The M&A Wave: Risk & Reward

A review of leverage, ratings and spread performance of recent USD High Grade deals

- The market is focused on the downside risks from the surge in M&A financing and jump in leverage, in our view. A review of past deals highlights the slow pace of deleveraging, even with the strong economic backdrop. However, we believe most recent transactions have been successful and are making progress towards their goals.
- Since 2015, $752bn of HG corporate bonds has been issued to fund M&A, which is 29% of all non-Financial bond issuance.
- We review 32 M&A transactions since 2015, representing $381bn of bond issuance. On average, leverage increased from 2.4x to 4.0x for these deals.
- Six quarters later, average leverage had declined by just 0.4x.
- Investing in the bonds issued for these M&A transactions has been profitable, with a median of 31bp spread outperformance versus the broader market one year later.
- Ratings downgrades at the time of the deals were modest, an average of 0.6 notch. Six quarters later ratings had been downgraded by another 0.1 notch, on average.
- In this note we review the leverage, ratings and spread performance trends of the 32 deals individually. Our Healthcare, TMT and Consumer analysts provide perspective on each transaction and on the M&A dynamic in their sectors more broadly.

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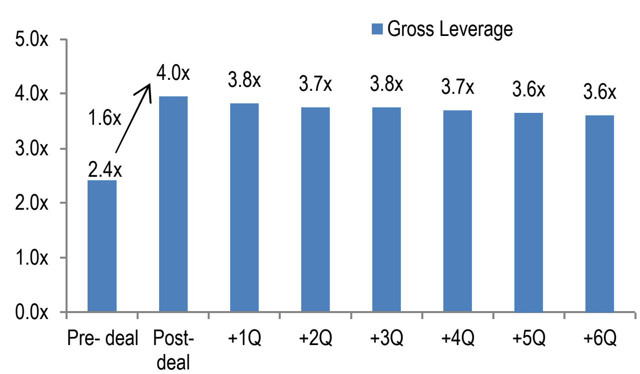
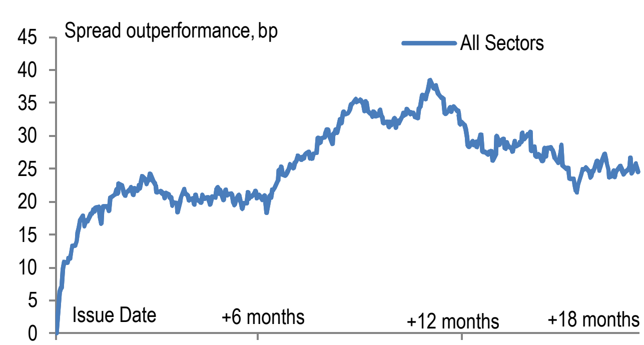
Post M&A deleveraging trends have been weak despite the strong economic backdrop



Buying bonds issued to fund recent M&A has been a good investment



Source: J.P. Morgan, Capital I.Q

See page 46 for analyst certification and important disclosures.

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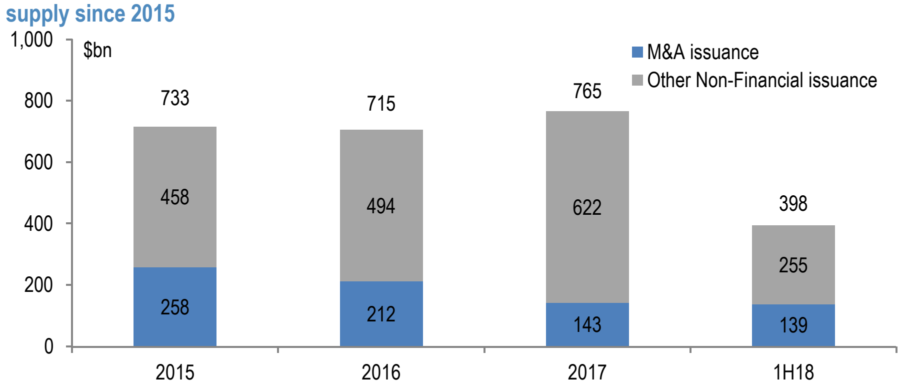
M&A has been a key driver of HG supply and higher corporate leverage

The US High Grade corporate bond market has grown substantially over the past few years, helping companies fund their investment and growth needs. A key use of funding from the market recently has been for Mergers and Acquisitions (M&A). From 2015 to mid-2018 M&A funding represented 29% of the bond issuance for non-Financial companies. $752bn was raised for M&A by these issuers over the past 3 ½ years. For this reason, understanding the success of these transactions is important for HG bond investors who own the bonds of these issuers, and to better understand the risks in the market more broadly. Defining what the 'success' of a transaction means is not straightforward, however, and is what we aim to do from a credit investor's perspective, in this note.

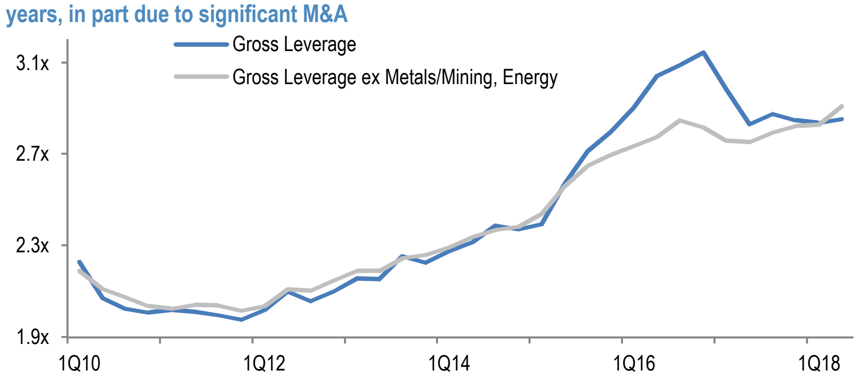
Exhibit 1: M&A related bond issuance has accounted for 29% of all non-Financial HG bond supply since 2015



Source: J.P. Morgan, Dealogic

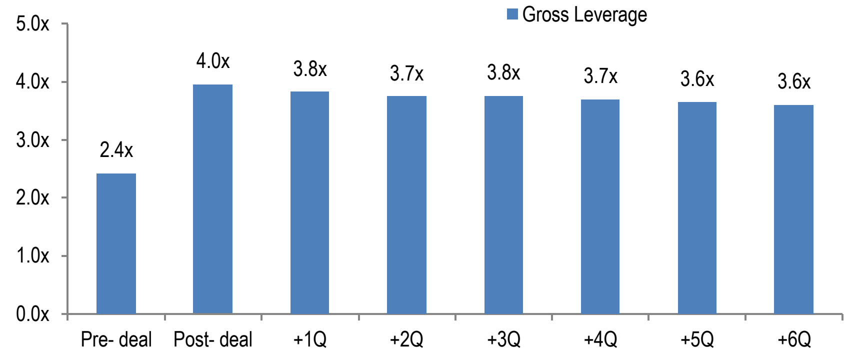
In most cases in an M&A transaction a company increases its leverage and then aims to bring this leverage down by capturing revenue and/or cost synergies. M&A is an inherently bullish transaction – a company is (usually) taking on more debt with a view that the combination of the market opportunity and their leadership will allow them to capture the benefits of the larger scale. At the time of most transactions a company will announce an estimate of the synergies they will capture. They usually provide a future leverage target (or other financial metrics) that they are aiming to achieve at some (sometimes) specified time period in the future.

Exhibit 2: The leverage of US HG non-Financial companies has risen sharply over the past few years, in part due to significant M&A



Source: J.P. Morgan, Capital I.Q.

Exhibit 3: Leverage rose by 1.6x, on average, for the 32 transactions since 2015 which we review in this note



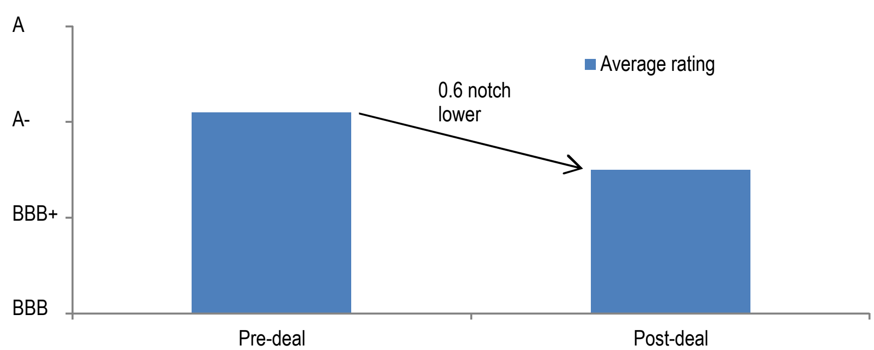
Source: J.P. Morgan, Capital I.Q.

The rating agencies play an important role in this dynamic

In many M&A transactions ratings are downgraded due to the increase in leverage and the increased uncertainty that comes with an untested integration between two previously distinct entities. As part of their review process the rating agencies often are assessing the announced integration/deleveraging plans of the combined entity. To the extent they believe the plan to be credible their rating will reflect this. The rating today typically will be higher than it would be were the current metrics alone being incorporated.

This has raised concerns in the investment community that the ratings post some M&A transactions may be too high. Companies, in some cases, are starting out with leverage metrics well above those typical for the assigned rating, as the rating agencies are giving them credit for a plan to improve their leverage and/or other financial metrics going forward. If the deleveraging or other financial targets which were promised are not achieved, ratings downgrades would be expected in many cases.

Exhibit 4: Ratings were downgraded by an average of 0.6 notches for the M&A deals in our sample. This seems too modest a deterioration given the increase in leverage



Source: J.P. Morgan, Moody's, S&P and Fitch

The strong US economy has been a tailwind for recent M&A transactions. US nominal GDP has grown by 14% from YE14 to mid-2018. S&P500 revenue growth has been 13% over this time period, and S&P500 earnings have grown by 16%. Obviously this has been important for progress on deleveraging. The fact that the post M&A deleveraging has been pretty modest, as discussed further below, despite the strong macro economic backdrop, does raise concerns about the trend of post

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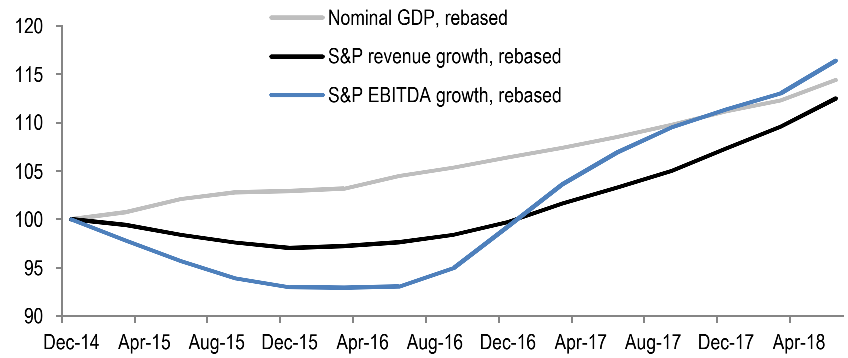
M&A deleveraging if/when the economy turns more negative. The prior M&A cycle pre-crisis was quite different from this one, with more heavily levered transactions, and more deals driven by financial sponsors rather than strategic alignments. Still, the extent of the stress in some of the pre-crisis transactions was driven by the strong US recession which followed. It is obviously difficult for a company to grow into a larger debt profile when the broader economy is shrinking.

Exhibit 5: Strong GDP growth and corporate earnings performance have been tailwinds for companies in their deleveraging efforts



Source: J.P. Morgan, Bloomberg

Exhibit 6: List of deals reviewed

Date Closed	Acquirer	Acquired
15-Jun-18	AT&T	Time Warner Inc
7-Mar-18	Discovery	Scripps Network
29-Dec-17	Becton Dickinson	CR Bard Inc
1-Nov-17	Crown Castle International Corp	LTS Group Holdings LLC
29-Aug-17	Amazon.com Inc	Whole Foods Market Inc
25-Jul-17	British American Tobacco PLC	Reynolds American Inc
15-Jun-17	Reckitt Benckiser PLC	Mead Johnson
1-Jun-17	Sherwin Williams	Valspar
13-Mar-17	Analog Devices Inc	Linear Technology Corp
13-Mar-17	Verizon Communications	Yahoo Holdings Inc
4-Jan-17	Abbott Laboratories	St Jude Medical Inc
8-Dec-16	Microsoft Corp	LinkedIn Corp
7-Nov-16	Oracle Corp	NetSuite Inc
11-Oct-16	Molson Coors Brewing Co	MillerCoors LLC
10-Oct-16	Anheuser-Busch InBev	SABMiller
7-Sep-16	Dell Technologies Inc	EMC Corp
24-Aug-16	Mylan NV	Meda AB
2-Aug-16	Teva	Allergan PLC's generic drug business
1-Jul-16	Southern Co	AGL resources
18-May-16	Charter	Time Warner Cable
15-Apr-16	Newell Rubbermaid	Jarden Corporation
2-Feb-16	Avago	Broadcom
29-Dec-15	Intel Corp	Altera Corp
6-Nov-15	Lockheed Martin	Sikorsky Aircraft Corporation
18-Aug-15	CVS Health Corp	Omnicare Inc
28-Jul-15	UnitedHealth Group	Catamaran Corp
2-Jul-15	HJ Heinz Corp	Kraft Foods Group Inc
1-Jul-15	Siemens	Dresser-Rand Group
27-May-15	AbbVie Inc	Pharmacyclics Inc
17-Mar-15	Becton Dickinson	CareFusion Corp
17-Mar-15	Actavis PLC	Allergan Inc
10-Oct-14	Bayer	Merck consumer care unit

Source: J.P. Morgan

Methodology: We review 32 large, debt funded M&A transactions involving High Grade bond issuers since 2015. For each company the leverage of the acquirer at the time of the deal announcement, the time of the deal closing, and for 6 subsequent quarters post the closing is shown. The goal is to understand the increase in leverage at the time of the deal and the post-closing progress on improving leverage. For the three main sectors with active debt-funded M&A over the three years (Healthcare, Telecommunications/Media/Technology (TMT), Consumer non-cyclical) there is a summary of the sector trends. For the summary metrics the leverage trend of each company is weighted by the amount of company debt at the time of the deal closing, so the larger capital structures impact the averages more heavily than the smaller ones.

Most companies in our sample have given guidance as to their financial targets after the transaction, and these are shown in the table. JPM sector analysts also give a qualitative assessment as to the success of each company's goal towards its stated post deal target.

Results: most transactions have made progress on deleveraging, but modest progress

Of the 21 M&A transactions reviewed in this report where it is not too soon to draw a conclusion, our analysts conclude that 13 companies have succeeded in achieving their post merger financial target, 4 have made partial progress and 4 have not succeeded. That's 62% success, 19% partial and 19% not succeeded. On average across the 32 deals in our analysis, leverage rose from a pre-deal level of 2.4x to 4.0x at the time the transactions closed. Six quarters later leverage had declined to 3.6x, so about a quarter of the rise in leverage from the transaction had been unwound 1.5 year later. As discussed above, this progress has occurred in the context of a strong economic backdrop and favorable financial markets for borrowing. There has been one obvious M&A failure with Teva, where post a large merger the company was downgraded to HY and the bonds which were issued to fund the transaction currently trade about 200bp wider than at issuance.

Exhibit 7: M&A performance by sector

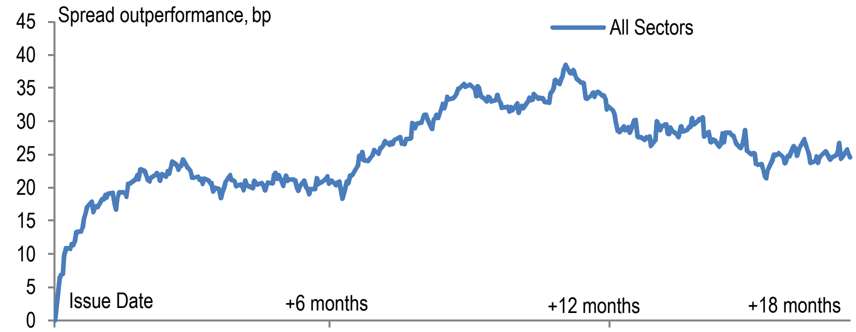
	Gross leverage			Rating change since pre-deal		Outperformance of 10Y bond issued for M&A deals 6 quarters after the close
	Pre-Deal	Post deal	+6Q	Post deal	+6Q	
Healthcare & Pharma	2.0x	3.8x	3.5x	0.8 lower	1.1 lower	9bp / 40bp (ex-Teva)
TMT	2.6x	3.2x	3.0x	1.5 lower	1.5 lower	57bp / 10bp (ex-Dell)
Consumer Noncyclicals	2.7x	5.4x	4.7x	0.1 higher	0.1 higher	10bp
Other	2.5x	4.1x	3.7x	0.9 lower	1.0 lower	22bp
Total	2.4x	4.0x	3.6x	0.6 lower	0.7 lower	23bp / 24bp (ex-Dell & Teva)

Source: J.P. Morgan

Post deal ratings improvement of these transactions has been modest. After 6 quarters 15 (71%) of the companies are rated the same as at the time of the deal closing, 2 (10%) are higher rated and 4 (19%) are lower rated. This is based on the 21 deals where 6 quarters have passed since the closing of the deal. The fact that there has been such a modest rating upgrade trend reflects the high starting leverage for the rating bucket in many cases. The companies were already given credit for their deleveraging targets in the initial rating, so there was little room for rating improvement.

Results from a bond investor's perspective: Buying the bonds issued to fund the M&A deals in our sample has been a very good investment. The median outperformance of these bonds versus the JULI has been 31bp one year later, and the deal weighted average has been 23bp of outperformance. There are two outlier results: Investors in Teva's M&A bonds fared very poorly with the 10yr bond 177bp of underperformance six quarters post the deal. In contrast, investors in Dell's M&A bonds did very well with 159bp of outperformance. Excluding these outliers, the average outperformance has been 24bp. This calculation is based on the benchmark 10yr bond issued for the M&A funding, compared to the JULI 10yr spread performance. Due to this the outperformance average is comparing different time periods for each deal.

Exhibit 8: Buying the bonds issued to fund the M&A deals in our sample has been a very good investment (Larger number indicates outperformance of M&A 10yr bond vs JULI 10yr)



Source: J.P. Morgan

Healthcare & Pharma

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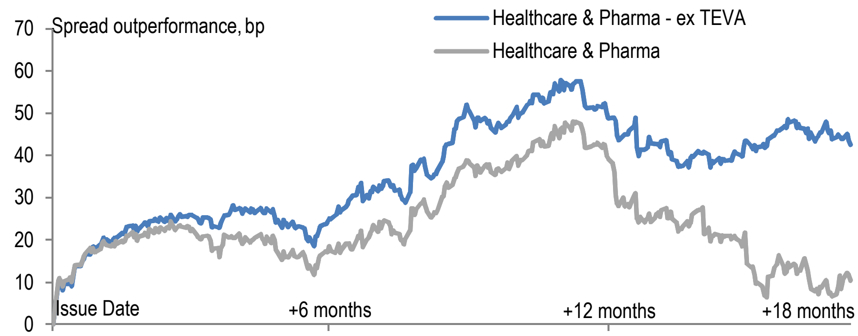
Levering M&A transactions have been a major credit driver in the Healthcare sector, in our view. Over the past few years there has been a consistent presence of consolidation drivers across much of the pharmaceutical supply chain. Including transactions expected to be completed, since the beginning of 2014 High Grade Healthcare issuers have been part of 47 transactions above $4bn EV, including 12 transactions above $20bn EV).

The sector is supported by a very strong cash flow generation profile which has given companies the ability to take leverage up materially when they promise to pay down debt rapidly (this cash flow generation and comfort with delevering in recent years has led to rating agencies giving substantial leeway in allowing companies to take leverage higher than previously allowed ranges, with starting leverage of ~4.5-5.5x not uncommon). While many of these transactions resulted in modest initial rating deterioration, deleveraging post M&A in the Healthcare sector can be broadly seen as “successful” if you consider whether companies completed acquisition commitments. Of course all of this is underpinned by the very well-publicized challenges at Teva (the company was downgraded to HY less than 1.5 years after completing the acquisition of the Allergan Generics business) as well as a few companies completing subsequent sizable acquisitions and pushing out original delevering timelines.

Looking at the subsectors within the Healthcare space, Medical Device company M&A deleveraging has been broadly successful, as most companies have improved leverage following large levering acquisitions. Large cap Pharma and Biotech companies have been less aggressive on bringing leverage down following transactions, but have also not executed deals that were relatively as large over the recent past. Health Insurers went through several iterations of levering transactions with the first set of horizontal mergers getting blocked by the DOJ and companies then turning to vertical deals where large bond issuances have occurred in 2018. On the other hand the two large Generics deals over the past few years have fallen behind original deleveraging targets as underlying fundamentals have been challenging in that subsector.

Looking forward, we anticipate a pickup in M&A across the sector as many of the strongest drivers of consolidation are still present, especially for Pharma companies. In particular, despite significant cash balances being freed up from tax reform, we have not seen material levels of Pharma M&A thus far in 2018. Finally, with several large levering transactions occurring so far in 2018, we will monitor those companies closely as they deleverage and look to fulfill their commitments over the next 18-24 months.

Exhibit 9: 10yr bonds issued to fund Healthcare & Pharma M&A deals have performed in line with JULI 10yr as underperformance of TEVA M&A bonds offset the outperformance of bonds from other M&A deals (Larger number indicates outperformance of M&A 10yr bond vs JULI 10yr)



Source: J.P. Morgan

Consumer Noncyclicals

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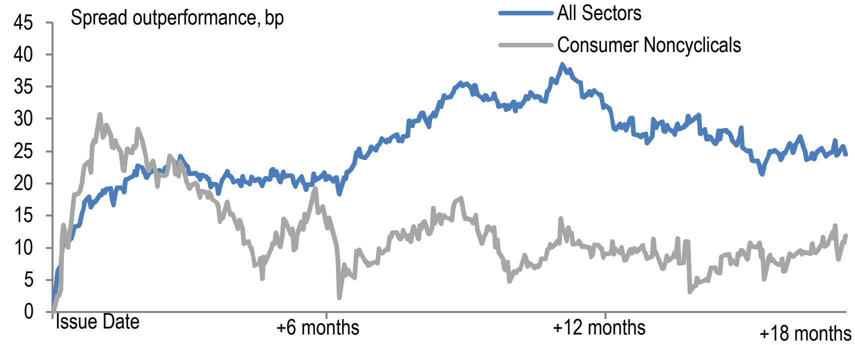
Consolidation in the consumer noncyclical sectors over the last several years has picked up due to a confluence of favorable economic and capital markets conditions and company strategies to boost growth. While each transaction has its specific rationale and circumstances, the combinations are typically expected to bring the acquirer some blend of faster growing product categories and geographies or a meaningful opportunity to streamline operations and take out costs.

The financial characteristics of the consumer noncyclical sector include stable demand trends through economic cycles, relatively high EBITDA margins in the 15-20% range, and strong cash generation. These attributes combined with the favorable macro and low interest rate backdrop have resulted in unprecedented leeway with pro forma leverage levels for strategic M&A within investment grade. Rating agencies have allowed leverage to rise into the 4.5-6x range as long as companies can demonstrate a willingness and ability to reduce leverage back to a more moderate 3.5-4x range within a reasonable time frame, usually 1.5-3 years.

While many of the M&A transactions analyzed in this report are still "in progress" with their deleveraging efforts, the majority are tracking behind original plan due to weaker than expected underlying results (rather than a change in financial policy). We also believe leniency on the part of the rating agencies, favorable capital markets conditions, and generally positive macro conditions, have contributed to a lower sense of urgency for companies to reduce their leverage.

Consolidation across the food and beverages sectors has continued apace in 2018 with several M&A transactions announced or recently closed. As a result, pro forma leverage is expected to rise into the 4-5.5x range for several companies with medium term (2-3 years) targets of 3-3.5x. One of these transactions, Campbell Soup's acquisition of Snyder's-Lance, which closed in March 2018, is already off to a rocky start due to weakness in legacy areas of Campbell's business and previously acquired businesses which prompted a strategic review and decision to sell non-core assets to reduce leverage. S&P lowered CPB's rating one notch to BBB- after lowering one notch in reaction to the acquisition announcement in December 2017. While we expect the pace of M&A activity across the food and beverage sectors to slow as the recent wave of transactions is digested, we think conditions are still supportive for strategic combinations in the household and personal care segments of consumer noncyclicals.

Exhibit 10: 10yr bonds issued to fund Consumer Noncyclicals M&A deals have outperformed the JULI index but underperformed bonds issued to fund M&A deals from other sectors (Larger number indicates outperformance of M&A 10yr bond vs JULI 10yr)



Source: J.P. Morgan

Telecom/Media/Technology

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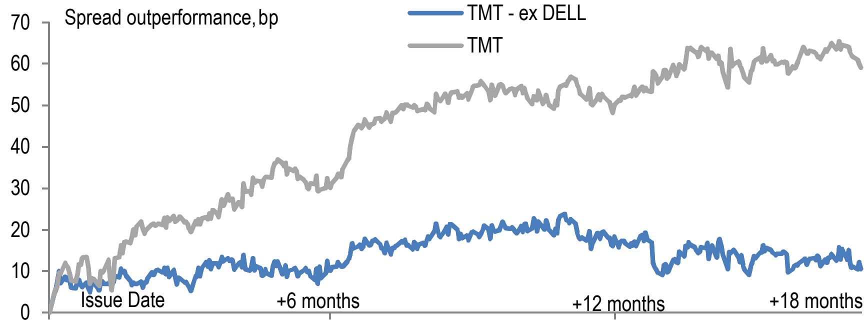
M&A activity in TMT has generally resulted in positive results for the acquirers, with most transactions being financially accretive and positive diversifiers. Ample cash balances and free cash flow, coupled with a benign economic backdrop, have reduced concerns around leverage, in our view, and increased the rate of de-leveraging across our sectors. While the Amazon/Whole Foods, Avago/Broadcom/Brocade, Intel/Altera, and Microsoft /Linkedin transactions account for nearly $100bn in transaction value, leverage remained at relatively conservative levels given the significant cash balances and FCF of the acquirers. Additionally, we view each transaction as having positively expanded and diversified each company's product offerings, better positioning them in the fast moving technology sector.

Unlike most of the technology transactions we have analyzed, the operating environment for Dell weakened post-transaction, creating significant headwinds, slowed cash generation, and delayed de-leveraging efforts. However, the operating environment has improved for Dell as the storage business has seen stronger profitability, which has helped drive cash flow and EBITDA growth leading to decreased leverage.

We expect M&A to continue in the technology sector as companies continue to diversify into high growth areas such as autonomous driving, AI, data centers, and gaming. In Media, we continue to believe consolidation will remain the key theme in the sector as content companies continue to seek scale (Time Warner, Scripps, 21st Century Fox, Sky, and potentially CBS/VIAB). In the telecom sector, AT&T has already made its move for Time Warner, while Verizon has publicly expressed they have no need to acquire content assets and are focused on the buildout of a 5G network. We note Verizon has appeared in several public filings with low, all stock bids for the Fox and CBS assets.

Exhibit 11: 10yr bonds issued to fund TMT M&A deals have outperformed the JULI index as well as bonds issued to fund M&A deals from other sectors. However, as shown below, most of the outperformance is driven by the strong performance of Dell 10yr bonds (Larger number indicates outperformance of M&A 10yr bond vs JULI 10yr)



Source: J.P. Morgan

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Exhibit 12: Gross leverage trend summary

Date Closed	Acquirer	Acquired	Deal Debt $bn	Pre-deal Leverage	Post-deal Leverage	Cumulative leverage change post close +1Q	+2Q	+3Q	+4Q	+5Q	+6Q	Leverage Target	Goal Achieved?
Healthcare & Pharma													
10-Oct-14	Bayer	Merck cons care unit	7.0	1.5x	2.4x	0.0x	+0.1x	-0.1x	-0.5x	-0.5x	-0.6x	Not specified	n/m
17-Mar-15	Becton Dickinson	CareFusion Corp	6.2	1.8x	3.8x	-0.2x	-0.4x	-0.3x	-0.5x	-0.7x	-0.8x	3.0x within 2 years	Yes
17-Mar-15	Actavis PLC	Allergan Inc	21.0	3.5x	5.2x	-0.7x	-0.7x	-0.5x	-0.2x	-0.2x	-1.0x	3.5x-4.0x within 12-18 months*	Yes
27-May-15	AbbVie Inc	Pharmacyclics Inc	16.7	1.3x	3.4x	-0.2x	-0.4x	-0.6x	-0.2x	-0.3x	-0.4x	Not specified	n/m
28-Jul-15	UnitedHealth Group	Catamaran Corp	10.5	1.4x	2.3x	+0.2x	+0.3x	+0.2x	+0.1x	0.0x	-0.1x	Debt-to-Cap <40%	Yes
18-Aug-15	CVS Health Corp	Omnicare Inc	11.3	1.2x	3.4x	-0.2x	-0.2x	-0.2x	-0.5x	-0.4x	-0.3x	2.7x in the long-term	Partially
2-Aug-16	Teva	Allergan's generic drug unit	15.0	1.7x	4.4x	-0.4x	-0.3x	0.0x	+0.4x	+0.9x	+0.8x	3.5x in 18 months	No
24-Aug-16	Mylan NV	Meda AB	6.5	2.5x	4.0x	-0.3x	-0.4x	-0.4x	-0.2x	-0.1x	0.0x	<3.0x by YE17	No
4-Jan-17	Abbott Laboratories	St Jude Medical Inc	15.1	1.9x	4.7x	-0.7x	-0.7x	-0.6x	-0.6x	-1.5x	-	3.5x in 2018	Yes
29-Dec-17	Becton Dickinson	CR Bard Inc	9.7	3.2x	4.9x	-0.2x	-0.4x	-	-	-	-	3.0x within 3 years	Too soon
Sector Summary (debt weighted)			**122.7**	**2.0x**	**3.8x**	**-0.3x**	**-0.3x**	**-0.3x**	**-0.2x**	**-0.3x**	**-0.3x**		
Consumer Noncyclicals													
2-Jul-15	HJ Heinz Corp	Kraft Foods Group	10.0	3.6x	4.4x	-0.6x	-0.4x	+0.1x	-0.1x	-0.2x	-0.1x	Mid 3x over medium term*	Partially
15-Apr-16	Newell Rubbermaid	Jarden Corporation	8.0	3.0x	4.5x	0.0x	-0.5x	-0.5x	-0.6x	-0.5x	-0.6x	3.0-3.5x after 2 to 3 years	Too soon
10-Oct-16	Anheuser-Busch InBev	SABMiller	46.0	2.7x	6.2x	0.0x	-0.4x	-0.4x	-0.8x	-0.8x	-0.8x	Long term target 2.3-2.5x*	Too soon
11-Oct-16	Molson Coors Brewing Co	MillerCoors LLC	5.3	2.5x	5.3x	-0.2x	-0.4x	-0.2x	-0.7x	-0.7x	-0.8x	4.1-4.3x by FY18, 3.85-4.05x by mid-FY19*	Too soon
15-Jun-17	Reckitt Benckiser PLC	Mead Johnson	7.8	1.0x	4.9x	-1.1x	-1.1x	-1.2x	-1.2x	-	-	Not specified	Too soon
25-Jul-17	British American Tobacco	Reynolds American	17.0	2.8x	4.6x	0.0x	+0.3x	+0.3x	-	-	-	3.2-3.3x by FY19*	Too soon
Sector Summary (debt weighted)			**94.1**	**2.7x**	**5.4x**	**-0.2x**	**-0.3x**	**-0.2x**	**-0.7x**	**-0.6x**	**-0.6x**		
TMT													
29-Dec-15	Intel Corp	Altera Corp	7.0	0.6x	1.0x	+0.1x	+0.3x	+0.1x	+0.1x	+0.1x	+0.3x	N/A	Yes
2-Feb-16	Avago	Broadcom	9.0	1.5x	2.9x	-0.3x	-0.5x	-0.6x	-0.8x	-0.9x	-0.6x	2x	Yes
18-May-16	Charter	Time Warner Cable	19.0	4.2x	4.4x	-0.2x	-0.3x	-0.3x	-0.3x	-0.0x	+0.1x	4.0x-4.5x	Yes
7-Sep-16	Dell Technologies Inc	EMC Corp	20.0	3.6x	5.4x	+0.8x	+0.7x	+0.7x	+0.4x	-0.2x	-	IG rating in 2 years	No
7-Nov-16	Oracle Corp	NetSuite Inc	9.3	2.6x	3.2x	0.0x	+0.1x	-0.2x	+0.2x	+0.1x	0.0x	N/A	Yes
8-Dec-16	Microsoft Corp	LinkedIn Corp	19.8	1.9x	2.4x	-0.2x	-0.3x	-0.1x	-0.3x	-0.3x	-0.7x	N/A	Yes
13-Mar-17	Analog Devices Inc	Linear Technology	2.1	1.4x	3.7x	-0.3x	-0.6x	-1.1x	-1.3x	-	-	2.3x in 2 years	Yes
13-Mar-17	Verizon Communications	Yahoo Holdings Inc	4.5	2.4x	2.7x	0.0x	-0.1x	-0.1x	-0.2x	-	-	N/A	Yes
29-Aug-17	Amazon.com Inc	Whole Foods Market	13.7	1.9x	3.1x	-0.3x	-0.6x	-0.9x	-	-	-	N/A	Yes
1-Nov-17	Crown Castle Intl Corp	Lightower	1.8	6.0x	6.5x	0.0x	-0.6x	-0.9x	-	-	-	4.1-5.1x in the long term	Partially
7-Mar-18	Discovery	Scripps Network	6.3	3.3x	4.6x	-0.2x	-	-	-	-	-	4.1x by YE18, 3.6x by YE19	Too Soon
15-Jun-18	AT&T	Time Warner Inc	22.5	2.8x	3.3x	-	-	-	-	-	-	2.7x by the end of the first year after close	Too Soon
Sector Summary (debt weighted)			**135.0**	**2.6x**	**3.2x**	**-0.0x**	**-0.1x**	**-0.2x**	**-0.1x**	**-0.1x**	**-0.2x**		
Other													
1-Jul-15	Siemens	Dresser-Rand Group	7.6	1.1x	1.9x	-0.3x	+0.2x	+0.6x	+0.1x	-0.1x	-0.1x	<2x*	Yes
6-Nov-15	Lockheed Martin	Sikorsky Aircraft Corp	7.0	1.3x	2.4x	-0.1x	-0.1x	-0.2x	-0.2x	-0.3x	-0.5x	Not specified	Partially
1-Jul-16	Southern Co	AGL resources	6.8	4.4x	6.2x	+0.1x	-0.2x	-0.2x	-0.3x	-0.4x	-0.4x	4.1x – 4.3x by YE16*	No
1-Jun-17	Sherwin Williams	Valspar	7.5	0.9x	4.2x	+0.2x	0.0x	0.0x	-0.2x	-	-	3x by 2018, 1.9x by 2020	Too soon
Sector Summary (debt weighted)			**29.1**	**2.5x**	**4.1x**	**-0.0x**	**-0.1x**	**-0.0x**	**-0.2x**	**-0.3x**	**-0.4x**		
Overall Summary (debt weighted)			**380.9**	**2.4x**	**4.0x**	**-0.1x**	**-0.2x**	**-0.2x**	**-0.3x**	**-0.3x**	**-0.4x**		

Source: J.P. Morgan, Capital I.Q. The AT&T M&A deal is excluded from summary calculations as the deal has just closed. The Avago M&A deal is excluded from the summary since there was no corporate bonds outstanding for the issuer at deal close
The company has provided a net leverage target – our gross leverage target estimate is based on this, but is not specifically mentioned by the company. Pre-deal leverage is pre-deal announcement leverage while post-deal leverage is post deal closing leverage

Exhibit 13: Benchmark 10yr bond issued for the M&A funding, compared to the JULI 10yr spread performance (Larger number indicates outperformance of M&A 10yr bond vs JULI 10yr)

Date Closed	Acquirer	Acquired	Debt $bn	Sector	10yr M&A Bond	10yr Bond outperformance vs JULI 10yr 6m	12m	18m
10/10/2014	Bayer	Merck consumer care unit	7	Healthcare	BAYNGR 3 3/8 10/08/24	34	51	79
3/17/2015	Becton Dickinson	CareFusion Corp	6.2	Healthcare	BDX 3.734 12/15/24	29	59	73
3/17/2015	Actavis PLC	Allergan Inc	21	Healthcare	AGN 3.8 03/15/25	30	93	51
5/27/2015	AbbVie Inc	Pharmacyclics Inc	16.7	Healthcare	ABBV 3.6 05/14/25	18	44	4
7/28/2015	UnitedHealth Group	Catamaran Corp	10.5	Healthcare	UNH 3 3/4 07/15/25	48	52	36
8/18/2015	CVS Health Corp	Omnicare Inc	11.3	Healthcare	CVS 3 7/8 07/20/25	45	65	30
8/2/2016	Teva	Allergan's generic drug business	15	Healthcare	TEVA 3.15 10/01/26	-31	-19	-177
8/24/2016	Mylan NV	Meda AB	6.5	Healthcare	MYL 3.95 06/15/26	-36	-	-
1/4/2017	Abbott Laboratories	St Jude Medical Inc	15.1	Healthcare	ABT 3 3/4 11/30/26	16	19	45
12/29/2017	Becton Dickinson	CR Bard Inc	9.7	Healthcare	BDX 3.7 06/06/27	5	3	-
7/2/2015	HJ Heinz Corp	Kraft Foods Group Inc	10	Consumer	KHC 3.95 07/15/25	32	42	-
4/15/2016	Newell Rubbermaid	Jarden Corporation	8	Consumer	NWL 4.2 04/01/26	62	72	59
10/10/2016	Anheuser-Busch InBev	SABMiller	46	Consumer	ABIBB 3.65 02/01/26	16	-2	2
10/11/2016	Molson Coors Brewing Co	MillerCoors LLC	5.3	Consumer	TAP 3 07/15/26	-8	-6	7
6/15/2017	Reckitt Benckiser PLC	Mead Johnson	7.8	Consumer	RBLN 3 06/26/27	-20	-5	-
7/25/2017	British American Tobacco	Reynolds American Inc	17	Consumer	BATSLN 3.557 08/15/27	7	8	-
12/29/2015	Intel Corp	Altera Corp	7	TMT	INTC 3.7 07/29/25	73	63	56
2/2/2016	Avago	Broadcom	9	TMT	-	-	-	-
5/18/2016	Charter	Time Warner Cable	19	TMT	-	-	-	-
9/7/2016	Dell Technologies Inc	EMC Corp	20	TMT	DELL 6.02 06/15/26	99	158	159
11/7/2016	Oracle Corp	NetSuite Inc	9.3	TMT	ORCL 2.65 07/15/26	2	0	4
12/8/2016	Microsoft Corp	LinkedIn Corp	19.8	TMT	MSFT 2.4 08/08/26	-10	-5	-10
3/13/2017	Analog Devices Inc	Linear Technology Corp	2.1	TMT	ADI 3 1/2 12/05/26	-4	-1	-2
3/13/2017	Verizon Communications	Yahoo Holdings Inc	4.5	TMT	VZ 4 1/8 03/16/27	-8	26	47
8/29/2017	Amazon.com Inc	Whole Foods Market	13.7	TMT	AMZN 3.15 08/22/27	9	28	-
11/1/2017	Crown Castle International	LTS Group Holdings	1.8	TMT	CCI 3.65 09/01/27	-2	-5	-
3/7/2018	Discovery	Scripps Network	6.3	TMT	DISCA 3.95 03/20/28	21	38	-
6/15/2018	AT&T	Time Warner Inc	22.5	TMT	-	-	-	-
7/1/2015	Siemens	Dresser-Rand Group	7.8	Other	SIEGR 3 1/4 05/27/25	44	62	31
11/6/2015	Lockheed Martin	Sikorsky Aircraft Corp	7	Other	LMT 3.55 01/15/26	36	20	18
7/1/2016	Southern Co	AGL resources	6.8	Other	-	-	-	-
6/1/2017	Sherwin Williams	Valspar	7.5	Other	SHW 3.45 06/01/27	14	-9	-

Source: J.P. Morgan

Bayer acquires Merck consumer care unit

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At the close of the Merck OTC acquisition, Bayer committed to maintaining a single-A rating, which aligned with having leverage sustained below 2.0x. The OTC business added scale and diversification to the company and was integrated on track with management expectations. Management initially delivered on deleveraging goals and keeping the single-A rating, but less than two years post-close the company signed an agreement to acquire MON for $66bn which resulted in multiple notches of downgrades.

Purpose of Transaction: To build the company's non-prescription medicines business. After close the company held the #2 Global market share and #1 US market share in the Consumer healthcare markets.

Deleveraging Targets at deal close: Committed to maintaining single A ratings

Timing	
Date announced:	May 6th, 2014
Date funded:	Oct 1st, 2014
Date closed:	Oct 10th, 2014
Sizing	
Deal size:	$14.2bn
IG bond issuance:	$7.0bn

Exhibit 1: 10 yr M&A funding deal bond vs JULI 10yr (Larger number indicates outperformance of M&A 10yr bond vs JULI 10yr)

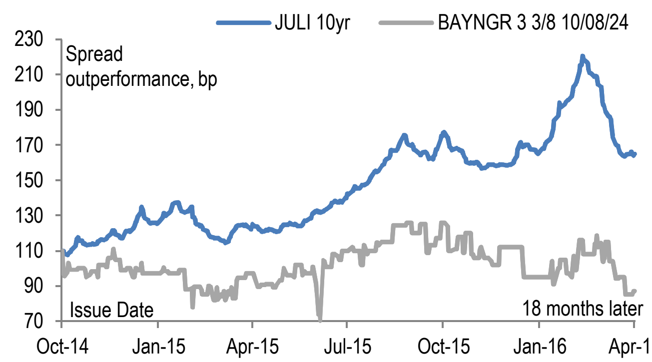


Exhibit 2: Rating trends

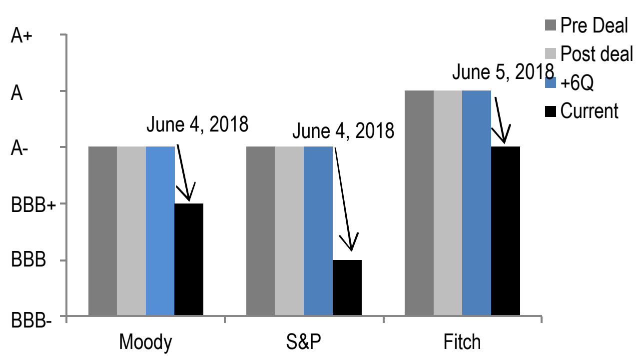
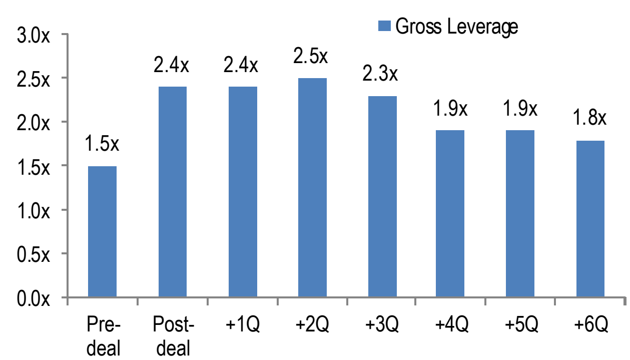


Exhibit 3: Gross Leverage trend



Source: J.P. Morgan, Capital I.Q., Moody's, S&P and Fitch
Current Bayer downgrades reflect the close of the MON acquisition

Becton Dickinson acquires CareFusion Corp

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BDX's $12.2bn acquisition of CareFusion led to a two notch downgrade from both S&P and Moody's, as the company's post acquisition target leverage was a full turn higher than the previously guided range. Over the next two years the company stayed on track to deliver on synergy expectations and hit its leverage target in March 2017. One month after achieving its leverage target BDX announced it would acquire CR Bard for $24.1bn. Following the close of the acquisition, Moody's downgraded BDX's credit rating another two notches to Ba1 due to three reasons: 1) the size of the deal, which quickly followed CFN; 2) very high pro-forma leverage; and 3) a view that deleveraging to IG levels will take longer than what the rating agency feels is acceptable. S&P left the ratings at an Investment Grade level while Fitch, who previously did not rate BDX, assigned a first time rating of BBB-. As of the 2Q18 earnings call, BDX has surpassed its $250mn synergy for CareFusion, recognizing $350mn of synergies and said it is on track with the integration of C.R. Bard and "delivering on financial commitments."

Purpose of Transaction: Expand operations to include Medical Systems and Procedural Solutions. The combination was thought to enable a simpler more effective parenteral drug delivery.

Deleveraging Targets at deal close: 3.0x within 2 years

Timing	
Date announced:	Oct 5th, 2014
Date funded:	Dec 4th, 2014
Date closed:	Mar 17th, 2015
Sizing	
Deal size:	$12.2bn
IG bond issuance:	$6.2bn

Exhibit 1: 10 yr M&A funding deal bond vs JULI 10yr (Larger number indicates outperformance of M&A 10yr bond vs JULI 10yr)

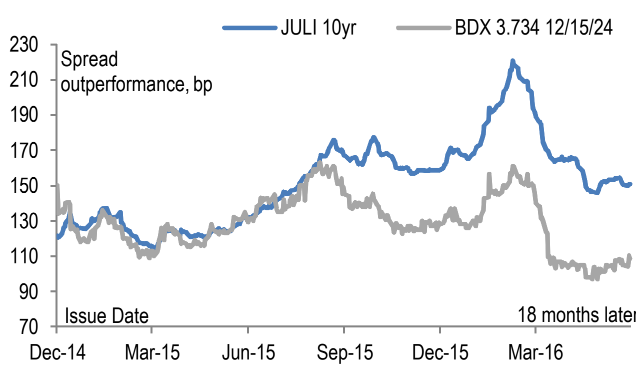
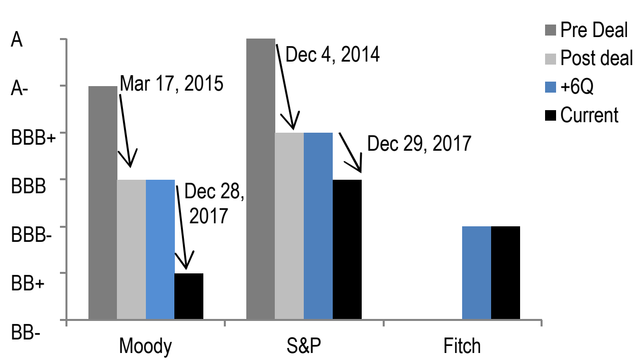
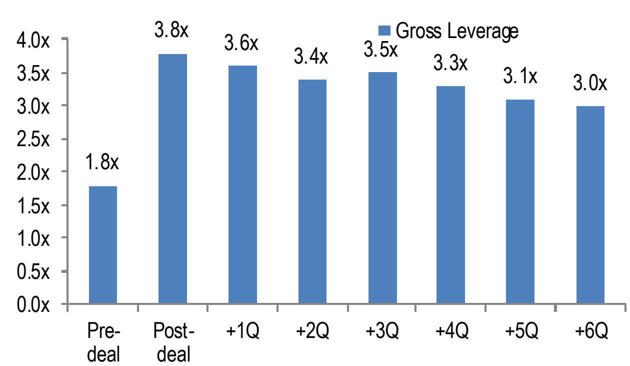


Exhibit 2: Rating trends



Source: J.P. Morgan, Capital I.Q., Moody's, S&P and Fitch
Fitch initiated the rating on 5/4/17

Exhibit 3: Gross Leverage trend



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Actavis PLC acquires Allergan Inc

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ACT used the transaction to change its name and ticker to Allergan and AGN as part of a broad re-branding effort. In addition, three months after the close of the transaction, AGN agreed to divest its generic drug business to TEVA for $39.6bn. With the divestiture the company's deleveraging originally slowed as the company waited to close the transaction, though once closed net leverage dropped precipitously. As part of the generic drug business divestment to TEVA, the company used $8bn of proceeds to pay down debt. Note that the company's leverage goal was on a net-basis and did achieve its 18 month target, but not its 12 month target that was pushed back until the close of the TEVA divestment that occurred 15 months post close of the original acquisition. Gross leverage further declined post the 6Q mark, as the company continued to pay down debt as it matured.

Purpose of Transaction: ACT acquired AGN to create a top 10 global growth pharmaceutical company.

Deleveraging Targets at deal close: Net leverage of 3.5x 12 months post close & 3.0x 18 months post close.

Timing	
Date announced:	Nov 17th, 2014
Date funded:	Mar 3rd, 2015
Date closed:	Mar 17th, 2015
Sizing	
Deal size:	$65.0bn
IG bond issuance:	$21.0bn

Exhibit 1: 10 yr M&A funding deal bond vs JULI 10yr (Larger number indicates outperformance of M&A 10yr bond vs JULI 10yr)

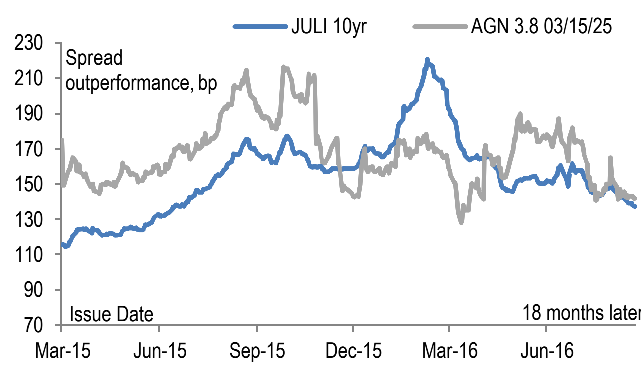
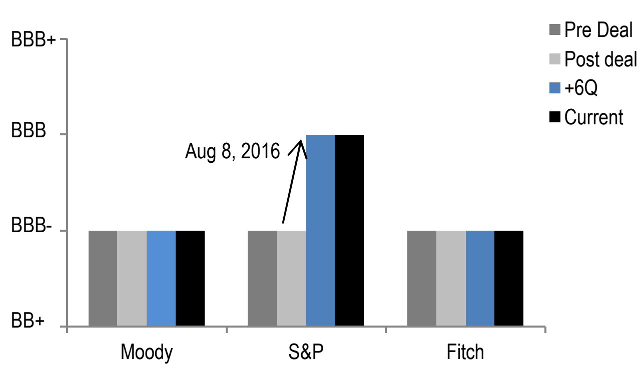
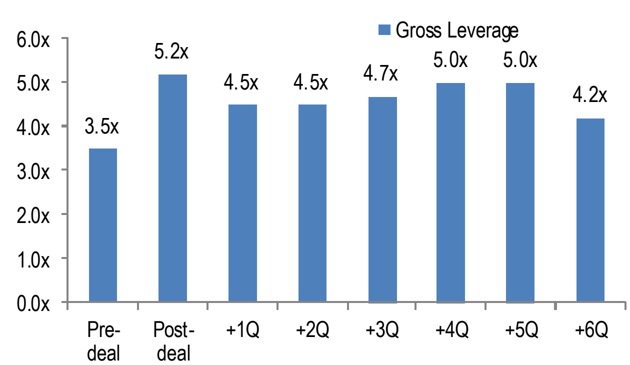


Exhibit 2: Rating trends



Source: J.P. Morgan, Capital I.Q., Moody's, S&P and Fitch

Exhibit 3: Gross Leverage trend



AbbVie Inc acquires Pharmacyclics Inc

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AbbVie acquired Pharmacyclics for roughly $20bn and gave the existing stockholders of Pharmacyclics an option to elect 100% cash, 100% stock or a mix of cash and stock. Promptly after the close of the transaction the company completed a $5bn stock repurchase program to repurchase half of the equity issued in the transaction. The debt financing was used to support both the share repurchase as well as the original debt financing. Pharmacyclics, manufacturer of oncology drug IMBRUVICA, was acquired to add diversity to ABBV's Humira concentration. Management never set out a leverage target or deleverging path but the company's ratings at the time were sustained due to the significant EBITDA growth ABBV was experiencing. This growth allowed the company to delever from the PF leverage of 4.4x (LTM 12/31/2014) to 3.4x by the end of 2Q15. In April 2016, ABBV announced an agreement to acquire Stemcentrx for $5.8bn, funding the acquisition 100% in debt. Subsequent to the announced transaction both Moody's and S&P downgraded ABBV's credit rating by one notch.

Purpose of Transaction: To grow AbbVie's late-stage pipeline in the hematological oncology space.

Deleveraging Targets at deal close: NA

Timing	
Date announced:	Mar 4th, 2015
Date funded:	May 5th, 2015
Date closed:	May 27th, 2015
Sizing	
Deal size:	$19.8bn
IG bond issuance:	$16.7bn

Exhibit 1: 10 yr M&A funding deal bond vs JULI 10yr (Larger number indicates outperformance of M&A 10yr bond vs JULI 10yr)

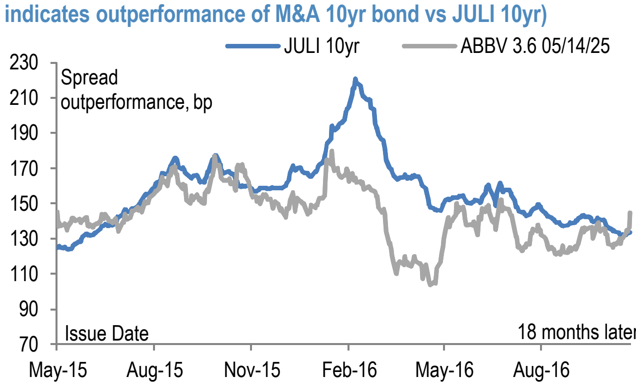


Exhibit 2: Rating trends

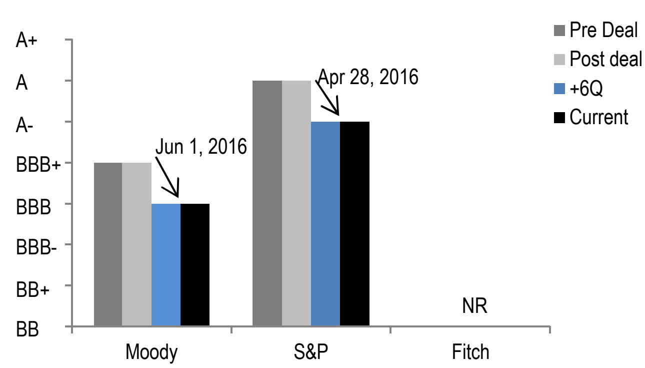
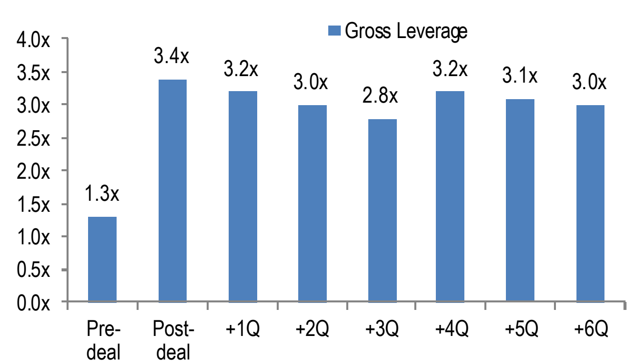


Exhibit 3: Gross Leverage trend



Source: J.P. Morgan, Capital I.Q., Moody's, S&P and Fitch

UnitedHealth Group acquires Catamaran Corp

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Catamaran was the largest acquisition in the company's history and took leverage to never before seen levels. Unlike many other Healthcare companies, however, UNH has never focused on its debt/EBITDA ratio, rather managing towards a debt-to-capital target ratio. Debt-to-capital increased from about 35% pre-deal to about 49% upon funding the deal. Over the next 5 quarters, the company increased debt by about $2bn but saw their leverage ratio decline to about 46% by the end of 2016. In 2017 the company focused more fully on debt pay down and reduced debt-to-capital below 40% in 3Q17, two years post deal close, thus achieving the company's deleveraging goal. The acquisition has allowed for added scale to UNH and has helped maintain its spot as a leader in the ever changing Healthcare service industry.

Purpose of Transaction: The acquisition of PBM Catamaran increased UNH's PBM scale, allowing it to gain greater purchasing/operating efficiencies.

Deleveraging Targets at deal close: Debt-to-cap below 40%

Timing	
Date announced:	Mar 30th, 2015
Date funded:	Jul 20th, 2015
Date closed:	Jul 28th, 2015
Sizing	
Deal size:	$13.2bn
IG bond issuance:	$10.5bn

Exhibit 1: 10 yr M&A funding deal bond vs JULI 10yr (Larger number indicates outperformance of M&A 10yr bond vs JULI 10yr)

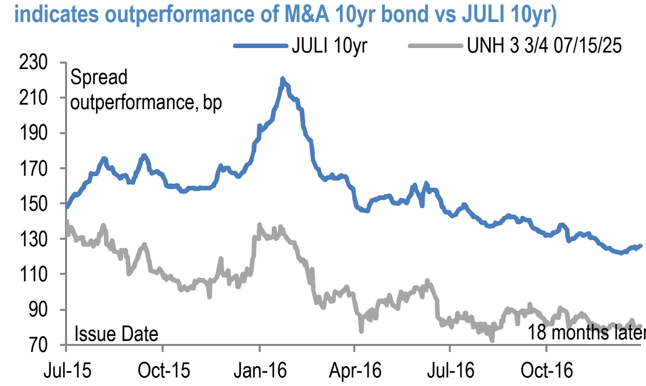


Exhibit 2: Rating trends

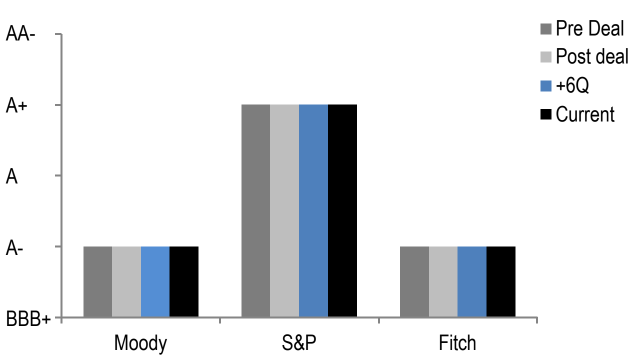
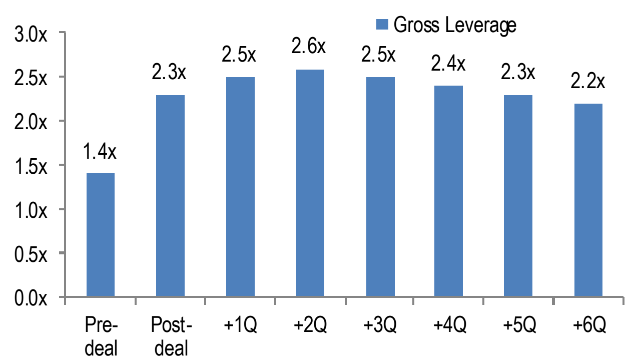


Exhibit 3: Gross Leverage trend



Source: J.P. Morgan, Capital I.Q., Moody's, S&P and Fitch

CVS Health Corp acquires Omnicare Inc

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In May 2015, CVS agreed to acquire Omnicare for $11.3bn and one month later announced it would acquire Target Corp's pharmacy and clinic businesses for $1.9bn. CVS funded both acquisitions collectively through a July 2015 issuance. Management targeted returning leverage to 2.7x in the long term and maintained a high-BBB rating. In 2016 due to stronger than anticipated FCF, management paid down debt ahead of schedule and therefore said it would leave leverage "constant" in 2017 and forego debt paydown until 2018. In December 2017, CVS announced the acquisition of AET, further delaying and changing the company's plans to return rent adjusted leverage to the low-3.0x level. Overall, management was happy with the integration of businesses as they set up CVS's pivot to healthcare ahead of noise around reform and AMZN concerns. In August 2018, CVS took a $3.9bn goodwill impairment charge reflecting Omnicare not growing at the original expected rate.

Purpose of Transaction: CVS acquired Omnicare, Inc. expanding its specialty pharmacy care to a new dispensing channel, long-term care pharmacy. One month later, CVS announced the acquisition of the pharmacy and clinic business of Target Corp, acquiring 1,672 pharmacies across 47 states, expanding its footprint in the United States.

Deleveraging Targets at deal close: Long-term 2.7x adjusted debt-to-EBITDA.

Timing	
Date announced:	May 21st, 2015
Date funded:	Jul 13th, 2015
Date closed:	Aug 18th, 2015
Sizing	
Deal size:	$11.3bn
IG bond issuance:	$11.3bn

Exhibit 1: 10 yr M&A funding deal bond vs JULI 10yr (Larger number indicates outperformance of M&A 10yr bond vs JULI 10yr)

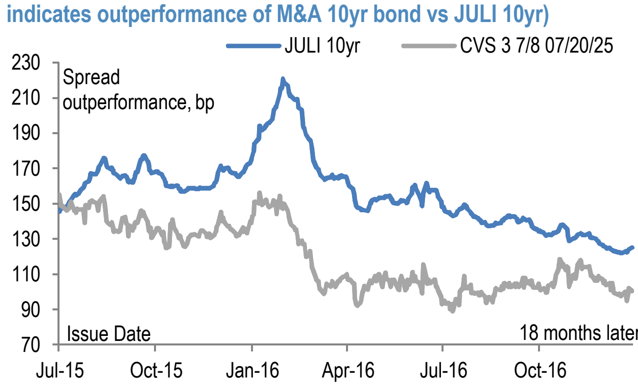


Exhibit 2: Rating trends

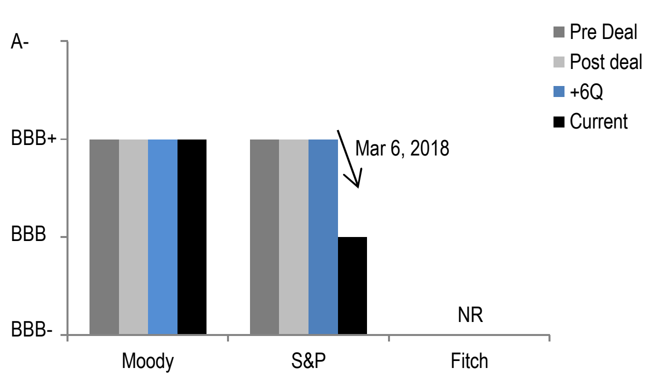
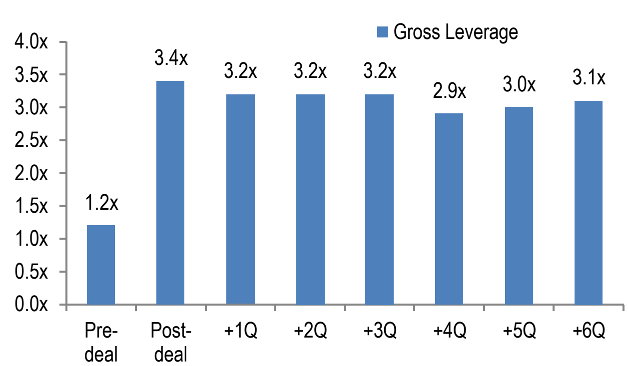


Exhibit 3: Gross Leverage trend



Source: J.P. Morgan, Capital I.Q., Moody's, S&P and Fitch

Moody's current rating is on review for downgrade pending the acquisition of AET and has said it will downgrade CVS's rating upon completion of the acquisition. S&P's current rating reflects the pending acquisition of AET.

Teva acquires Allergan PLC's generic drug business

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At the time of the transaction announcement Allergan's generic business was experiencing high growth and was anticipated to allow for significant synergies after combining with TEVA's generics business. Immediately following the announcement of the acquisition, all three rating agencies announced they would downgrade the company one-notch to the mid-BBB equivalent upon closure. Due to regulatory hurdles, the acquisition did not close until 3Q16, delayed from the original 1Q16 target. In addition, during 2016 the generics market started to experience deteriorating market dynamics with significant pricing erosion. Therefore, Teva and the new acquired business significantly underperformed original expectations and saw EBITDA shortfalls lead to the company not hitting any of its deleveraging targets. Further compounding the issue, in October 2017 the FDA approved a generic competitor to 40mg Copaxone (TEVA's largest concentration product) which led to forward expectations of EBITDA significantly declining. In November 2017, as the underlying business continued to face price erosion and leverage remained at elevated levels, Fitch Ratings downgraded Teva to HY with Moody's and S&P following with downgrades of the company to HY in January and February 2018.

Purpose of Transaction: To build the company's already large and global generics business with an anticipated $1.2bn of synergies.

Deleveraging Targets at deal close: 3.5x gross debt/EBITDA 18 months post close

Timing	
Date announced:	Jul 27th, 2015
Date funded:	Jul 19th, 2016
Date closed:	Aug 2nd, 2016
Sizing	
Deal size:	$40.5bn
IG bond issuance:	$15.0bn

Exhibit 1: 10 yr M&A funding deal bond vs JULI 10yr (Larger number indicates outperformance of M&A 10yr bond vs JULI 10yr)

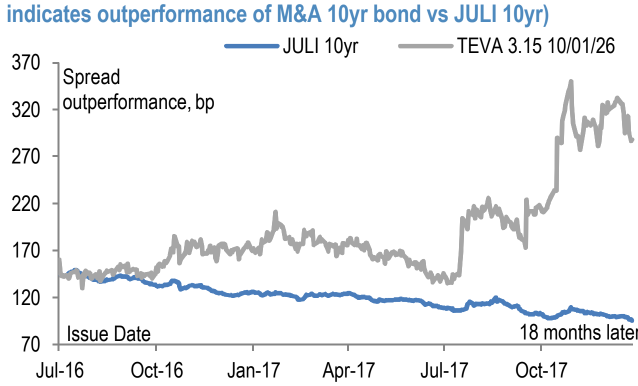


Exhibit 2: Rating trends

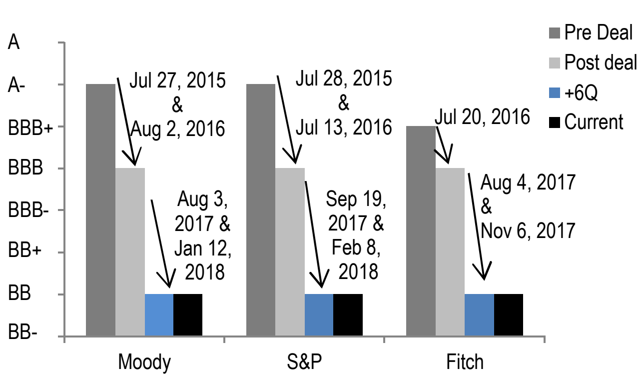
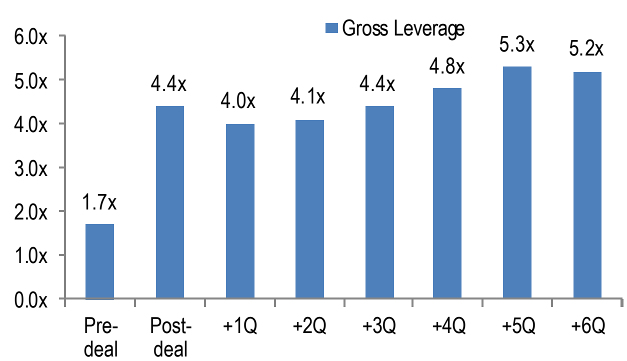


Exhibit 3: Gross Leverage trend



Source: J.P. Morgan, Capital I.Q., Moody's, S&P and Fitch

Mylan NV acquires Meda AB

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In the two years since the close of the transaction, MYL's leverage has remained elevated. In 2017, management pushed back its 2017 YE goal of delevering to 3.0x due to weakness in the business as well as a delay in product launches and diverting $500mn of cash in 4Q17 towards share repurchases instead of debt paydown. At the end of 2017, with leverage at 3.8x, management set a target of delevering to below 3.5x by year-end before continuing to delever towards its long term 3.0x goal but quickly started the year with $432mn in share repurchases. During 2018 MYL experienced additional product launch delays and continued to see weak underlying trends leading to the company changing the language of deleveraging to "decreasing towards 3.5x by year end". Management has identified $1.1bn in debt that it anticipates paying down to help delever over the next 12 months. Additionally the board of the company is currently in the process of conducting a strategic review and is evaluating a "wide range of alternatives".

Purpose of Transaction: To further enhance the Rottapharm and EPD acquisitions by leveraging the company's infrastructure in Europe and Emerging Markets. Meda also expanded Mylan's branded portfolio and created a $1bn OTC business.

Deleveraging Targets at deal close: Below 3.0x by end of 2017

Timing	
Date announced:	Feb 10th, 2016
Date funded:	May 31st, 2016
Date closed:	Aug 24th, 2016
Sizing	
Deal size:	$9.9bn
IG bond issuance:	$6.5bn

Exhibit 1: 10 yr M&A funding deal bond vs JULI 10yr (Larger number indicates outperformance of M&A 10yr bond vs JULI 10yr)

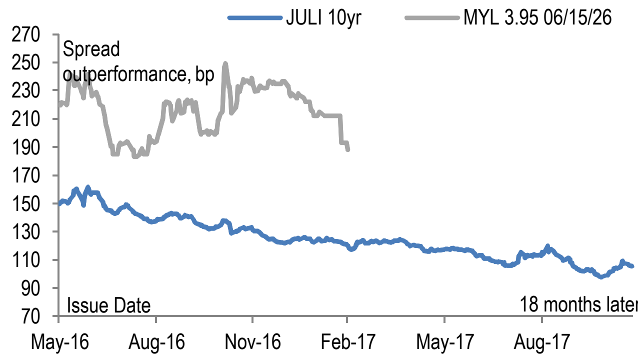


Exhibit 2: Rating trends

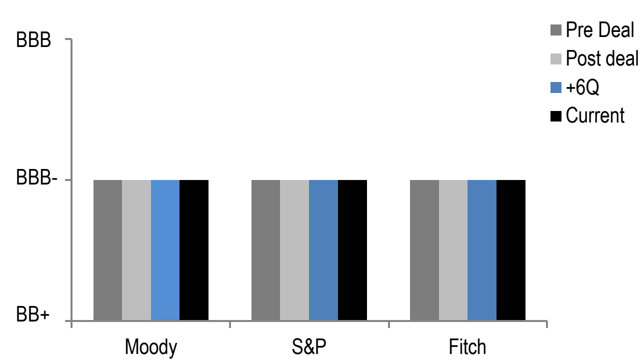
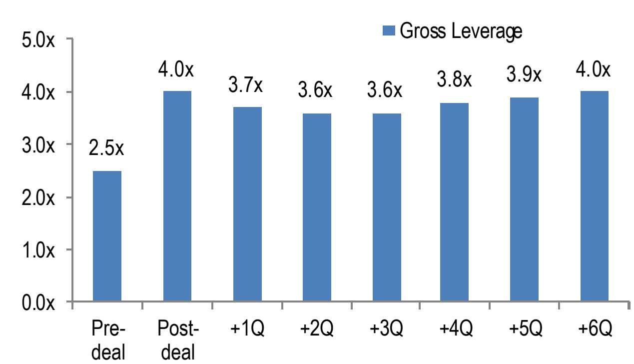


Exhibit 3: Gross Leverage trend



Source: J.P. Morgan, Capital I.Q., Moody's, S&P and Fitch

Becton Dickinson acquires CR Bard Inc

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BDX's $12.2bn acquisition of CareFusion led to a two notch downgrade from both S&P and Moody's, as the company's post acquisition target leverage was a full turn higher than the previously guided range. Over the next two years the company stayed on track to deliver on synergy expectations and hit its leverage target in March 2017. One month after achieving its leverage target BDX announced it would acquire CR Bard for $24.1bn. Following the close of the acquisition, Moody's downgraded BDX's credit rating another two notches to Ba1 due to three reasons: 1) the size of the deal, which quickly followed CFN; 2) very high pro-forma leverage; and 3) a view that deleveraging to IG levels will take longer than what the rating agency feels is acceptable. S&P left the ratings at an Investment Grade level while Fitch, who previously did not rate BDX, assigned a first time rating of BBB-. As of the 2Q18 earnings call, BDX has surpassed its $250mn synergy for CareFusion, recognizing $350mn of synergies and said it is on track with the integration of C.R. Bard and "delivering on financial commitments."

Purpose of Transaction: To expand the breadth and depth in medication management and infection prevention and enter in the high-growth therapy-oriented device segment.

Deleveraging Targets at deal close: 3.0x within 3 years

Timing	
Date announced:	Apr 23rd, 2017
Date funded:	May 22nd, 2017
Date closed:	Dec 29th, 2017
Sizing	
Deal size:	$24.1bn
IG bond issuance:	$9.7bn

Exhibit 1: 10 yr M&A funding deal bond vs JULI 10yr (Larger number indicates outperformance of M&A 10yr bond vs JULI 10yr)

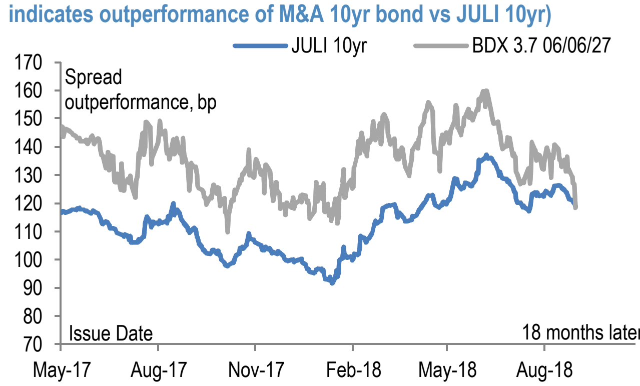
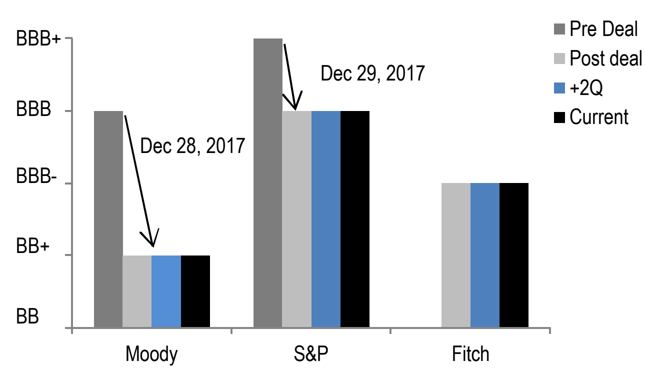
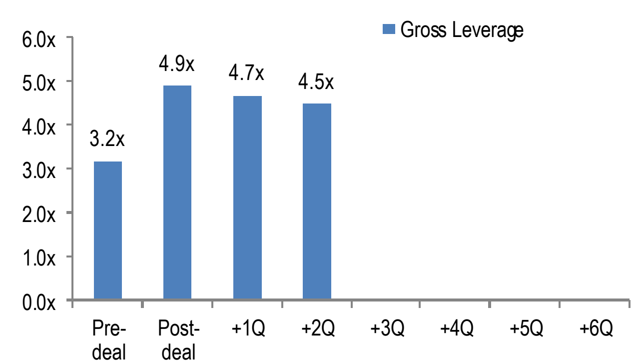


Exhibit 2: Rating trends



Source: J.P. Morgan, Capital I.Q., Moody's, S&P and Fitch
Fitch initiated the rating on 5/4/17

Exhibit 3: Gross Leverage trend



HJ Heinz Corp merges with Kraft Foods Group Inc

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HJ Heinz and Kraft Foods Group merged in July 2015 with KRFT shareholders receiving a $16.50/share special cash dividend and equity in the combined company, representing 49% ownership. The $16.50 dividend was funded by a cash investment of $10bn by 3G and Berkshire, which own the other 51% of the combined company. There was no incremental debt added to the capital structure as part of the transaction, but combined leverage rose due to the higher leveraged Heinz capital structure. From a strategic standpoint, the merger transaction was expected to benefit both sides through increased revenue and EBITDA scale, cost synergy opportunities of $1.5bn within two years and strong cash flow generation. Other strategic benefits included the potential to expand Kraft's brands internationally through Heinz's infrastructure and a path to a more sustainable long term capital structure. Management provided a very clear commitment to an investment grade credit profile including plans to de-lever. The Kraft Foods dividend was held constant and there have been no share repurchases since the transaction closed. A debt pay down commitment of $2bn within two years was met, but some debt has been added back in over the last year. KHC's medium term net leverage target of <3x compares with ~4x currently.

Purpose of Transaction: Increased scale, cost synergies, international growth, and long term capital structure.

Deleveraging Targets at deal close: Repay $2bn of debt in first two years; medium term net leverage of <3x

Timing	
Date announced:	Mar 25th, 2015
Date funded:	Jun 23rd, 2015
Date closed:	Jul 2nd, 2015
Sizing	
Deal size:	$55.4bn
IG bond issuance:	$10.0bn

Exhibit 1: 10 yr M&A funding deal bond vs JULI 10yr (Larger number indicates outperformance of M&A 10yr bond vs JULI 10yr)

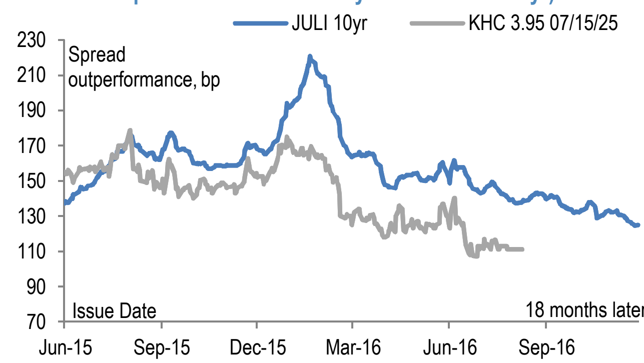


Exhibit 2: Rating trends

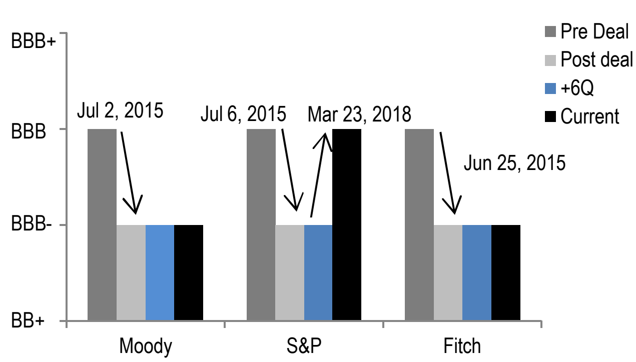
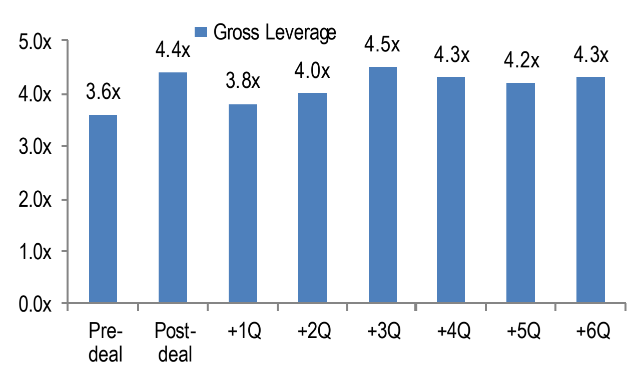


Exhibit 3: Gross Leverage trend



Source: J.P. Morgan, Capital I.Q., Moody's, S&P and Fitch

Newell Rubbermaid and Jarden Corporation Merger

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When Newell announced its acquisition of Jarden in late 2015, the strategic rationale was for the combination to bring together two strong portfolios of branded household products, add significant scale and cost synergy opportunities. NWL expected the deal to be immediately accretive to normalized earnings and to deliver $500mn of run rate synergies within four years. The combined company was estimated to generate $16bn of revenue and approximately $3bn of EBITDA (post synergies). NWL's leverage increased from 3x pre-deal to 4.5x post deal, and it committed to de-lever to 3-3.5x in two to three years, with planned repayment of $1.5bn of term loan borrowings and $900mn of maturities as well as capturing cost synergies. While NWL has reduced outstanding debt by $2.5bn since closing the transaction in April 2016 and was successful in achieving $568mn of cost synergies/savings in 2016-2017, leverage has not meaningfully improved due to weaker underlying business performance. In addition, NWL announced a major change in business strategy in March 2018 including divestment of a significant portion of its portfolio (35% of revenues) for expected net cash proceeds of $10bn. NWL intends to use 45% of the asset sale proceeds to reduce debt and reach its leverage target of 3-3.5x by the end of 2019.

Purpose of Transaction: To add scale, diversification and cost synergy opportunities.

Deleveraging Targets at deal close: 3-3.5x gross debt/EBITDA two to three years after the close

Timing	
Date announced:	Dec 14th, 2015
Date funded:	Mar 18th, 2016
Date closed:	Apr 15th, 2016
Sizing	
Deal size:	$17.9bn
IG bond issuance:	$8.0bn

Exhibit 1: 10 yr M&A funding deal bond vs JULI 10yr (Larger number indicates outperformance of M&A 10yr bond vs JULI 10yr)

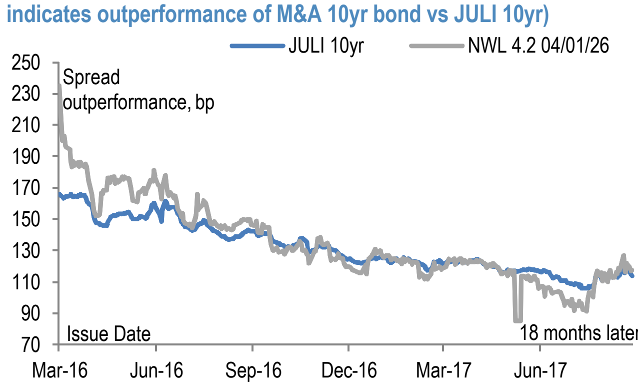
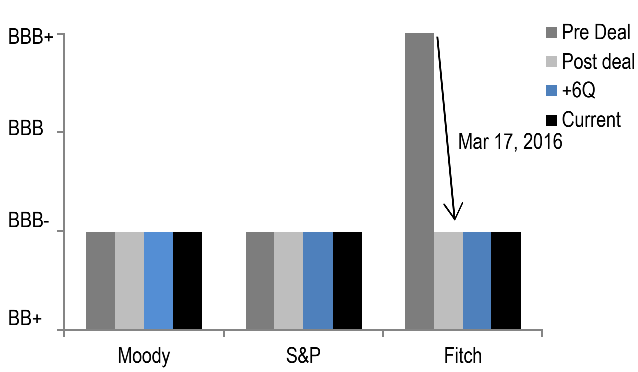
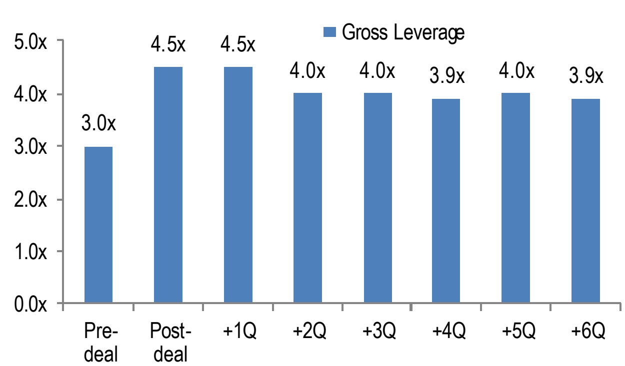


Exhibit 2: Rating trends



Source: J.P. Morgan, Capital I.Q., Moody's, S&P and Fitch

Exhibit 3: Gross Leverage trend



Anheuser-Busch InBev acquires SABMiller

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Anheuser-Busch InBev closed on its $110bn acquisition of SAB Miller in October 2016 after a year long regulatory review process. The transaction was initially financed with $80bn of new debt including bridge and term loans and $46bn of new IG bonds, with $12bn of the bridge loans immediately replaced by proceeds from its divestment of its 58% stake in its MillerCoors JV to Molson Coors. Additional asset sale proceeds of approximately $6bn were achieved over the course of 2017 which were also applied to net debt reduction. Cost synergy opportunities of $3.2bn are expected by October 2020, with $2.5bn already achieved as of 1H18. ABI articulates its "optimal capital structure" as having a net debt/EBITDA ratio of approximately 2x and its capital allocation priorities of 1) invest in organic growth, 2) deleverage, 3) selective M&A, and 4) return cash to shareholders (growing dividend). Net debt/EBITDA currently stands at 4.87x versus 5.8x when the deal closed. ABIBB plans to repay ~$2bn of bonds maturing in 2H18 as part of $6bn maturing over the next twelve months.

Purpose of Transaction: To build the first truly global beer company, growth, cost synergy opportunities.

Deleveraging Targets at deal close: 2x net debt / EBITDA

Timing	
Date announced:	Oct 13th, 2015
Date funded:	Jan 13th, 2016
Date closed:	Oct 10th, 2016
Sizing	
Deal size:	$110.0bn
IG bond issuance:	$46.0bn

Exhibit 1: 10 yr M&A funding deal bond vs JULI 10yr (Larger number indicates outperformance of M&A 10yr bond vs JULI 10yr)

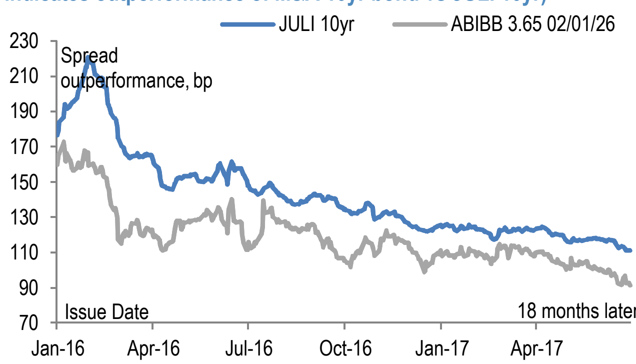


Exhibit 2: Rating trends

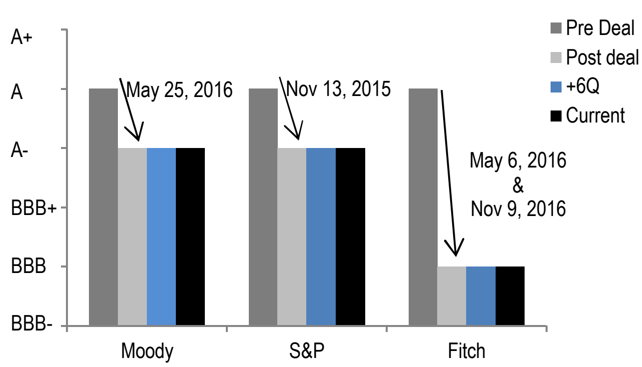
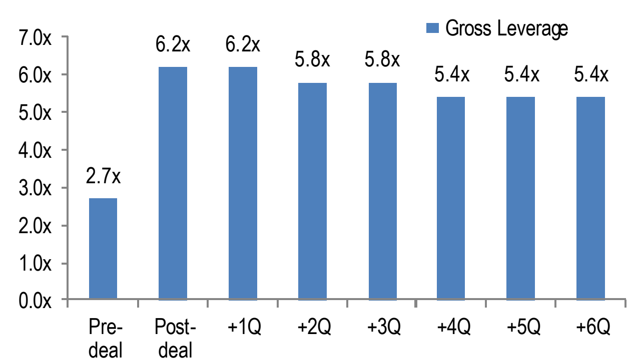


Exhibit 3: Gross Leverage trend



Source: J.P. Morgan, Capital I.Q., Moody's, S&P and Fitch

Molson Coors Brewing Co acquires MillerCoors LLC

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Molson Coors acquired the 58% stake in its US JV MillerCoors it did not previously own for $12bn in October 2016. The transaction was related to Anheuser-Busch Inbev's acquisition of SABMiller, and the need to divest SABMiller's US business for anti-trust purposes. Molson Coors financed the purchase with $2.6bn of new equity, $3bn of term loans, and $5.3bn of new US$ bonds, an €800mn bond, and two CAD bonds totaling 1bn. Strategic and financial benefits of the deal were expected to include larger go to market scale in the US, cost synergy opportunities of $200mn by the fourth year and annualized cash tax savings of $250mn. Net debt/EBITDA rose from 2x to slightly over 5x on a pro forma basis, and credit ratings were lowered to low BBB from all three agencies. This was a one notch downgrade from Moody's and Fitch and a two notch downgrade by S&P. TAP expressed a strong commitment to maintaining investment grade ratings, and guided for capital allocation to prioritize strengthening its balance sheet. TAP targets net debt/EBITDA of 4x by the end of 2018 (vs. 4.5x mid-year), and 3.75x by mid-2019. TAP does not have an official long-term leverage target but expects to continue deleveraging below 3.75x.

Purpose of Transaction: Larger go to market scale in the US, cost synergy opportunities

Deleveraging Targets at deal close: 4x net debt / EBITDA by the end of 2018 and 3.75x by mid-2019

Timing	
Date announced:	Nov 11th, 2015
Date funded:	Jun 28th, 2016
Date closed:	Oct 11th, 2016
Sizing	
Deal size:	$12.0bn
IG bond issuance:	$5.3bn

Exhibit 1: 10 yr M&A funding deal bond vs JULI 10yr (Larger number indicates outperformance of M&A 10yr bond vs JULI 10yr)

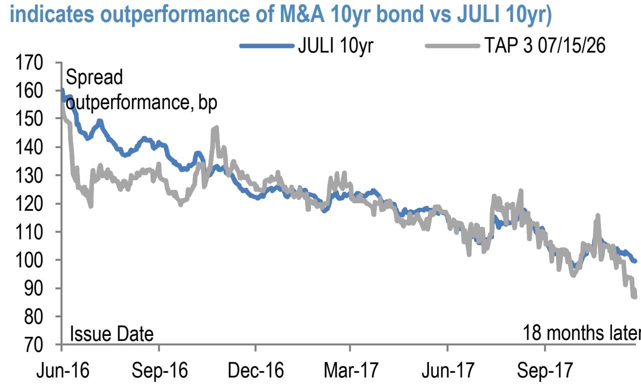


Exhibit 2: Rating trends

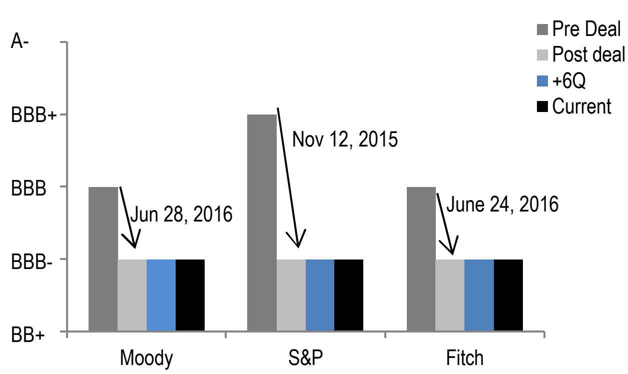
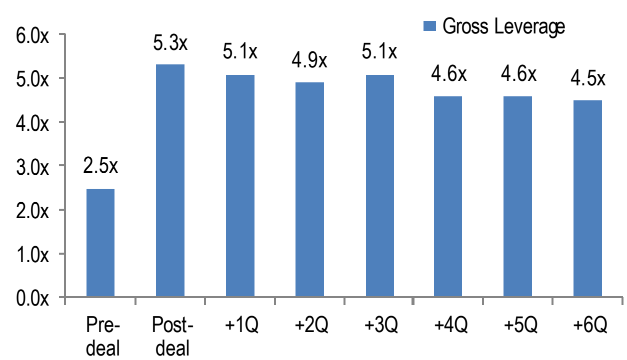


Exhibit 3: Gross Leverage trend



Source: J.P. Morgan, Capital I.Q., Moody's, S&P and Fitch

Reckitt Benckiser PLC acquires Mead Johnson

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Reckitt Benckiser PLC acquired Mead Johnson for $16.6bn in cash on June 15, 2017, and assumed $3bn of existing MJN bonds. RB financed the transaction with $7.75bn of new USD bonds, a $4.5bn 3-year term loan and a $4.5bn 5-year term loan. Strategically, the deal adds Mead's leading global infant nutrition business, scale in key geographies (China and other developing markets), and strong R&D, quality control and regulatory capabilities to Reckitt's business. Financial benefits of the deal are expected to include cost synergies of £200mn by the end of the third full year with £450mn of upfront costs to achieve. As a result of the transaction, pro forma leverage initially rose to 4.9x from 1x prior and credit ratings were lowered two notches to low single A. Shortly after closing the acquisition of Mead Johnson, Reckitt sold its food unit to McCormick for $4.2bn, and used the proceeds to repay a portion of its term loan borrowings in 2H17, lowering leverage to 3.8x. De-leveraging is a top priority as evidenced by the significant portion of debt financing in term loans and suspension of share repurchases until "debt levels are materially lower." Though management has not specified a leverage target, its medium and long term rating objectives are strong and stable "A" band credit ratings. Leverage at 1H18 was 3.7x, down meaningfully from its peak.

Purpose of Transaction: To enter the infant nutrition business, scale in key geographies, and add strong R&D, quality control & regulatory capabilities.

Deleveraging Targets at deal close: Not specified

Timing	
Date announced:	Feb 10th, 2017
Date funded:	Jun 21st, 2017
Date closed:	Jun 15th, 2017
Sizing	
Deal size:	$16.6bn
IG bond issuance:	$7.8bn

Exhibit 1: 10 yr M&A funding deal bond vs JULI 10yr (Larger number indicates outperformance of M&A 10yr bond vs JULI 10yr)

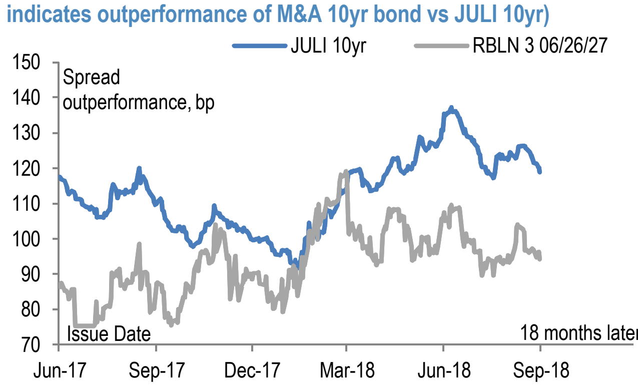


Exhibit 2: Rating trends

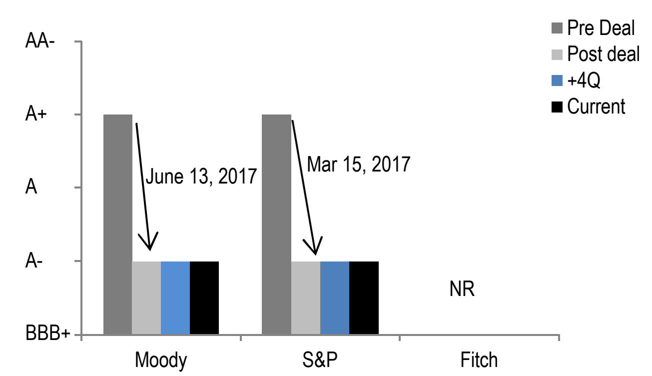
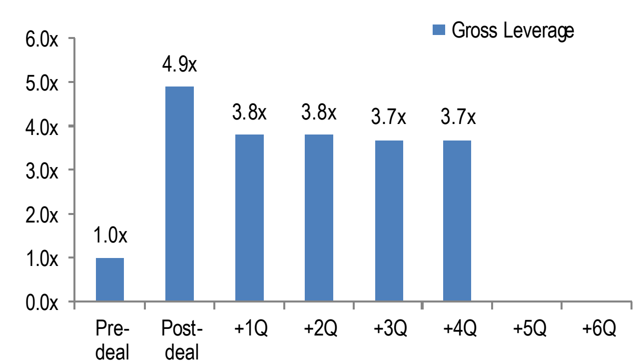


Exhibit 3: Gross Leverage trend



Source: J.P. Morgan, Capital I.Q., Moody's, S&P and Fitch

British American Tobacco PLC acquires Reynolds American Inc

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British American Tobacco acquired the 58% stake in Reynolds American it did not previously own in July 2017 for $49.4bn in cash and stock. The cash portion of the transaction was financed with $25bn of new debt including USD term loans of $5bn, new USD bonds of $17bn, new €3.1bn and £450mn of bonds. Strategically the deal gives British American Tobacco full ownership of Reynolds American, allowing the companies to combine product portfolios and leverage research and development investments, especially in Next Generation Products. Financial benefits of the deal are expected to include cost synergies of $400mn by the end of the third year. De-leveraging is a top priority in the near term with management targeting net leverage of approximately 3x by the end of 2019 and the higher end of the 1.5-2.5x range longer-term. Leverage at 1H18 was 4.9x on a gross basis and 4.7x on a net basis. With regards to its $2.3bn of bond maturities in 2019, management plans for a combination of debt paydown, some refinancing along with higher utilization of commercial paper. BATS also indicated that it is on track to register its bonds as early as the end of this year (original timeline was 1Q19). BATS aims to get credit ratings back to Baa1/BBB+ in the medium term, up one notch from its current Baa2/BBB with Stable outlooks.

Purpose of Transaction: To combine product portfolios and leverage research and development investments.

Deleveraging Targets at deal close: Approximately 3x Net leverage by the end of 2019 and the higher end of the 1.5-2.5x range in the longer-term

Timing	
Date announced:	Jan 17th, 2017
Date funded:	Aug 8th, 2017
Date closed:	Jul 25th, 2017
Sizing	
Deal size:	$49.4bn
IG bond issuance:	$17.0bn

Exhibit 1: 10 yr M&A funding deal bond vs JULI 10yr (Larger number indicates outperformance of M&A 10yr bond vs JULI 10yr)

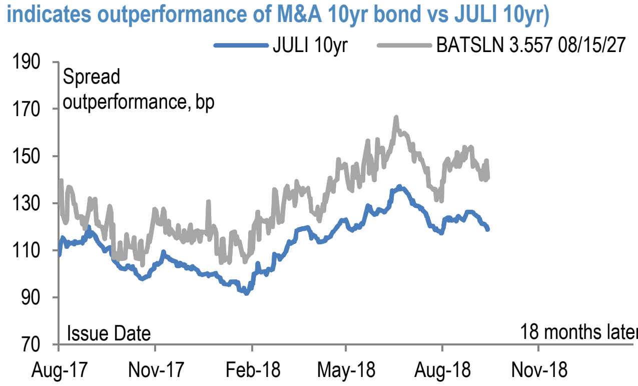
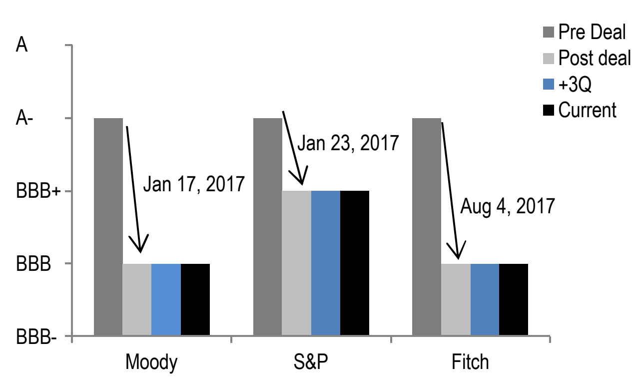
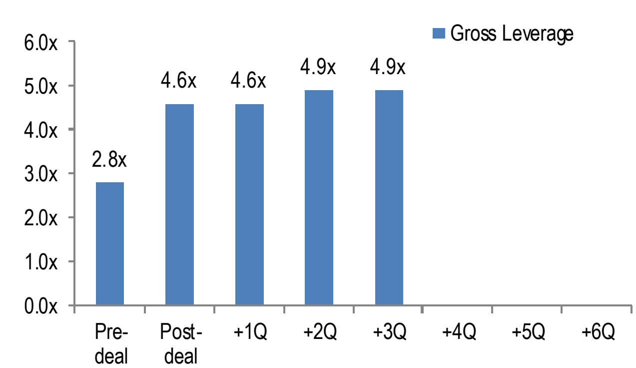


Exhibit 2: Rating trends



Source: J.P. Morgan, Capital I.Q., Moody's, S&P and Fitch

Exhibit 3: Gross Leverage trend



Intel Corp acquires Altera Corp

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Intel announced the acquisition of Altera on June 1st 2015 in an all cash transaction valued at approx. $16.7bn. The cash portion was funded with a combination of new debt and existing balance sheet cash. Both S&P and Moody's affirmed Intel ratings following the acquisition, highlighting the positive business profile impact of the deal and Intel's exceptional liquidity. Leverage increased to approx. 1x after the transaction. The acquisition of Altera was an important step for Intel to diversify away from the declining PC business, refocusing company efforts on cloud computing. Altera specializes in configurable field programmable gate arrays (FPGAs), which are an essential (and high margin) component in the very profitable data center market. We believe the Altera business is very well positioned to take advantage of the high growth and compute intensive IoT/autonomous driving applications amidst record levels of capex spending from cloud service providers. Leverage has remained relatively stable at Intel with the company acquiring Mobileye in 2017 using around $15bn of offshore cash.

Purpose of Transaction: Intel purchased Altera to diversify away from the declining PC business and focus on cloud computing

Deleveraging Targets at deal close: NA

Timing	
Date announced:	Jun 1st, 2015
Date funded:	Jul 22nd, 2015
Date closed:	Dec 29th, 2015
Sizing	
Deal size:	$16.7bn
IG bond issuance:	$7.0bn

Exhibit 1: 10 yr M&A funding deal bond vs JULI 10yr (Larger number indicates outperformance of M&A 10yr bond vs JULI 10yr)

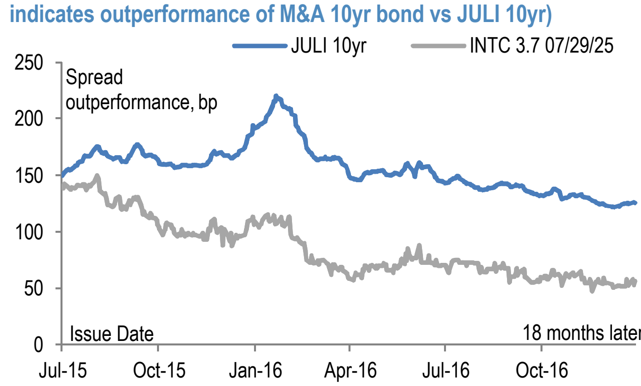
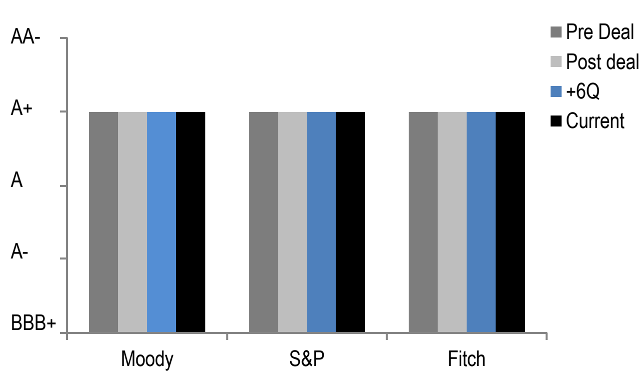
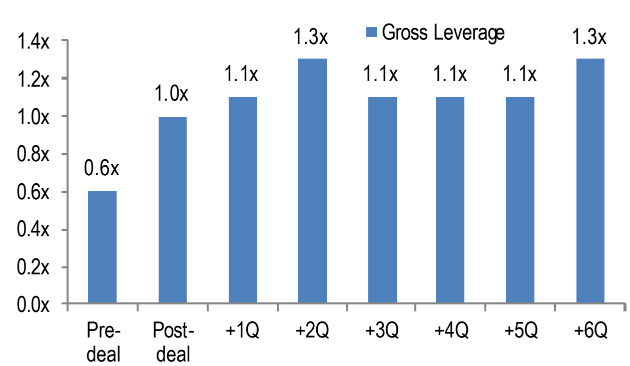


Exhibit 2: Rating trends



Source: J.P. Morgan, Capital I.Q., Moody's, S&P and Fitch

Exhibit 3: Gross Leverage trend



Avago acquires Broadcom

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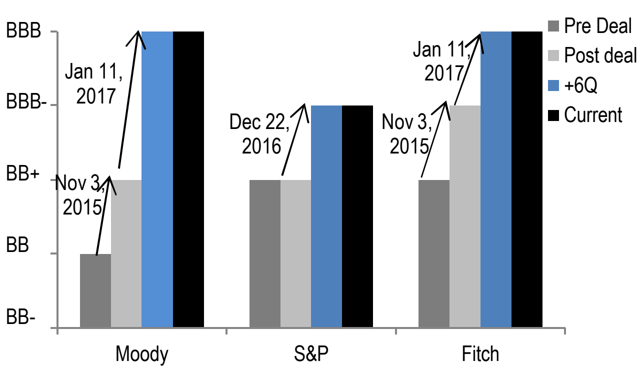
Avago announced on May 28, 2015, their intentions to acquire Broadcom for a total consideration of $37 billion. Financing for the deal included 140 million new shares valued at $20bn, $9bn of new debt, and $8bn of company cash. Avago initially issued term loans to fund the debt portion of the deal, which were then exchanged out for IG unsecured bonds. The acquisition would create the third largest semiconductor company, trailing only Intel and Qualcomm in revenue (LTM) at the time of acquisition. Importantly, Broadcom provided further diversification into the Infrastructure & Networking and Broadband & Connectivity product areas. The opportunity within Networking for Data Centers has proved to be extremely valuable for the combined companies as the area is one of the fastest growing within the semiconductor space. Pro forma for the transaction, leverage post close was 2.9x on a gross basis and 2.6x net. Avago announced intentions to de-lever to approximately 2x leverage. The acquisition has been very successful from both a business and financial perspective as the added densification of Broadcom has proven vital in driving growth in the ever-changing semiconductor industry. Furthermore, Avago successfully de-levered to the stated goal of approximately 2x. However, soon after de-levering from the Broadcom transaction, Avago announced the purchase of Brocade for $5.9bn. The acquisition ticked up leverage .3x to 2.3x for a brief period before de-leveraging once again to approximately 1.9x. The Brocade transaction strengthened Avago's position in enterprise data centers and enhanced the companies FCF profile.

Purpose of Transaction: Avago acquired Broadcom to provide diversification into the Infrastructure/Networking and Broadband/Connectivity product areas

Deleveraging Targets at deal close: Avago announced intentions to de-lever to approximately 2x gross leverage

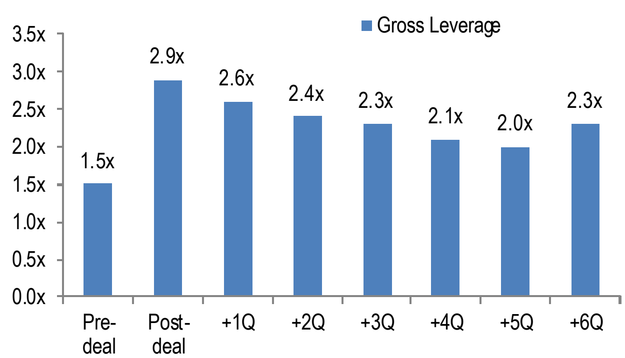
Timing	
Date announced:	May 28th, 2015
Date funded:	Aug 8th, 2015
Date closed:	Feb 2nd, 2016
Sizing	
Deal size:	$37.0bn
IG bond issuance:	$9.0bn

Exhibit 1: Rating trends



Source: J.P. Morgan, Capital I.Q., Moody's, S&P and Fitch

Exhibit 2: Gross Leverage trend



Charter acquires Time Warner Cable

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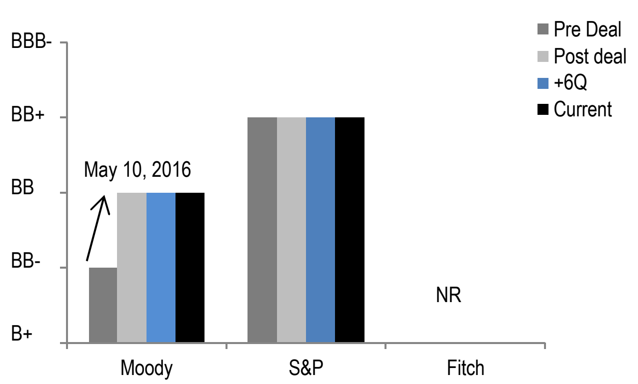
Charter announced the acquisition of TWC on May 26, 2015, in a cash/stock deal valued at $78.7bn. Funding for the deal included $19bn in new senior secured debt, in addition to term loans and HY debt. Charter structured the capital structure for the deal with the intention of maintaining access to long-dated low-cost financing in the investment grade market. Additionally, the company committed to maintain IG index eligibility for the legacy TWC notes and new secured notes. Charter's leverage post close was approx. 4.4x gross and has remained relatively flat since the acquisition, at the higher end of management's initial target leverage guidance. The secured debt has also remained in line with management's initial targets at slightly below 3.5x. The business case for acquiring TWC was focused on increased scale. With TWC, Charter significantly increased their geographical footprint, allowing new Charter to compete with national competitors. Pro forma for the transaction, Charter now would pass through approx. 48 million homes and become the second-largest U.S. cable company behind Comcast. Additionally, Charter/TWC stood to gain from growth in video and broadband as Charter's penetration in both areas was previously hovering below industry levels. While the increased scale has been a positive for Charter, secular weakness in the cable business due to cord cutting has led to declining video subscriber numbers. However, the broadband side of the business has been strong as increased data usage and demand for higher internet speeds have driven better profitability.

Purpose of Transaction: Charter acquired TWC with the goal of achieving national scale and a competitive advantage in video and broadband, which would allow the company to increase product offerings with a wide array of consumer and commercial customers.

Deleveraging Targets at deal close: Target total leverage of 4.0x-4.5x, ±0.5x to enable strategic activity, and secured leverage of approximately 3.5x

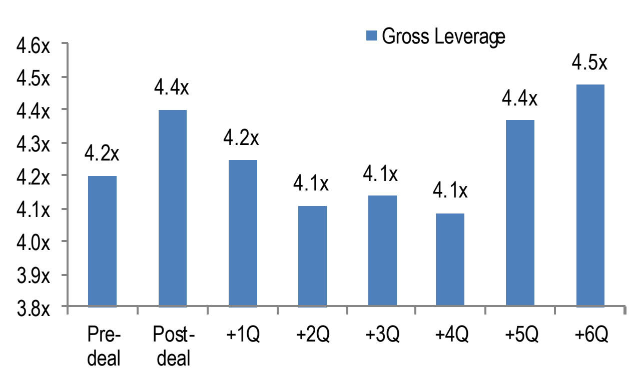
Timing	
Date announced:	May 26th, 2015
Date funded:	Jul 9th, 2015
Date closed:	May 18th, 2016
Sizing	
Deal size:	$78.7bn
IG bond issuance:	$19.0bn

Exhibit 1: Rating trends



Source: J.P. Morgan, Capital I.Q., Moody's, S&P and Fitch

Exhibit 2: Gross Leverage trend



Dell Technologies Inc. acquires EMC Corp

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Dell announced the EMC acquisition in October 2015 in a cash/tracking stock deal valued at approx. $67bn. The rationale behind the transaction was that Dell was experiencing revenue and margin declines from 2010 to 2013 as worldwide PC sales slowed, increasing competition, and the introduction of new hardware technologies cannibalized traditional PC sales. With the acquisition of EMC, Dell became the largest privately owned tech company with leading market share in servers, storage, virtualization and PCs. Dell funded the acquisition with a combination of IG secured debt, term loans and HY unsecured debt. While Dell became more strategically complete, leverage (calculated using total debt through Dell Inc. excluding structured debt) spiked up significantly from 3.6x pre-deal to 5.4x post- deal. Initial expectations had been that Dell would rapidly de-lever through asset sales, strong cash flow, and heavy cost cuts with the goal of becoming an IG company within 2 years. However, Dell (post-merger) began to face a market environment of secular weakness in both its PC and storage business combined with significant component cost headwinds throughout fiscal 2017, which slowed cash generation and de-leveraging efforts. Leverage hovered around 6x as Dell worked to get its storage business into a better position, which started to show improvement in F4Q18 when management changes helped start a turnaround in the business. Improving profitability in the storage business has helped drive cash flow and EBITDA growth and leverage has since declined to approx. 5.2x.

Purpose of Transaction: With the PC business slowing down, Dell acquired EMC to diversify into the storage and server market

Deleveraging Targets at deal close: The target for Dell was to become an IG company within 2 years of the EMC acquisition

Timing	
Date announced:	Oct 12th, 2015
Date funded:	May 17th, 2016
Date closed:	Sep 7th, 2016
Sizing	
Deal size:	$67bn
IG bond issuance:	$20.0bn

Exhibit 1: 10 yr M&A funding deal bond vs JULI 10yr (Larger number indicates outperformance of M&A 10yr bond vs JULI 10yr)

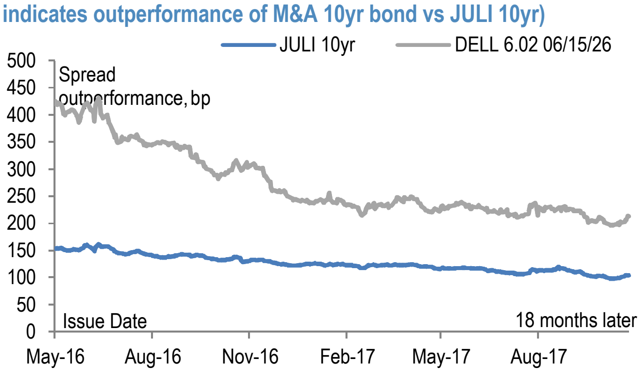
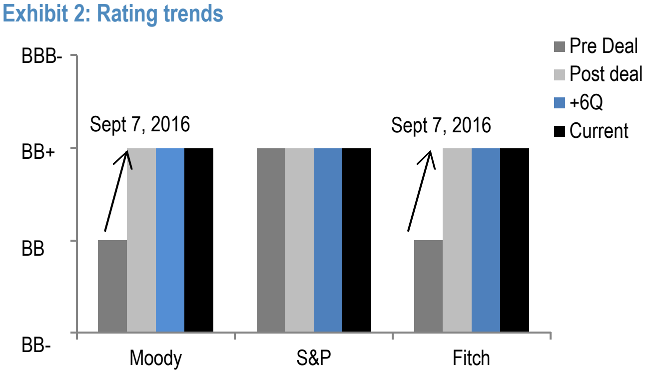
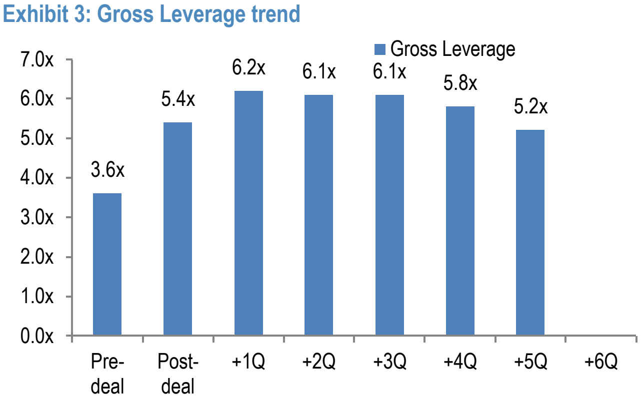


Exhibit 2: Rating trends



Source: J.P. Morgan, Capital I.Q., Moody's, S&P and Fitch

Exhibit 3: Gross Leverage trend



Oracle Corp acquires NetSuite Inc

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Oracle acquired NetSuite for $9.3bn on July 28, 2016, funded using cash on hand from a $14bn debt issuance in June 2016. Prior to tax reform, Oracle was one of the largest issuers in the Technology space, issuing debt for acquisitions, share repurchases, and dividends. The NetSuite purchase bolstered Oracle's enterprise cloud offerings. The combination of NetSuite's enterprise offerings and Oracle's scale was an attractive opportunity for Oracle. While S&P affirmed the ratings of Oracle after the transaction, Moody's noted the transaction was Credit Negative due to the steep price tag and expectations that Oracle would continue to issue debt to fund acquisitions and repurchases. Ultimately the transaction had a minimal impact on Oracle's leverage.

Purpose of Transaction: Oracle acquired NetSuite as a complementary cloud addition to strengthen Oracle's market position and share

Deleveraging Targets at deal close: NA

Timing	
Date announced:	Jul 28th, 2016
Date funded:	Jun 29th, 2016
Date closed:	Nov 7th, 2016
Sizing	
Deal size:	$9.3bn
IG bond issuance:	$9.3bn

Exhibit 1: 10 yr M&A funding deal bond vs JULI 10yr (Larger number indicates outperformance of M&A 10yr bond vs JULI 10yr)

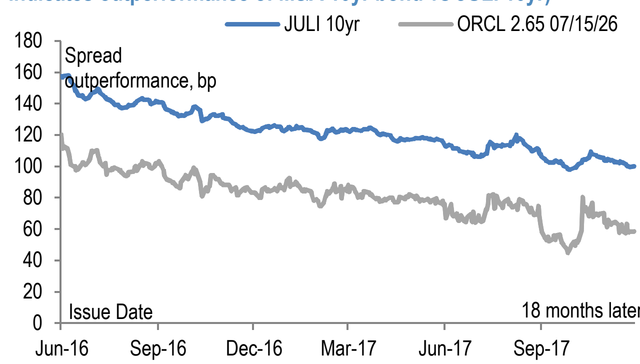


Exhibit 2: Rating trends

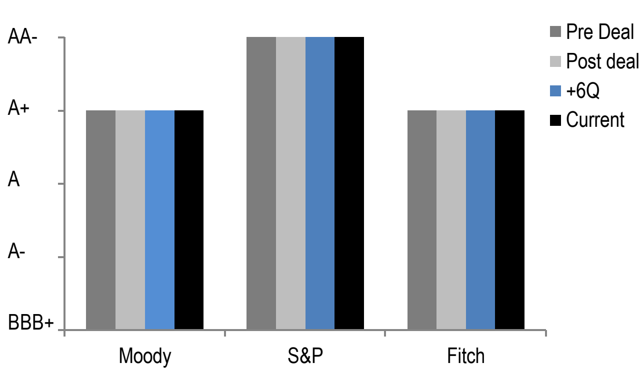
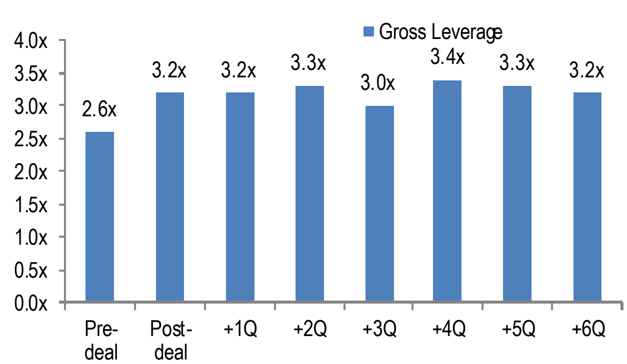


Exhibit 3: Gross Leverage trend



Source: J.P. Morgan, Capital I.Q., Moody's, S&P and Fitch

Microsoft Corp acquires LinkedIn Corp

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On June 13, 2016, Microsoft announced its largest ever acquisition, LinkedIn, valued at $26.2bn. S&P affirmed Microsoft's AAA rating with a stable outlook, while Moody's moved to a negative outlook. Moody's outlook change was based on the view that Microsoft may continue with aggressive shareholder returns and/or more debt funded M&A. One year later, Moody's revised the outlook to stable as Microsoft's business continued to thrive while limiting debt funded acquisitions and moderating shareholder returns. Leverage post close was slightly above 2x, but Microsoft has quickly de-levered the balance sheet with robust cash generation and EBITDA growth. Looking at the transaction, the key selling point for acquiring LinkedIn was the ability to combine private data (Outlook/Exchange/Office 365) and public profiles (Linkedin) into a massive source of data that Microsoft would now own. Linkedin is also an asset that has proven difficult to replace given the lack of viable competitors in the networking space. While initially a drag on corporate margins, in FY2018 Linkedin is ramping up with accelerated revenue growth amidst strong (and broad based) sales execution and is now accretive to EPS ahead of initial expectations. The general consensus is that the acquisition is exceeding expectations, with management commenting LinkedIn appears to be even more of a strategic asset than it originally thought.

Purpose of Transaction: Purchasing Linkedin offered a treasure trove of data and an asset with few competitors to Microsoft

Deleveraging Targets at deal close: NA

Timing	
Date announced:	Jun 13th, 2016
Date funded:	Aug 1st, 2016
Date closed:	Dec 8th, 2016
Sizing	
Deal size:	$26.2bn
IG bond issuance:	$19.8bn

Exhibit 1: 10 yr M&A funding deal bond vs JULI 10yr (Larger number indicates outperformance of M&A 10yr bond vs JULI 10yr)

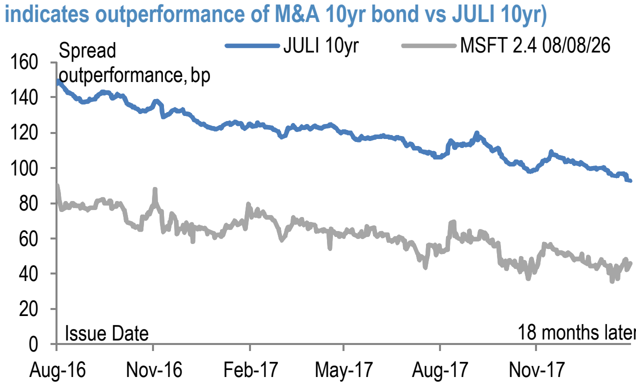


Exhibit 2: Rating trends

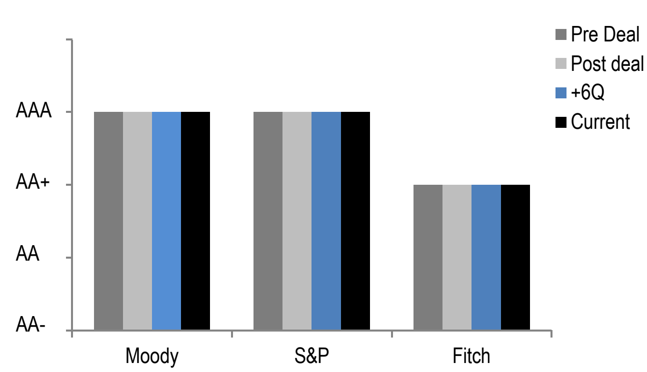
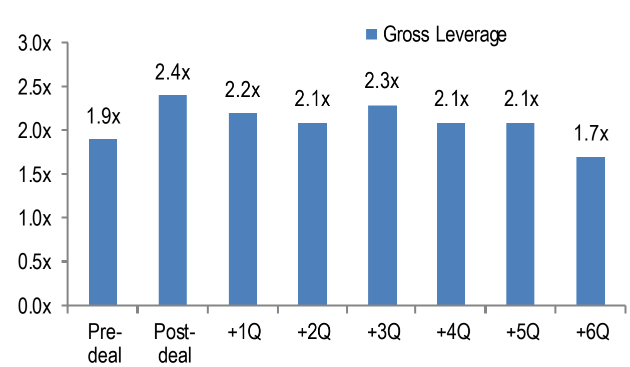


Exhibit 3: Gross Leverage trend



Source: J.P. Morgan, Capital I.Q., Moody's, S&P and Fitch

Analog Devices Inc acquires Linear Technology Corp

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Analog Devices announced the Linear Technology acquisition on July 26, 2016, for a total consideration of $14.8bn funded with cash and stock. Funding included 58 million ADI shares, $7.3bn of debt, and cash on hand. The debt portion was funded with a mix of term loans and IG unsecured issuance. The acquisition was highly complementary; two analog semiconductor companies focused on the Industrial, Automotive, and Communications Infrastructure segments. Furthermore, Linear provided diversification into the Power Management product area. Leverage spiked to approx. 3.7x on a gross basis (from approx. 1.4x) and management pledged to suspend share buybacks until the target 2.0x net leverage was achieved. ADI was downgraded to BBB from A- by S&P and Baa1 from A3 by Moody's. ADI announced on the 3Q18 earnings call that the company's strong cash generation allowed them to achieve the 2.0x net leverage goal three quarters ahead of plan and reinstated a share repurchase program.

Purpose of Transaction: Analog Devices' acquisition of Linear Technology combined two analog semiconductor companies with very complimentary product offerings and provided

Deleveraging Targets at deal close: 2.0x leverage on a net basis or approx. 2.3x on a gross basis in 2 years

Timing	
Date announced:	Jul 26th, 2016
Date funded:	Nov 30th, 2016
Date closed:	Mar 13th, 2017
Sizing	
Deal size:	$14.8bn
IG bond issuance:	$2.1bn

Exhibit 1: 10 yr M&A funding deal bond vs JULI 10yr (Larger number indicates outperformance of M&A 10yr bond vs JULI 10yr)

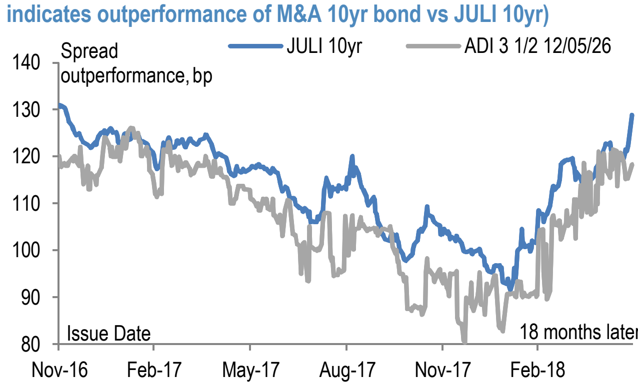


Exhibit 2: Rating trends

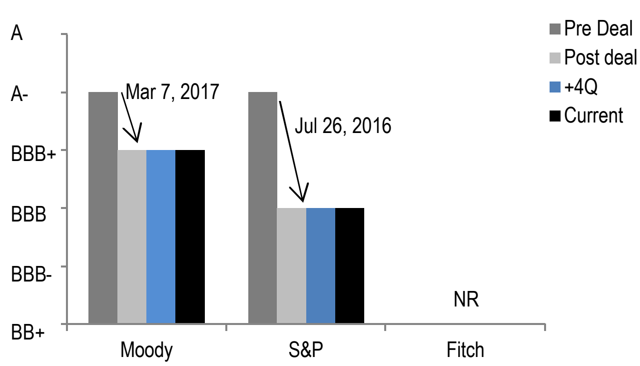
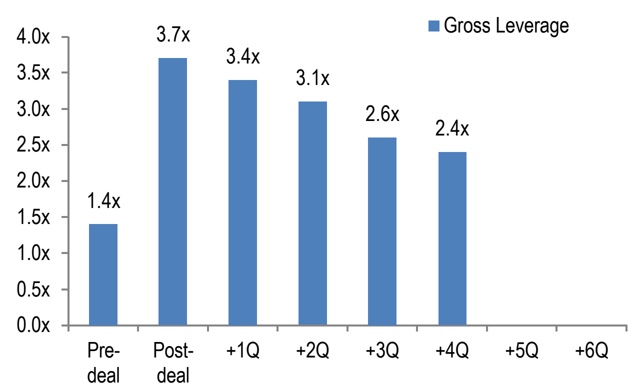


Exhibit 3: Gross Leverage trend



Source: J.P. Morgan, Capital I.Q., Moody's, S&P and Fitch

Verizon Communications acquires Yahoo

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Verizon's acquisition of Yahoo was part of the company's plans to build out a mobile media/digital advertising platform. Verizon initially offered $4.83bn to acquire Yahoo, but after a significant cyber attack at Yahoo lowered the offer to $4.48bn. Leverage was relatively unmoved by the transaction, but the business impact of the deal was more pronounced. Verizon initially sought for a combination of Yahoo and AOL to compete with Google and Facebook and act as a revenue growth driver. However, the transaction has failed to reap significant results for Verizon. Both Yahoo and AOL are now viewed as outdated platforms compared to their competitors at Google and Facebook. Furthermore, Verizon has failed to attract significant content deals or advertisers, who similarly prefer the more tech savvy and far reaching competitors in Silicon Valley.

Purpose of Transaction: Verizon acquired Yahoo to build out a digital advertising and mobile internet business. Verizon planned to integrate Yahoo with AOL and compete in the mobile media space as an alternative offering for advertisers

Deleveraging Targets at deal close: NA

Timing	
Date announced:	Jul 25th, 2016
Date funded:	Mar 13th, 2017
Date closed:	Mar 13th, 2017
Sizing	
Deal size:	$4.5bn
IG bond issuance:	$4.5bn

Exhibit 1: 10 yr M&A funding deal bond vs JULI 10yr (Larger number indicates outperformance of M&A 10yr bond vs JULI 10yr)

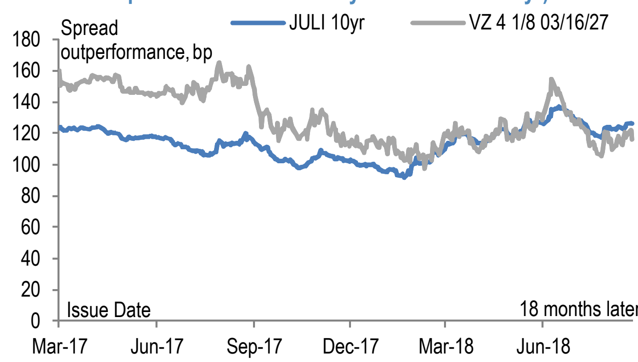


Exhibit 2: Rating trends

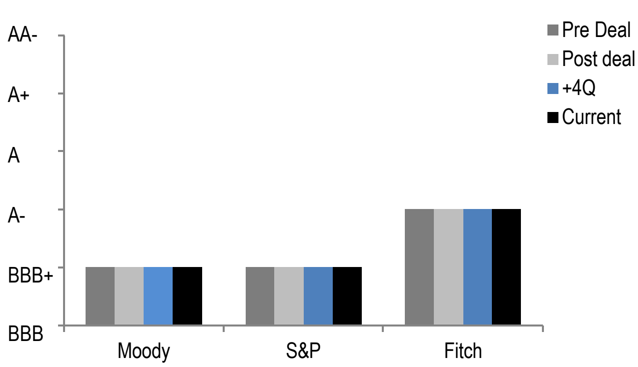
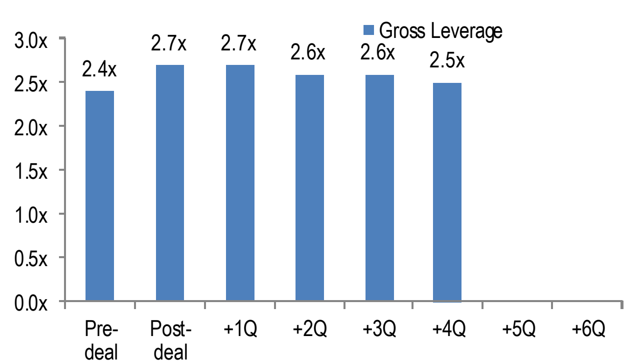


Exhibit 3: Gross Leverage trend



Source: J.P. Morgan, Capital I.Q., Moody's, S&P and Fitch

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Amazon.com Inc. acquires Whole Foods Market Inc

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Amazon announced the Whole Foods acquisition on Jun 16, 2017, in an all-cash transaction valued at approximately $13.7bn. Amazon financed the deal with a $16bn bond issuance. As one of the largest technology companies and retailers, Amazon viewed Whole Foods as a unique opportunity to expand its brick and mortar footprint while integrating Amazon Prime with the Whole Foods customer base. Integration between the two companies has been ongoing with Prime discounts now available in stores, but more changes are expected in the future. Ratings on Amazon were affirmed by the agencies as the transaction had a marginal impact on leverage given Amazon's ability to de-lever.

Purpose of Transaction: Amazon acquired Whole Foods to expand into brick and mortar and integrate Amazon Prime with Whole Foods customers

Deleveraging Targets at deal close: NA

Timing	
Date announced:	Jun 16th, 2017
Date funded:	Aug 15th, 2017
Date closed:	Aug 29th, 2017
Sizing	
Deal size:	$13.7bn
IG bond issuance:	$13.7bn

Exhibit 1: 10 yr M&A funding deal bond vs JULI 10yr (Larger number indicates outperformance of M&A 10yr bond vs JULI 10yr)

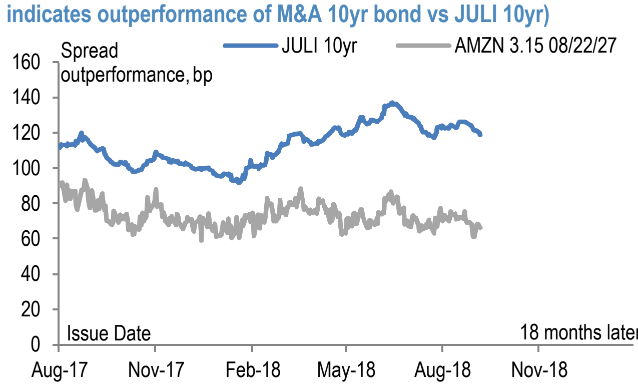


Exhibit 2: Rating trends

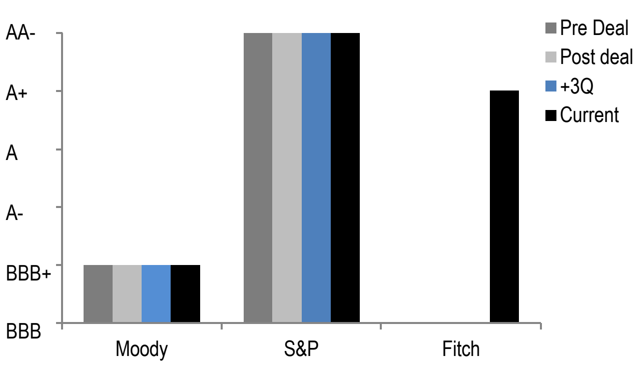
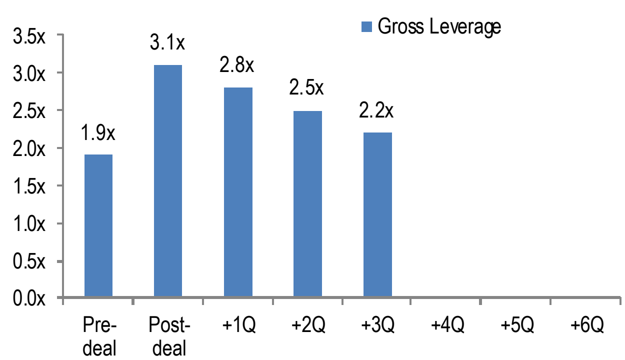


Exhibit 3: Gross Leverage trend



Source: J.P. Morgan, Capital I.Q., Moody's, S&P and Fitch

Crown Castle International Corp acquires Lightower

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Crown Castle acquired an attractive asset in Lightower with 32,000 miles of valuable fiber in the Northeast of the U.S. The fiber acquired is important for deploying small cells and building out next-generation wireless technologies. Crown Castle operates both towers and fiber cables and we note there is significantly more competition and lower barriers to entry in fiber than towers. The $7.1bn cash transaction was funded with debt and a significant equity portion of $3.25bn of common stock and $1.5bn of mandatory convertible preferred stock. Post-acquisition, we believe CCI remains well positioned to take advantage of the increased usage of its towers and fiber. Leverage has remained elevated despite strong cash flow growth due to acquisitions and capital spending, but is offset by the strength of Crown Castle's business operations and outlook for continued growth.

Purpose of Transaction: Crown Castle acquired Lightower for access to the attractive fiber footprint in several top metropolitan markets. The deal brought 32,000 miles of fiber in the Northeast

Deleveraging Targets at deal close: Crown Castle management aimed for 4-5x net leverage as a long term target

Timing	
Date announced:	Jul 18th, 2017
Date funded:	July 25th, 2017
Date closed:	Nov 1st, 2017
Sizing	
Deal size:	$7.1bn
IG bond issuance:	$1.8bn

Exhibit 1: 10 yr M&A funding deal bond vs JULI 10yr (Larger number indicates outperformance of M&A 10yr bond vs JULI 10yr)

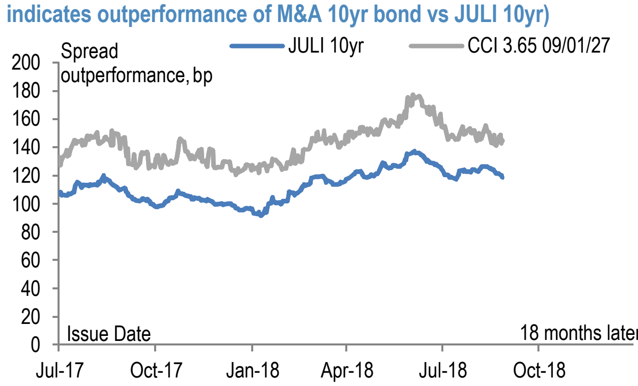


Exhibit 2: Rating trends

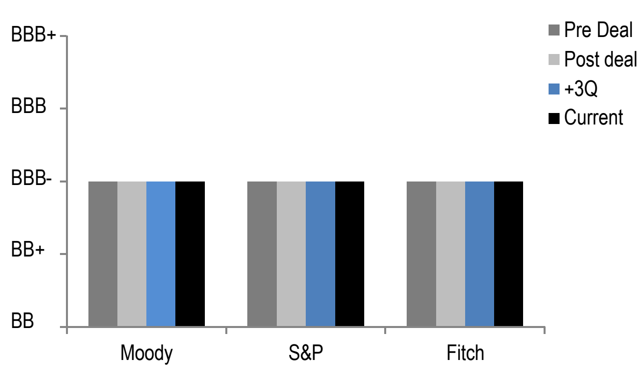
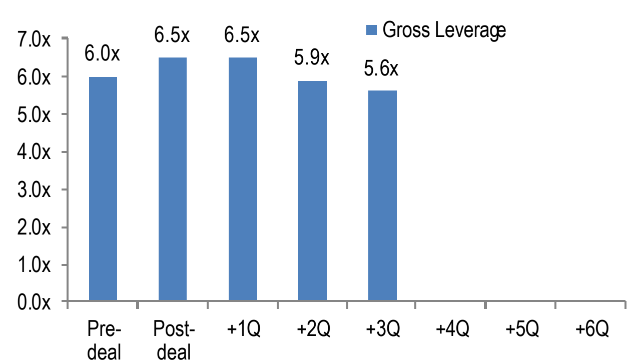


Exhibit 3: Gross Leverage trend



Source: J.P. Morgan, Capital I.Q., Moody's, S&P and Fitch

Discovery acquires Scripps Networks

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On July 31, 2017, Discovery announced the transaction to acquire Scripps Networks for a total consideration of $14.6bn funding with 70% cash and 30% equity. Discovery funded the debt portion of the deal with IG unsecured debt and a term loan. Discovery aimed to maintain investment grade ratings throughout the transaction, with a target normalized leverage level of 3.5x or less within the first two years after the transaction. Opening leverage post deal closing was 4.6x on a pro forma basis. Discovery pledged to use substantially all FCF to reduce pre-payable and/or short term debt. The transaction was compelling strategically as Scripps' assets such as the Food Network, Travel Channel, and HGTV would add to the real life entertainment IP at Discovery. While the deal just recently closed earlier this year, Discovery is slightly ahead of schedule on their de-leveraging path. Discovery now expects net leverage to be at or below 4x by YE 2018 from original pronouncements of "around" 4x. Additionally, the company believes they will achieve their 3.5x net leverage target ahead of schedule (originally by YE2019) due to higher than expected free cash flow.

Purpose of Transaction: Expand content offerings and gain scale, specifically in the real life entertainment genre

Deleveraging Targets at deal close: Around 4x net leverage (now specifically 4x) by YE 2018 and 3.5x net leverage by YE2019 (now likely earlier) or approx. 4.1x gross and 3.6x gross

Timing	
Date announced:	Jul 31st, 2017
Date funded:	Sep 7th, 2017
Date closed:	Mar 7th, 2018
Sizing	
Deal size:	$14.6bn
IG bond issuance:	$6.3bn

Exhibit 1: 10 yr M&A funding deal bond vs JULI 10yr (Larger number indicates outperformance of M&A 10yr bond vs JULI 10yr)

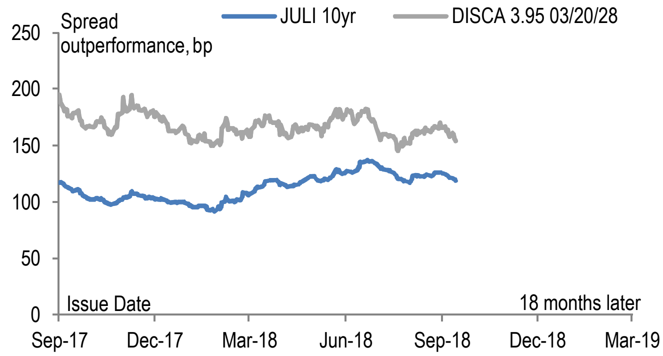


Exhibit 2: Rating trends

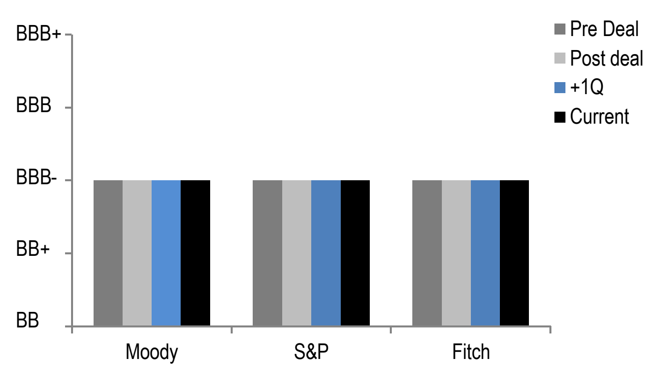
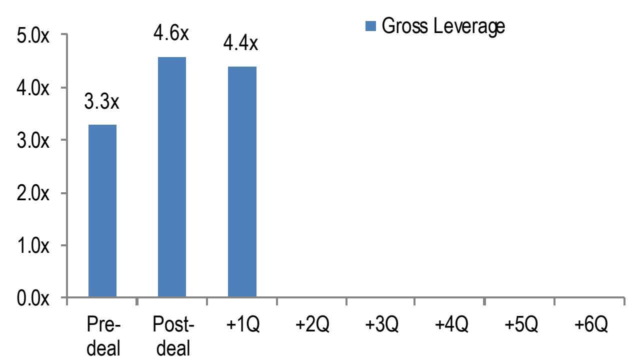


Exhibit 3: Gross Leverage trend



Source: J.P. Morgan, Capital I.Q., Moody's, S&P and Fitch

AT&T acquires Time Warner Inc

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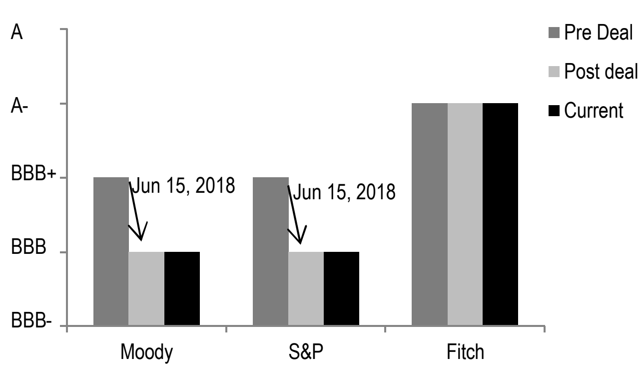
AT&T announced the acquisition of Time Warner on October 22, 2016, in a 50/50 stock-and-cash transaction valued at $85bn. The cash portion was financed with new debt and cash from the balance sheet. In the announcement, AT&T committed to keeping a strong balance sheet and investment grade credit metrics. Expectations for leverage were 2.5x on a net basis by the end of the first year after close. The merger was challenged by the Department of Justice as being anti-competitive. Over 600 days later, Judge Richard Leon ruled the acquisition was not anti-competitive and allowed the transaction to close. Shortly after closing, the DOJ appealed Judge Leon's decision, sending the case back to the courts. Both Moody's and S&P downgraded AT&T to BBB/Baa2 from BBB+/Baa1 due to elevated leverage levels. The acquisition of Time Warner is highly complementary to the core AT&T businesses. The wide array of premium content assets at Time Warner (Warner Bros, HBO, Turner Networks) will allow AT&T to cross sell these assets between wireless and cable/satellite. Additionally, AT&T management believes with the addition of Time Warner content assets they will be able to build an ad platform ready to compete with the likes of Google and Facebook. We calculate PF leverage (based on recent AT&T filings) for the combined T/TWX to be 3.3x gross/3.2x net. We expect de-leveraging mainly through FCF and the sale of non-core assets. We don't expect meaningful EBITDA growth. AT&T management now expects its net-debt-to-adjusted EBITDA ratio to be in the 2.9x range by the end of 2018, dropping to the 2.5x range by the end of 2019 and reaching historical levels in the 1.8x range by the end of 2022.

Purpose of Transaction: Time Warner provides AT&T with revenue diversity and an opportunity to strengthen top line growth. AT&T hopes to cross sell Time Warner content with wireless/wireline offerings

Deleveraging Targets at deal close: AT&T targeted leverage of 2.5x on a net basis (~2.7x gross) by the end of the first year after close and reaching historical levels in the 1.8x range by the end of 2022

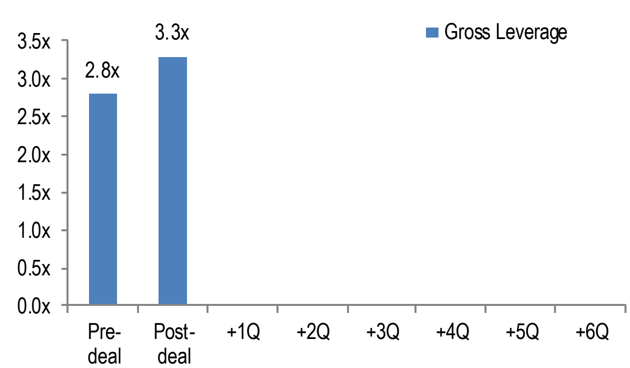
Timing	
Date announced:	Oct 22nd, 2016
Date funded:	Jul 27th, 2017
Date closed:	Jun 15th, 2018
Sizing	
Deal size:	$85bn
IG bond issuance:	$22.5bn

Exhibit 1: Rating trends



Source: J.P. Morgan, Capital I.Q., Moody's, S&P and Fitch

Exhibit 2: Gross Leverage trend



Siemens acquires Dresser-Rand Group

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Siemens acquired Dresser Rand in mid-2015 in an all cash transaction for $7.6bn valuing the enterprise at 16x EBITDA. The acquisition was meant to strengthen Siemens' portfolio for the oil & gas industry and also distributed power and expand its presence in the US. While the timing of the acquisition was sub-optimal due to a downturn in oil & gas markets beginning in the second half of 2015, Siemens was able to increase its expected synergy target from more than €150 million in annual synergies by 2019 to €250 million. Leverage has declined modestly since the transaction was closed. Challenges in other business areas (power generation) and portfolio changes have altered the composition of the company since the Dresser Rand acquisition. Siemens continues to maintain a very strong credit profile with 0.6x net leverage at the Industrial company currently which is in line with its target of <1x. Siemens does not have a stated credit ratings target, but its leverage target of <1x is in line with a single A rating.

Purpose of Transaction: To enhance Siemens product portfolio for the oil & gas industry, gain US exposure

Deleveraging Targets at deal close: <1x net leverage

Timing	
Date announced:	Sep 21st, 2014
Date funded:	May 18th, 2015
Date closed:	Jul 1st, 2015
Sizing	
Deal size:	$7.6bn
IG bond issuance:	$7.6bn

Exhibit 1: 10 yr M&A funding deal bond vs JULI 10yr (Larger number indicates outperformance of M&A 10yr bond vs JULI 10yr)

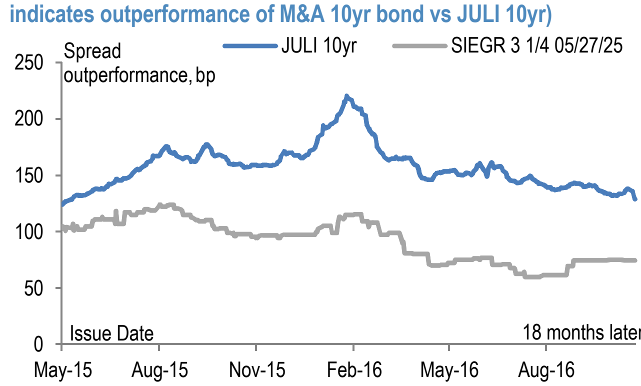


Exhibit 2: Rating trends

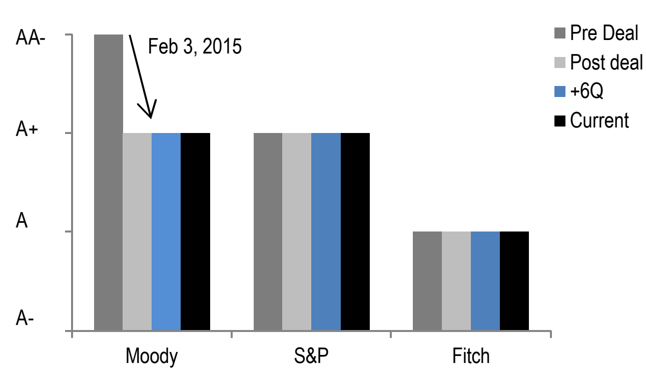
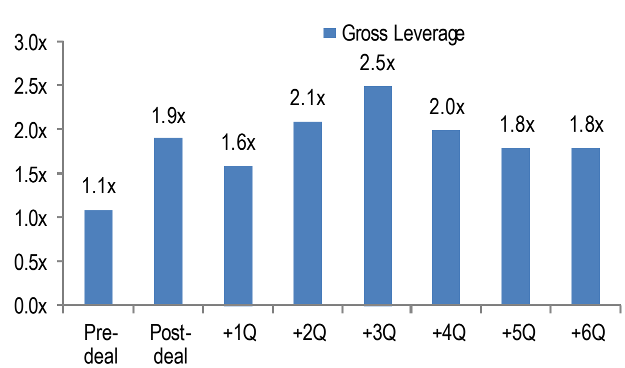


Exhibit 3: Gross Leverage trend



Source: J.P. Morgan, Capital I.Q., Moody's, S&P and Fitch

Lockheed Martin acquires Sikorsky Aircraft Corporation

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Lockheed Martin acquired Sikorsky from United Technologies in November 2015 for $9bn in cash. The transaction was initially funded with $6.0bn of borrowings under LMT's 364-day revolver, commercial paper and cash on hand, which was later replaced with $7bn of IG issuance. The acquisition of Sikorsky was expected to benefit LMT through diversification and growth into the large helicopter market segment which had a mix of commercial and military customers both domestic and international. Although Lockheed took a one notch downgrade for the acquisition of Sikorsky and leverage increased ~1x, management made a commitment to strong IG ratings at high BBB with a longer term goal of getting back to low A. Lockheed has repaid about $1bn of debt since the close of the Sikorsky transaction and plans to repay another $750mn that is maturing in 2018. Leverage has improved ½ turn to 1.9x on the debt reduction and also strong earnings growth over the last two years. LMT's improving credit profile has been reflected in positive rating actions by S&P and Fitch, which have raised their outlooks on Lockheed's BBB+ ratings to Positive in April-May 2018.

Purpose of Transaction: To add diversification and expansion into the large helicopter market segment

Deleveraging Targets at deal close: Not specified, expect gradual deleveraging

Timing	
Date announced:	Jul 20th, 2015
Date funded:	Nov 16th, 2015
Date closed:	Nov 6th, 2015
Sizing	
Deal size:	$9.0bn
IG bond issuance:	$7.0bn

Exhibit 1: 10 yr M&A funding deal bond vs JULI 10yr (Larger number indicates outperformance of M&A 10yr bond vs JULI 10yr)

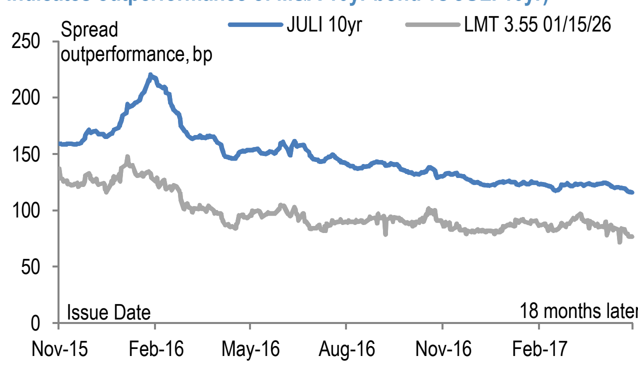
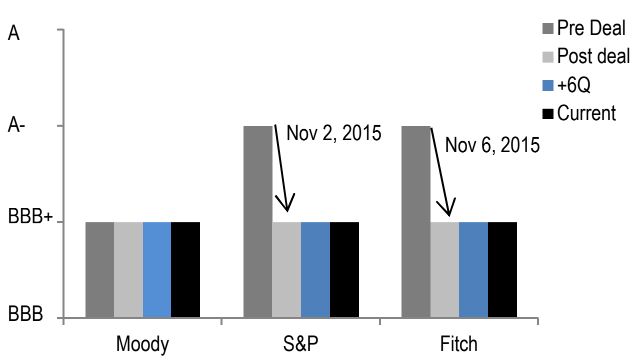


Exhibit 2: Rating trends



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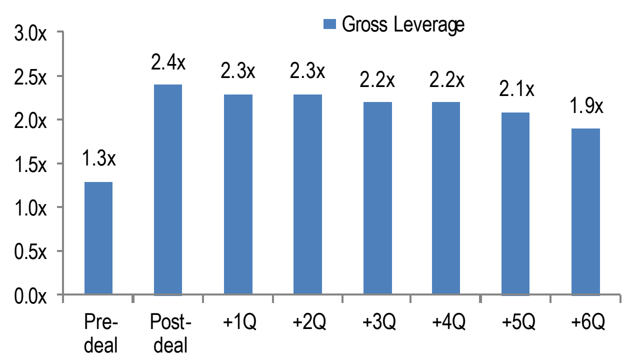

Source: J.P. Morgan, Capital I.Q., Moody's, S&P and Fitch

Southern Co acquires AGL resources

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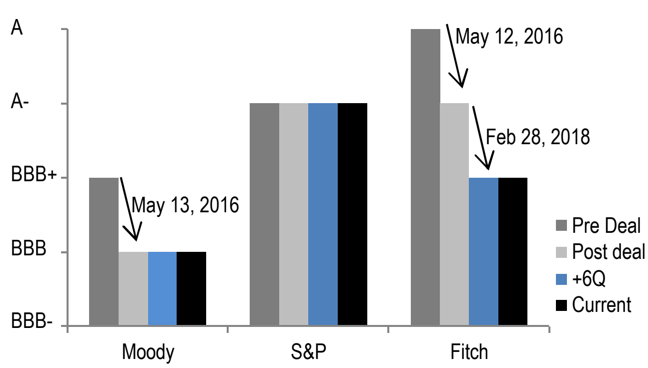
The acquisition of AGL enabled SO to capture the changing dynamic of natural gas consumption, which facilitated additional growth opportunities for the utility. When the transaction was first announced, SO anticipated the debt financing portion of the deal would be approximately $5.0 billion. Ultimately, in May 2016, SO issued a total of $8.0 billion long-term debt, of which $6.75 billion was specifically allocated towards funding the AGL transaction. Prior to the new issuance, both Moody's and Fitch downgraded SO's rating, while S&P affirmed the rating but maintained their Negative outlook. While the transaction has improved SO's overall regulated earnings profile, the utility's credit metrics have remained weakly positioned within their current ratings, due to cost overruns for the construction of Vogtle and the negative impact from tax reform. Recently, SO has taken various supportive measures to strengthen their balance sheet and mitigate ratings pressure, including asset sales, deleveraging, and commitment to raise a total of $7.0 billion of equity over 5 years. Despite these initiatives, SO's credit metrics are expected to remain pressured over the next few years. Specifically, FFO/debt is expected to average 14.5% through 2020.

Purpose of Transaction: The strategic rationale behind the transaction was growth driven. The acquisition of AGL enabled SO to capture the changing dynamic of natural gas consumption, which facilitated additional growth opportunities for the utility.

Deleveraging Targets at deal close: SO targeted a return to credit metrics commensurate with their ratings at the time the transaction was announced by 2019.

Timing	
Date announced:	Aug 24th, 2015
Date funded:	May19th, 2016
Date closed:	Jul 1st, 2016
Sizing	
Deal size:	$11.9bn
IG bond issuance:	$6.8bn

Exhibit 1: Rating trends



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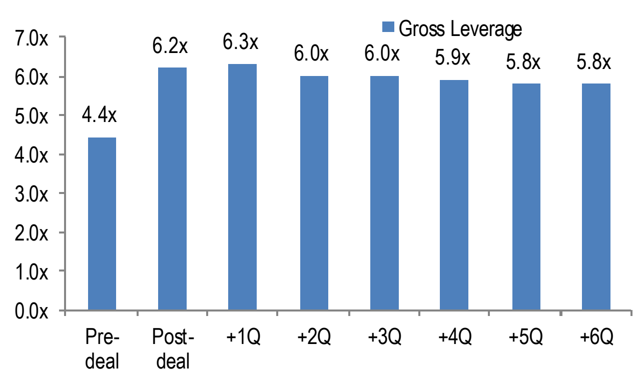

Source: J.P. Morgan, Capital I.Q., Moody's, S&P and Fitch

Sherwin Williams acquires Valspar

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Sherwin Williams completed the acquisition of Valspar on 1-Jun-17. The combination expands the company's footprint both geographically and by product. Since the close of the deal the company has made progress in terms of cost synergy realization and it has raised its expectations on that front (annual cost synergies are now expected to reach $320mm in 2018). Debt/EBITDA leverage has remained elevated since the close of the deal (at 4.0x+). We estimate that SHW will need to pay down an incremental ~$1.1bn of debt by YE18 to reach its 3.0x leverage target (assuming 2018 Bloomberg consensus EBITDA of $3.1bn). Note that the company now targets longer term leverage in the 2.0x-2.5x range, a slight upward revision to the prior 1.9x 2020 target.

Purpose of Transaction: Expand geographic and product diversity

Deleveraging Targets at deal close: 3x by 2018, 1.9x by 2020

Timing	
Date announced:	Mar 20th, 2016
Date funded:	May 2nd, 2017
Date closed:	Jun 1st, 2017
Sizing	
Deal size:	$11.2bn
IG bond issuance:	$7.5bn

Exhibit 1: 10 yr M&A funding deal bond vs JULI 10yr (Larger number indicates outperformance of M&A 10yr bond vs JULI 10yr)

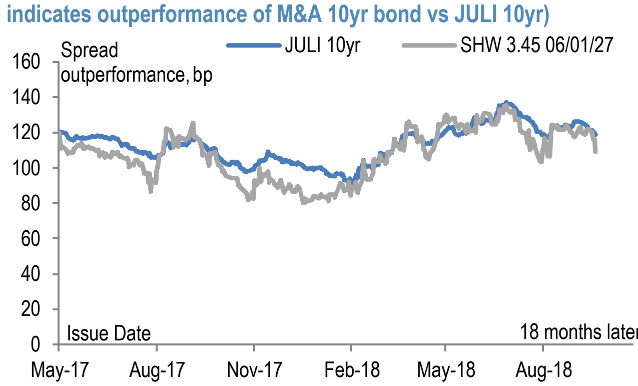


Exhibit 2: Rating trends

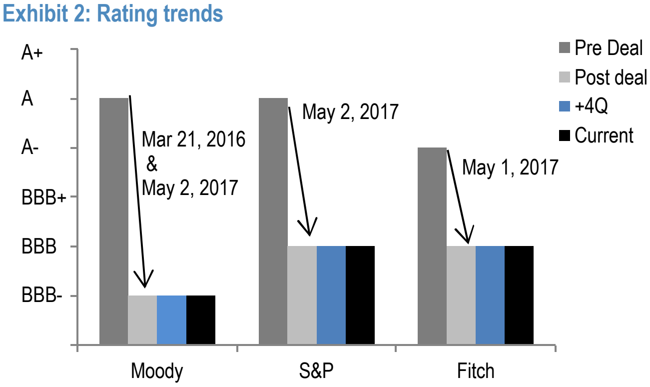
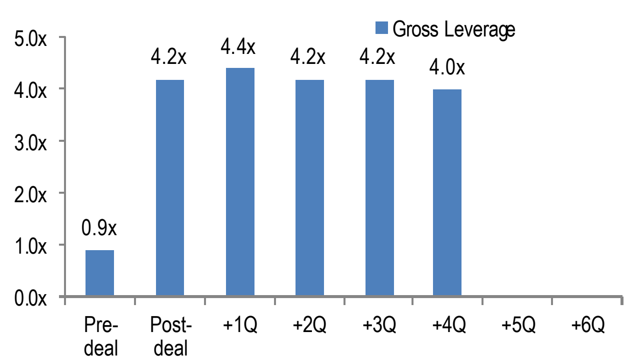


Exhibit 3: Gross Leverage trend



Source: J.P. Morgan, Capital I.Q., Moody's, S&P and Fitch

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