Capital Markets and Investment Banking
Market Update
MARCH 2019

Cautious Optimism Forecasted for Aerospace and Defense M&A

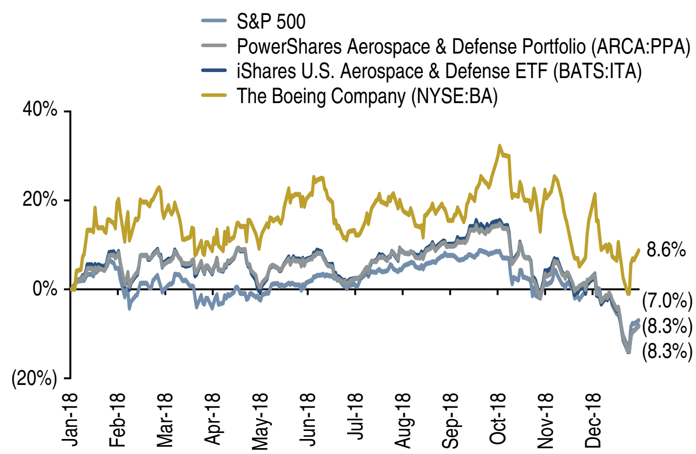
While 2018 was a turbulent year in both the markets and in the press, the outlook for the Aerospace and Defense ("A&D") industry in 2019 and beyond remains positive. Despite headlines consisting of trade wars, market volatility and business cycle concerns, A&D continues to benefit from numerous long-term trends unaffected by the day-to-day noise. While these concerns are certainly valid and will remain present in the new year, Mesirow Financial believes that larger, slower-moving trends will continue to make the A&D sector attractive for investors and give cause for cautious optimism. A few of the highlights from 2018 include:

- Total passenger traffic continued its impressive growth trajectory.
- Over $40 billion in merger and acquisition ("M&A") deals were announced with five deals valued more than $1 billion.
- Rockwell Collins and United Technologies finally consummated their deal after receiving regulatory approval from Chinese authorities and subsequently announced a spin-off of combined aerospace operations from United Technologies' other business lines.
- Boeing edged out Airbus in both deliveries and order pipeline at the end of a year of record production.
- Escalating trade war rhetoric between the United States and China threatened the export-heavy U.S. aerospace industry, though nothing substantial has yet to materialize.
- Defense budgets of the United States and near-peer global powers continued to rise with the Trump administration proposing one of the largest military budgets since the height of Cold War tensions.

A&D equities saw their modest gains through October 2018 erased as they followed the S&P 500 index to its worst annual performance in nearly a decade. As shown in *Chart 1*, the PowerShares Aerospace & Defense Portfolio and the iShares U.S. Aerospace and Defense ETF both ended the year more than 7 percent below 2017 year-end levels. While discouraging, Mesirow Financial believes that the downward movement toward the end of 2018 is indicative of the broader equity market declines rather than sector-specific concerns. In contrast to its peers, Boeing performed more favorably in 2018, ending the year up 8.6 percent on record deliveries and new orders.

IN THIS ISSUE

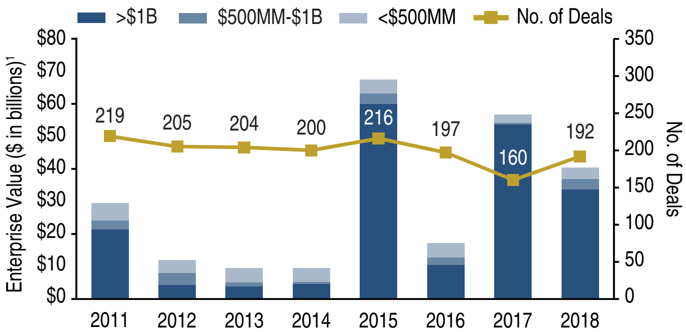
CHART 1 | **Aerospace & Defense ETF Share Price Performance Against the S&P 500 (2018)**



Source: S&P Capital IQ.

Despite the drag on public A&D company valuations toward the end of 2018, it proved to be a strong year for both large and small M&A transactions. Compared to 2017, deal activity in 2018 consisted of fewer large transactions and more overall announced deals as evident in *Chart 2*. Both results were high on a relative historical basis. While the total deal value was down in 2018 as compared to 2017, several of the blockbuster deals announced in 2017 ultimately closed in 2018. Despite the longer merger timeline of deals requiring state approval and the historically high deal volume over the last two years, the recent strength of M&A activity in the A&D sector is evident.

CHART 2 | **Aggregate A&D Deal Volume by Transaction Range: (2010 – 2018)**



Source: S&P Capital IQ.
1. Only includes deals with disclosed deal value.

TABLE 1 | **Notable Transaction Developments in 2018**

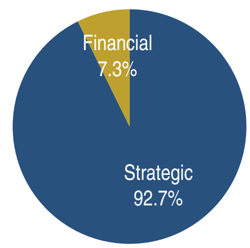
Closed Date	Acquirer	Target
Pending	The Boeing Company	Commercial Operations of Embraer S.A.
Pending	Transdigm Group Incorporated	Esterline Technologies Corporation
Pending	Harris Corporation	L3 Technologies, Inc.
Nov-18	United Technologies Corporation	Rockwell Collins, Inc.
Oct-18	The Boeing Company	KLX Inc.
Mar-18	Safran SA	Zodiac Aerospace

Sources: Company websites, S&P Capital IQ. Note: Mesirow Financial did not represent any of the acquirers or targets in connection with the transactions noted on this page and is not currently representing any of the listed acquirers or targets.

Top industry heavyweights and middle-market A&D investors alike continue to look down the supply chain for acquisition opportunities with access to recurring revenue streams, such as servicing and replacement parts. Popular segments continue to include precision machining and composites and advanced materials, among others. Additionally, Mesirow Financial continues to believe that cost-cutting measures such as Boeing's "Partnering for Success 2.0" program will create margin pressure on suppliers that, together with recent in-sourcing initiatives from both Airbus and Boeing, will continue to drive supply chain consolidation. As such, consolidation by strategic buyers in the subsector is expected to remain popular and valuation multiples for private transactions are not expected to be impacted through 2019.

As indicated by *Chart 3* and in line with the industry dynamics discussed above, strategic buyers continued to make up a disproportionate percentage of A&D buyers. While strategic acquirers have been more successful in completing transactions, private equity firms continue to look for opportunistic plays in the sector because of continued, healthy financial markets and growing market opportunities. Increasing trepidation surrounding the length of the current business cycle has led many financial investors to look toward exiting existing positions at attractive valuations and to resist the temptation to pay up in competitive processes.

CHART 3 | **Number of A&D Transactions by Buyer Type (% of total deal count): 2018**



Source: S&P Capital IQ.

Market Outlook

While potential headwinds and pitfalls for the A&D industry certainly have the ear of the market, the same long-term trends remain intact that have encouraged investors over the past decade. Growth in world GDP and an emerging global middle class continue to fuel growth in the commercial aerospace industry despite concerns over a business cycle long in the tooth. Business jet sales are poised for a rebound as inventory issues lingering from the prior financial downturn have finally normalized. Defense spending is set to benefit from the peacetime escalation of tensions worldwide, though vulnerability exists on the macro level as well. Ultimately, deal activity should continue through the turbulence with little change to valuations for highly sought-after targets. The continuation will be a result of supply chains tightening in preparation to accommodate increased travel and global powers increased spending to deal with lingering tensions.

Market Snapshot: Middle-Market Mergers & Acquisitions

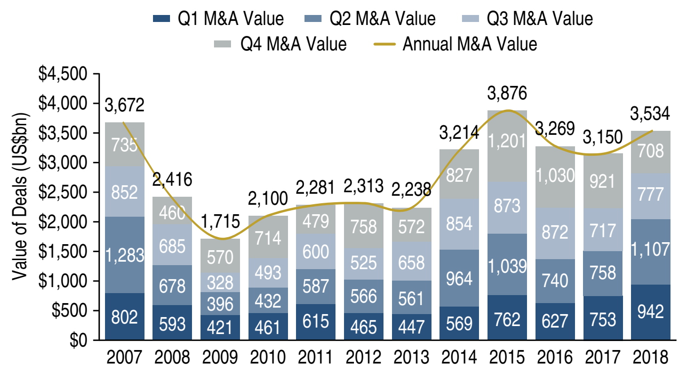
2018 M&A Recap

- Following a frenetic first half of the year, the second half of 2018 saw subdued M&A activity as intensifying trade tensions, political instability and regulatory scrutiny caused hesitation in the marketplace.
- Despite the drop in activity in the second half of the year, 2018 witnessed the third-highest value on record behind 2007 and 2015, with $3.53 trillion across 19,232 deals announced.
- In 2018, 36 megadeals breached the $10 billion mark, topping the previous year by six deals.

2019 Outlook

- Strong backlogs will drive continued consolidation.
- Cross-border activity will remain strong as dealmakers pursue strategies to spread risk geographically.
- Continued high levels of cash and a relatively favorable financing environment are expected to drive an active M&A market for 2019.

Quarterly Global M&A Comparison

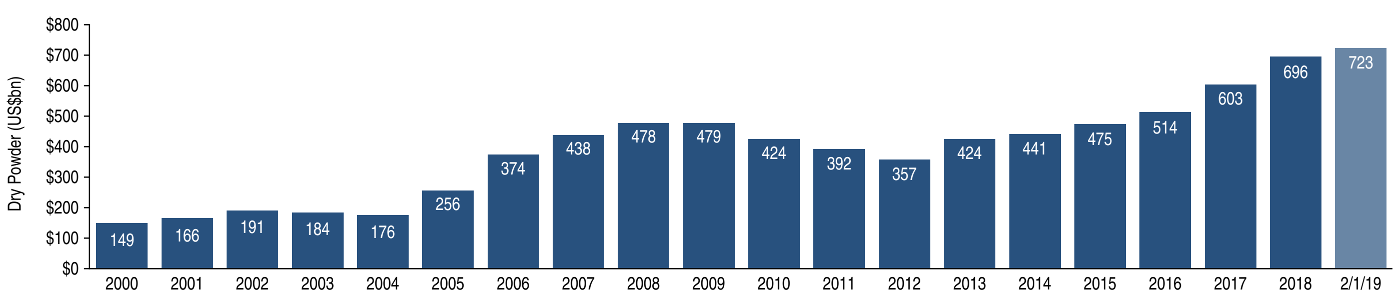


Source: MergerMarket.

Significant Opportunities Exist to Capitalize on the Favorable Financing Environment

- Buyout dry powder levels have continued to increase and are currently at a record high of $722.9 billion.
- 5,106 private equity-backed buyout deals were announced in 2018, the highest number ever recorded.
- North America saw 2,787 deals announced worth a total of $264 billion, while Europe saw 1,779 deals worth an aggregate $137 billion.
- As private equity firms continue to sit on record levels of dry powder, we can expect buyout transaction activity to increase as these funds are deployed.

Private Equity Dry Powder Buyout Funds



Source: Preqin.

Market Snapshot: Municipal Bonds

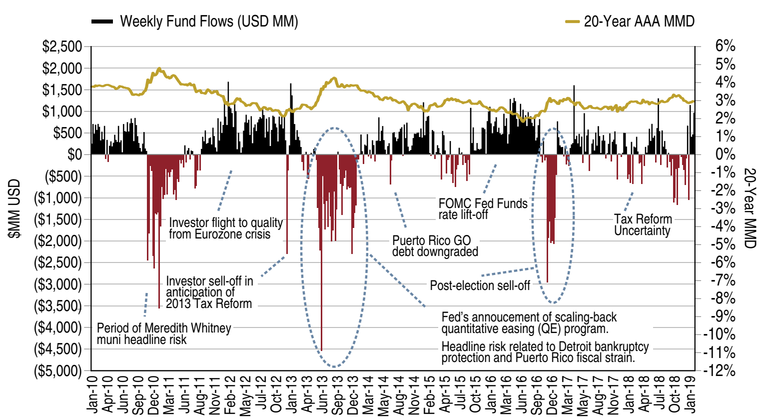
Municipal Bond Fund Flows and Municipal Market Data (MMD)

Muted inflation numbers, dovish Federal Reserve commentary and reduced seasonal supply contributed to positive flows and performance in January. The Bloomberg Barclays Municipal Bond Index Total Return Index Value gained 59 basis points ("bps") and the Bloomberg Barclays Muni High-Yield TR Index returned 0.43 percent.

Municipal fund flows reversed a 4Q 2018 outflow trend with positive flows in five of the last six weeks reported. The Federal Reserve dropped a reference to "Further gradual increases" in their statement on January 30 and added that the Fed is "Prepared to adjust any of the details for completing balance sheet normalization in light of economic and financial developments." Chairman Powell also mentioned that "The narrative of slowing global growth continues."

Municipal credit spreads remain compressed below historical averages but have been stable since 2017. Thirty-year MMD BBB, A and AA credit spreads stand 25 percent, 20 percent and 12.5 percent below longer-term historical spreads, respectively. High-yield spreads, measured by the Bloomberg Barclays Muni High-Yield Yield to Worst (YTW), have been widening since October 2018, but remain 30 percent below historical averages. In general, credit spreads compress in periods of lower rates as investors demand higher yield.

Municipal Bond Fund Flows and 20-Year MMD



As of the weekly reporting date 1/30/2019.
Source: EPFR Global Fund Flows and Allocations Data – All Muni Funds (Retail and Institutional Funds).

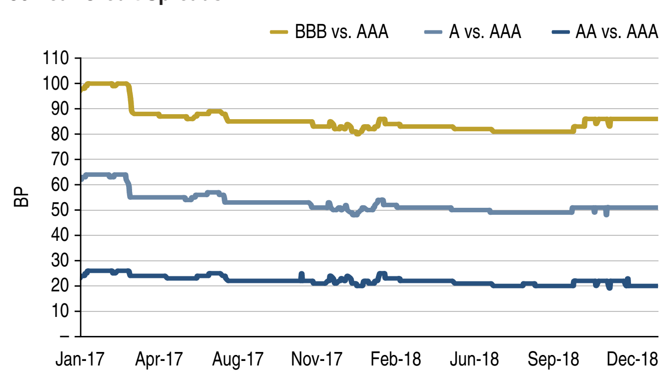
Trailing 16-Week Data

Muni Fund Reporting Date	Weekly Fund Flow ($MM USD)	20-Yr AAA MMD (%)
10/17/2018	(1,011.30)	3.25
10/24/2018	(345.66)	3.20
10/31/2018	(1,168.76)	3.26
11/7/2018	(320.86)	3.28
11/14/2018	(8.36)	3.22
11/21/2018	(62.45)	3.12
11/28/2018	(245.86	3.11
12/5/2018	(360.83)	2.97
12/12/2018	(714.29)	2.97
12/19/2018	(92.35)	2.92
12/26/2018	662.98	2.86
1/2/2019	(1,051.20)	2.84
1/9/2019	1,138.55	2.89
1/16/2019	404.28	2.88
1/23/2019	459.96	2.95
1/30/2019	960.02	2.93

Credit Spreads

- As identified in our previous newsletter, California General Obligation ("GO") bonds were trading at near Triple-A levels and it was our forecast that credit spreads would widen over time. As predicted, California GO credit spreads have in fact widened during that period.
- Municipal bonds continue to represent value as the Municipal to Treasury ratio reached 101 percent. This ratio indicates a period in which municipal investors receive the tax preference of municipal bonds for free at more than 100 percent of treasuries, therefore benefiting from the tax deductibility of muni bonds without sacrificing yield.
- Recently, little change has occurred in credit spreads; however, they continue to remain tight and credit risk offerings are of limited value to investors.

30-Year Credit Spreads



Source: The Municipal Market Monitor (TM3).

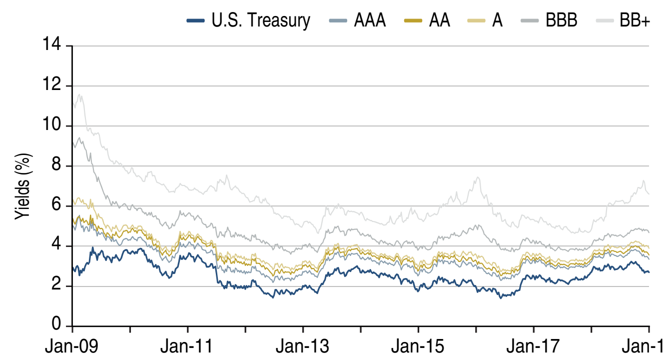
- The Federal Reserve's posture has changed dramatically over the last six weeks, as they have signaled a pause, if not end, in their tightening cycle. We might expect to see a steepening of the yield curve and a reduction of rates on the short end. This would make leveraged products such as tender option bonds a more attractive alternative for investors seeking yield and finding limited value in taking credit risk.

Market Snapshot: Corporate Debt and Infrastructure Finance

Corporate Debt Spreads – Finance Market Summary

- Yields on U.S. 10-year Treasuries fell sharply throughout November and December and stayed steady in January after reaching their highest level, approximately 3.25 percent, since early 2011. Due to the drop, 10-year Treasury yields were only 22 basis points ("bps") higher at the end of 2018 compared to the end of 2017. Throughout most of 2018, Treasury yields were more than 50 bps higher year-over-year. Yields remained below 2.8 percent throughout January 2019. Further support for continued low rates came in early February with an announcement by the Federal Reserve which indicated it would hit pause before raising interest rates any further.

Historical Corporate Bond Yields – 10-Year Maturity



Data as of January 30, 2019.
Source: S&P Global Fixed Income Research.

- Corporate spreads rallied in January after widening significantly across credit categories in the last quarter of 2018. The spread on the five-year investment grade CDX index increased approximately 20 bps in December, peaking at 95 bps and returning to approximately 51 bps in the first week of February, a 45-bps downward swing to start the year. Amazon exemplified this movement in the market as the company's spread to Treasuries on its eight-year bond debt peaked at 96 bps in December and narrowed to 58 bps in the first week of February.

- Total corporate issuance in 2018 fell to $1,336.8 billion, down 24 percent from $1,652.4 billion in 2017. 2018 also showed the lowest amount of corporate bond issuance by volume since 2011.[1] The slump in corporate bond issuance comes after years of booming supply as central banks kept rates low and investor appetite remained high.

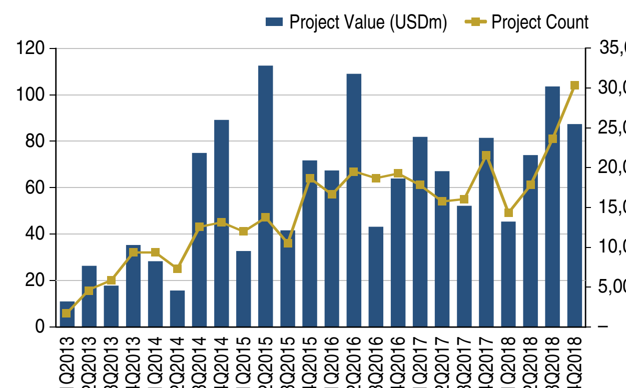
U.S. Infrastructure – Market Update

- 2018 showed strong U.S. project finance activity with over $90 billion in infrastructure transactions reaching financial close, exceeding previous years in terms of aggregate transaction size as well as deal count. Project activity was primarily in the power and renewable energy sectors.[2]

- Greenfield public-private partnership ("P3") project activity sputtered in 2018 despite signs of momentum in the final quarter of 2018. Three social infrastructure projects, which included two student housing and one courthouse project valued more than $300 million in aggregate, reached financial close during the quarter. Simultaneously, two transportation projects closed with an aggregate estimated project value of more than $1.7 billion.

- Regardless of varied success using the P3 model in the U.S., conversation continues across the country on using private capital to address the infrastructure gap. Accordingly, the P3 pipeline in 2019 includes upwards of 200 greenfield projects in the procurement or pre-procurement phase.[2] About half of the pipeline is comprised of transportation projects, over a quarter of the projects are social infrastructure developments and the remaining projects are primarily in the water and telecom sectors.[2]

Deals Reaching Financial Close by Quarter from 1Q2013 – 4Q2018



Graph includes Greenfield, Brownfield and Refinancing transactions.
Source: Inframation.

1 SIFMA, US Corporate Bond Issuance, 2.5.19.
2 Inframation, InfraDeals Database, 2.7.19.

Featured Mesirow Financial Deals

Subordinate CTL Financing

Confidential Industrial Tenant

(TENANT)

Subordinate CTL Financing for a Confidential Industrial Tenant

Mesirow Financial successfully underwrote the acquisition financing of a “zero cash flow” acquisition (“Zero”) of an industrial asset, tenanted by a confidential investment-grade tenant. The transaction was especially unique because Mesirow did not arrange for the senior debt financing, which closed over a year ago, but was able to finance the acquisition by way of a “B note” debt execution. Specifically, once the transaction was awarded to the property purchaser, Mesirow was engaged and provided leverage on the acquisition by underwriting a fully subordinate, zero coupon bond, secured by a second lien on the senior CTL trust assets including a second mortgage on the property. While subordinate financing was not allowed under the original senior loan documents, Mesirow was able to negotiate an amendment to the loan documents to facilitate the financing. Thus, new subordinate debt documents, including an intercreditor agreement with the senior lenders, were negotiated in conjunction with the closing. The transaction represents another unique offering of Mesirow’s Structured Debt Products group and flexibility to add value to clients even when we are not serving as the lead banker on a CTL transaction.

PPC FLEXIBLE PACKAGING

a portfolio company of

Morgan Stanley Capital Partners

has acquired

TEMKIN

— Buy-side Advisor —

M&A Buy-side Advisor to PPC Flexible Packaging, LLC

Mesirow Financial acted as the exclusive financial advisor to PPC Flexible Packaging, LLC (“PPC” or the “Company”), a portfolio company of Morgan Stanley Capital Partners, on its acquisition of Temkin International, Inc. Headquartered in Buffalo Grove, IL, PPC is a leader in flexographic printing and converting of flexible films, bags and pouches. PPC is a recognized pioneer in cleanroom packaging for healthcare and medical applications, “better for you” snack organic brands, produce, pet food and bakery. The Company operates three manufacturing facilities in Buffalo Grove, IL, Mission, KS, and Rome, GA. Its facilities are SQF and ISO-9001 certified. Founded in 1968, PPC strives to provide the highest quality products with best-in-class lead times and service. The transaction represents another successful assignment completed by Mesirow Financial’s Investment Banking group. Mesirow Financial is one of the most active advisors in the paper, plastics, packaging and specialty printing sectors, having completed over 125 transactions in recent years.

Proviso Township High School District #209
$28,030,000
December 2018
General Obligation Limited Tax School Bonds, Series 2018B

— Senior Underwriter —

Senior Underwriter for Proviso Township High School District #209

Mesirow Financial (“Mesirow”) served as senior underwriter for Proviso Township High School District Number 209’s (the “District”) $28,030,000 General Obligation Limited Tax School Bonds, Series 2018B (the “2018B Bonds”) issued in December 2018. The financing provided the initial funding for the District’s evolving multi-year Master Facility Plan that currently totals over $100 million. Working with the District and their financial advisors, Mesirow developed a $28 million tax-exempt financing plan that minimized interest costs as well as the local tax rate impact while solidifying the District’s credit rating. The financing structure also enhanced the District’s ability to fund remaining projects on a “pay-as-you-go” basis from annual operating surpluses combined with strategic draws from the District’s Capital Project Fund over the next three years. Mesirow Financial locked-in favorable interest rates for the 2018B Bonds by ensuring that credit spreads compared favorably to year-end market conditions. Finally, the 2018B Bonds concluded a series of District financings executed by Mesirow Financial from 2015 through 2018 that now total over $86 million – all of which are geared toward reducing interest costs, enhancing borrowing capacity and minimizing local taxpayer impact. This comprehensive plan illustrates Mesirow Financial’s focus on providing thoughtful, value-driven strategies that maximize financing results for our issuer clients.

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About Mesirow Financial
Mesirow Financial is an independent, employee-owned firm founded in 1937. As specialists in investment, risk management and advisory services, we are committed to helping our institutional, corporate and individual clients achieve their objectives. Our professionals are inspired by an entrepreneurial desire to develop tailored solutions designed to deliver measurable results. To learn more, please visit mesirowfinancial.com.

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