

NORTHROP GRUMMAN



MFIF
Minutemen Fixed Income Fund

Northrop Grumman (NYSE: NOC)

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We recommend an **overweight** on Northrop Grumman's 4.400% 2030 senior unsecured notes. Northrop Grumman (NOC) is an American aerospace and defense company specialized in the advanced research and development of military hardware and software. NOC's sales were \$33.8 B in 2019, having sourced 83% of its revenue from the United States Government, with the remaining 17% split between international clients (15%) and commercial aerospace (2%). In 2018, NOC completed the \$9.3B acquisition of the space technology company Orbital ATK, which bolstered its already strong core competency in the business of military-grade space technology. As a result of this acquisition, NOC has become the prime contractor on a series of important space projects, effectively establishing a space sector moat for the company which has gone underpriced in the market. We believe the top-line momentum provided by this moat and strong overall performance, coupled with NOC's commitment to retire \$3.2B in debt with excess cash by the end of FY22E, will improve their credit profile sufficiently to warrant a ratings upgrade, from Baa2 currently to Baa1 around the end of FY22E. **Further, we believe this ratings upgrade will be the catalyst for NOC's 2030 notes to tighten ~20bps with respect to their competitors, within our projection window from 2H22 to 1H23. Therefore, we recommend the purchase and retention of NOC's 2030 notes until they tighten to our valuation, at which point they could be sold for an average total return of ~60bps greater than the current yield of Moody's Baa index (within our sensitivity range, as indicated in Figure 6).**

Figure 1: Capitalization Table

| Northrop Grumman | | | | | | |
|-------------------------------------|---------------|-------------|------------|--------|--------|-------|
| LTM EBITDA, Leverage | 5,140 | 2.9x | | | | |
| 2020E EBITDA, Leverage | 5,242 | 2.8x | | | | |
| Debt Outstanding (USD in Millions) | | | | | | |
| Type | Amount O/S | Leverage | Maturity | Coupon | Price | YTW |
| Senior Unsecured Notes of '20 | 0 | | 10/15/2020 | 2.08% | N/A | N/A |
| Senior Unsecured Notes of '21 | 700 | | 3/15/2021 | 3.50% | 101.26 | 0.09% |
| Senior Unsecured Notes of '22 | 1,500 | | 10/15/2022 | 2.55% | 104.19 | 0.23% |
| Senior Unsecured Notes of '23 | 1,050 | | 8/1/2023 | 3.25% | 107.87 | 0.37% |
| Senior Unsecured Notes of '25 | 1,500 | | 1/15/2025 | 2.93% | 108.47 | 0.79% |
| Senior Unsecured Notes of '27 | 750 | | 2/1/2027 | 3.20% | 111.24 | 1.25% |
| Senior Unsecured Notes of '28 | 2,000 | | 1/15/2028 | 3.25% | 112.07 | 1.42% |
| Senior Unsecured Notes of '30 | 750 | | 5/1/2030 | 4.40% | 123.17 | 1.68% |
| Senior Unsecured Notes of '40 | 500 | | 5/1/2040 | 5.15% | 135.48 | 2.74% |
| Senior Unsecured Notes of '40 | 300 | | 11/15/2040 | 5.05% | 133.76 | 2.83% |
| Senior Unsecured Notes of '43 | 950 | | 6/1/2043 | 4.75% | 130.97 | 2.88% |
| Senior Unsecured Notes of '45 | 600 | | 4/15/2045 | 3.85% | 117.05 | 2.86% |
| Senior Unsecured Notes of '47 | 2,250 | | 10/15/2047 | 4.03% | 122.89 | 2.80% |
| Senior Unsecured Notes of '50 | 1,000 | | 5/1/2050 | 5.25% | 144.01 | 2.97% |
| Total Senior Unsecured Notes | 13,850 | 2.7x | | | | |
| Senior Unsecured Gtd. Notes of '21 | 36 | | 4/21/2021 | 9.38% | 103.61 | 1.35% |
| Senior Unsecured Gtd. Notes of '26 | 270 | | 3/1/2026 | 7.88% | 133.68 | 1.31% |
| Senior Unsecured Gtd. Notes of '26 | 257 | | 3/15/2026 | 7.75% | 132.57 | 1.43% |
| Senior Unsecured Gtd. Notes of '28 | 41 | | 1/15/2028 | 6.65% | 124.43 | 2.87% |
| Senior Unsecured Gtd. Notes of '29 | 90 | | 6/1/2029 | 7.75% | 141.02 | 2.43% |
| Senior Unsecured Gtd. Notes of '31 | 466 | | 2/15/2031 | 7.75% | 151.77 | 2.12% |
| Senior Unsecured Gtd. Notes of '36 | 47 | | 3/15/2036 | 6.98% | 138.20 | 3.70% |
| Total Debt | 15,057 | 2.9x | | | | |
| (-) Cash | 4,178 | | | | | |
| (+) Market Capitalization | 49,006 | | | | | |
| Enterprise Value | 59,885 | | | | | |

Source: Bloomberg, Company Filings

Security Data

Bond Maturity: 05/01/2030

Rating: Baa2/BBB

Tranche: Senior Unsecured

Price: \$123.17

YTW: 1.68%

Mty. Type: Callable

Coupon: 4.400%

Z-Spread: 94.5 bps

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FY20E Outlook, Minimal Covid Headwinds

All of NOC's segments are performing well. The aeronautics segment, which produces manned and unmanned aircraft, is suffering from COVID-19 headwinds. Given NOC's (somewhat small) exposure to commercial aerospace, sales are expected to remain stagnant this year and pick up again next year. Otherwise, their three other segments – Defense, Mission, and Space Systems – are expected to perform well and contribute to overall sales growth of ~5.4% for 2020, based on guidance and outstanding backlog.

Orbital ATK Acquisition

In 2Q18A, NOC finalized the acquisition of Orbital ATK for \$9.2B at a ~12x EV/EBITDA multiple, using \$7.8B in excess cash and \$1.4B in debt. Importantly, this transaction has given NOC access to Orbital's portfolio of rockets, engines, and spacecraft. Initially, Orbital was organized as the new business segment "Innovation Systems" but has since been reorganized into "Space Systems" with NOC's existing space-technology business. Run-rate cost synergies from the merger were expected to be ~\$150M, which have since been actualized.

Figure 3: Comparable Company Metrics

| Comps (USD in Millions) | NOC | GD | LMT | RTX |
|----------------------------------|----------|----------|-----------|-----------|
| Market Cap | 49,006 | 40,013 | 108,580 | 91,339 |
| Debt | 16,057 | 15,970 | 12,674 | 34,473 |
| Cash | 4,178 | 2,300 | 2,855 | 6,975 |
| Net Debt | 11,879 | 13,670 | 9,819 | 27,498 |
| Enterprise Value | 60,885 | 53,683 | 118,399 | 118,837 |
| Revenue (LTM) | 35,308 | 39,350 | 59,812 | 77,046 |
| EBITDA (LTM) | 5,140 | 5,245 | 9,813 | 5,299 |
| Debt/EBITDA (LTM) | 2.93x | 3.05x | 1.29x | 6.51x |
| Net Debt/EBITDA (LTM) | 2.31x | 2.61x | 1.00x | 5.19x |
| EBITDA Margin (LTM) | 16.3% | 14.7% | 20.0% | 19.2% |
| EBITDA/Interest (LTM) | 9.2x | 12.2x | 18.3x | 9.2x |
| FCF (LTM) | 3,896 | 2,313 | 6,220 | 3,305 |
| Individual Security Comps | | | | |
| Rating | Baa2/BBB | A2/A | A3/A- | Baa1/BBB+ |
| Coupon | 4.40% | 3.63% | 1.85% | 2.25% |
| Maturity | 5/1/2030 | 4/1/2030 | 6/15/2030 | 7/1/2030 |
| Price | 123.2 | 119.0 | 104.4 | 104.5 |
| YTW | 1.68% | 1.41% | 1.35% | 1.72% |
| Z-Spread | 94.5 bps | 64.6 bps | 55.3 bps | 92.9 bps |
| OAS | 96.1 bps | 66.0 bps | 55.5 bps | 93.1 bps |
| Next Call Date | 2/1/2030 | 1/1/2030 | 3/15/2030 | 4/1/2030 |
| OAS/Turn of Leverage | 32.8 bps | 21.7 bps | 43.0 bps | 14.3 bps |

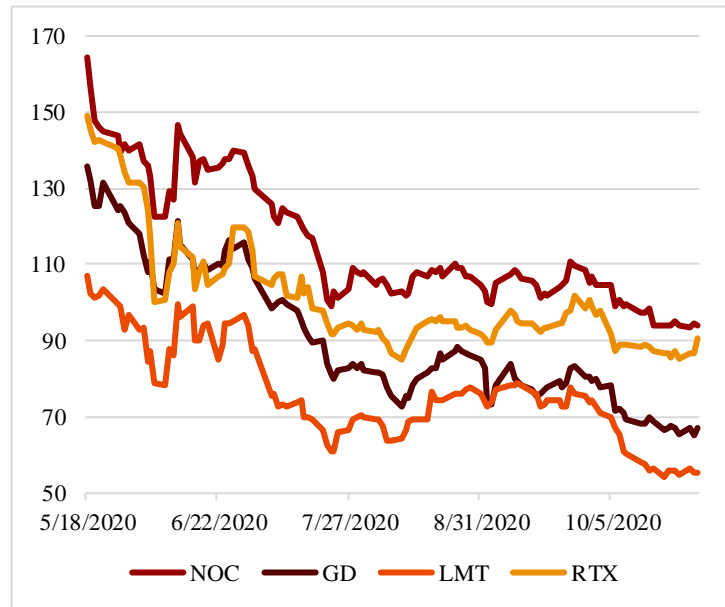
Source: Bloomberg, Company Filings

Management

Kathy Warden is NOC's chairman and CEO. Prior to her election in August of 2019, she served as NOC's president and COO for 2 years. She has spent her entire career in A&D, including former executive positions at GD and GE.

David Keffer is NOC's CFO and corporate VP. Prior to joining NOC as CFO in February of 2018, Keffer served as CFO of SRA International, a national security IT company now owned by GD.

Figure 2: Comparable Option-Adjusted Spreads



Source: Bloomberg BVAL

Market Underpricing NOC's Space-Tech Moat

Since the Orbital acquisition, their space sector revenues have grown from \$4.7 B in FY17A to \$7.4 B in FY19A at a 25.5% CAGR, all of which is organic growth (given that the \$4.7B figure is a pro-forma estimate of what the combined businesses' space revenue would have been for 2017). This indicated an accelerated capture of the U.S. Government's \$47.5B space budget

An example of the value Orbital has added: Boeing, who had developed the Minuteman 3, America's last flagship ICBM, was forced out of a bidding war with NOC for the contract to produce the next generation of American ICBM's, the GBSD project, owing to the fact that Boeing had sourced its rocket engines from Orbital ATK. As a result, NOC was awarded the \$13.2 B contract for the 3-year R&D phase for the rockets and will likely gain further lucrative contracts for their production, due to the nature of their primary contractor status as discussed further below.

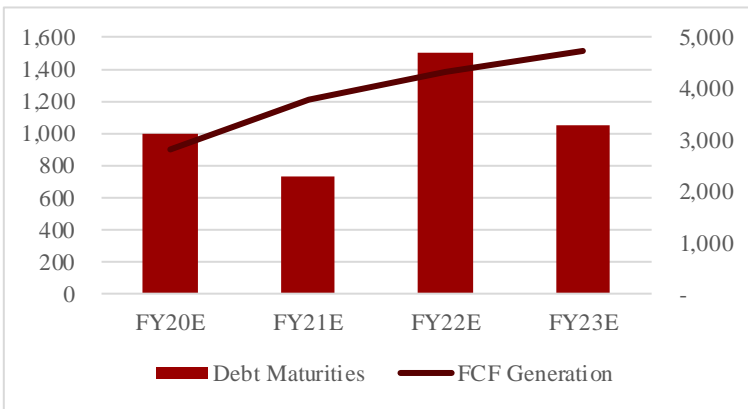
Additionally, in 1H20 NOC has been awarded a ~\$5.6B contract for a restricted space-related project. For restricted projects, NOC can expect to be the prime and often sole contractor, making them much harder to replace and much more likely to receive follow-up contracts. Fully 43% of NOC's \$7.4 B space sector revenue was sourced from restricted contracts in 2019, and restricted projects are the fastest growing source of revenue for the segment. We believe this will propel space sector revenue from \$8.4B in FY20E to \$10.3B in FY23E, at a ~7% CAGR.

Improved Credit from Growth and Deleveraging

NOC will retire \$1B in 4Q20E, \$700M in 1Q21E, and \$1.5B in 4Q22E. This will decrease their long-term debt by \$3.2B in total and reduce their annual interest expense by ~10%. We also expect ~5.4% y/y top-line growth, driven by the space sector, and accompanying operating margin expansion of ~60 bps y/y due to the high-fixed cost nature of their business, along with further segment and merger consolidation.

As a result, we expect NOC's credit profile to improve sufficiently to warrant a ratings upgrade around the end of FY22E, to Baa1 from its current rating of Baa2. Individual metric improvements can be seen enumerated in Figure 5.

Figure 4: Upcoming Debt Maturities, FCF Generation



Source: Company Filings

Trade Timeline and Catalysts

Given NOC's commitment to retire the debt maturing in the next 3 fiscal years (and \$1B maturing 10/15/2020), paired with strong ~8% y/y projected EBITDA growth, we expect NOC's "Leverage and Coverage" ratings scores to improve substantially by FY22E. Moody's has given commentary indicating that sustained improvements in this category will drive upwards rating pressure, and given our projections, ~year end FY22E is the most likely timeframe for ratings action.

We have given the range indicated in Figure 6 for our expected range of spread tightening, and the implied total return if the position, entered now, were to be exited on the given dates.

Figure 6: Total Return by Change in Spread and Trade Exit Date

| | 6/31/2021 | 12/31/2021 | 6/31/2022 | 12/31/2022 | 6/31/2023 | 12/31/2023 |
|---------|-----------|------------|-----------|------------|-----------|------------|
| -50 bps | 8.82% | 6.46% | 5.53% | 5.00% | 4.67% | 4.43% |
| -40 bps | 7.57% | 5.77% | 5.05% | 4.65% | 4.39% | 4.20% |
| -30 bps | 6.32% | 5.08% | 4.58% | 4.29% | 4.10% | 3.96% |
| -20 bps | 5.11% | 4.41% | 4.11% | 3.94% | 3.82% | 3.73% |
| -10 bps | 3.90% | 3.73% | 3.65% | 3.58% | 3.54% | 3.50% |
| 0 bps | 2.71% | 3.06% | 3.19% | 3.24% | 3.26% | 3.27% |
| +10 bps | 1.53% | 2.39% | 2.72% | 2.89% | 2.98% | 3.03% |
| +20 bps | 0.38% | 1.74% | 2.27% | 2.54% | 2.71% | 2.81% |
| +30 bps | -0.76% | 1.08% | 1.82% | 2.20% | 2.43% | 2.58% |
| +40 bps | -1.90% | 0.43% | 1.37% | 1.86% | 2.15% | 2.35% |
| +50 bps | -3.01% | -0.21% | 0.92% | 1.52% | 1.88% | 2.12% |

Source: Bloomberg, Company Filings

Risks

- Ratings agencies may not elect to take ratings action within our timeline
- Space segment revenue growth may plateau if DoD reduces space priority
- NOC sources 83% of their revenue from US government contracts, which are subject to potential delay and cancellation

Mitigants

- NOC's credit profile is quite likely to improve regardless given cash reserves and upcoming debt maturities
- This is offset by the fact that Space Systems backlog increased by 48% to ~\$23.8B in 1H20
- Since NOC is the prime contractor on the majority of its projects, government switching costs are much greater

Figure 5: Moody's Rating Buildup

| Quantitative | Weight | FY19A | FY20E | FY21E | FY22E |
|-------------------------------------|--------|-------------|-------------|-------------|------------|
| Scale | | | | | |
| Revenue | | 33,841 | 35,682 | 37,245 | 38,799 |
| Score | 10% | 5.2 | 5.1 | 4.9 | 4.7 |
| Operating Profit | | 3,969 | 4,128 | 4,564 | 4,897 |
| Score | 10% | 5.5 | 5.5 | 5.0 | 4.7 |
| Profitability and Efficiency | | | | | |
| Operating Margin | | 11.7% | 11.6% | 12.3% | 12.6% |
| Score | 5% | 9.6 | 9.8 | 9.4 | 9.2 |
| Leverage and Coverage | | | | | |
| Debt/EBITDA | | 3.1x | 2.9x | 2.5x | 2.1x |
| Score | 15% | 10.5 | 10.7 | 8.1 | 7.4 |
| RCF/Net Debt | | 6% | 14% | 14% | 21% |
| Score | 10% | 15.6 | 12.9 | 12.3 | 9.9 |
| EBIT/Interest Expense | | 7.5x | 7.9x | 9.3x | 10.4x |
| Score | 10% | 7.2 | 7.2 | 6.1 | 5.4 |
| Qualitative | | | | | |
| Business Profile | | | | | |
| Competitive Position | | | | | |
| Score | 10% | 6 | 6 | 6 | 6 |
| Expected Revenue Stability | | | | | |
| Score | 10% | 8 | 8 | 8 | 8 |
| Financial Policy | | | | | |
| Score | 20% | 9 | 9 | 9 | 9 |
| Aggregate Numeric Score | | 8.4 | 8.2 | 7.7 | 7.2 |
| Implied Credit Rating | | Baa2 | Baa2 | Baa1 | A3 |

* Qualitative scores backed into using FY19A Quantitative data and Moody's commentary

Source: Moody's, Company Filings

Relative Value

Relative to the Moody's Seasoned Baa Corporate Bond Yield index, which is currently yielding 3.36%, our expected total return range – as indicated in the dashed box – is expected to return ~3.96% on average. We believe the upside potential on NOC's notes, paired with their relative safety compared to companies with substantial commercial aerospace exposure (e.g. RTX), makes them the best large-cap A&D company to have credit exposure to at this time.

Figure 7: Summary Model

| Northrop Grumman (NOC) | | | | | | | | | | | |
|-----------------------------------|------------|------------|------------|-----------|-----------|-----------|------------|------------|------------|------------|------------|
| Fiscal Year | FY17A | FY18A | FY19A | 1Q20A | 2Q20A | 3Q20A | 4Q20E | FY20E | FY21E | FY22E | FY23E |
| EOP Date | 12/31/2017 | 12/31/2018 | 12/31/2019 | 3/31/2020 | 6/30/2020 | 9/30/2020 | 12/31/2020 | 12/31/2020 | 12/31/2021 | 12/31/2022 | 12/31/2023 |
| Income Statement | | | | | | | | | | | |
| <i>Aeronautics Systems</i> | - | - | 11,194 | 2,843 | 2,925 | 2,914 | 2,797 | 11,479 | 11,709 | 11,943 | 12,182 |
| <i>Defense Systems</i> | - | - | 7,564 | 1,881 | 1,886 | 1,859 | 1,878 | 7,504 | 7,729 | 7,961 | 8,199 |
| <i>Mission Systems</i> | - | - | 9,328 | 2,347 | 2,446 | 2,551 | 2,628 | 9,972 | 10,570 | 11,098 | 11,542 |
| <i>Space Systems</i> | - | - | 7,374 | 1,948 | 2,048 | 2,198 | 2,242 | 8,436 | 9,111 | 9,749 | 10,334 |
| <i>Intersegment Eliminations</i> | - | - | (1,619) | (399) | (421) | (439) | (450) | (1,709) | (1,873) | (1,951) | (2,024) |
| Total Revenue | 26,004 | 30,095 | 33,841 | 8,620 | 8,884 | 9,083 | 9,095 | 35,682 | 37,245 | 38,799 | 40,234 |
| Operating costs & expenses | | | | | | | | | | | |
| Cost of sales | 20,074 | 23,304 | 26,582 | 6,898 | 7,058 | 7,243 | 7,216 | 28,316 | 29,494 | 30,582 | 31,563 |
| Gross profit | 5,930 | 6,791 | 7,259 | 1,722 | 1,826 | 1,840 | 1,879 | 7,365 | 7,751 | 8,217 | 8,671 |
| General & administrative | 2,712 | 3,011 | 3,290 | 788 | 832 | 855 | 800 | 3,238 | 3,187 | 3,320 | 3,443 |
| Operating income | 3,218 | 3,780 | 3,969 | 934 | 994 | 985 | 1,079 | 4,128 | 4,564 | 4,897 | 5,227 |
| Other (expense) income | - | - | - | - | - | - | - | - | - | - | - |
| Interest expense | (360) | (562) | (528) | (125) | (154) | (154) | (186) | (526) | (491) | (472) | (454) |
| FAS (non-service) pension benefit | 699 | 1,049 | 800 | 302 | 303 | 302 | 302 | - | - | - | - |
| Mark-to-market pension expense | 536 | (655) | (1,800) | - | - | - | (1,211) | - | - | - | - |
| Other, net | 136 | 130 | 107 | (58) | 60 | 34 | 34 | 70 | 70 | 70 | 70 |
| Earnings before income taxes | 4,229 | 3,742 | 2,548 | 1,053 | 1,203 | 1,167 | 18 | 3,672 | 4,143 | 4,495 | 4,843 |
| Income tax expense | 1,360 | 513 | 300 | 185 | 198 | 181 | 3 | 432 | 488 | 529 | 570 |
| Net earnings | 2,869 | 3,229 | 2,248 | 868 | 1,005 | 986 | 15 | 3,240 | 3,655 | 3,966 | 4,273 |
| Revenue Growth | | | | | | | | | | | |
| <i>Aeronautics Systems</i> | - | - | - | -1.4% | 2.9% | -0.4% | -4.0% | 2.6% | 2.0% | 2.0% | 2.0% |
| <i>Defense Systems</i> | - | - | - | -3.5% | 0.3% | -1.4% | 1.0% | -0.8% | 3.0% | 3.0% | 3.0% |
| <i>Mission Systems</i> | - | - | - | -2.4% | 4.2% | 4.3% | 3.0% | 6.9% | 6.0% | 5.0% | 4.0% |
| <i>Space Systems</i> | - | - | - | 2.5% | 5.1% | 7.3% | 2.0% | 14.4% | 8.0% | 7.0% | 6.0% |
| <i>Total Revenue Growth</i> | 6.1% | 15.7% | 12.4% | -1.2% | 3.1% | 2.2% | 0.1% | 5.4% | 4.4% | 4.2% | 3.7% |
| Operating Metrics | | | | | | | | | | | |
| Gross Margin | 22.8% | 22.6% | 21.5% | 20.0% | 20.6% | 20.3% | 20.7% | 20.6% | 20.8% | 21.2% | 21.6% |
| SG&A/Revenue | 10.4% | 10.0% | 9.7% | 9.1% | 9.4% | 9.4% | 8.8% | 9.1% | 8.6% | 8.6% | 8.6% |
| Operating Margin | 12.4% | 12.6% | 11.7% | 10.8% | 11.2% | 10.8% | 11.9% | 11.6% | 12.3% | 12.6% | 13.0% |
| Tax Rate | 32.2% | 13.7% | 11.8% | 17.6% | 16.5% | 15.5% | 16.0% | 11.8% | 11.8% | 11.8% | 11.8% |
| EBITDA Reconciliation | | | | | | | | | | | |
| (+) EBIT | 3,218 | 3,780 | 3,969 | 934 | 994 | 985 | 1,079 | 4,128 | 4,564 | 4,897 | 5,227 |
| (+) Depreciation and Amortization | 475 | 800 | 1,018 | 297 | 308 | 241 | 241 | 1,042 | 1,111 | 1,170 | 1,228 |
| (+) Stock-Based Compensation | 94 | 86 | 127 | 18 | 18 | 18 | 18 | 72 | 72 | 72 | 72 |
| EBITDA | 3,787 | 4,666 | 5,114 | 1,249 | 1,320 | 1,244 | 1,338 | 5,242 | 5,746 | 6,138 | 6,527 |
| FCF Reconciliation | | | | | | | | | | | |
| (+) CFFO | 2,613 | 3,827 | 4,297 | (993) | 2,337 | 1,418 | 576 | 3,984 | 5,067 | 5,431 | 5,825 |
| (-) Capex | (928) | (1,249) | (1,264) | (272) | (269) | (318) | (318) | (1,177) | (1,300) | (1,100) | (1,100) |
| FCF | 1,685 | 2,578 | 3,033 | (1,265) | 2,068 | 1,100 | 258 | 2,807 | 3,767 | 4,331 | 4,725 |
| Credit Metrics | | | | | | | | | | | |
| Debt | 14,399 | 13,883 | 16,057 | 16,057 | 16,057 | 16,057 | 15,057 | 15,057 | 14,321 | 12,821 | 11,771 |
| Debt/EBITDA | 3.8x | 3.0x | 3.1x | 3.2x | 3.0x | 3.2x | 2.8x | 2.8x | 2.5x | 2.1x | 1.8x |
| EBITDA/Interest | 10.5x | 8.3x | 9.7x | 10.0x | 8.6x | 8.1x | 10.0x | 10.0x | 11.7x | 13.0x | 14.4x |

Source: Company Filings

Model Notes: Sector revenue figures and growth rates do not appear before FY19 because of a sector reorganization which occurred starting in FY20. Segment projections are based on guidance to the historical growth rates for the smaller units which compose the segments, as well as assumptions based on backlog and industry tailwinds. The space sector projections are based on our space-tech moat thesis, as well as implied sales from added backlog.