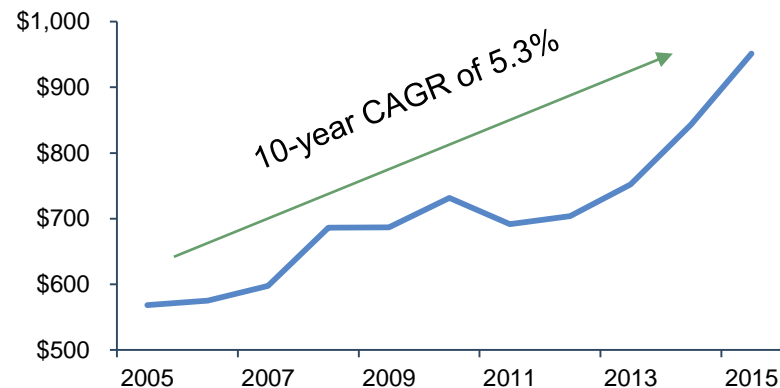
## Major Contracts

- **May 2016**
  - Signed contract with GKN Aerospace to deliver precision aluminium and titanium components for the A320, A330, and A380 aircraft programs, which represents CAD\$130M of revenue through 2020
- **October 2016**
  - Signed contract with Boeing to supply complex titanium machined components for 777X and 787
  - Signed contract with BAE Systems for F-35 tail fins, which represents CAD\$70M of revenue for two years

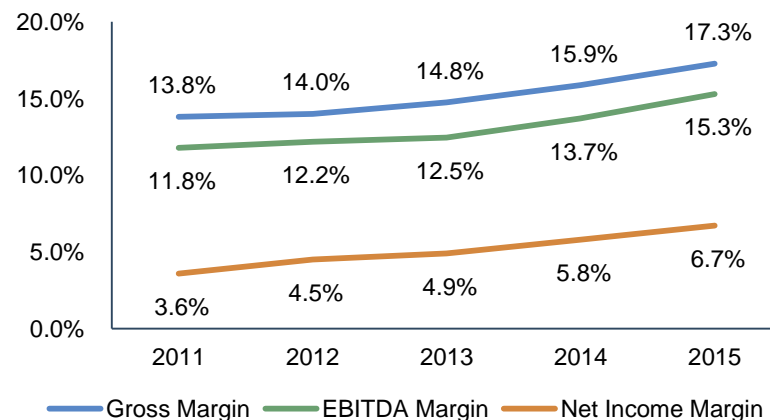
## Black Brant Rocket

- Black Brant rocket is manufactured by Magellan and can carry payloads of 70-850kg to altitudes of 150km to 1,500km
- Since starting production in 1962, Magellan has delivered over 1,000 rockets with a success rate of 99%
  - There was a failure in 1990, but it was the guidance system (built by another contractor) that failed

## Revenue Split by Customer



## Margin Expansion



# Management Team

*Management's expertise maintains their apex position in the industry*

## *Phillip Underwood President and CEO*

- Held a number of senior aerospace industry positions with GKN Aerospace before joining Magellan
- Led Magellan's UK operation and partnership in India for 10 years

## *Larry Winegarden VP Corporate Strategy*

- Held various financial management positions prior to joining Magellan Aerospace
- Saw Magellan through 2 significant M&A transactions in 2012

## *N. Murray Edwards Chairman of the Board*

- Ex-CEO (stepped down in 2002) still has extensive industry experience and positively influences decision making
- Owns 74% of Magellan's common equity



# External Analysis

*Two largest customers are expected to increase production, Magellan primed to utilize operational superiority*

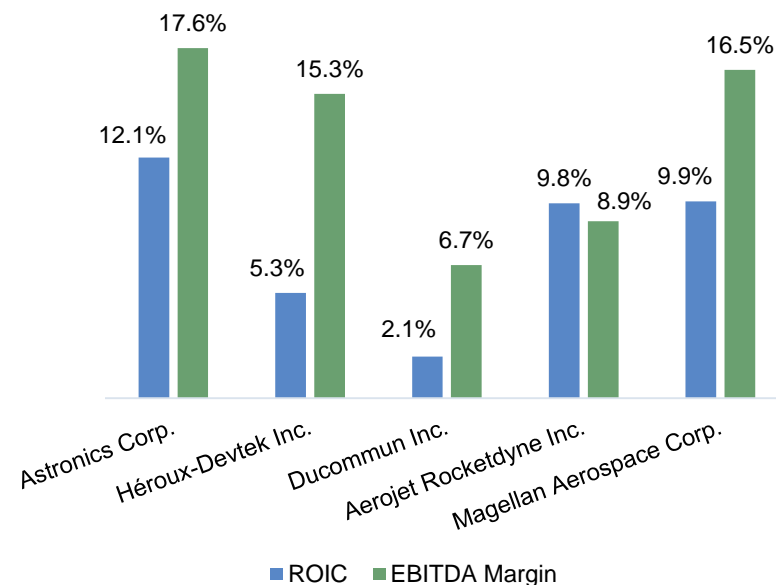
## Airbus – 20% of Revenue

- Supplier to A320, A330, and A380 aircrafts
- Backlog:
  - A320: 12,830 | A330: 345 | A380: 319
- Plans to ramp-up production and projected to increase A320 production to 60/month by 2019
- Production rate increase for A330 is scheduled to take effect in January 2017 and will raise production from 6/month to 7/month

## Boeing – 17% of Revenue

- B737
  - Backlog of 4,385 airplanes
  - Current production: 42 / month
  - Projected 2017: 47 / month
  - Projected 2018: 52 / month
  - Projected 2019 : 57 / month
- B787
  - Backlog of 724 airplanes
  - Current production: 12 / month
  - Projected 2020: 14 / month

## Return on Invested Capital (LTM)



- Magellan boasts above average on historical returns on invested capital
- EBITDA margins are reflective of Magellan's pricing power - only Astronics (portfolio) is better
- Margin expansion through the development of new projects is expected into FY2017



# External Analysis

*According to the International Air Transport Association, global passenger traffic grew 6.5% from 2014 to 2015*

## Europe – 30% of Revenue

- Devaluation of the GBP against the CAD could open opportunities for M&A activity in the UK
- Magellan has existing operations in the UK that should continue to grow given its expertise in the region because the CEO came with the acquisition of UK-based Mayflower in 2003
- Operations in Poland are strategic as they are in close proximity to European customers and have lower labour costs compared to the UK

## India – Growth Segment

- Magellan currently has two joint ventures in India: Mahindra Aerospace (Indian-based aerospace manufacturer) and Aerospace Processing India (provider of aerospace surface treatment)
- Indian government recently raised foreign ownership ceiling for the defence sector from 49% to 100%, which opens up the possibility for further M&A or a wholly-owned subsidiary
- Indian Prime Minister Modi has recently signed a military logistics exchange agreement: government will not impose customs duties, excise or import/export taxes on goods and services provided to US warships, aircraft, and land forces that may access Indian military facilities



# Valuation – Comparable Companies Analysis



\$ in CAD millions, except per share data, ratios, and multiples

Closest comparables highlighted in green

Company Name	Market Cap.	EV	EV / EBITDA			P/E			5Y Beta	5Y Rev. CAGR	Debt / EBITDA	EBITDA Margin %	5Y ROIC
			LTM	2017E	2018E	LTM	2017E	2018E					
<b>Aerospace and Defense Manufacturers – Mid and Large Cap</b>													
United Technologies Corporation	\$ 112,519	\$ 135,895	9.8x	9.4x	9.4x	19.4x	15.4x	15.5x	1.10	0.2%	2.2x	17.9%	9.8%
Textron Inc.	14,316	18,647	8.7x	8.9x	8.2x	17.2x	14.7x	13.6x	1.77	4.5%	2.4x	11.5%	8.3%
Orbital ATK, Inc.	5,789	7,843	9.4x	8.7x	8.4x	20.1x	13.4x	12.3x	-	-	2.6x	13.5%	NM
Curtiss-Wright Corporation	5,233	5,922	10.9x	10.8x	10.4x	23.6x	21.5x	19.9x	1.26	1.4%	2.4x	19.1%	8.1%
Moog Inc.	2,778	3,748	8.7x	9.1x	8.7x	17.7x	16.0x	15.4x	1.62	1.1%	3.4x	13.3%	6.6%
Mean			9.5x	9.4x	9.0x	19.6x	16.2x	15.3x	1.44	1.8%	2.6x	15.1%	8.2%
Median			9.4x	9.1x	8.7x	19.4x	15.4x	15.4x	1.44	1.3%	2.4x	13.5%	8.2%
<b>Aerospace and Defense Manufacturers – Small Cap</b>													
Aerojet Rocketdyne Holdings, Inc.	1,637	2,180	10.8x	7.0x	6.5x	46.5x	29.3x	17.0x	1.57	14.8%	4.3x	8.9%	9.0%
Astronics Corporation	1,416	1,612	10.0x	10.8x	9.5x	19.7x	18.8x	15.9x	1.62	26.3%	1.4x	17.6%	13.1%
Heroux-Devtek Inc.	522	651	10.5x	9.4x	8.1x	24.9x	18.2x	14.1x	0.42	3.7%	2.2x	15.3%	5.0%
Ducommun Inc.	289	526	9.8x	7.2x	6.5x	58.4x	8.0x	10.7x	0.96	7.8%	4.7x	6.7%	2.6%
Mean			10.3x	8.6x	7.6x	37.4x	18.6x	14.4x	1.14	13.1%	3.2x	12.1%	7.4%
Median			10.3x	8.3x	7.3x	35.7x	18.5x	15.0x	1.27	11.3%	3.3x	12.1%	7.0%
Magellan Aerospace Corp.	\$ 1,083	\$ 1,292	7.8x	7.4x	7.1x	14.9x	12.4x	11.5x	0.45	6.7%	1.3x	16.5%	9.1%
<b>Overall Mean</b>			<b>9.8x</b>	<b>9.0x</b>	<b>8.4x</b>	<b>27.5x</b>	<b>17.3x</b>	<b>14.9x</b>	<b>1.29</b>	<b>7.5%</b>	<b>2.8x</b>	<b>13.8%</b>	<b>7.8%</b>
<b>Overall Median</b>			<b>9.8x</b>	<b>9.1x</b>	<b>8.4x</b>	<b>20.1x</b>	<b>16.0x</b>	<b>15.4x</b>	<b>1.42</b>	<b>4.1%</b>	<b>2.4x</b>	<b>13.5%</b>	<b>8.2%</b>





# Valuation – Discounted Cash Flow Analysis



Stub period of 2016H2

(\$ in CAD millions)	2013A	2014A	2015A	2016E*	2017E	2018E	2019E	2020E
<b>Unlevered Free Cash Flow</b>	\$ 40.8	\$ 39.3	\$ 45.3	\$ 62.1	\$ 67.2	\$ 72.4	\$ 77.1	\$ 81.6
<b>Less: Current Stub</b>				(36.5)				
Discount Period				0.25	1.00	2.00	3.00	4.00
Discount Factor				0.98	0.93	0.86	0.80	0.75
<b>PV of Free Cash Flows</b>				\$ 24.9	\$ 62.5	\$ 62.5	\$ 61.9	\$ 60.9

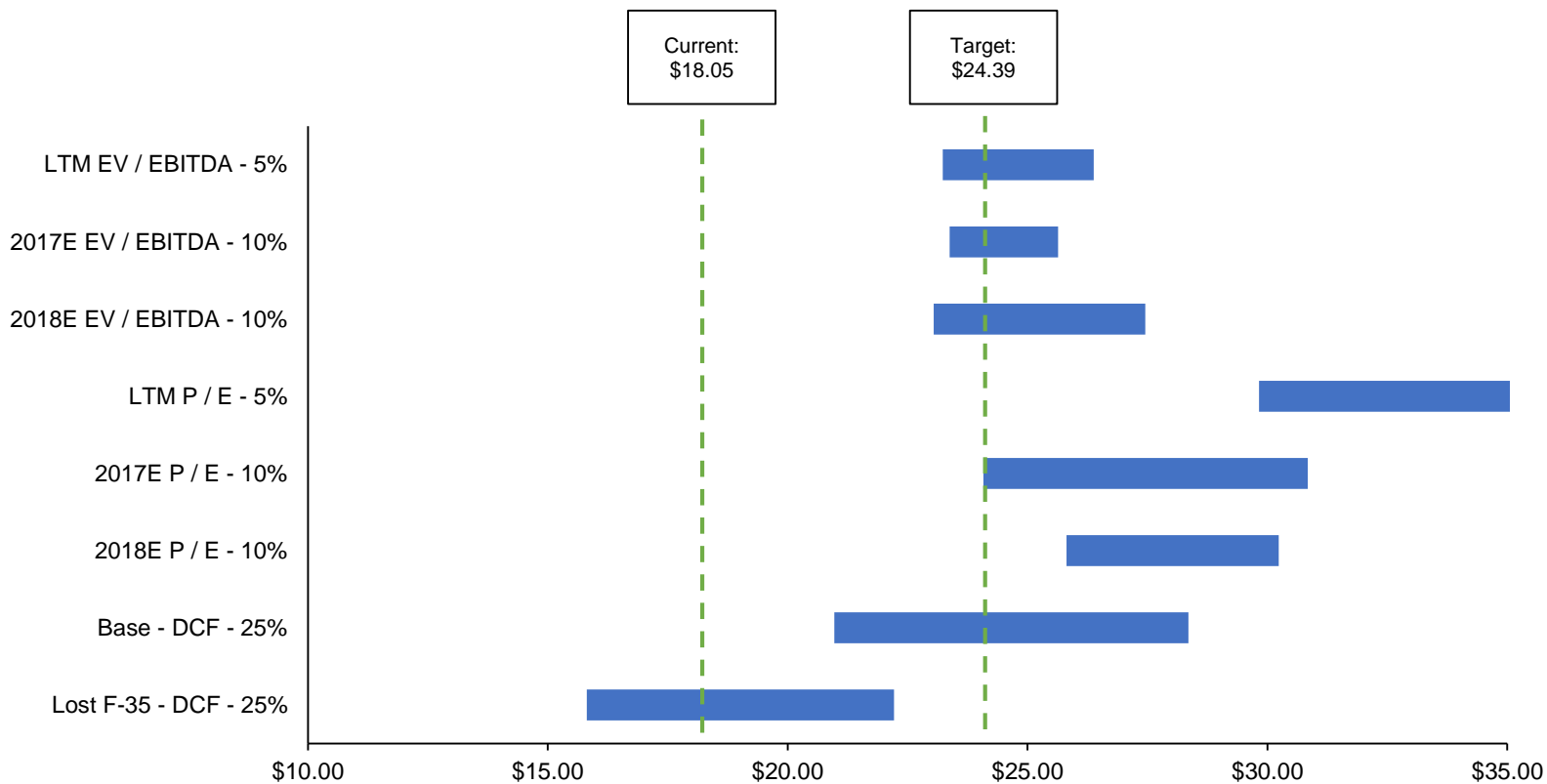
<b>WACC</b>	<b>7.6%</b>
Exit Multiple	9.0x
2020E EBITDA	\$ 210.9
PV of Terminal Value	\$ 1,364.8
Implied Perpetuity Growth Rate	3.0%
<b>Total Enterprise Value</b>	<b>\$ 1,637.5</b>
Debt	\$ 214.7
Cash	5.0
<b>Total Equity Value</b>	<b>\$ 1,427.8</b>
Shares Outstanding (millions)	58.2
<b>Fair Value Per Share</b>	<b>\$ 24.53</b>
Current Price	\$ 18.05
Implied Upside	35.9%

## Sensitivity Analysis – Implied Upside

WACC	Exit Multiple				
	8.0x	8.5x	9.0x	9.5x	10.0x
6.6%	27.0%	34.5%	42.0%	49.6%	57.1%
7.1%	24.2%	31.6%	38.9%	46.3%	53.7%
7.6%	21.5%	28.7%	35.9%	43.1%	50.3%
8.1%	18.8%	25.9%	32.9%	40.0%	47.1%
8.6%	16.2%	23.1%	30.1%	37.0%	43.9%

# Valuation – Football Field

Price target of \$24.39 implies a 35.1% upside



# Risks and Catalysts

*New contracts, increased diversification, and decisions on major issues are all potential impacting factors*

## Risks

- Contract risk
- Loss of F-35
- FX exposure risk
  - Mitigated as revenues and expenses are mainly in USD (~60%)
- Ownership of common shares
  - Low trading volume as N. Murray Edwards (Chairman and President) owns 74% of common shares

## Catalysts

- Decision on F-35 program
- Decision on new trade terms for UK
- Contract announcements
- M&A activity, particularly in Poland and India



# Recommendation

Buy at current price of \$18.05 with price target of \$24.39



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# Appendix – Canadian Aerospace and Defense

## *Canada is a major player in the global aerospace and defense industry*

- **Canada is highly involved in the global aerospace and defense industry**
  - Canada ranks 3<sup>rd</sup> in terms of civil aircraft production despite its relatively small population
  - Highly integrated into global value chains as the industry reported that it exported 80% of its production
  - Canada has well-developed transportation and trade infrastructure to the US, Mexico, and other global markets through the North American Free Trade Agreement (NAFTA) and the pending Comprehensive Economic Trade Agreement (CETA) with the European Union
  
- **Canada is highly competitive in the global aerospace and defense industry**
  - First country to offer a tariff-free zone for industrial manufacturers, meaning investors can import advanced machinery and equipment free of import duties and quickly write off these capital investments as Canada allows for straight-line depreciation
  - Canadian institutions awarded almost 14,000 undergraduate degrees in engineering in 2014 (more than the US on a per-capita basis) and approximately 3,000 students graduate from aerospace-related courses programs at Canadian institutions each year

# Appendix – Free Cash Flow Build



Revenue Build	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020
Canada	\$ 365.9	\$ 337.5	\$ 301.5	\$ 325.2	\$ 330.4	\$ 340.4	\$ 354.0	\$ 368.1	\$ 382.9	\$ 398.2
<i>Growth</i>		-8%	-11%	8%	2%	3%	4%	4%	4%	4%
United States	187.7	199.9	232.3	272.6	333.1	359.7	381.3	400.4	416.4	428.9
<i>Growth</i>		7%	16%	17%	22%	8%	6%	5%	4%	3%
Europe	137.9	166.6	218.4	245.2	287.9	311.0	332.8	352.7	366.8	377.8
<i>Growth</i>		21%	31%	12%	17%	8%	7%	6%	4%	3%
<i>FX Effect</i>						0%	0%	0%	0%	0%
<b>Revenue</b>	<b>691.4</b>	<b>704.0</b>	<b>752.1</b>	<b>843.0</b>	<b>951.5</b>	<b>1,011.1</b>	<b>1,068.0</b>	<b>1,121.2</b>	<b>1,166.1</b>	<b>1,204.9</b>
<i>Revenue Growth</i>		1.8%	6.8%	12.1%	12.9%	6.3%	5.6%	5.0%	4.0%	3.3%
<b>EBIT</b>	<b>57.3</b>	<b>59.6</b>	<b>65.5</b>	<b>85.6</b>	<b>107.6</b>	<b>123.3</b>	<b>132.4</b>	<b>141.3</b>	<b>149.3</b>	<b>156.6</b>
<i>EBIT Margin</i>	8.3%	8.5%	8.7%	10.1%	11.3%	12.2%	12.4%	12.6%	12.8%	13.0%
Effective Tax Rate	9.6%	5.6%	25.1%	26.6%	20.9%	21.0%	21.0%	21.0%	21.0%	21.0%
<b>EBIAT</b>	<b>51.8</b>	<b>56.2</b>	<b>49.1</b>	<b>62.8</b>	<b>85.1</b>	<b>97.4</b>	<b>104.6</b>	<b>111.6</b>	<b>117.9</b>	<b>123.7</b>
D / A	32.8	31.2	33.3	35.3	45.0	45.5	48.1	50.5	52.5	54.2
<i>% of Revenue</i>	4.7%	4.4%	4.4%	4.2%	4.7%	4.5%	4.5%	4.5%	4.5%	4.5%
CapEx	59.3	33.7	31.3	35.5	43.9	46.5	49.1	51.6	53.6	55.4
<i>% of Revenue</i>	8.6%	4.8%	4.2%	4.2%	4.6%	4.6%	4.6%	4.6%	4.6%	4.6%
Change in NWC	12.5	22.9	10.3	23.2	40.9	34.4	36.3	38.1	39.6	41.0
<i>% of Revenue</i>	1.8%	3.3%	1.4%	2.8%	4.3%	3.4%	3.4%	3.4%	3.4%	3.4%
<b>Free Cash Flow (Base)</b>	<b>12.8</b>	<b>30.8</b>	<b>40.8</b>	<b>39.3</b>	<b>45.3</b>	<b>62.1</b>	<b>67.2</b>	<b>72.4</b>	<b>77.1</b>	<b>81.6</b>



# Appendix – Sensitivity Analysis

## Sensitivity Analysis – Base

		Exit Multiple				
		8.0x	8.5x	9.0x	9.5x	10.0x
WACC	6.6%	27.0%	34.5%	42.0%	49.6%	57.1%
	7.1%	24.2%	31.6%	38.9%	46.3%	53.7%
	7.6%	21.5%	28.7%	35.9%	43.1%	50.3%
	8.1%	18.8%	25.9%	32.9%	40.0%	47.1%
	8.6%	16.2%	23.1%	30.1%	37.0%	43.9%

## Sensitivity Analysis – Base

		Annual FX Effect				
		-5.0%	-2.5%	0.0%	2.5%	5.0%
WACC	6.6%	19.8%	30.4%	42.0%	54.8%	68.7%
	7.1%	17.1%	27.5%	38.9%	51.4%	65.1%
	7.6%	14.5%	24.7%	35.9%	48.1%	61.5%
	8.1%	12.0%	22.0%	32.9%	44.9%	58.1%
	8.6%	9.5%	19.3%	30.1%	41.8%	54.7%

## Sensitivity Analysis – Loss of F-35

		Exit Multiple				
		7.0x	7.5x	8.0x	8.5x	9.0x
WACC	6.6%	-3.9%	2.8%	9.6%	16.3%	23.1%
	7.1%	-6.1%	0.5%	7.1%	13.7%	20.3%
	7.6%	-8.3%	-1.8%	4.7%	11.2%	17.6%
	8.1%	-10.3%	-4.0%	2.3%	8.7%	15.0%
	8.6%	-12.4%	-6.2%	0.0%	6.2%	12.4%

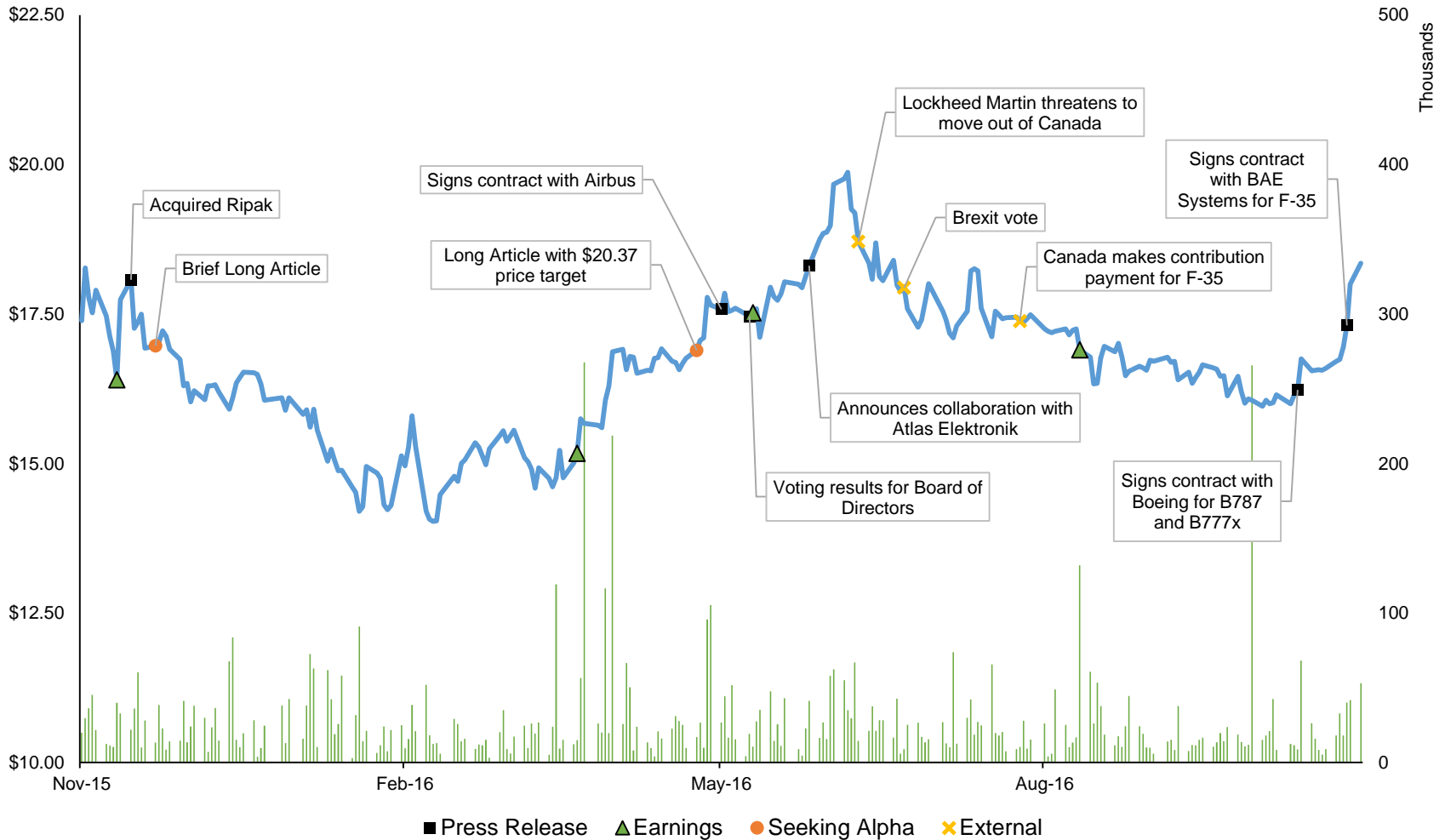
## Sensitivity Analysis – Loss of F-35

		Annual FX Effect				
		-5.0%	-2.5%	0.0%	2.5%	5.0%
WACC	6.6%	-9.7%	-0.5%	9.6%	20.6%	32.7%
	7.1%	-11.8%	-2.8%	7.1%	17.9%	29.7%
	7.6%	-13.8%	-5.0%	4.7%	15.3%	26.9%
	8.1%	-15.8%	-7.2%	2.3%	12.7%	24.1%
	8.6%	-17.7%	-9.3%	0.0%	10.2%	21.3%



# Appendix – Annotated Stock Chart

*Magellan's stock price has seen major movements in the past year*





# Appendix – WACC Calculation

*WACC Calculation using adjusted Beta of 0.63 compared to Raw Beta of 0.45*

## WACC Calculation

### Capital Structure

Debt	16.5%
Equity	83.5%

### Cost of Debt

Cost of Debt	3.1%
Tax Rate	25.0%
After-tax Cost of Debt	2.3%

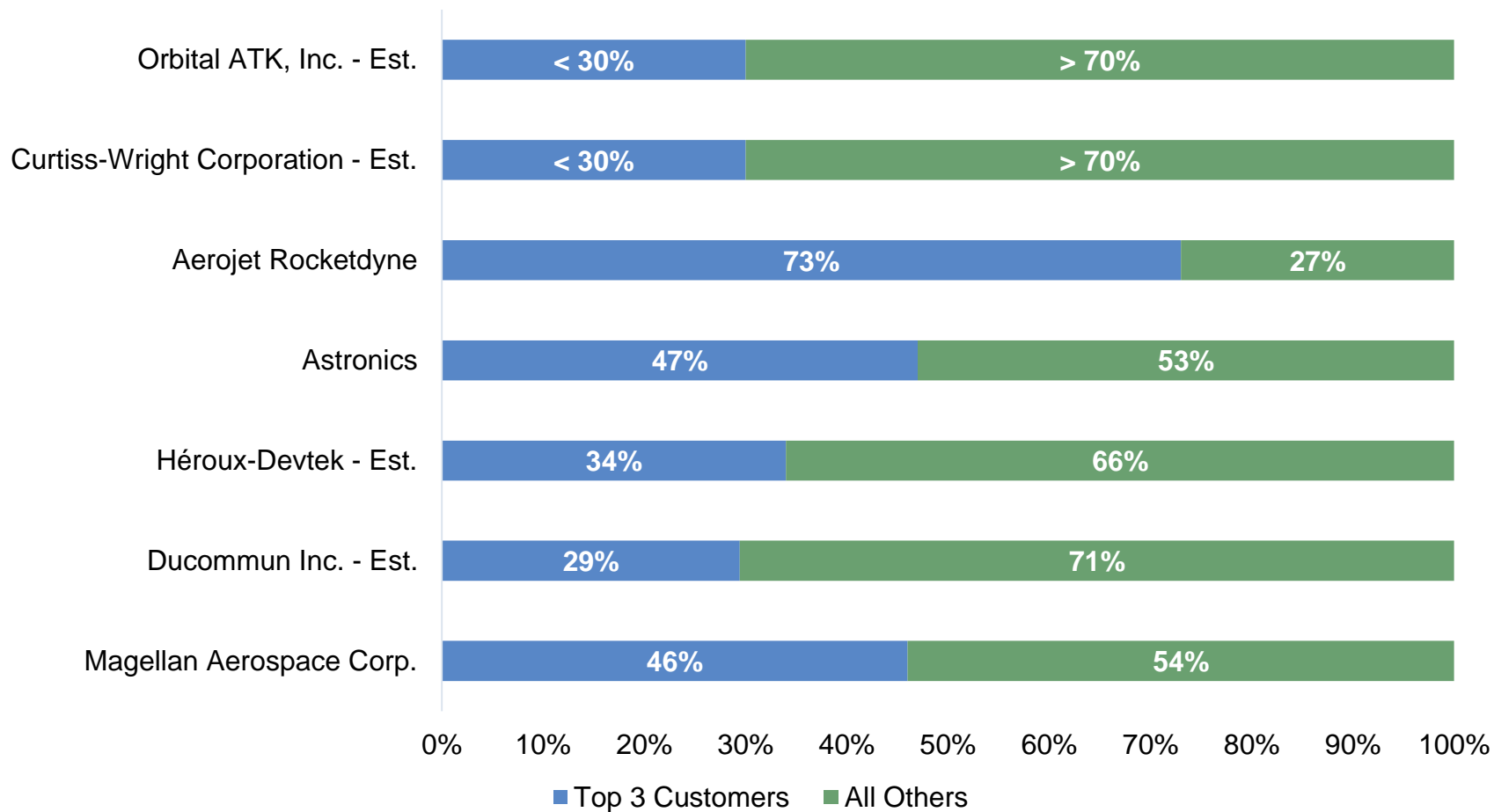
### Cost of Equity

Risk-free Rate	2.3%
Market Risk Premium	10.0%
Beta	0.63
Cost of Equity	8.7%

<b>WACC</b>	<b>7.6%</b>
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# Appendix – Customer Concentration

*Industry standard for customer concentration puts Magellan at a strong position with low relative risk*



# Appendix – Mid and Large Comps



*Comps consist of companies with significant operations in aerospace and defense manufacturing*

Company	Market Cap.	Description
United Technologies Corporation (NYSE:UTX)	\$ 112,188	United Technologies Corporation provides technology products and services to building systems and aerospace industries worldwide. Its Pratt & Whitney segment (25%) supplies aircraft engines for aviation markets. Its Aerospace Systems segment (25%) provides aerospace products and aftermarket service solutions.
Textron Inc. (NYSE:TXT)	\$ 14,391	Textron Inc. operates in the aircraft, defense, industrial, and finance businesses worldwide. It operates through five segments: Textron Aviation (36%), Bell (26%), Textron Systems (11%), Industrial (26%), and Finance (1%).
Orbital ATK, Inc. (NYSE:OA)	\$ 5,891	Orbital ATK, Inc. develops and produces aerospace, defense, and aviation-related products to the U.S. Government, allied nations, prime contractors, and other customers in the United States and internationally.
Curtiss-Wright Corporation (NYSE:CW)	\$ 5,295	Curtiss-Wright Corporation, together with its subsidiaries, designs, manufactures, and overhauls precision components, and engineered products and services primarily to the aerospace, defense, power generation, and general industrial markets worldwide.
Moog Inc. (NYSE:MOG.A)	\$ 2,751	Moog Inc. designs, manufactures, and integrates precision motion and fluid controls and systems for original equipment manufacturers and end users in the aerospace, defense, and industrial markets worldwide.

# Appendix – Small Comps

*Comps consist of companies with significant operations in aerospace and defense manufacturing*

Company	Market Cap.	Description
Aerojet Rocketdyne Holdings, Inc. (NYSE:AJRD)	\$ 1,603	Aerojet Rocketdyne Holdings, Inc. designs, develops, manufactures, and sells aerospace and defense products and systems in the United States.
Astronics Corporation (NasdaqGS:ATRO)	\$ 1,438	Astronics Corporation, through its subsidiaries, designs and manufactures products for the aerospace, defense, electronics, and semiconductor industries worldwide.
Heroux-Devtek Inc. (TSX:HRX)	\$ 512	Héroux-Devtek Inc. engages in the design, development, manufacture, repair, and overhaul of aircraft landing gears, and hydraulic flight control actuators and fracture-critical components in Canada, the United States, the United Kingdom, and internationally.
Ducommun Inc. (NYSE:DCO)	\$ 286	Ducommun Incorporated provides engineering and manufacturing products and services primarily to the aerospace, defense, industrial, natural resources, medical, and other industries.

# Appendix – Currency Analysis

*Based on best estimates of the impact of foreign exchange, revenue projections are inline with Magellan's actual performance*

Revenue Reported in CAD	2011	2012	2013	2014	2015
Canada	\$ 284	\$ 292	\$ 299	\$ 325	\$ 330
United States	188	200	232	273	333
Europe	138	167	218	245	288
Total	\$ 610	\$ 659	\$ 750	\$ 843	\$ 951
Growth		8.0%	13.8%	12.4%	12.9%

Revenue Reported ex-FX	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Growth in US Revenue in USD	N/A	N/A	N/A	9.5%	5.6%					
Growth in Europe Revenue in GBP	N/A	N/A	N/A	0.0%	9.3%					

CAD Revenue in CAD				\$ 325	\$ 330
USD Revenue in CAD				254	288
GBP Revenue in CAD				218	268
				798	886

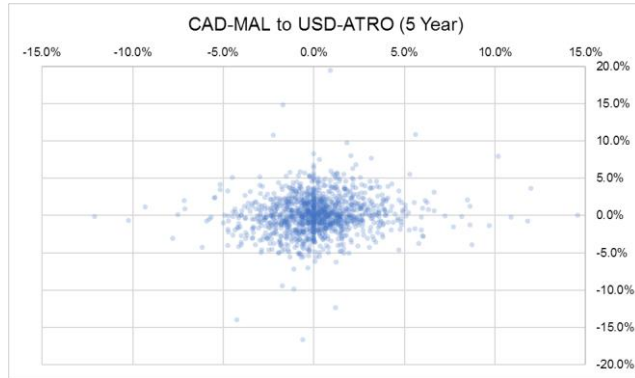
Growth without FX				6.4%	5.1%					
Revenue Growth Projections						6.3%	5.6%	5.0%	4.0%	3.3%

Revenue Reported ex-FX	2011	2012	2013	2014	2015
Revenue at LTM Avg. FX		\$ 656	\$ 734	\$ 783	\$ 858
Growth		7.5%	11.5%	4.4%	1.8%

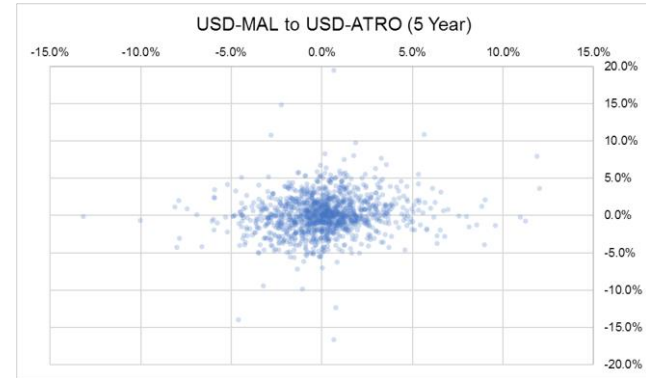
# Appendix – Regression Analysis with ATRO

*Based on a regression analysis between Magellan and Astronics, the two stocks have negligible correlation*

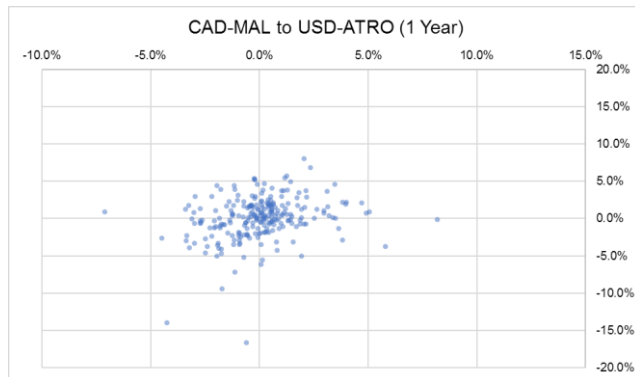
R-Square of 0.01 – Coefficient of 0.13



R-Square of 0.02 – Coefficient of 0.15



R-Square of 0.07 – Coefficient of 0.41



R-Square of 0.08 – Coefficient of 0.40

