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High Grade Credit Fundamentals: 3Q19

A Sector-by-Sector Review of Trends in Credit Ratios

US High Grade Strategy and CDS Research

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See page 57 for analyst certification and important disclosures.

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Executive Summary

A summary of 3Q19 data shows a continuation of the declining trend in revenue and EBITDA growth while debt growth rose Y/Y. Both LTM revenue and EBITDA grew at their slowest y/y rate since 4Q16. The decline in revenue and EBITDA growth more than offset the relatively slower rate of debt growth.

In more detail, Revenue grew 1.2% y/y (+1.5% y/y ex commodities). EBITDA grew by 2.1% y/y (+2.0% y/y ex commodities). This was the weakest y/y revenue and EBITDA performance over the past three years. The y/y debt growth was also relatively modest compared to historical trends, but it still outpaced EBITDA growth. Debt grew by 5.9% y/y (+4.3% y/y ex-commodities). This is around the slowest pace of y/y debt growth ex-commodities since 2011.

Slower debt growth helped offset some of the negative impact of the earnings growth slump over the past few quarters. As a result, gross leverage increased slightly by 0.1x y/y to 3.0x for the overall HG market (+0.1x y/y to 3.1x ex commodities). Gross leverage increased across 12 out of 18 sectors in our analysis compared to an increase of only 9 sectors in 1Q19.

Interest coverage declined by 1.0x y/y to 9.8x overall as well as ex-commodities. This is the sharpest y/y decline in the interest coverage ratio since 1Q17, both overall and excluding commodities. The sharp y/y decline in interest coverage ratio was a result of both waning EBITDA growth as well as a significant rise in interest expense. Interest expense grew by 10.6% y/y (+10.3% y/y ex-commodities). This is the fastest rate of interest expense growth since 1Q17. We believe the pick-up in interest expense growth is, in part, driven by the higher cost of newly issued debt versus maturing debt last year. However, this trend has reversed since then as corporate bond yields have declined significantly in 2019.

Overall, the credit metrics of BBB issuers deteriorated less over the past year than for A-rated issuers. Also BBB issuers have reduced their payouts to shareholders while A-rated issuers continue to pay a near peak share of their EBITDA out as dividends and share buybacks. This reflects the efforts of BBB companies to delever and avoid downward rating migration.

Exhibit 1: Credit Metrics Summary

	OVERALL GROWTH			EX COMMODITIES			
	q/q change	y/y chg	3yr Range	q/q change	y/y chg	3yr Range	Comment
Revenue	-0.4%	1.2%	-1.6% - 9.5%	0.3%	1.5%	1.5% - 5.2%	Revenue growth ex commodities was significantly lower than nominal GDP growth
EBITDA	-0.2%	2.1%	-1.3% - 12.2%	0.6%	2.0%	1.4% - 6.7%	EBITDA grew at its slowest pace since 4Q16
Debt	1.2%	5.9%	2.7% - 11.9%	Unchanged	4.3%	4.0% - 13.5%	Ex commodities, Debt grew at its slowest pace since 2011

Source: J.P. Morgan, Capital IQ

Exhibit 2: Credit Ratios Summary

	OVERALL			EX COMMODITIES			
	3Q19 Level	y/y chg	3yr Range	3Q19 Level	y/y chg	3yr Range	Comment
Profit Margin	29.7%	0.5%	27.6% - 29.7%	29.7%	0.5%	28.4% - 29.7%	Profit Margins are around their post crisis peak
Leverage	3.0x	0.1x	2.9x - 3.0x	3.1x	0.1x	2.7x - 3.1x	Leverage is around its highest level post crisis
Interest Coverage	9.8x	-1.0x	9.8x - 10.8x	9.8x	-1.0x	9.8x - 11.0x	Interest Coverage declined sharply y/y

Source: J.P. Morgan, Capital IQ

Key Themes this Quarter

- Credit metric trends of BBBs are better than those of A-rated issuers
- Profit margins remain very strong for US HG corporates despite the broader trend of declining corporate margins nationally
- Debt growth is slowing, but EBITDA growth has slowed more
- Interest coverage has weakened more than leverage, reflecting higher new issue coupons versus maturing bond coupons in 2018
- Share buybacks have declined slightly after a post-tax reform surge, but equity payouts by A-rated issuers remain elevated

Credit metric trends of BBBs are better than those of A-rated issuers

BBB issuers have been more focused on their balance sheets relative to A-rated issuers. BBB issuers have posted faster growth in EBITDA than A-rated issuers and they have been more cautious than A-rated issuers in raising additional debt as well as increasing shareholder payouts. As a result, the recent deterioration in credit metrics for HG non-Financial issuers overall is primarily being driven by A-rated issuers. Note that the credit ratios calculated in this section exclude the Commodities and Utilities sectors.

LTM EBITDA grew by 2.2% y/y for BBBs, more than three times the pace of EBITDA growth for A-rated issuers (+0.6% y/y). At the same time, BBB issuers increased debt by 0.8% y/y compared to a 14.2% y/y increase in debt for A-rated issuers. This has resulted in a more significant deterioration in credit metrics for A-rated issuers compared to BBB issuers.

Gross leverage is up 0.3x y/y to 2.5x for A-rated issuers while it declined 0.1x y/y to 3.6x for BBB-rated issuers. The gap between BBB and A gross leverage has narrowed to just 1.1x, which is the smallest gap since 2Q16. Similarly, interest coverage trends are much weaker for As (down 2.3x y/y to 13.2x) compared to BBBs (down 0.8x y/y to 8.1x) as the interest expense growth for As was higher, accompanied by a slower EBITDA growth rate.

Exhibit 3: A-rated issuers have been the driver of the y/y increase in leverage while leverage for BBB issuers was stable

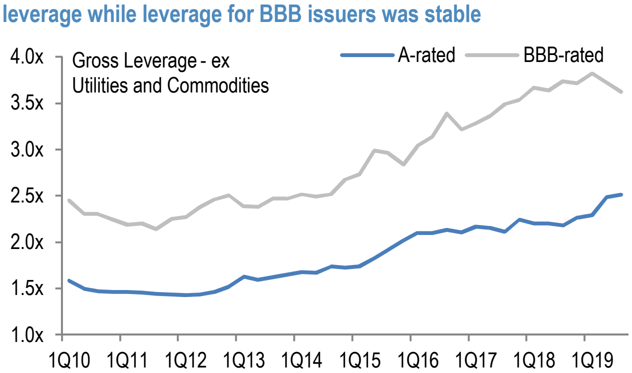
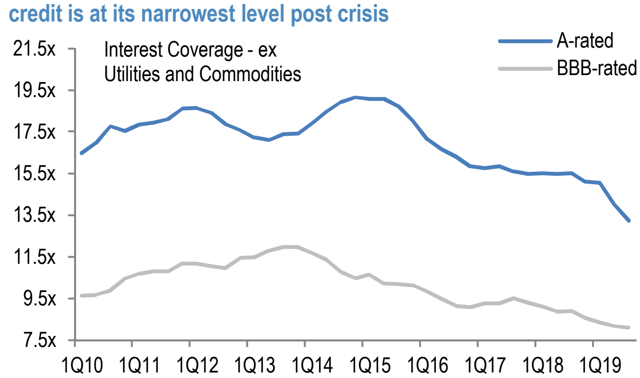


Exhibit 4: The gap in interest coverage ratio for BBB and A-rated credit is at its narrowest level post crisis



Source: J.P. Morgan, Capital IQ

Furthermore, the earnings payout ratio continues to decline for BBB issuers, driven by a y/y decline in cash to shareholders and positive EBITDA growth. This is the share of EBITDA paid out as dividends and share buybacks. The earnings payout ratio for BBB issuers declined 4% y/y to 30% as both dividends and share buybacks were lower y/y. On the other hand, the earnings payout ratio increased by 3% for A-rated issues with both dividends and share buybacks up y/y.

Exhibit 5: Net leverage stabilized for BBB issuers, rose for A issuers

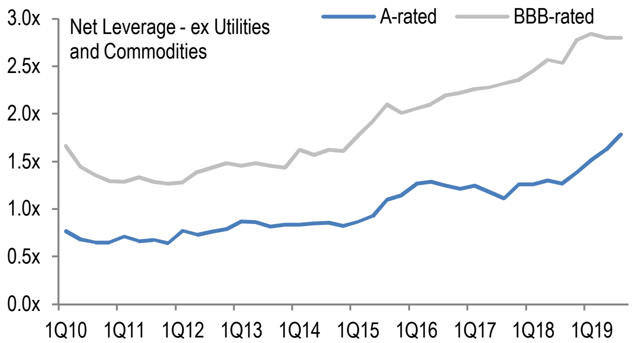
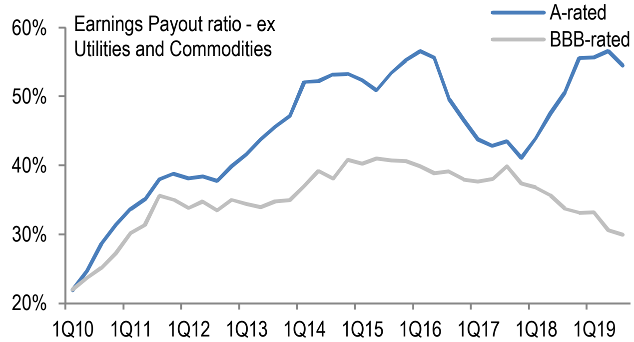


Exhibit 6: The earnings payout ratio for BBBs is at its lowest level since 2010, reflecting a focus on deleveraging over equity returns



Source: J.P. Morgan, Capital IQ

Profit margins remain very strong for US HG corporates despite the broader trend of declining corporate margins

Another positive is that profit margins for Non-Financial HG issuers remain near the post-crisis peak. Profit margins for the companies in our analysis were up 0.5% to 30% both overall and excluding commodities. Profit margins have remained stable around their post-crisis peak for the past several quarters. It is interesting that this has continued even as labor costs crept higher and the amount of imports subject to tariffs has risen. The trend in profit margins for US HG corporates is quite different from overall nonfinancial corporate business margins based on BEA (U.S. Bureau of Economic Analysis) reported numbers. The national trend in profit margins has been declining since 2015 while profit margins for the largest US HG Corporates have increased/stabilized over the same period.

We believe there are two main factors driving the divergence in trends of profit margins for US HG corporates versus overall non-financials. First, there has been large amount of M&A in the US HG market. Many of the large M&A deals over the past few years are as much or more focused on achieving cost synergies than on expanding the top line. In the subsequent quarters and years after the M&A deals close companies have, in aggregate, been successful in achieving the hoped-for synergies. This has contributed to the consistently strong trend in profit margins. Second, a driver of lower profit margins nationally is rising labor costs. The large US HG companies in sectors such as Energy, Healthcare and Technology are less sensitive to labor costs than other sectors such as leisure and hospitality, which are not heavily represented in our market. Finally, our profit margin figures are based on corporate results globally, while the BEA figures are US only. The profit margin pressures nationally appear to be less strong internationally, based on our data.

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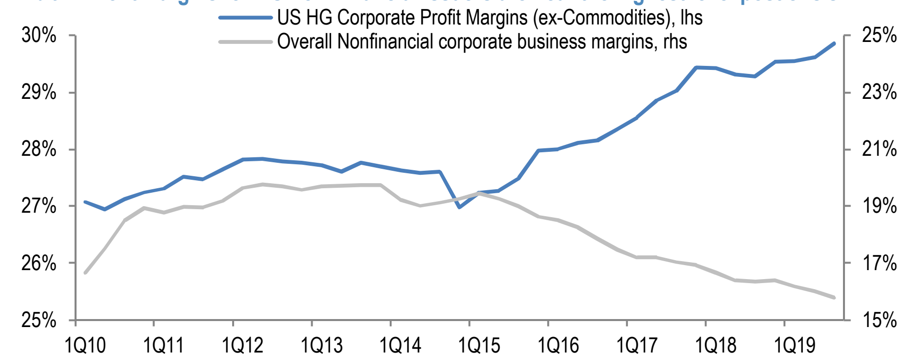
Exhibit 7: Profit Margins for HG non-Financial issuers are near the highest level post crisis



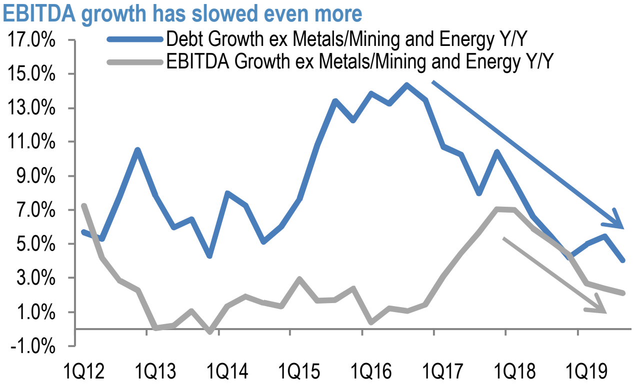
Source: J.P. Morgan, US Bureau of Economic Analysis, Capital IQ

Debt growth is slowing, but EBITDA growth has slowed more

Declining net supply in HG credit coupled with a higher debt base has been supportive of a moderation in debt growth over the past few years. YTD USD HG net supply has declined by 35% from its peak in 2016 to $429bn. Additionally, years of positive net issuance in the HG credit market have resulted in the existing debt base increasing significantly. These two factors in aggregate have led to a sharp decline in debt growth in percentage terms over the past few years. Based on 3Q19 credit fundamentals data, debt grew by 4.3% y/y for US HG non-financial issues (ex commodities). This is around the slowest pace of y/y debt growth since 2011 and roughly a third of the 11.5% y/y debt growth on average between 2015 and 2017. US nominal GDP grew by 4.3% on average in the four quarters ending 3Q19, so corporate debt growth was in line with this.

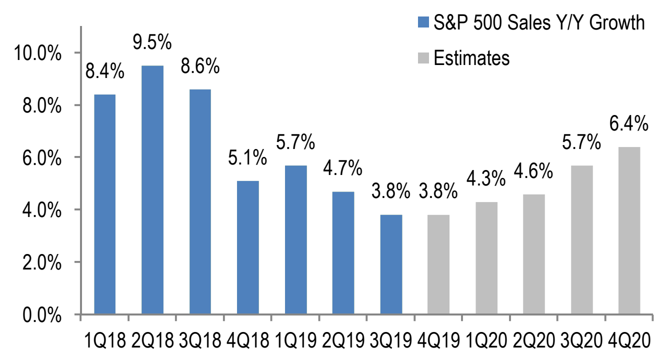
The decline in debt growth hasn't led to an improvement in credit metrics, however, as earnings growth has meaningfully declined over the past few quarters. Excluding commodities, EBITDA grew by 2.0% y/y for the companies in our analysts. This is the slowest pace of EBITDA growth since 4Q16. Slower EBITDA growth relative to debt growth has resulted in leverage inching higher. However, consensus expectations suggest an improvement in earnings in 2020. If realized, then a pickup in EBITDA growth coupled with our expectations of a decline in net bond supply next year should lead to leverage trends stabilizing/improving in 2020.

Exhibit 8: Debt growth has moderated significantly recently, but EBITDA growth has slowed even more



Source: J.P. Morgan, I/B/E/S data from Refinitiv

Exhibit 9: Revenue growth has slowed in 3Q19, but is expected to improve throughout 2020



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Interest coverage has weakened more than leverage recently

A significant increase in interest expense growth coupled with declining EBITDA growth led to the sharpest decline in the interest coverage ratio since 1Q17. LTM Interest expense grew by 10.6% y/y (10.3% ex-Commodities). This is the fastest interest expense growth since 1Q17. The recent uptick in interest expense is quite different from the increase in late 2016 to early 2017. The uptick back then was driven by significant debt growth in the prior quarters. The 2H15 to 2016 time period saw the highest pace of debt growth post crisis with debt growing by 12-13% y/y on average.

We believe the recent uptick in interest expense growth, despite moderating debt growth, was driven by the rising corporate funding needs last year. The average cost of newly issued bonds was 33bp higher than the average cost of maturing bonds in 2018 in our index. Post crisis, 2018 was the first year when the cost of newly issued debt was higher than the cost of maturing debt. LTM Interest expense tends to lag debt issuance trends as the impact of interest expense due to newly issued bonds takes a few quarters to be fully reflected in a company's financials. Hence we believe that the relatively higher cost of refinancing in 2018 is only now starting to impact credit ratios. That said, the cost of new issuance in 2019 so far has been 17bp lower than cost of maturing debt, driven by the strong rally in rates. If this trend continues, it should help stabilize interest expense growth in the coming quarters.

Exhibit 10: Interest expense recently grew at its fastest rate since the 2016-2017 period

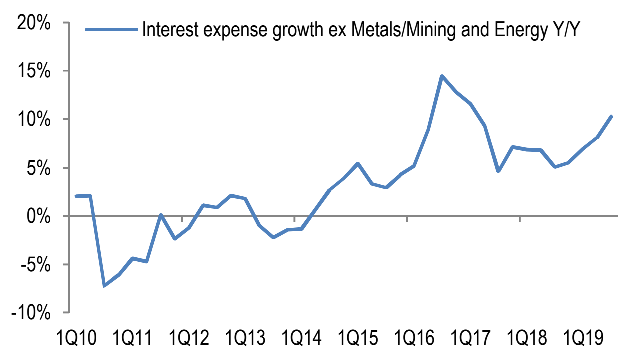
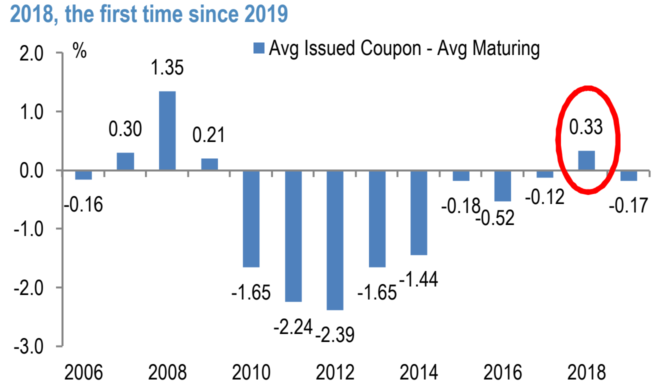


Exhibit 11: The difference between the average coupon on new issues and the average coupon of maturing coupons was positive in 2018, the first time since 2019



Source: J.P. Morgan, Capital IQ

Share buybacks start to normalize after the tax-reform fueled frenzy

LTM cash to shareholders is up 7.3% y/y but is down 1.7% from the peak reached in 1Q19. The reduction in cash to shareholders is driven primarily by a decrease in share buybacks of 6.3% from their peak in 1Q19. This reflects normalization after a surge in 2018 driven by tax reform. On the other hand, dividends continue to increase at a steady pace each quarter.

Single A-rated companies increased share buybacks significantly post tax reform. These buybacks have declined recently. A-rated companies increased their share repurchases by 127% between the 4Q17 and 1Q19. They have since cut back almost

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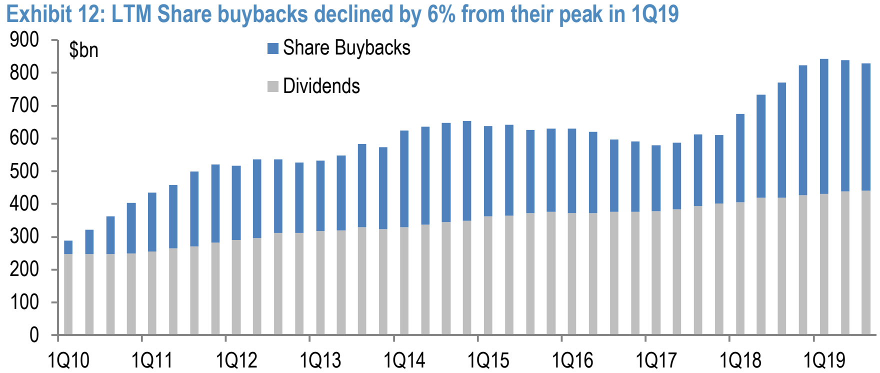
a third of this increase. On the other hand, BBB-rated companies increased share buybacks by 69% between 4Q17 and 1Q19, and have reversed a quarter of this increase in the last 2 quarters.

Exhibit 12: LTM Share buybacks declined by 6% from their peak in 1Q19



Source: J.P. Morgan, Capital IQ

Detailed Discussion of Credit Metrics

Revenue growth for the period ending 3Q19 continued to decline for the fourth consecutive quarter. It is currently at 1.2% y/y on a LTM basis, which is the weakest sales growth since the y/y decline of 1.6% in 4Q16. In recent comparison, this figure was 3.9% in 2Q19, 6.1% as of 1Q19, and 8.3% in 4Q18. The decrease in revenue growth of 2.7% from 3.9% in 2Q19 to 1.2% in 3Q19 represents the largest quarterly drop since 3Q15 (-3.0%). However, note that this is also the eleventh consecutive quarter of positive revenue growth since 4Q16, after seven quarters of contraction.

The number of sectors which reported positive sales growth has declined for three quarters now. Currently, 11 of the 18 sectors in our analysis reported positive revenue growth. In comparison, this figure was 14 sectors one quarter ago and 15 sectors just two quarters ago. The sectors with at least two consecutive quarters of decline include Chemicals, Consumer Products, Domestic Telecoms and Yankee Telecoms.

Excluding Commodities, revenue growth was slightly faster at 1.5% y/y, However, this is still the slowest growth since 3Q16 when revenue increased by 1.3% y/y. The Energy sector reported revenue growth of -0.1% y/y. This is the first time revenue growth is negative since 1Q17 of -2.0% y/y. This is a continuation of the downward trend seen in the last four quarters and is a significant decline from +9.1% y/y in 2Q19, +17.3% in 1Q19, and +24.1% in 4Q18. On the other hand, the Metals and Mining sector reported modest revenue growth of 2.5% y/y in 3Q19. Sales growth for this sector continues to slow from last quarter (3.6%) at its slowest pace since 1Q17 of 1.2%.

For the S&P 500 universe, revenue growth in 3Q19 was 3.8% y/y (this is versus 3Q18). This grew at the same pace as US nominal GDP growth. Looking forward at equity analyst consensus estimates, there is an expectation of modest sales growth for 4Q19, and a gradual pickup throughout 2020. Our JPM Equity strategists believe S&P 500 companies are on track to deliver the ~4% top-line growth in 2019 despite lower commodity prices, softer business spending, and trade headwinds. At the same time, JPM also expects an increase in US nominal GDP growth for 4Q19, and a slight decline thereafter in 2020.

Exhibit 13: Revenue growth has slowed in 3Q19, but is expected to improve throughout 2020

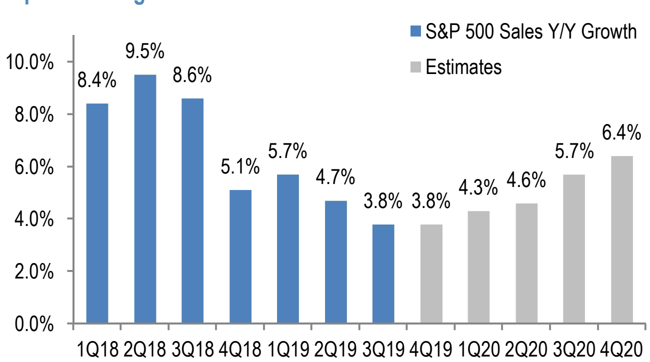
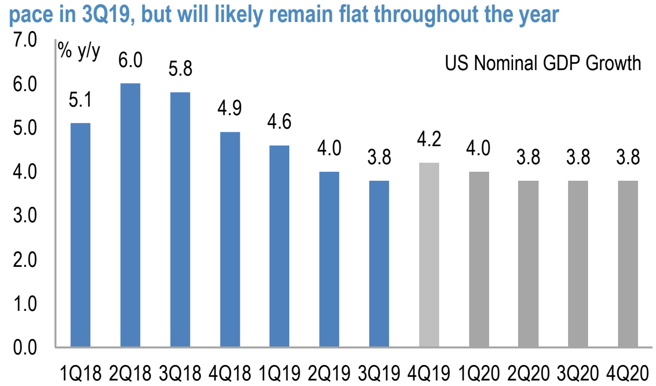
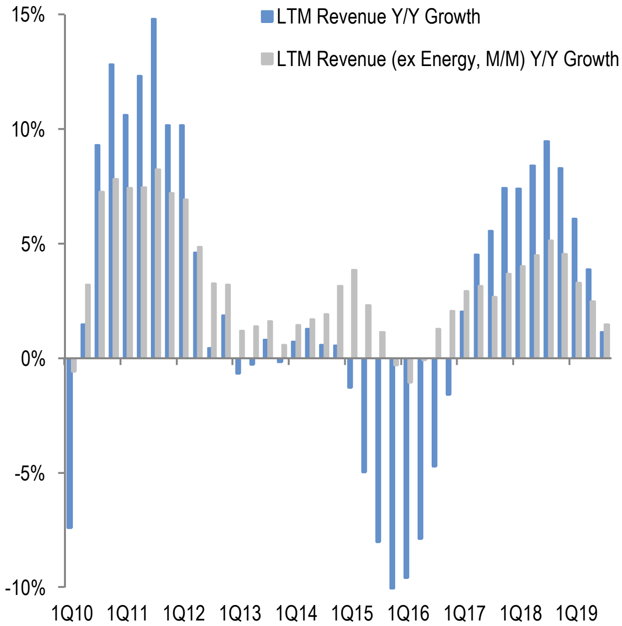


Exhibit 14: On the other hand, US nominal GDP growth fell at a slower pace in 3Q19, but will likely remain flat throughout the year



Source: J.P. Morgan, I/B/E/S data from Refinitiv

Exhibit 15: Revenue growth was 1.2% y/y and 1.5% ex Energy and Metals and Mining



Source: J.P. Morgan, Capital IQ

Exhibit 16: Revenue growth was modest across most sectors, with Healthcare/HMOs taking the lead

	3Q19 change		LTM level
	($mn)	%	($mn)
Chemicals	-8,850	-5.6%	149,530
Telecoms - Yankees	-12,262	-4.3%	271,244
Capital Goods	-15,517	-2.0%	769,847
Telecoms - Domestic	-5,188	-1.6%	325,103
Automotive	-5,259	-1.4%	369,504
Consumer Products	-2,217	-1.2%	181,121
Energy	-2,892	-0.1%	1,925,621
Utilities	1,876	0.6%	320,307
Food/Drug Retail	3,809	1.3%	305,447
Cable/TV	2,489	1.6%	153,624
Food/Beverages	6,366	1.9%	346,978
Technology	13,991	2.0%	721,017
Metals/Mining	3,106	2.5%	128,513
Non-Food Retail	25,309	2.7%	959,630
Transportation	6,508	3.3%	203,750
Pharmaceuticals/Medical Products	19,988	3.4%	611,107
Diversified Media	7,435	5.6%	140,833
Healthcare/HMOs	65,388	5.8%	1,197,275
Industrials Total (ex Metals/Mining, Energy)	**103,866**	**1.5%**	**7,026,319**
Industrials Total	**104,081**	**1.2%**	**9,080,453**

Second and third column show the change in 3Q19 vs 3Q18. The fourth column shows the 3Q19 level. Source: J.P. Morgan, Capital IQ

EBITDA growth declined for the seventh consecutive quarter to 2.1% y/y in 3Q19 from its recent peak of 12.2% y/y in 4Q17. This is the slowest rate of growth in nearly three years, since the contraction of 1.3% y/y in 4Q16. Excluding Commodities, EBITDA growth also declined for seven quarters in a row to 2.0% y/y. The slowdown in earnings growth is reflective of a mild growth environment for most HG sectors.

Most sectors in our analysis reported positive EBITDA growth, but it remains modest with single digit growth between the range of 1.0% and 7.5% y/y. Yankee Telecoms outperformed the rest of the HG Non-Financial credit market with an increase of 7.5% y/y. Over the same period, 5 out of 18 sectors reported negative EBITDA growth. EBITDA growth for Chemicals fell 9.5% y/y, followed by Capital Goods of 7.1%.

The recovery in the Commodities-related sector has also slowed. The Energy sector reported a significant decline in EBITDA growth, to only 3.2% y/y. This is the slowest rate of growth since 4Q16 (-22.2%) and is well below the average of 30.8% since the Energy crisis (for the period 1Q17 to 2Q19). Moreover, the Metals and Mining sector reported negative earnings growth of 2.7%, which is another quarter of decline after -0.5% y/y in 2Q19.

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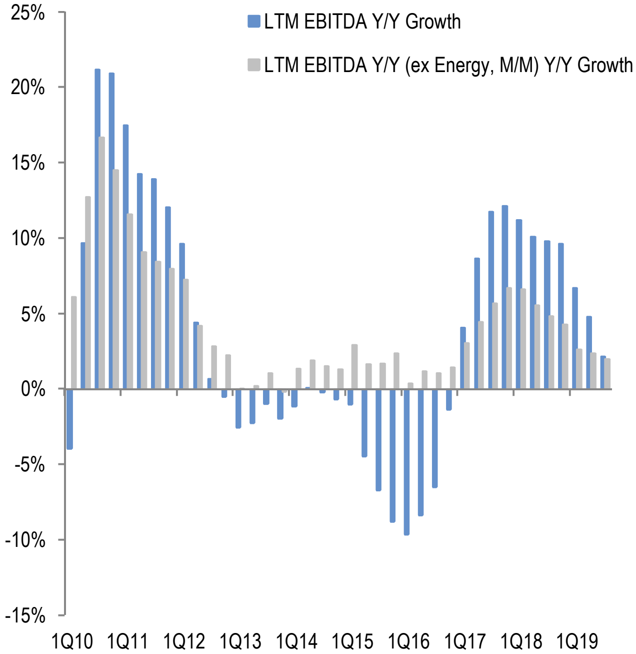
Exhibit 17: EBITDA growth declined for the seventh consecutive quarter to a low of 2.1% y/y since the recent peak of 12.2% in 4Q17. Ex Commodities, EBITDA growth was slower at 2.0% y/y



Source: J.P. Morgan, Capital IQ

Exhibit 18: EBITDA grew in 13 out of 18 sectors, but the pace of EBITDA growth has declined sharply for Energy to +3.2% y/y after nine quarters of double-digit growth

	3Q19 change		LTM level
	($mn)	%	($mn)
Chemicals	-2,977	-9.5%	28,428
Capital Goods	-8,969	-7.1%	117,079
Food/Drug Retail	-385	-1.3%	29,735
Diversified Media	-349	-1.1%	31,574
Metals/Mining	-95	-0.2%	51,370
Non-Food Retail	736	1.0%	73,924
Telecoms - Domestic	1,378	1.2%	112,166
Healthcare/HMOs	1,259	1.8%	71,559
Automotive	870	2.1%	41,447
Food/Beverages	2,451	2.3%	109,027
Transportation	1,205	2.7%	45,185
Energy	10,952	3.2%	354,054
Technology	7,430	3.3%	235,386
Consumer Products	1,496	3.4%	44,899
Utilities	4,288	3.9%	114,471
Pharmaceuticals/Medical Products	10,184	4.8%	220,850
Cable/TV	2,640	5.6%	50,061
Telecoms - Yankees	6,114	7.5%	87,859
Industrials Total (ex Metals/Mining, Energy)	**27,370**	**2.0%**	**1,413,650**
Industrials Total	**38,227**	**2.1%**	**1,819,074**

Second and third column show the change in 3Q19 vs 3Q18. The fourth column shows the 3Q19 level. Source: J.P. Morgan, Capital IQ

Profit Margins (EBITDA/Revenue) increased to a post-crisis high of 29.7% in 3Q19, both with and without commodities. As discussed above, profit margins for the HG companies in our sample have done much better than those of the US companies more broadly.

Profit Margins for the Energy sector increased at its slowest pace of 1.2% y/y since 3Q17 (0.6% y/y) to the peak of 29.8%. Additionally, profit margins for Metals and Mining declined 0.2% over the same period to 42.0%. On the other hand, profit margins increased modestly for 11 other sectors in addition to Energy (out of 18) in our analysis, with Yankee Telecoms taking the lead with an increase of 2.5% y/y, followed by Transportation of 1.7% y/y. The sector with the largest decrease in profit margins was Diversified Media (-1.8% y/y), followed by Capital Goods (-0.6%) and Chemicals (-0.5%).

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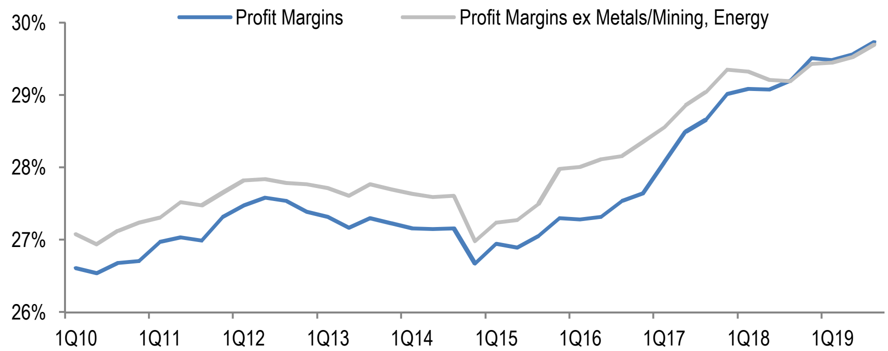
Exhibit 19: Profit Margins increased to a post-crisis high of ~30%. However, the gap between Profit Margins and Profit Margins excluding Commodities has narrowed



Source: J.P. Morgan, Capital IQ

Debt for the companies in our analysis grew by 5.9% y/y. The pace of debt growth has been accelerating throughout 2019 and has now doubled from an eight-year low of 2.9% y/y in 4Q18. However, this is still lower than the average debt growth over the past 5 years of 8.1% y/y. The companies in our analysis ended 3Q19 with total debt of $4.75tr, up by $240bn y/y. Energy (+$103bn, 15.6% y/y) and Utilities (+$66bn, 11.9% y/y) were the largest drivers of the increase in debt outstanding. Diversified Media (-$9.9bn, -10% y/y) and Domestic Telecoms (-$18bn, -5.9% y/y) saw the most notable decline in debt. A-rated issuers saw a 12.9% y/y increase in debt compared to a 3.8% y/y increase for BBB-rated issuers. This is the second quarter in a row where A-rated issuers grew debt faster than BBB issuers whereas the opposite was true during the prior 5 quarters.

The new accounting rule that came into effect this year requires companies to start reporting the cost of renting assets used for operations. For companies that are in scope for incorporating the new accounting rule, their debt numbers will increase due to the addition of operating lease cost. This means that the change in accounting standards may cause an “artificial” jump in leverage. To avoid this “artificial” jump, we have made the necessary adjustments on a case by case basis after discussions with the respective JPM sector analysts. The major hurdle in making the adjustment is that not all companies have incorporated the accounting changes so far. Furthermore, for certain sectors, it is challenging to estimate the historical operating lease cost solely based on the data available currently. For this reason we have made the adjustments in two different ways that we believe are best to mitigate the impact based on the data currently available. For issuers with significant retail exposure, where operating leases are a significant line item, and sectors such as Food/Beverage, Capital Goods, Consumer Products and Transportation, we have included the operating lease numbers historically into the calculation to avoid an “artificial” jump in leverage. On the other hand, for most of the remaining sectors we have excluded the operating lease portion of the debt numbers to avoid any “artificial” jumps. We will continue to work on incorporating this change in a more consistent manner across sectors over the course of the next few quarters as more companies start reflecting the operating lease line item in the balance sheet.

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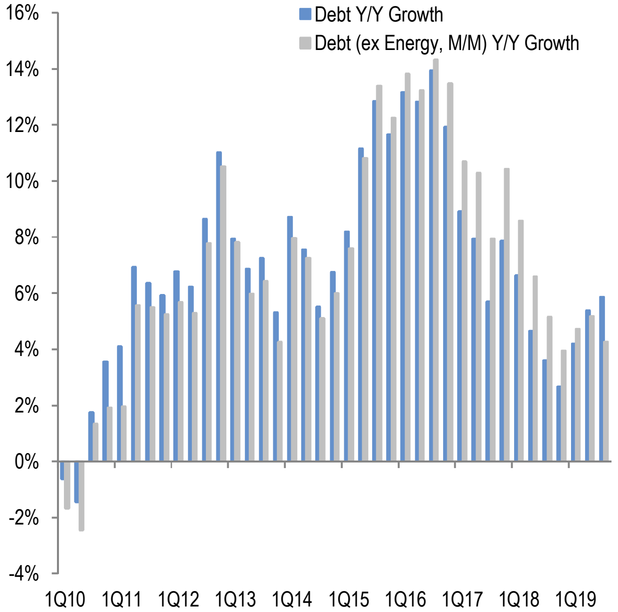
Exhibit 20: Debt grew by 6.0% y/y, trending upwards from its 8 year low of 2.9% y/y in 4Q18



Source: J.P. Morgan, Capital IQ

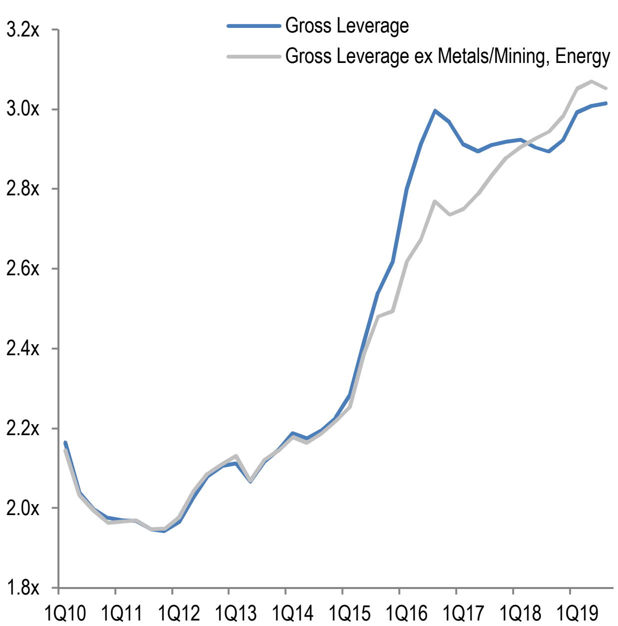
Exhibit 21: Only 5 sectors cut their aggregate debt level

	3Q19 change		LTM level
	($mn)	%	($mn)
Diversified Media	-9,993	-10.0%	90,165
Telecoms - Domestic	-18,149	-5.9%	290,233
Automotive	-1,824	-4.0%	43,296
Non-Food Retail	-5,625	-3.3%	163,635
Consumer Products	-3,039	-3.0%	98,286
Metals/Mining	-880	-1.5%	56,841
Chemicals	720	1.0%	74,223
Technology	6,929	1.7%	410,872
Food/Beverages	10,523	2.5%	429,085
Pharmaceuticals/Medical Products	16,763	3.6%	481,836
Healthcare/HMOs	8,206	3.7%	232,839
Food/Drug Retail	5,110	4.0%	133,940
Telecoms - Yankees	18,763	7.4%	271,719
Capital Goods	26,338	10.6%	273,885
Utilities	65,516	11.9%	616,332
Transportation	16,045	13.8%	131,918
Energy	103,422	15.6%	767,825
Cable/TV	24,762	15.9%	180,950
Industrials Total	**263,589**	**5.9%**	**4,747,879**

Second and third column show the change in 3Q19 vs 3Q18. The fourth column shows the 3Q19 level. Source: J.P. Morgan, Capital IQ

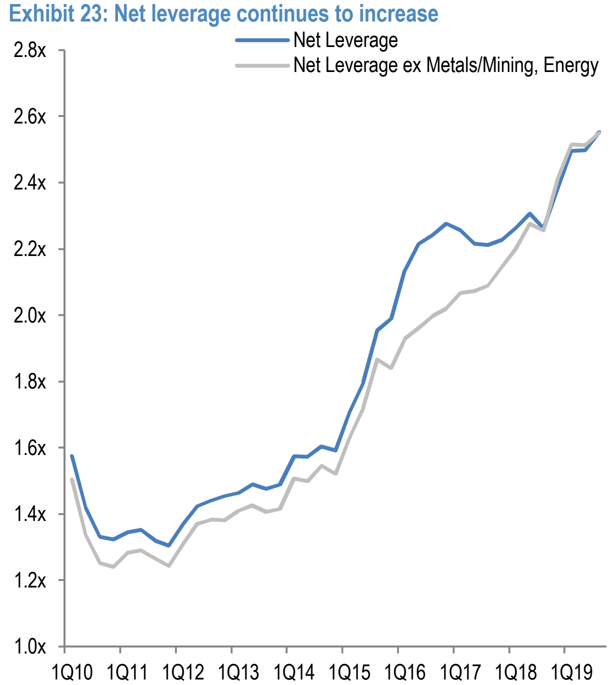
Leverage increased by 0.1x y/y to 3.0x overall and by 0.1x y/y to 3.0x excluding commodities. That said, both figures nudged down slightly q/q and gross leverage is flat to where it was in 3Q16. Leverage declined the most for Diversified Media (-0.3x y/y to 2.9x) and increased the most for Utilities (+0.5x to 5.5x).

Exhibit 22: Gross Leverage stable, but still elevated



Source: J.P. Morgan, Capital IQ

Exhibit 23: Net leverage continues to increase



Source: J.P. Morgan, Capital IQ

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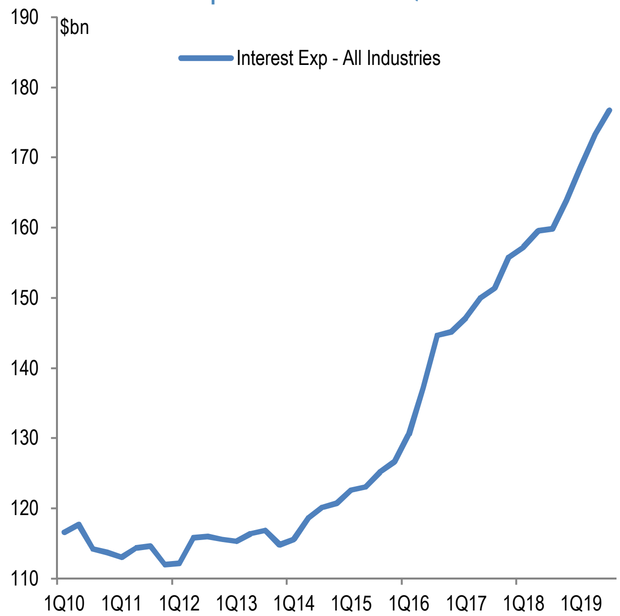
Net Leverage is 2.6x, up 0.3x y/y. This is a new high for net leverage in our framework. Net leverage decreased in just 4 sectors: Metals & Mining, Consumer Products, Non-Food Retail and Domestic Telecoms. Health Care and Transportation saw the largest increases in net leverage y/y (+0.6x and +0.5x, respectively).

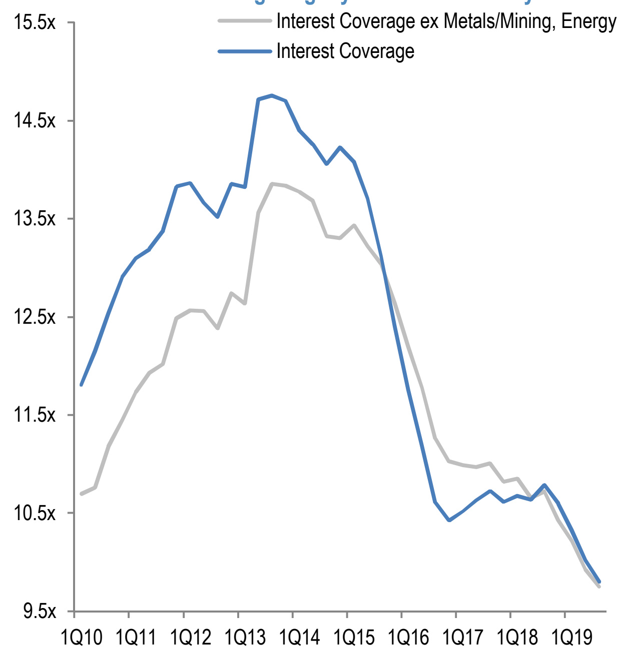
Interest expense increased 10.6% y/y (+$16.9bn) and 2% q/q ($3.4bn) to $176.7bn. Excluding commodities interest expense increased 10.3% y/y (+13.3bn) to $142.7bn. Among the 18 sectors in our study, interest expense increased for all sectors except for Metals/Mining. This increase is led by the Energy sector with a $3.8bn (+14% y/y) increase in interest expense, followed by Utilities (+3bn/+13% y/y) and Healthcare (+$2bn/34%).The lowest y/y increase in interest expense is reported for Metals/Mining (-7% y/y), Automotive sector (+1% y/y) and Consumer Products (+2% y/y). Among ratings, interest expense for A-rated companies has increased by 14.4% y/y while BBB-rated companies reported 9.3% y/y increase.

Exhibit 24: Interest expense increased in 3Q19



Source: J.P. Morgan, Capital IQ

Exhibit 25: Interest coverage slightly declined over the year



Source: J.P. Morgan, Capital IQ

Interest Coverage declined by 1x y/y to 9.8x overall as well as excluding commodities. Interest coverage is at its lowest level since 2010. Among sectors, Metals/Mining reported the highest interest coverage at 19.9x and Utilities reported the lowest interest coverage at 4.5x.Among all sectors, Metals/Mining and Pharmaceuticals/Medical Products are the only sectors with positive increase y/y in the interest coverage with 1.8x and 1.4x y/y increase respectively. Highest y/y decline in interest coverage is reported for Diversified Media (-8.1x y/y) followed by Chemicals (-3.4x y/y) and Healthcare (-3.3x y/y).

Capital Expenditures increased modestly at 4.3% y/y (+$26bn) to $633bn, the absolute increase majorly driven by Utilities (+$10bn) and Commodity sectors (+$12bn). Excluding commodities, Capex increased 3.3% y/y. Capex increased for 13 out of the 18 sectors y/y. In relative terms, the Chemicals sector had highest y/y

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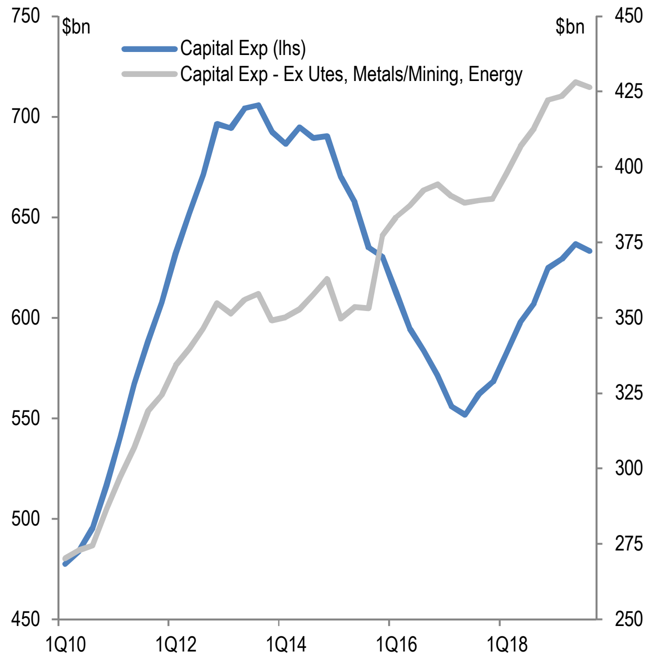
increase in Capex (22% y/y, $2bn) to $10bn, followed by Metals/Mining sector with 19% y/y (+$3bn) increase to $18bn. Meanwhile, the Automotive sector reported 10% y/y decline (-$2bn) in Capex to $18bn, which is the highest decline in y/y Capex among sectors. It is worth noting that there is a divergence in y/y Capex increase trends among A and BBB issuers. While Capex increased by 7% y/y (+16bn) to $228bn for A issuers, BBB issuers Capex increased at a much lower pace of 1% y/y (+3bn) to $285bn.

Exhibit 26: Capex increased by 4.3% y/y overall but only 3.3% excluding commodities



Source: J.P. Morgan, Capital IQ

Exhibit 27: Several sectors showed Capex growth

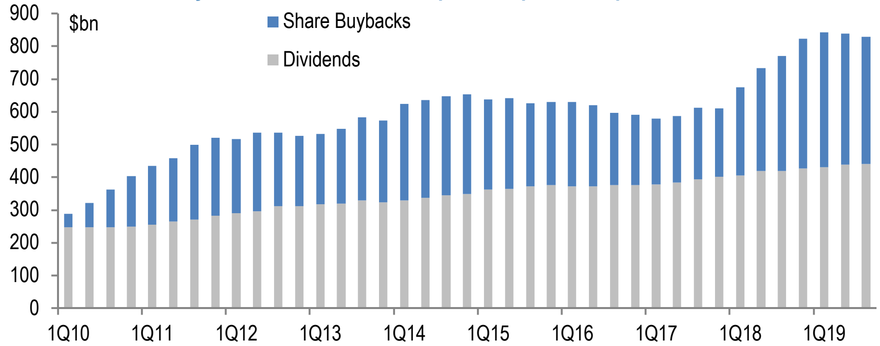
	3Q19 change		LTM level
	($mn)	%	($mn)
Automotive	-2,051	-10.1%	18,215
Cable/TV	-1,216	-6.5%	17,379
Telecoms - Domestic	-2,595	-6.2%	39,135
Technology	-2,466	-5.0%	46,614
Food/Beverages	-412	-2.5%	16,007
Capital Goods	6	0.0%	20,558
Consumer Products	244	3.6%	7,079
Healthcare/HMOs	321	3.8%	8,783
Energy	9,549	5.3%	189,209
Food/Drug Retail	480	5.6%	9,105
Non-Food Retail	1,403	6.9%	21,828
Pharmaceuticals/Medical Products	1,702	7.1%	25,674
Utilities	9,957	9.4%	115,620
Telecoms - Yankees	3,499	9.5%	40,264
Diversified Media	552	10.5%	5,822
Transportation	2,372	10.7%	24,502
Metals/Mining	2,750	18.6%	17,553
Chemicals	1,782	22.1%	9,826
Industrials Total (ex Metals/Mining, Energy)	**13,579**	**3.3%**	**426,411**
Industrials Total	**25,879**	**4.3%**	**633,174**

Second and third column show the change in 3Q19 vs 3Q18. The fourth column shows the 3Q19 level. Source: J.P. Morgan, Capital IQ

Cash to Shareholders paid out over the past four quarters increased 7.3% y/y (+$57bn) to $839bn, the absolute increase majorly driven by Technology ($30bn) and Commodities sectors ($39bn). Cash to shareholders ex-commodities was only 2.8%, a much slower pace that the overall number. This is the slowest growth for this metric since 4Q17. The cash to shareholders declined by 1.7% ($15bn) compared to 1Q19, which was a record high at $854bn. The y/y growth comprised of share buybacks which increased $35bn, 10% y/y and dividends which increased $23bn/ 5% y/y. However, share buybacks were down 3% q/q.

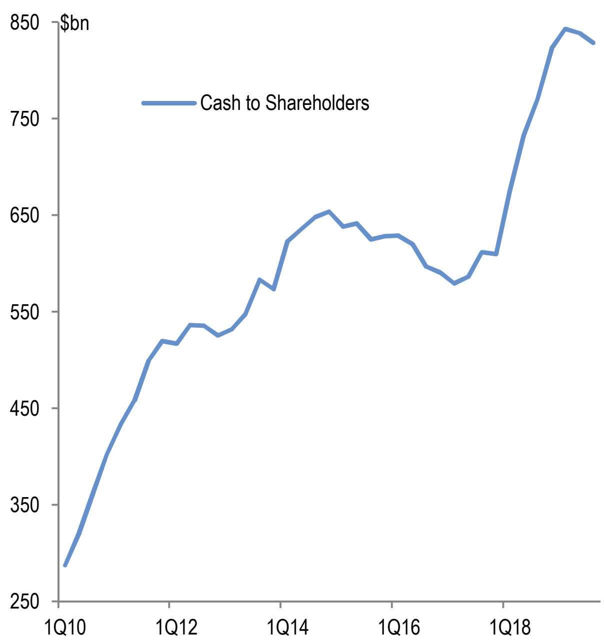
In addition, the cash to shareholders by issuers rating shows a large divergence. Cash to shareholders has increased by 10% y/y for A issuers, while it decreased by 2% y/y for BBB issuers. The Earnings Payout Ratio (Cash to Shareholders / EBITDA) was flat y/y at 37%. This is around the lowest level for the ratio since 2013.

Exhibit 28: Share buy backs has declined compared to previous quarter



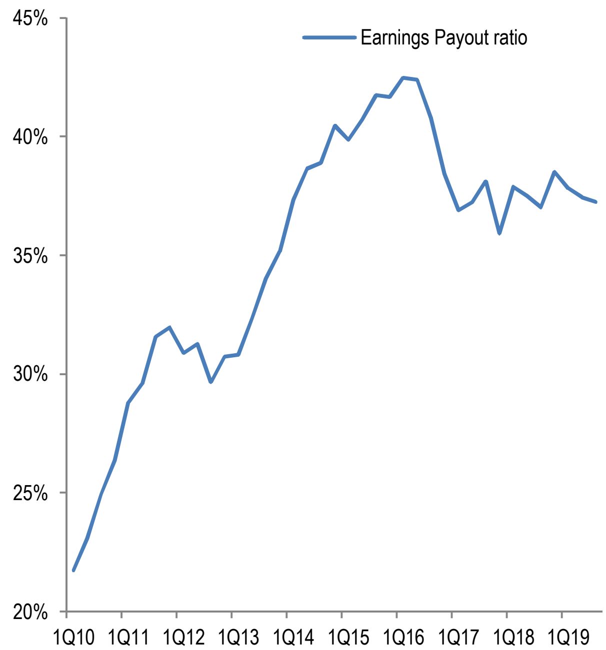
Source: J.P. Morgan, Capital IQ

Exhibit 29: Cash to Shareholders has declined by 2% since 2Q19 but has increased by 7.3% y/y



Source: J.P. Morgan, Capital IQ

Exhibit 30: The Earnings Payout Ratio has increased just by 1% y/y and is slightly lower than previous quarter



Automotive

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We maintain our **Overweight Auto Manufacturing and Fincos**, and **Underweight Auto Suppliers**. From a macro perspective, the US auto market (the largest driver of profitability for domestic automakers) is likely to remain resilient in 2020, supported by a healthy US consumer backdrop as measured by consumer confidence, low unemployment, and low household debt levels. IHS forecasts 2020 sales of 16.7mm, a ~2% decline from the 2019 run rate (17.0mm) and still a favorable environment for domestic manufacturers in our view in the context of continued growth in transaction prices. From a labor perspective, Ford and GM have ratified new four year agreements with the UAW that should preserve labor flexibility and maintain existing North America breakeven economics. Vehicle affordability and an increasingly competitive crossover SUV segment are areas of concern. Outside of the US, China remains a wild card given the ~11% YTD volume contraction experienced in 2019 and heavy competition resulting in pricing pressure. JPM expects China new vehicle sales to remain flat in 2020, with comps easing into the end of 2019 and the market showing signs of stabilization. A Phase One US/China trade deal could potentially provide a lift in sentiment. In Europe, we think that increasingly stringent Co2 emissions requirements coming in 2020/2021 could result in downside to a mostly muted vehicle sales outlook. In Europe especially, growing investments in vehicle electrification are likely to pressure OE margins and cash flow.

The US auto lending market remains mostly healthy. Delinquency and charge-off trends at the captives have remained mostly stable, average FICO scores have increased, and the subprime share of new vehicle loan/lease originations has declined modestly. The ABS market remains healthy and we expect it will continue to be an important source of funding. Historically low interest rates should be beneficial from a financing perspective. Our biggest concern is vehicle affordability as longer loan terms and increased reliance on financing and leasing has somewhat offset the impact of rising transaction prices. Despite this, average monthly payments continue to rise to record highs. Residual value trends have surprised to the upside in 2019, and we see further room for growth as used vehicles provide a more affordable alternative to increasingly expensive new vehicles.

Overall from a credit perspective, OEM balance sheets remain broadly healthy, characterized by low pension-adjusted leverage and ample cash balances/liquidity runways.

Largest issuers in the sector:

#	Issuer	Debt in JULI ($mn)	Share	Revenue ($bn)	EBITDA ($bn)	Debt ($bn)	Leverage	Int Cov	Profit Margin	Earnings Payout Ratio
1	General Motors Co	40,762	47%	130	18	15	0.9x	23.1x	14%	13%
2	Ford Motor Co	36,547	42%	146	11	14	1.3x	11.3x	8%	23%
3	Harley-Davidson Inc	3,081	4%	5	1	1	1.5x	16.6x	11%	126%
4	Aptiv PLC	2,473	3%	14	2	4	1.9x	14.6x	16%	39%
5	Magna International Inc	1,508	2%	40	4	4	0.9x	43.9x	10%	49%
	Sector Summary	**86,583**	**100%**	**370**	**41**	**43**	**1.1x**	**17.7x**	**11%**	**18%**

Change

#	Issuer	Revenue (y/y chg)	EBITDA (y/y chg)	Debt (y/y chg)	Leverage (y/y chg)	Int Cov (y/y chg)	Profit Margin (y/y chg)	Earnings Payout Ratio (y/y chg)
1	General Motors Co	-2%	6%	-4%	-0.1x	-3.9x	1%	-9%
2	Ford Motor Co	-2%	0%	-3%	0.0x	1.8x	0%	-4%
3	Harley-Davidson Inc	-8%	-33%	0%	0.5x	-8.1x	-4%	68%
4	Aptiv PLC	1%	0%	7%	0.1x	-5.0x	0%	18%
5	Magna International Inc	-2%	-6%	-23%	-0.2x	4.4x	0%	-4%
	Sector Summary	**-1%**	**2%**	**-4%**	**-0.1x**	**-1.8x**	**1%**	**-6%**

Source: J.P. Morgan, Capital IQ

- Revenue for the sector declined by 1% y/y, in line with the declining industry conditions seen this year. This negative growth is primarily driven by lower sales at GM and Ford in 3Q19, likely reflecting the impact of the GM-UAW strike for GM and a step back in Ford's progress to turn around its international operations.
- On the other hand, sector EBITDA grew by 2% y/y in 3Q19. The second consecutive quarter of growth, reversing a trend of negative EBITDA growth every quarter since 3Q17. Despite headwinds from lost production from the UAW

strike, GM was able to increase EBITDA by 6% y/y largely on account of strong sales mix and transformational cost savings. Profit margin for the sector increased 1% y/y to 11.2%.

- 3Q19 marked the fourth consecutive quarter of debt reduction as debt declined by 4% y/y compared to an average increase of 9% y/y since 1Q14. The large decline in debt at Magna was driven by elevated commercial paper borrowings in 3Q18 which was subsequently repaid in 1Q19. Note that this analysis excludes Finco debt. The decline in sector debt drove leverage down by 0.1x y/y to 1.1x.
- Interest coverage for the sector has decreased to 17.7x, the lowest since 3Q12. This is primarily due to declining EBITDA at Harley Davidson and rising debt at Aptiv.
- Earnings Payout Ratio declined by 6% y/y to 18% for the sector, mainly driven by lower y/y share repurchases at GM.

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Exhibit 1: Sector Constituents

	Sector	Debt outst ($mn)	Share
1	General Motors Co	40,762	47%
2	Ford Motor Co	36,547	42%
3	Harley-Davidson Inc	3,081	4%
4	Aptiv PLC	2,473	3%
5	Magna International Inc	1,508	2%
6	Cummins Inc	1,173	1%
7	General Motors Co	40,762	47%
	Total	**86,583**	**100%**

Exhibit 2: Revenue

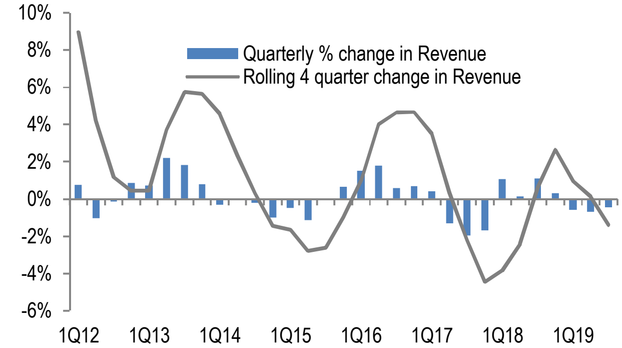


Exhibit 3: EBITDA

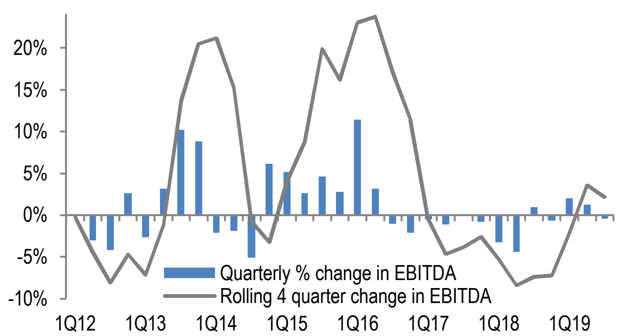


Exhibit 4: Debt

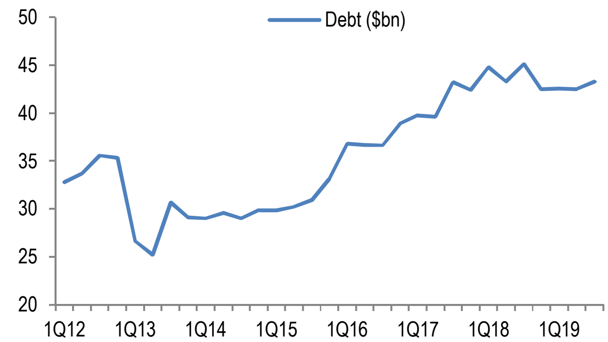


Exhibit 5: Cash to Shareholders

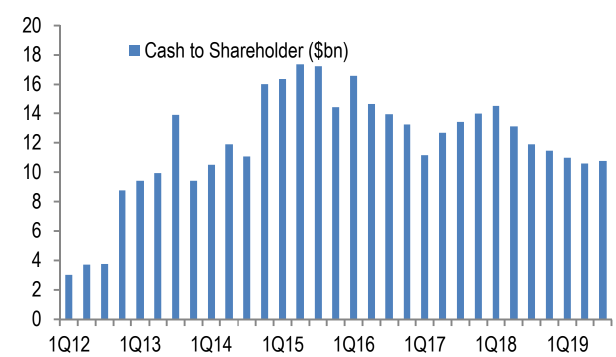


Exhibit 6: Gross and Net Leverage

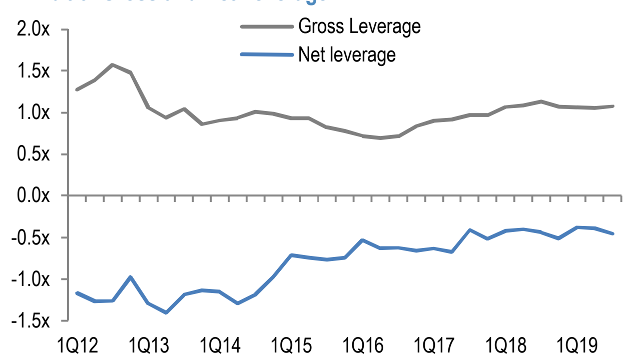


Exhibit 7: Interest Coverage Ratio

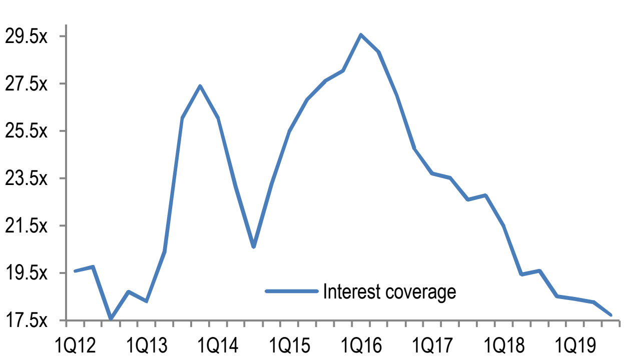
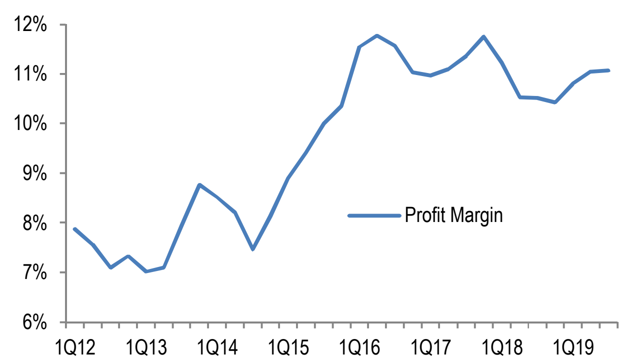


Exhibit 8: Profit Margin



Source for all exhibits on this page: J.P. Morgan, Capital IQ

Cable/Satellite

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We maintain our **Overweight** recommendation on the **HG Cable/Satellite** subsector as earnings remain strong with continued positive momentum driven by healthy broadband growth. Comcast's results beat expectations on both top and bottom line driven by strength in the cable business and better results at NBCU following softer results earlier this year. Positively, commentary from Comcast management remains credit friendly with the company focused on meeting rating agency leverage targets by YE2020. At a recent conference, Comcast's CFO pointed to a strong 4th quarter of broadband net adds and offered details around the launch of Peacock, the company's AVOD streaming service. CHTR also reported strong results highlighted by robust broadband growth, better revenues, and stronger FCF. Legacy Cable revenues were slightly better (largely HSD and Video), while adj. EBITDA was very much in line, and the wireless business continues to ramp. 2019 cable capex guidance was reduced to "slightly below" $7bn vs $7bn previously, and management comments suggest capital intensity should continue to improve in 2020 and beyond. Net leverage at CHTR is 4.6x total/3.2x secured, largely unchanged and in-line with expectations.

Largest issuers in the sector:

#	Issuer	Debt in JULI ($mn)	Share	Revenue ($bn)	EBITDA ($bn)	Debt ($bn)	Leverage	Int Cov	Profit Margin	Earnings Payout Ratio
1	Comcast Corp	81,761	66%	108	34	106	3.1x	8.2x	31%	15%
2	Charter	42,302	34%	45	16	75	4.6x	4.4x	36%	34%
	Sector Summary	**124,063**	**100%**	**154**	**50**	**181**	**3.6x**	**7.0x**	**33%**	**21%**

#	Issuer	Revenue (y/y chg)	EBITDA (y/y chg)	Debt (y/y chg)	Leverage (y/y chg)	Int Cov (y/y chg)	Profit Margin (y/y chg)	Earnings Payout Ratio (y/y chg)
1	Comcast Corp	0%	7%	27%	0.5x	-1.6x	2%	-12%
2	Charter	5%	3%	3%	0.0x	-0.2x	-1%	-10%
	Sector Summary	**2%**	**6%**	**16%**	**0.3x**	**-1.2x**	**1%**	**-12%**

Source: J.P. Morgan, Capital IQ

- Revenue for the sector grew by 2% y/y, lower than the 5 year average growth rate of 7% y/y. Similarly EBITDA grew by 6% y/y, showing some recovery after a period of low growth in the past couple quarters. Profit Margin for the sector, at 33.0%, has been stable over the past few years and has ranged between 30.9% and 32.6% over the past 5 years.
- Debt for the sector grew by 16% y/y ($25bn) in 3Q19. This increase in debt was mainly driven by Comcast (27% y/y, +$22bn) which issued $27bn of senior unsecured USD bonds to fund the Sky Ltd acquisition which was announced in April 2018 and funded in October 2018. Leverage for the sector increased by +0.3x y/y to 3.6x.
- Interest coverage for the sector declined by 1.2x to 7.0x as EBITDA increased at a much slower pace than interest expense. Interest expense increased by 28% y/y for Comcast compared to EBITDA growth of only 7% y/y. Interest coverage ratio declined significantly for Comcast Corp (-1.6x y/y to 8.2x) while the decline was modest for Charter (-0.2x y/y to 4.4x).
- Earnings Payout ratio for the sector declined by 12% y/y to 21%. Charter has cut down on its share buybacks after a few quarters of aggressive buybacks in 2017. LTM total cash to shareholders at $10.7bn is 32% lower than the $15.8bn in 3Q18, thereby leading to an 12% decline in earnings payout ratio y/y. Cash to shareholders decreased 41% y/y for Comcast resulting in its earnings payout ratio declining by 12% y/y.
- Capex for the sector decreased by 7.0% y/y (-$1.2bn). Capex growth has been slowing for the sector over the past few quarters. The current capex grow rate of -7.0% y/y is significantly down from the average rate of 9% y/y over the past 5 years.

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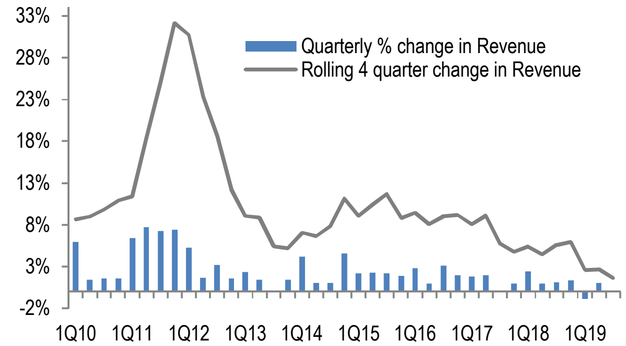
Exhibit 1: Sector Constituents

	Sector	Debt outst ($mn)	Share
1.	Comcast Corp	81,761	66%
2.	Charter Communications	42,302	34%
	Total	**124,063**	**100%**

Exhibit 2: Revenue



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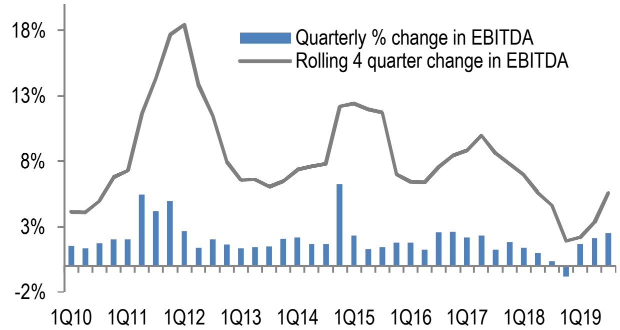

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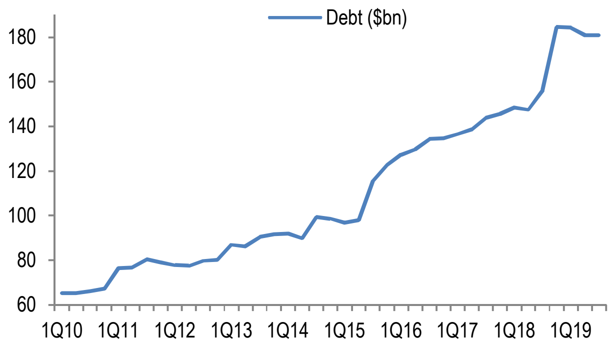


Exhibit 5: Cash to Shareholders

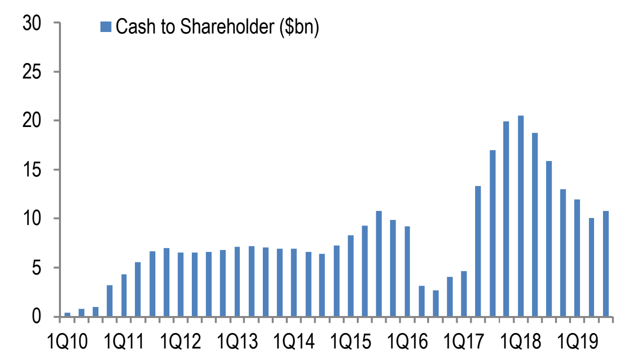


Exhibit 6: Gross and Net Leverage

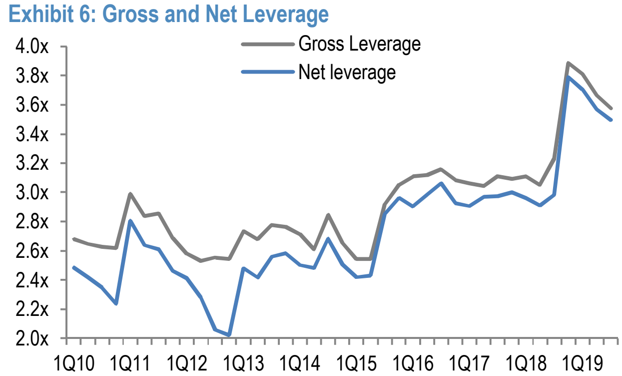


Exhibit 7: Interest Coverage Ratio

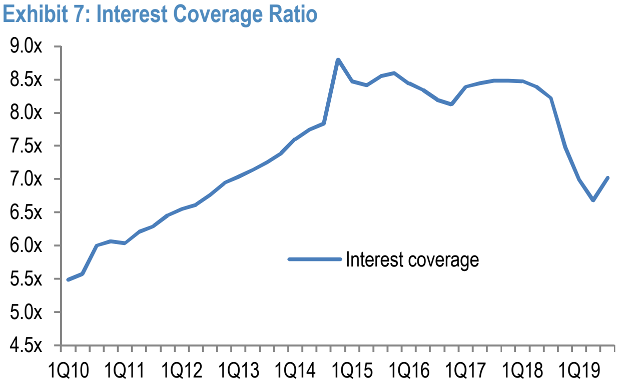
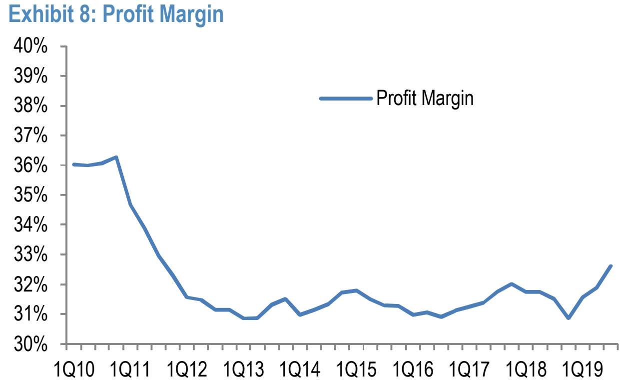


Exhibit 8: Profit Margin



Source for all exhibits on this page: J.P. Morgan, Capital IQ

Capital Goods

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We recommend investors **Underweight HG Manufacturing**. We think the combination of slower economic growth, elevated event risk, and rich relative valuations will cause the sector to modestly underperform the overall index in 2020. HG Manufacturing sector currently trades 12bp inside the JULI. We recommend **Neutral on the HG Aerospace & Defense** sector, based on a relatively positive outlook on Defense, continued focus on deleveraging following M&A, and rich valuations. The resolution to the 737 Max grounding will be an important driver of the sector's performance in 2020. The A&D sector trades approximately 31bp tight to the JULI.

Largest issuers in the sector:

#	Issuer	Debt in JULI ($mn)	Share	Revenue ($bn)	EBITDA ($bn)	Debt ($bn)	Leverage	Int Cov	Profit Margin	Earnings Payout Ratio
1	General Electric Co	47,272	20%	105	14	34	2.5x	4.8x	15%	9%
2	United Technologies Corp	31,417	13%	77	14	47	3.3x	8.8x	19%	19%
3	Deere & Co	21,392	9%	35	4	7	1.5x	14.3x	13%	49%
4	Caterpillar Inc	20,763	9%	52	10	9	0.9x	20.3x	20%	68%
5	Boeing Co	18,921	8%	87	6	26	3.9x	9.0x	8%	115%
	Sector Summary	**240,978**	**100%**	**770**	**117**	**274**	**2.3x**	**10.2x**	**16%**	**41%**

Change

#	Issuer	Revenue (y/y chg)	EBITDA (y/y chg)	Debt (y/y chg)	Leverage (y/y chg)	Int Cov (y/y chg)	Profit Margin (y/y chg)	Earnings Payout Ratio (y/y chg)
1	General Electric Co	-8%	-18%	-27%	-0.5x	-0.6x	-1%	-14%
2	United Technologies Corp	20%	32%	48%	0.4x	-1.2x	2%	-1%
3	Deere & Co	5%	-17%	3%	0.3x	-2.0x	-3%	16%
4	Caterpillar Inc	3%	-10%	1%	0.1x	2.2x	-3%	34%
5	Boeing Co	-11%	-49%	103%	2.9x	-16.5x	-5%	5%
	Sector Summary	**-2%**	**-7%**	**11%**	**0.3x**	**-1.6x**	**-1%**	**8%**

Source: J.P. Morgan, Capital IQ

- Revenue decreased by 2% y/y for the sector. Boeing Co had the largest y/y revenue decline at -11%, due to the 737 Max grounding, followed by General Electric Co down 8% y/y. United Technology Corp had the highest revenue growth y/y at +20%, driven by its acquisition of Rockwell Collins, followed by Deere & Co up 5% y/y.
- EBITDA decreased 7% y/y for the sector. United Technologies Corp was the only issuer with positive y/y EBITDA growth at +32% (from the COL acquisition). Boeing Co experienced the highest y/y EBITDA decline at -49% (headwinds from 737 Max grounding), followed by General Electric Co with a -18% y/y EBITDA decline.
- Debt for the sector increased 11% y/y, mainly due to a $17bn/48% y/y debt increase at United Technologies Corp for the Rockwell Collins acquisition, and $14bn/103% y/y increase at Boeing Co, as it issued bonds for working capital needs. This was offset by a 27% y/y decline in debt for General Electric Co, partly due to the deconsolidation of BHGE as well as debt reduction using asset monetization proceeds. Gross leverage for the sector increased 0.3x, largely driven by Boeing Co (+2.9x y/y).
- The earnings payout ratio increased 8% y/y, driven by a 34% and 16% y/y increase in the Earnings Payout Ratios for Caterpillar Inc and Deere & Co, respectively, partially offset by a 14% y/y decline at General Electric Co.
- Interest coverage declined 1.6x y/y for the sector. Boeing Co reported the largest y/y decrease in interest coverage of -16.5x, while Caterpillar Inc reported the largest increase in y/y interest coverage of +2.2x.

Exhibit 1: Sector Constituents

	Sector	Debt outst ($mn)	Share
1.	General Electric Co	47,272	20%
2.	United Technologies Corp	31,417	13%
3.	Deere & Co	21,392	9%
4.	Caterpillar Inc	20,763	9%
5.	Boeing Co	18,921	8%
6.	Siemens AG	17,441	7%
7.	3M Co	13,922	6%
8.	Northrop Grumman Corp	13,359	6%
9.	Lockheed Martin Corp	13,056	5%
10.	General Dynamics Corp	8,960	4%
11.	Others	34,474	14%
	Total	**240,978**	**100%**

Exhibit 2: Revenue

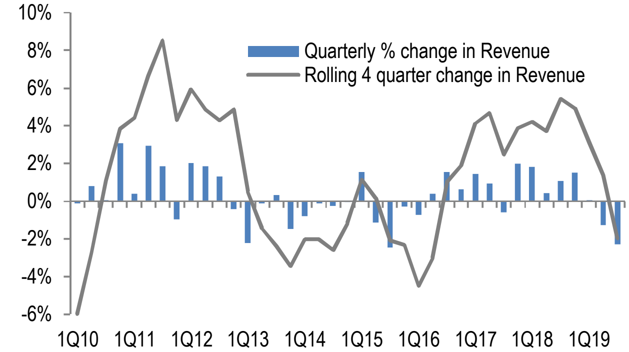


Exhibit 3: EBITDA

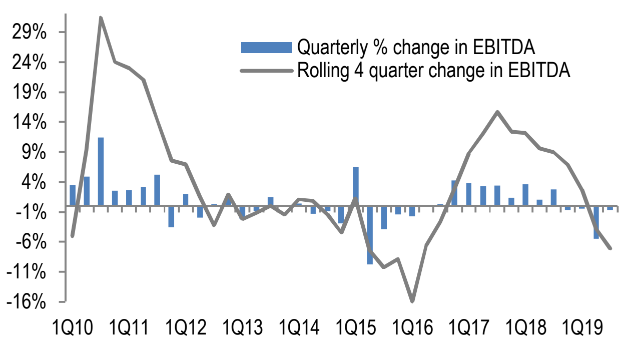


Exhibit 4: Debt

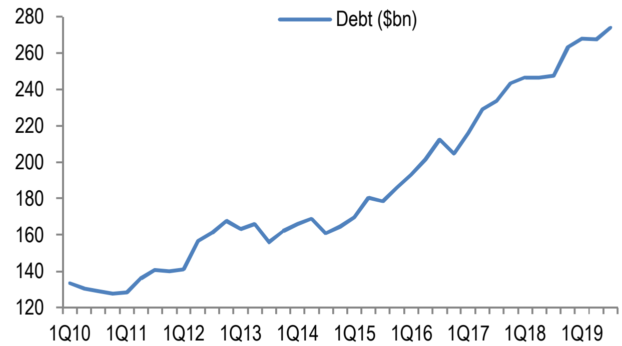


Exhibit 5: Cash to Shareholders

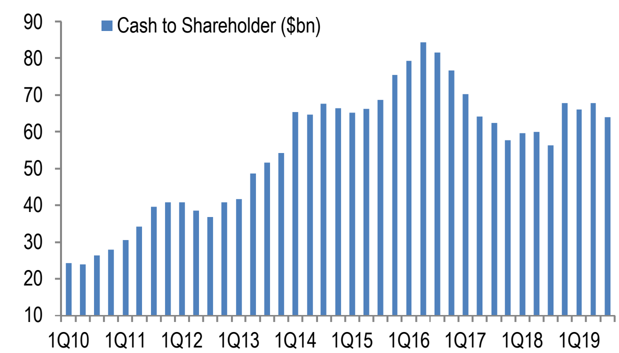


Exhibit 6: Gross and Net Leverage

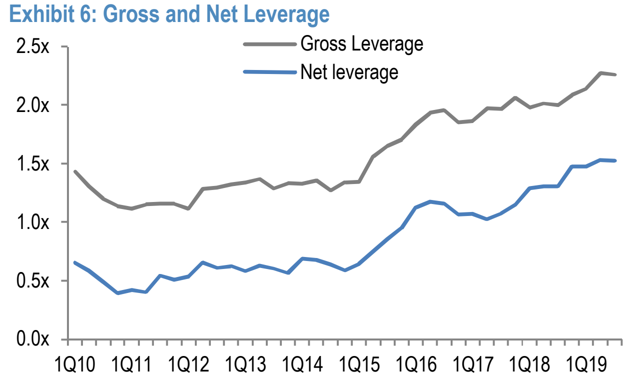
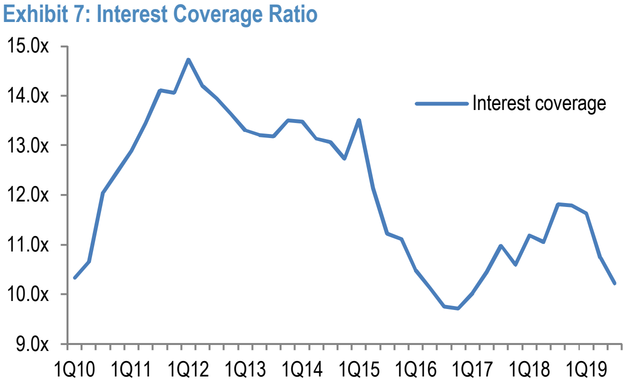
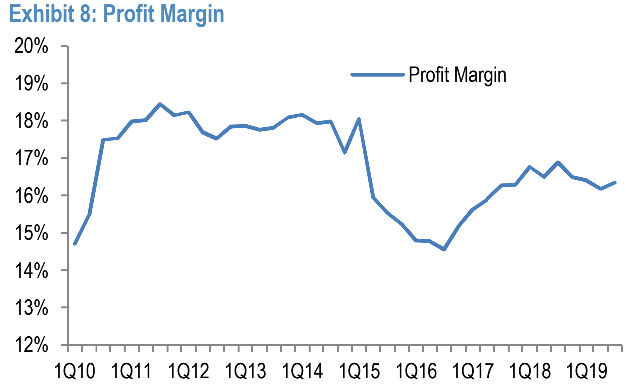


Exhibit 7: Interest Coverage Ratio



Source for all exhibits on this page: J.P. Morgan, Capital IQ

Exhibit 8: Profit Margin



Chemicals

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We maintain our **Underweight rating on Chemicals** heading into 2020. We bucket our chemicals credit universe into three main categories: commodity, specialty, and agricultural. In the commodity chemical space, ethylene and polyethylene capacity additions are likely to continue to weigh on producer margins while the demand outlook is clouded by weaker industrial end markets, particularly in Europe and in China. Specialty chemical companies have been more resilient from a margins/earnings perspective in the current market environment, but growing event risk remains a key concern for credit investors in a handful of names (DuPont is reportedly considering large asset sales, PPG is mulling a joint bid for AXTA, CE is considering a potential breakup). We generally view the agricultural chemical companies as a relatively safer place to invest given the less cyclical nature of longer term demand drivers (i.e. population growth). While the commodity fertilizer companies reported weaker 3Q results and lowered 2019 expectations, the softness was partially weather-driven and more of a temporary phenomenon. Fertilizer producers expect a combination of stronger demand in North America and the idling of capacity to tighten the potash and phosphate markets somewhat in 2020, though increased phosphate exports from China remain a concern. Balance sheet leverage for the sector has trended upward in recent years, a theme we expect to continue as companies continue to prioritize shareholder returns and pursue inorganic growth opportunities (though we expect the commodity chemical companies to remain more disciplined in this regard with the market in somewhat of a trough).

Largest issuers in the sector:

#	Issuer	Debt in JULI ($mn)	Share	Revenue ($bn)	EBITDA ($bn)	Debt ($bn)	Leverage	Int Cov	Profit Margin	Earnings Payout Ratio
1	Dow Chemical Co	15,201	27%	45	8	18	2.4x	7.6x	17%	15%
2	Dupont De Nemours Inc	13,811	25%	22	6	18	3.0x	8.5x	27%	74%
3	Nutrien Ltd.	8,285	15%	20	4	11	2.7x	7.7x	21%	72%
4	The Sherwin-Williams Company	7,651	14%	18	3	9	3.0x	8.4x	17%	41%
5	LyondellBasell Industries NV	7,487	13%	35	6	12	2.1x	16.5x	16%	110%
	Sector Summary	**56,360**	**100%**	**150**	**28**	**74**	**2.7x**	**8.5x**	**20%**	**53%**

Change

#	Issuer	Revenue (y/y chg)	EBITDA (y/y chg)	Debt (y/y chg)	Leverage (y/y chg)	Int Cov (y/y chg)	Profit Margin (y/y chg)	Earnings Payout Ratio (y/y chg)
1	Dow Chemical Co	-10%	-19%	-12%	0.2x	-1.5x	-2%	-35%
2	Dupont De Nemours Inc	-3%	3%	21%	0.4x	-8.9x	2%	17%
3	Nutrien Ltd.	5%	18%	-15%	-1.0x	0.8x	2%	1%
4	The Sherwin-Williams Company	2%	-1%	-8%	-0.2x	0.2x	-1%	30%
5	LyondellBasell Industries NV	-10%	-22%	39%	0.9x	-4.1x	-3%	78%
	Sector Summary	**-6%**	**-9%**	**1%**	**0.1x**	**-3.4x**	**0%**	**6%**

Source: J.P. Morgan, Capital IQ

- Revenue for the sector decreased 6% y/y relative to the average growth rate of 5% over the past 5 quarters. This was mainly driven by weaker sales growth at Dow (-10% y/y, -$4.9bn) and LyondellBasell (-10% y/y, -$3.9bn). LTM EBITDA declined by 9% y/y, most notably for Dow (-19% y/y, -$1.8bn) and LyondellBasell (-22% y/y, -1.6bn), both in the commodity chemical space. Profit margin for the sector remained flat y/y.
- Debt for the sector increased marginally by 1% y/y. Debt increased by 21% y/y for DuPont, as part of the capital structure realignment related to the business separations, and by 39% y/y for LyondellBasell, to fund share repurchases. These increases were offset by declines at Dow (-12% y/y) and Nutrien (-15% y/y). Leverage for the sector increased by 0.1x y/y to 2.7x.
- Interest coverage had a 3.4x decline over the year to 8.5x. This was mainly driven by a 2.1 times increase in interest expense for DuPont (related to capital structure realignment) coupled with lower sector EBITDA.
- The earnings payout ratio increased by 6% y/y to 53%. Cash to Shareholders increased to $17bn, up 16% y/y largely due to higher buyback activity for the sector. The past 12 months have seen a solid pick up in buybacks particularly for LyondellBasell (+$4bn).

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Exhibit 1: Sector Constituents

	Sector	Debt outst ($mn)	Share
1.	Dow Chemical Co/The	15,201	27%
2.	Dupont De Nemours Inc	13,811	25%
3.	Nutrien Ltd.	8,285	15%
4.	The Sherwin-Williams Company	7,651	14%
5.	LyondellBasell Industries NV	7,487	13%
6	Eastman Chemical Co	3,924	7%
	Total	**56,360**	**100%**

Exhibit 2: Revenue

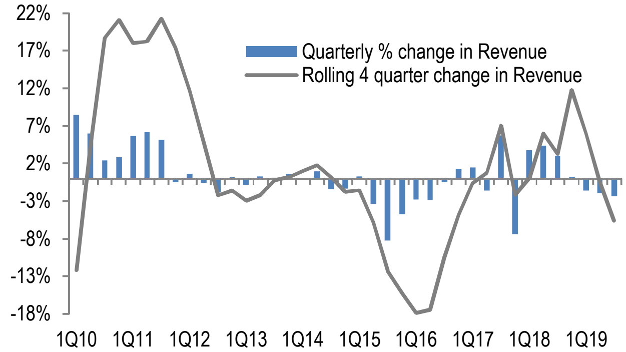


Exhibit 3: EBITDA

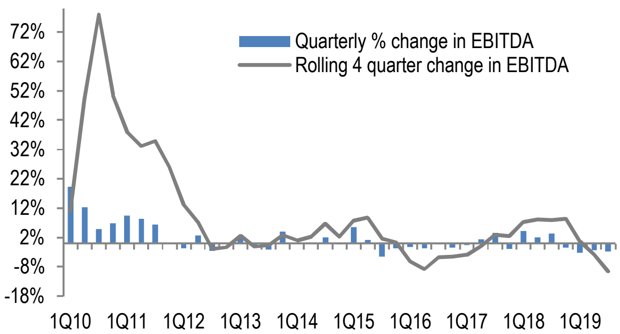


Exhibit 4: Debt

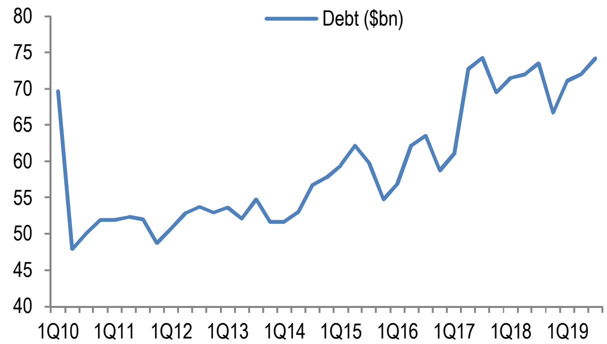


Exhibit 5: Cash to Shareholders

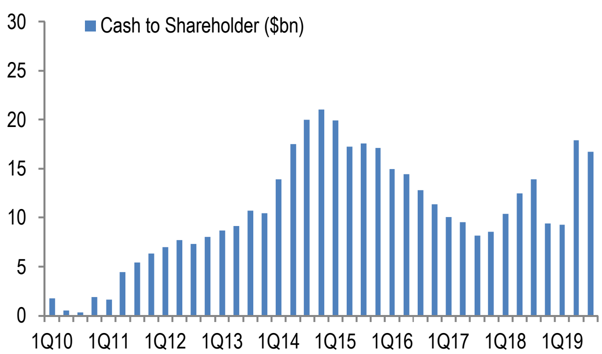


Exhibit 6: Gross and Net Leverage

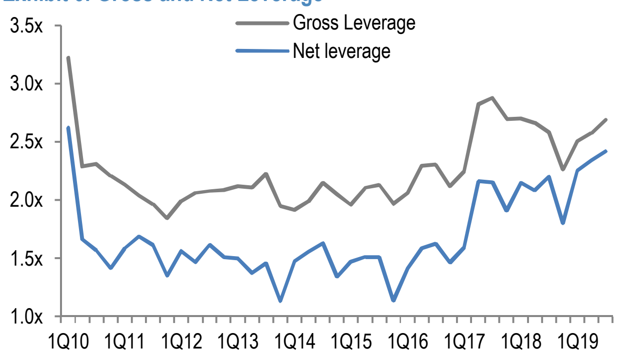


Exhibit 7: Interest Coverage Ratio

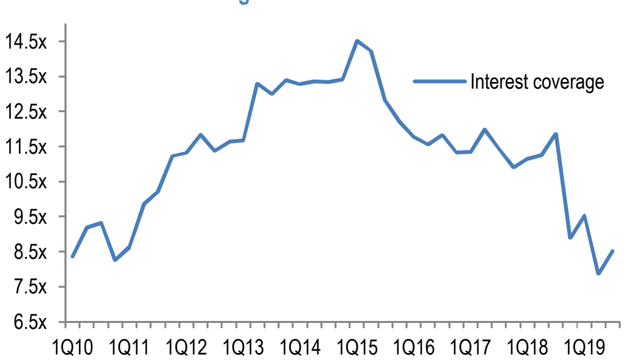
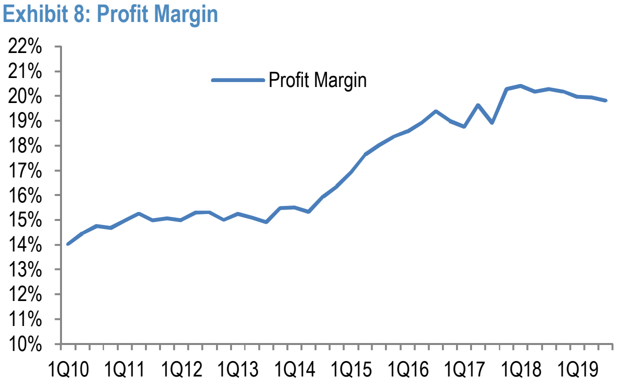


Exhibit 8: Profit Margin



Source for all exhibits on this page: J.P. Morgan, Capital IQ

Consumer Products

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We recommend **Neutral on the HG Consumer Products sector** and expect the sector to perform in line with the overall index. Credit fundamentals are very strong, with modest leverage, strong cash generation, and globally diversified operations. Profit margins have been steady, driven by price increases, cost cutting and productivity gains, with input costs less benign as of late. Valuation is somewhat rich, trading 25bp inside the index, reflecting the high credit quality composition of the sector.

Largest issuers in the sector:

#	Issuer	Debt in JULI ($mn)	Share	Revenue ($bn)	EBITDA ($bn)	Debt ($bn)	Leverage	Int Cov	Profit Margin	Earnings Payout Ratio
1	Unilever NV	12,268	28%	56	12	32	2.5x	14.0x	23%	69%
2	Reckitt Benckiser	10,399	23%	16	5	16	3.2x	9.8x	31%	31%
3	Procter & Gamble Co	9,925	22%	69	18	30	1.7x	30.5x	27%	78%
4	Kimberly-Clark Corp	5,335	12%	18	4	8	1.9x	12.5x	24%	49%
5	Colgate-Palmolive Co	3,994	9%	15	4	9	2.0x	20.3x	29%	65%
	Sector Summary	**44,384**	**100%**	**181**	**45**	**98**	**2.3x**	**16.1x**	**26%**	**61%**

Change

#	Issuer	Revenue (y/y chg)	EBITDA (y/y chg)	Debt (y/y chg)	Leverage (y/y chg)	Int Cov (y/y chg)	Profit Margin (y/y chg)	Earnings Payout Ratio (y/y chg)
1	Unilever NV	-6%	6%	-11%	-0.4x	-0.6x	2%	-29%
2	Reckitt Benckiser	5%	7%	1%	-0.2x	1.2x	1%	2%
3	Procter & Gamble Co/The	3%	2%	-3%	-0.1x	-3.4x	0%	4%
4	Kimberly-Clark Corp	0%	5%	-3%	-0.1x	0.8x	1%	-1%
5	Colgate-Palmolive Co	-1%	-2%	21%	0.4x	-3.2x	0%	0%
	Sector Summary	**-1%**	**3%**	**-3%**	**-0.2x**	**-0.8x**	**1%**	**-5%**

Source: J.P. Morgan, Capital IQ

- Revenue for the sector declined 1% y/y, driven by Unilever (-6% y/y) due to the divestiture of its spread business. EBITDA for the sector increased by 3% over the same period and grew for 5 out of 6 companies in our analysis, with Colgate (-2% y/y) the only company that saw a decline. Profit Margin improved by 1% y/y to 26%.
- Debt for the sector fell 3% y/y, mainly driven by Unilever (-$3.8bn, -11% y/y), while Colgate saw the largest increase in debt (+$1.5bn, +21% y/y) as it issued bonds for the acquisition of Laboratoires Filorga Cosmetiques. Gross Leverage for the sector declined 0.2x to 2.3x.
- Interest Coverage decreased by 0.8x y/y to 16.1x, the lowest level post crisis. Procter & Gamble saw the largest decrease in interest coverage at -3.4x y/y, followed by Colgate (-3.2x y/y) and Unilever (-0.6x y/y).
- The Earnings Payout Ratio declined 5% over the year to 61% driven mainly by a decline at Unilever (-29% y/y). However, Cash to shareholders decreased 5% y/y as share buybacks fell 12% y/y, partially offset by an increase in dividends of +2% y/y.
- Capital expenditures for the sector increased by 4% y/y driven by Kimberly-Clark (+56% y/y) as it increased spending related to supply chain improvements as part of its 2018 Global Restructuring Program.

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Exhibit 1: Sector Constituents

	Sector	Debt outst ($mn)	Share
1.	Unilever NV	12,268	28%
2.	Reckitt Benckiser	10,399	23%
3	Procter & Gamble Co/The	9,925	22%
4	Kimberly-Clark Corp	5,335	12%
5	Colgate-Palmolive Co	3,994	9%
6	Clorox Co	2,463	6%
	Total	**44,384**	**100%**

Exhibit 2: Revenue

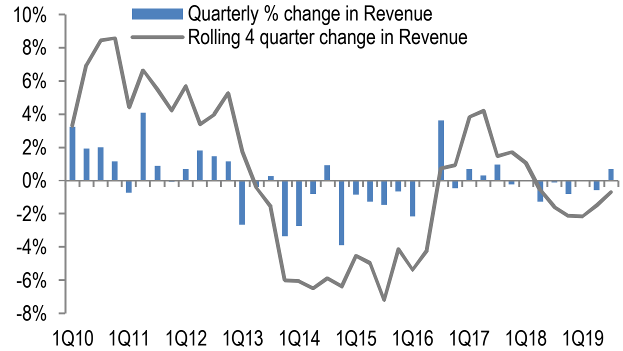


Exhibit 3: EBITDA

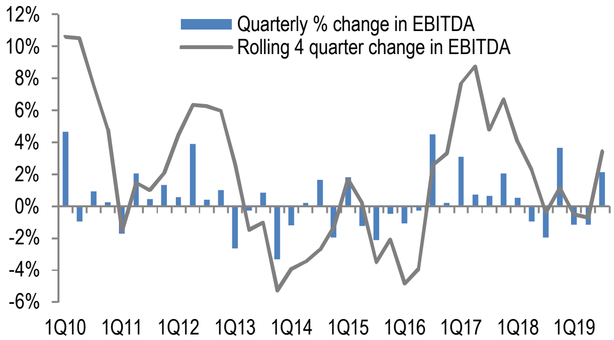


Exhibit 4: Debt

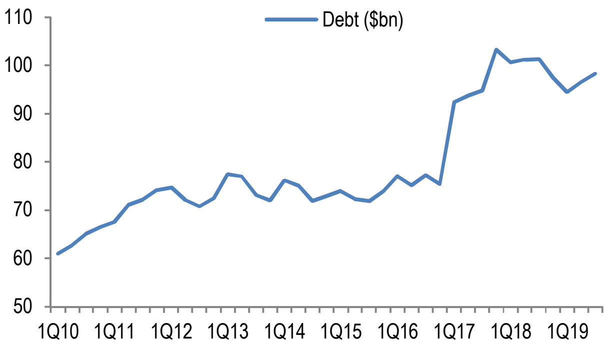


Exhibit 5: Cash to Shareholders

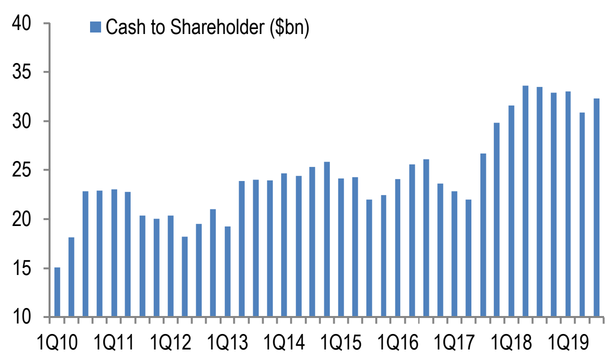


Exhibit 6: Gross and Net Leverage

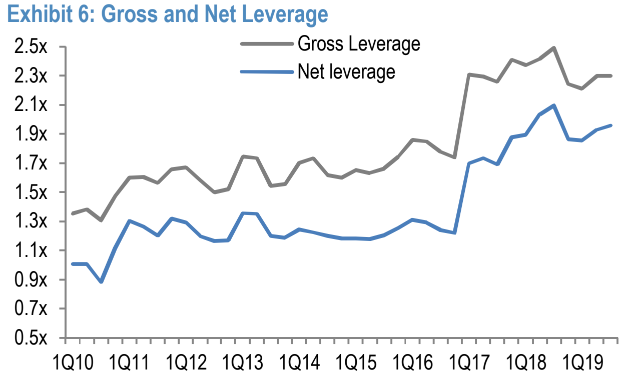


Exhibit 7: Interest Coverage Ratio

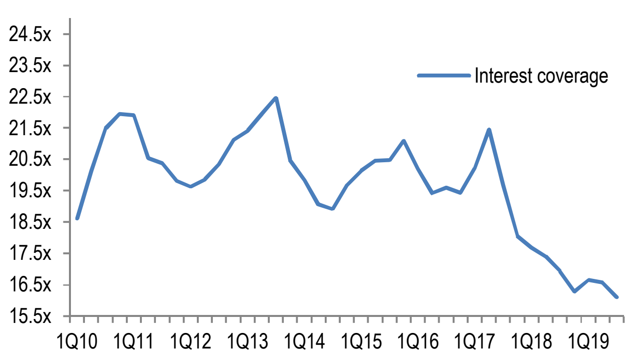
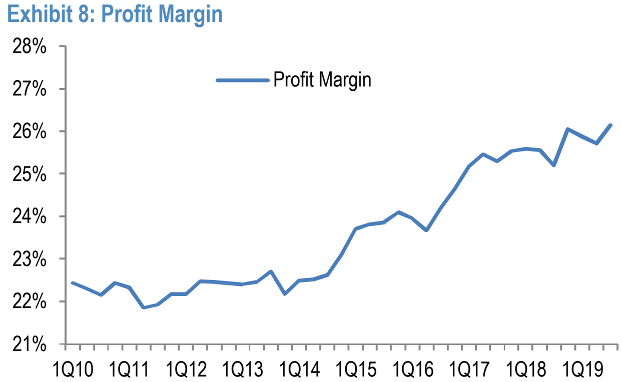


Exhibit 8: Profit Margin



Source for all exhibits on this page: J.P. Morgan, Capital IQ

Diversified Media

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We maintain our **Neutral** recommendation on the **diversified media** subsector. Earnings across the sector were solid in 3Q19, generally in-line with street expectations with many of the trends (declining subscribers, increased content investments, direct-to-consumer efforts) seen earlier in the year continuing during the quarter. Notably, the merger of CBS and Viacom was completed and Disney + was launched with an initial 10 million subscribers. We will be interested to see the results from the first combined quarter of VIAC. At a recent industry conference, the CEO of VIAC noted the company is comfortable with their mid-BBB credit rating and would like to drive leverage down slightly, though not significantly. On the ad-agency side, results were softer this quarter after a streak of earnings outperformance, though positively management commentary from the large agencies pointed to a relatively healthy backdrop with some company specific headwinds in the quarter weighing on results.

Largest issuers in the sector:

#	Issuer	Debt in JULI ($mn)	Share	Revenue ($bn)	EBITDA ($bn)	Debt ($bn)	Leverage	Int Cov	Profit Margin	Earnings Payout Ratio
1	Walt Disney Co	31,661	45%	78	17	47	2.8x	17.3x	22%	15%
2	Discovery Communications Inc	14,332	20%	11	5	16	3.4x	6.5x	43%	0%
3	CBS Corp	10,213	14%	15	3	9	3.1x	6.5x	20%	12%
4	Viacom Inc	7,936	11%	13	3	9	2.9x	6.1x	23%	11%
5	Omnicom Group Inc	3,634	5%	15	2	5	2.0x	10.6x	17%	46%
	Sector Summary	**70,527**	**100%**	**141**	**32**	**90**	**2.9x**	**11.5x**	**24%**	**14%**

Change

#	Issuer	Revenue (y/y chg)	EBITDA (y/y chg)	Debt (y/y chg)	Leverage (y/y chg)	Int Cov (y/y chg)	Profit Margin (y/y chg)	Earnings Payout Ratio (y/y chg)
1	Walt Disney Co/The	9%	-5%	-13%	-0.3x	-18.2x	-3%	-49%
2	Discovery Communications Inc	-1%	7%	-7%	-0.5x	0.3x	3%	0%
3	CBS Corp	6%	-4%	-5%	0.0x	-0.2x	-2%	-13%
4	Viacom Inc	-1%	-1%	-13%	-0.4x	0.7x	0%	0%
5	Omnicom Group Inc	-3%	5%	5%	0.0x	1.2x	1%	0%
	Sector Summary	**6%**	**-1%**	**-10%**	**-0.3x**	**-8.1x**	**-2%**	**-37%**

Source: J.P. Morgan, Capital IQ

- Revenue for the sector increased by 6% y/y while EBITDA was down 1% y/y. Profit Margins for the overall sector declined by 2% y/y to 24%.
- Debt decreased by 10% y/y, as 4 out the 5 companies in our analysis cut their debt footprint, led by Disney (-13% y/y). As a result, leverage for the sector was down 0.3x to 2.9x.
- Interest coverage for the sector fell by 8.1x y/y to 11.5x, led again by Disney whereas the rest of the sector was close to unchanged.
- The earnings payout ratio declined as well, down by 37% y/y to 14%, mostly attributable to Disney though CBS also cut back on share buybacks.
- Disney paid of their bridge financing using proceeds from RSN sale, new issuance and cash on hand leading to the decline in debt. Additionally, the decline in EBITDA for Disney was driven by weaker results at 21st Century Fox assets particularly at the movie studio and DTC losses from DIS+ and ESPN+ investments.

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Exhibit 1: Sector Constituents

	Sector	Debt outst ($mn)	Share
1.	Walt Disney Co	31,661	45%
2.	Discovery Communications Inc	14,332	20%
3.	CBS Corp	10,213	14%
4.	Viacom Inc	7,936	11%
5.	Omnicom Group Inc	3,634	5%
6.	Interpublic Group of Cos Inc	2,751	4%
	Total	**70,527**	**100%**

Exhibit 2: Revenue

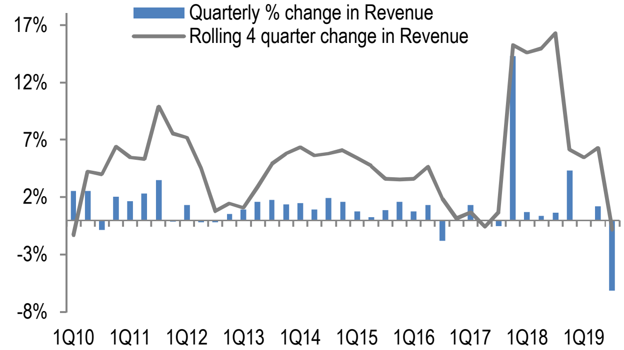


Exhibit 3: EBITDA

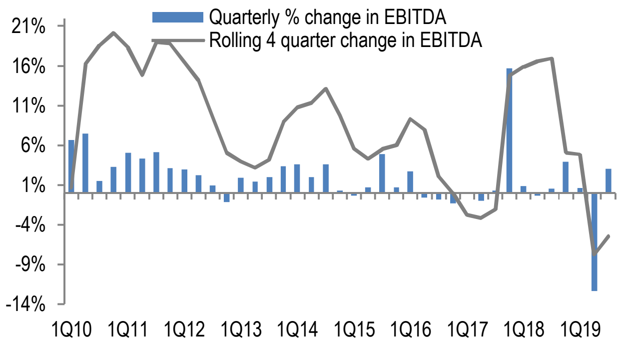


Exhibit 4: Debt

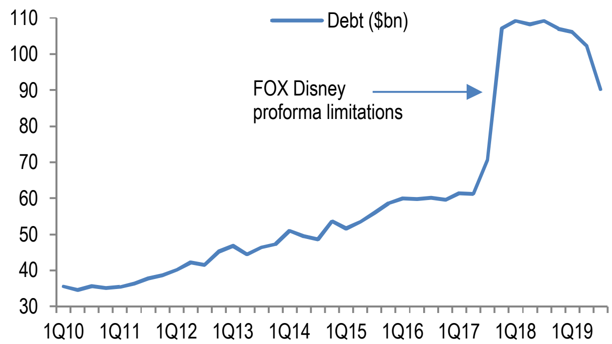


Exhibit 5: Cash to Shareholders

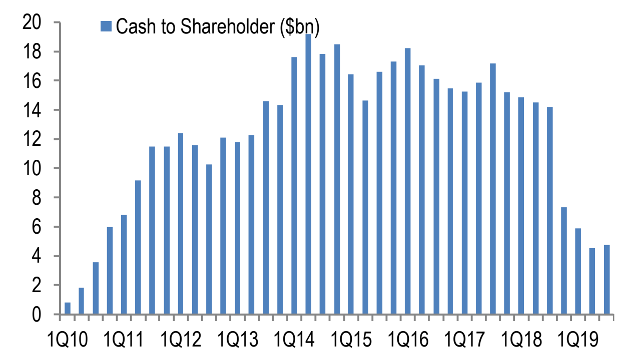


Exhibit 6: Gross and Net Leverage

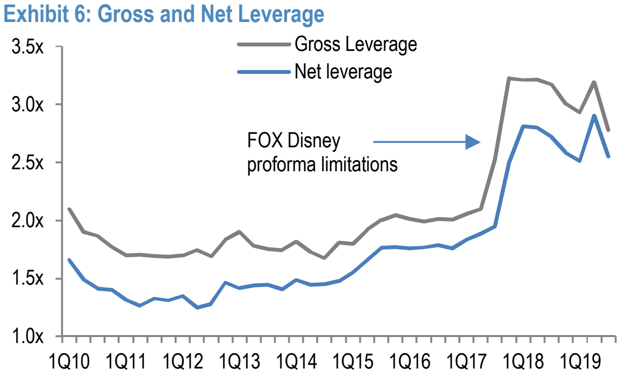


Exhibit 7: Interest Coverage Ratio

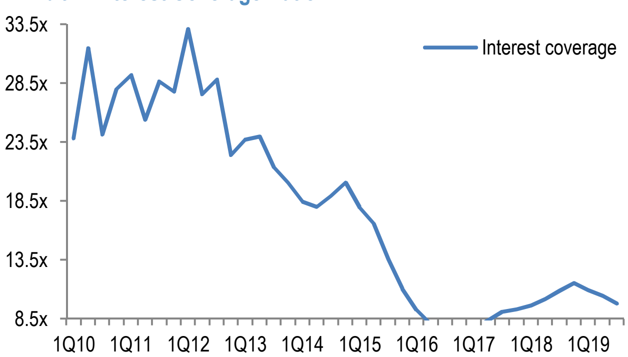
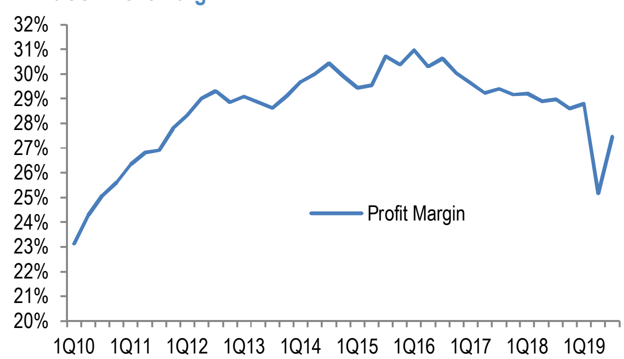


Exhibit 8: Profit Margin



Source for all exhibits on this page: J.P. Morgan, Capital IQ

Energy

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We maintain our **Overweight rating on the Pipeline**, Midstream, MLP sub-sector as we expect volumes across the energy space to continue grow over the long term. We expect it to outperform both the JULI Ex-EM and the other Energy subsectors in 2020. Company fundamentals continue to improve on the back of sustained focus on debt reduction and distribution coverage by nearly all members of the sector. We have seen the Pipeline/Midstream/MLP sector continue to de-lever their balance sheets while improving corporate governance through simplifications of GP and LPs with most companies eliminating their IDRs. Leverage has ticked up for certain names with large project backlogs for the short-term but within context of their leverage targets. We continue to prefer the diversified Pipeline/Midstream/MLP companies with minimal commodity and volumetric risk as they are more defensive through periods of commodity price volatility. Additionally, the difficulty in getting new pipelines approved and completed in North America should lead to a slower pace of growth, making the value of existing assets increase over time. We expect management teams to strongly defend IG ratings with fewer companies at risk of falling to HY in 2020. We see this sub-sector as having many utility like characteristics that should lead it to trade inside many other sub-sectors within Energy.

We remain **Neutral the E&P sub-sector** despite M&A activity in the space creating a floor for most E&P spreads. We continue to think the OXY acquisition of APC will not start a trend in the space. The technicals remain favorable with limited issuance expected over the near term and companies focused on not outspending FCF, although we believe these positive technical are largely priced into spreads. E&P companies have been and continue to focus on disciplined execution of capex budgets and production growth plans with an extreme focus on not materially outspending free cash flow assuming strip commodity prices. We have seen the equity markets reward companies that are able to maintain growth guidance while cutting back on capital spending plans. Several companies have sold non-core assets, using proceeds to reduce leverage through liability management exercises and in some cases return value to shareholders.

We remain **Neutral the Integrated and Refining sub-sectors** as spreads remain relatively tight for most names while a few select names appear attractive. Integrated companies continued to benefit from the diversification of their asset bases with upstream and downstream and in most cases chemicals operations. Refining margins have been relatively range bound in 2019 and are expected to improve modestly in 2020 as IMO 2020 comes into effect, which should help margins and the demand for ULSD. Gasoline inventories remain slightly above the five-year average level, while distillate inventories heading into 2020 are below the five-year average. Shareholder returns remain a focus in the form of high dividends and to a lesser degree share buybacks, but shareholder returns remain in context of current ratings, with improved cash flow generation as companies remain comfortable with current levels of leverage.

We remain **Underweight the Services sub-sector** as we see a difficult fundamental outlook on the back of the new found discipline by the producers in the face of range bound commodity prices. The Services sector is expected to see some modest improvement in international operations, while North American activity levels will remain weak in 4Q19 and constrained in 2020. There are very few North American producers calling for significant increases in activity levels in 2020 as they remain focused on improved operating efficiency (doing more with less) and living within FCF. We prefer to take risk in other areas of Energy that offer better fundamentals and better risk/reward. We continue to expect the sector to struggle to return to peak margins in the near to intermediate term, but note that the big three services companies remain best positioned to manage through the evolving energy services space.

Largest issuers in the sector:

#	Issuer	Debt in JULI ($mn)	Share	Revenue ($bn)	EBITDA ($bn)	Debt ($bn)	Leverage	Int Cov	Profit Margin	Earnings Payout Ratio
1	Energy Transfer Partners LP	38,195	9%	55	11	46	4.2x	4.8x	20%	28%
2	Royal Dutch Shell PLC	32,537	8%	363	59	89	1.5x	11.9x	16%	40%
3	Occidental Petroleum Corp	30,926	7%	29	15	48	3.2x	8.1x	53%	24%
4	Kinder Morgan Inc/DE	30,076	7%	14	7	36	5.0x	4.0x	53%	25%
5	BP PLC	26,683	6%	282	40	76	1.9x	15.4x	14%	18%
	Sector Summary	**414,822**	**100%**	**1,926**	**354**	**768**	**2.9x**	**9.8x**	**30%**	**33%**

Change

#	Issuer	Revenue (y/y chg)	EBITDA (y/y chg)	Debt (y/y chg)	Leverage (y/y chg)	Int Cov (y/y chg)	Profit Margin (y/y chg)	Earnings Payout Ratio (y/y chg)
1	Energy Transfer Partners LP	58%	34%	41%	0.2x	-1.0x	-4%	-6%
2	Royal Dutch Shell PLC	-2%	3%	13%	0.1x	-1.9x	1%	13%

3	Occidental Petroleum Corp	-3%	2%	78%	1.3x	-3.2x	3%	-25%
4	Kinder Morgan Inc/DE	-3%	6%	-3%	-0.4x	0.4x	4%	-2%
5	BP PLC	-3%	9%	18%	0.1x	-3.7x	1%	-2%
	Sector Summary	**0%**	**3%**	**16%**	**0.2x**	**-1.1x**	**1%**	**0%**

Source: J.P. Morgan, Capital IQ

- LTM Revenue for the sector was flat y/y and down 3% q/q mainly driven by the decline in energy prices. EBITDA was up 3% y/y. As a result, Profit Margin for the sector was up 1% y/y to 30%.
- Debt of the sector was up 16% y/y (+$103bn). About half the increase in sector debt was driven by an increase in debt at OXY (+$21bn, +78% y/y), ETP (+$13bn, +41% y/y), MPC (+$13bn, +70% y/y) as the companies increased debt to fund acquisitions. Leverage for the sector increased by 0.2x to 2.9x as debt grew at a strong pace while EBITDA was only marginally higher y/y.
- The interest coverage decreased by 1.1x to 9.8x over the year as interest expense continues to grow at a strong pace despite the slowdown in EBITDA growth. Interest expense grew by 14% y/y.
- Cash to shareholders increased by 17% y/y and is currently at its highest level post crisis. Earnings Payout ratio was flat y/y at 33%.

Exhibit 1: Sector Constituents

	Sector	Debt outst ($mn)	Share
1.	Energy Transfer Partners LP	38,195	9%
2.	Royal Dutch Shell PLC	32,537	8%
3.	Occidental Petroleum Corp	30,926	7%
4.	Kinder Morgan Inc/DE	30,076	7%
5.	BP PLC	26,683	6%
6.	Enterprise Products Partners LP	26,321	6%
7.	Exxon Mobil Corp	20,963	5%
8.	Williams Companies	17,116	4%
9.	TransCanada Corp	16,015	4%
10.	ConocoPhillips	15,146	4%
11.	Others	160,842	39%
	Total	**414,822**	**100%**

Exhibit 2: Revenue

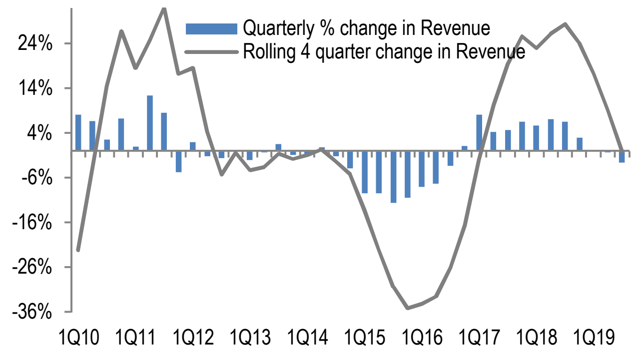


Exhibit 3: EBITDA

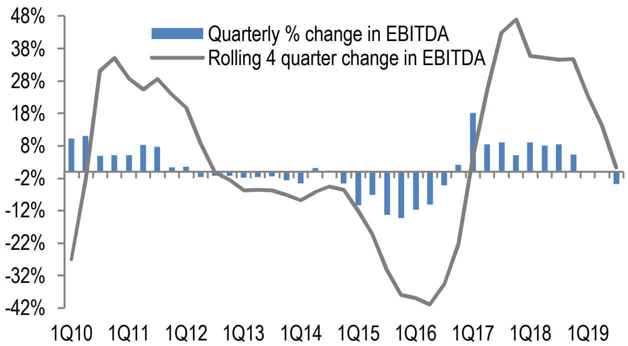


Exhibit 4: Debt

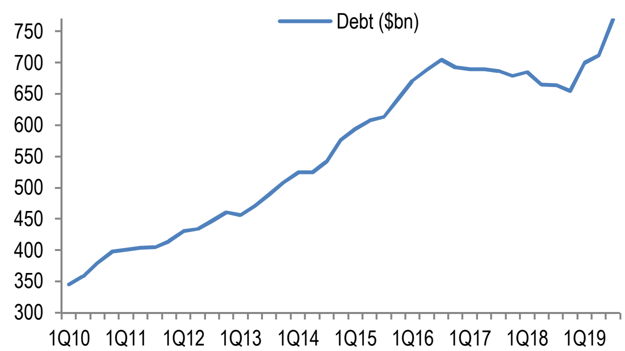


Exhibit 5: Cash to Shareholders

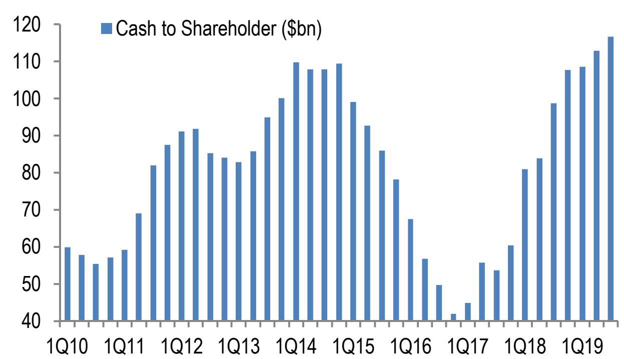


Exhibit 6: Gross and Net Leverage

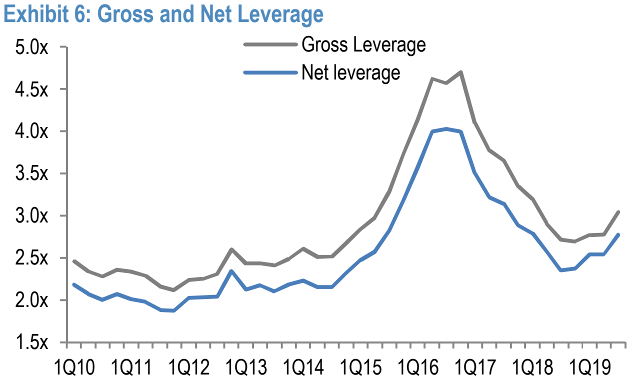


Exhibit 7: Interest Coverage Ratio

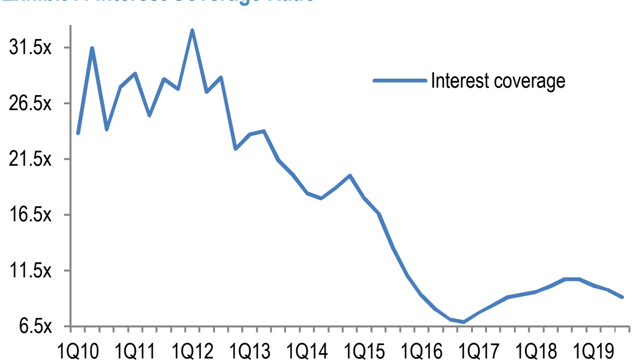
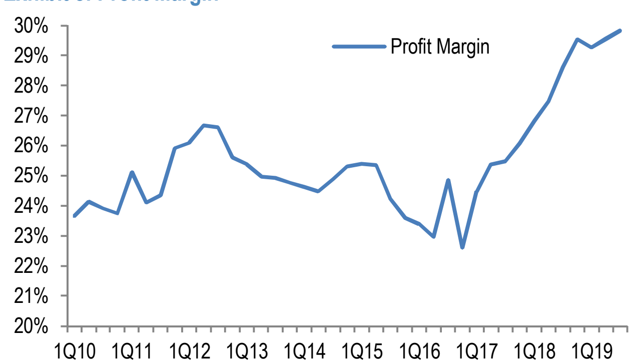


Exhibit 8: Profit Margin



Source for all exhibits on this page: J.P. Morgan, Capital IQ

Food, Beverages and Tobacco

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We recommend an **Overweight on the HG Food/Beverage** sector. Following the wave of M&A over the last few years, that resulted in elevated leverage and lower ratings, companies are focused on reducing debt with strong cash flows and in some cases asset sale proceeds. Valuation relative to the index remains attractive in our view, trading slightly wider at 2bp versus well inside the index historically. We recommend **Overweight on the HG Tobacco sector**. The sector continues to trade with wide spreads, in our opinion, due to negative investor sentiment toward the product category and headline risks relating to regulation and litigation. We expect Tobacco sector spreads to compress as the market refocuses on the robust credit profiles, including 50% EBITDA margins, significant cash flow generation, and declining leverage in 2020. The sector currently trades 54bp wide to the JULI.

Largest issuers in the sector:

#	Issuer	Debt in JULI ($mn)	Share	Revenue ($bn)	EBITDA ($bn)	Debt ($bn)	Leverage	Int Cov	Profit Margin	Earnings Payout Ratio
1	Anheuser-Busch InBev NV	73,133	28%	54	22	113	4.9x	5.8x	42%	22%
2	British American Tobacco PLC	28,666	11%	32	14	64	4.5x	6.5x	44%	42%
3	PepsiCo Inc	25,666	10%	66	13	34	2.5x	8.3x	21%	57%
4	The Kraft Heinz Company	25,416	10%	25	6	31	4.9x	4.5x	25%	35%
5	Altria Group Inc	23,759	9%	19	10	28	2.7x	9.4x	53%	65%
	Sector Summary	**261,836**	**100%**	**347**	**109**	**429**	**4.2x**	**7.0x**	**36%**	**38%**

Change

#	Issuer	Revenue (y/y chg)	EBITDA (y/y chg)	Debt (y/y chg)	Leverage (y/y chg)	Int Cov (y/y chg)	Profit Margin (y/y chg)	Earnings Payout Ratio (y/y chg)
1	Anheuser-Busch InBev NV	-2%	2%	-5%	-0.4x	1.0x	2%	-23%
2	British American Tobacco PLC	0%	8%	0%	-0.4x	-2.7x	3%	6%
3	PepsiCo Inc	2%	1%	-9%	-0.3x	-0.8x	0%	8%
4	The Kraft Heinz Company	-4%	-18%	-5%	0.6x	-1.3x	-4%	-6%
5	Altria Group Inc	-1%	1%	99%	1.3x	-4.8x	1%	-4%
	Sector Summary	**2%**	**2%**	**3%**	**0.0x**	**-0.9x**	**1%**	**-9%**

Source: J.P. Morgan, Capital IQ

- Revenue for the sector grew by 2%, mainly driven by growth at KDP of $6.8bn (+161% y/y) (largely due to its merger) and KO of $2.3bn (+7% y/y). EBITDA for the sector was up 2% y/y, and Profit Margin was up 1% y/y to 36%.
- Debt for the sector was up 3% y/y to $429bn, driven by the M&A transactions that took place in 2018 and early 2019: Altria issued $16bn for its investments in JUUL Labs & Cronos Group, Conagra issued $7bn for its acquisition of Pinnacle Foods, and Constellation Brands issued $3bn for its Canopy Growth investment.
- Despite the pick-up in debt issuance for M&A activity, Gross Leverage was flat y/y at 4.2x, slightly below the peak of 4.6x in 4Q16, as companies including ABIBB and PEP reduced debt and leverage.
- Interest Coverage for the sector declined 0.9x y/y to 7.0x, with the largest decrease at Altria Group (-4.8x). Philip Morris International improved its Interest Coverage by 4.8x to a multi-year high of 19.4x.
- The Earnings Payout ratio declined by 9% y/y to 38% as Cash to Shareholders decreased by 10% y/y to $50bn, the lowest level since 2Q17. This was primarily driven by lower Share Buybacks (-$5.4bn/-48% y/y) as companies prioritize deleveraging following the recent wave of M&A activity. Dividends decreased $1.5bn/-3% y/y, driven by Kraft Heinz's dividend cut in 1Q19.

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Exhibit 1: Sector Constituents

	Sector	Debt outst ($mn)	Share
1.	Anheuser-Busch InBev NV	73,133	28%
2.	British American Tobacco PLC	28,666	11%
3.	PepsiCo Inc	25,666	10%
4.	The Kraft Heinz Company	25,416	10%
5.	Altria Group Inc	23,759	9%
6.	Philip Morris International Inc	19,207	7%
7.	Coca-Cola Co/The	13,466	5%
8.	Keurig Dr Pepper	11,878	5%
9.	Constellation Brands	10,909	4%
10.	General Mills Inc	9,417	4%
11.	Others	20,319	8%
	Total	**261,836**	**100%**

Exhibit 2: Revenue

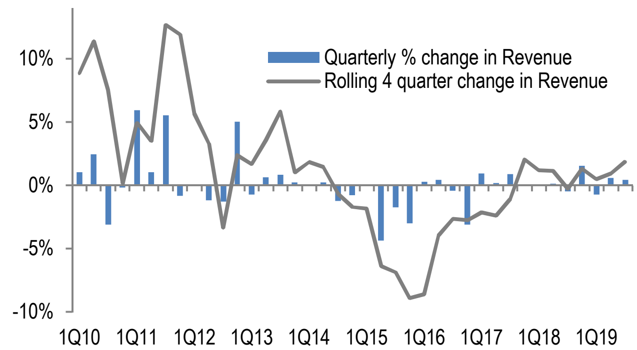


Exhibit 3: EBITDA

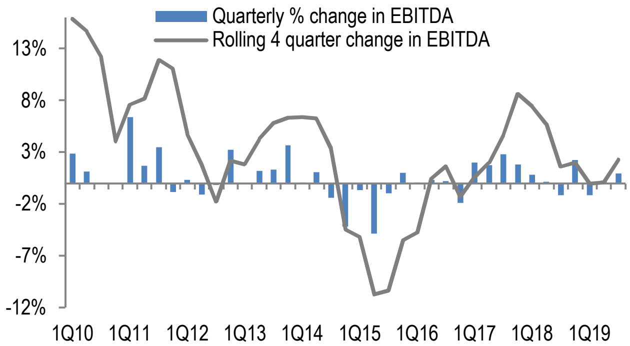


Exhibit 4: Debt

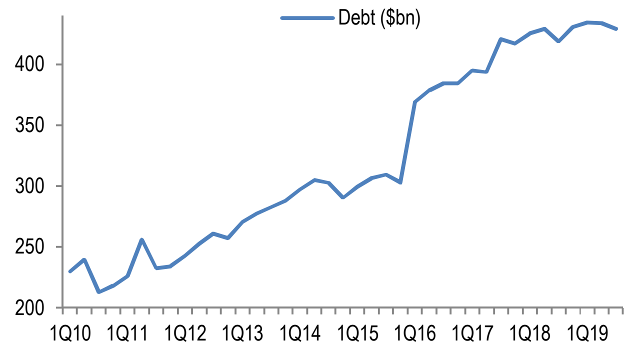


Exhibit 5: Cash to Shareholders

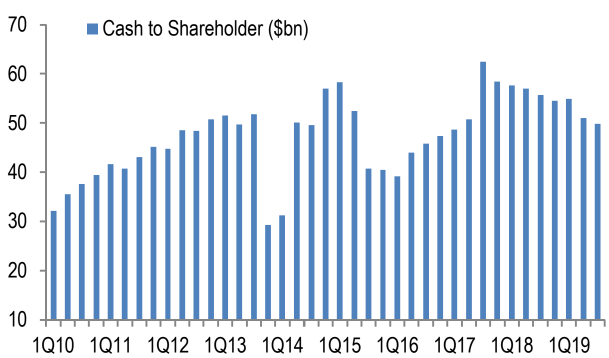


Exhibit 6: Gross and Net Leverage

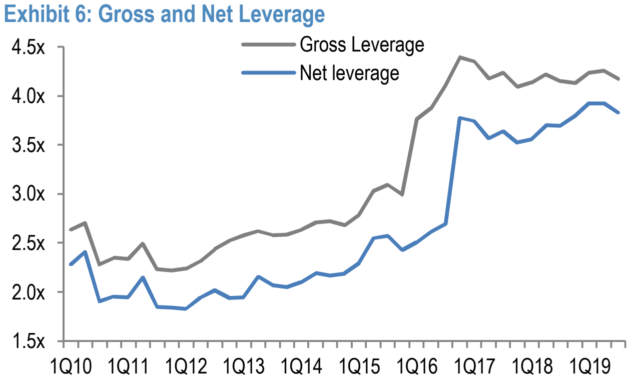


Exhibit 7: Interest Coverage Ratio

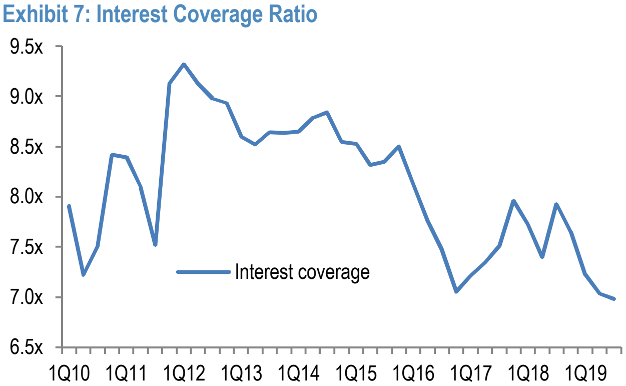
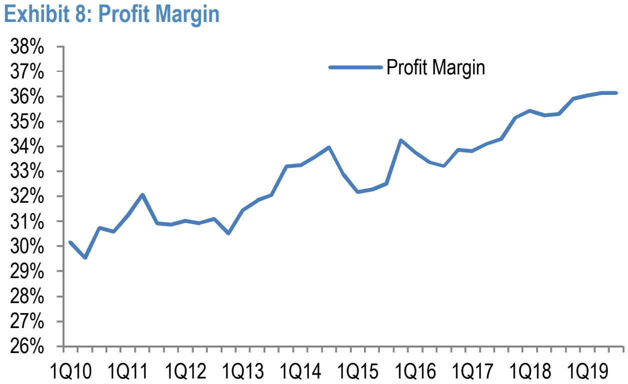


Exhibit 8: Profit Margin



Source for all exhibits on this page: J.P. Morgan, Capital IQ

Food/Drug Retail

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We recommend investors **Overweight the HG Food/Drug Retail sector**. Valuation appears attractive to us as the sector currently trades 17bp wider than the JULI, which is near the wide end of the one-year range. The sector is solidly BBB. Overall revenue trends have been favorable, benefitting from low unemployment and supportive demographic trends. Companies have raised capital spending given the increasingly competitive environment, as well as pursued more aggressive financial policies. We expect credit profiles and cash flow generation to remain steady and to hold up relatively well regardless of global economic conditions.

Largest issuers in the sector:

#	Issuer	Debt in JULI ($mn)	Share	Revenue ($bn)	EBITDA ($bn)	Debt ($bn)	Leverage	Int Cov	Profit Margin	Earnings Payout Ratio
1	McDonald's Corp	21,121	39%	21	10	45	3.8x	7.4x	57%	67%
2	Starbucks Corporation	11,359	21%	27	6	24	3.3x	8.8x	27%	166%
3	Kroger Co/The	11,326	21%	121	5	21	3.4x	6.7x	5%	8%
4	Walgreens Boots Alliance Inc	9,971	19%	137	9	44	3.7x	6.6x	9%	48%
	Sector Summary	**53,778**	**100%**	**305**	**30**	**134**	**3.6x**	**7.3x**	**31%**	**68%**

Change

#	Issuer	Revenue (y/y chg)	EBITDA (y/y chg)	Debt (y/y chg)	Leverage (y/y chg)	Int Cov (y/y chg)	Profit Margin (y/y chg)	Earnings Payout Ratio (y/y chg)
1	McDonald's Corp	-1%	3%	-1%	-0.1x	-0.3x	2%	-3%
2	Starbucks Corporation	7%	9%	20%	0.2x	-1.8x	1%	28%
3	Kroger Co/The	-2%	-11%	-5%	0.2x	-0.6x	0%	-37%
4	Walgreens Boots Alliance Inc	4%	-6%	6%	0.4x	-0.7x	-1%	-7%
	Sector Summary	**1%**	**-1%**	**4%**	**0.1x**	**-0.6x**	**1%**	**-4%**

Source: J.P. Morgan, Capital IQ

- Revenue grew by 1% y/y to a record high of $305bn, while EBITDA declined by 1% y/y to $30bn. McDonald's saw a 1% y/y decline in reported revenue, while revenues were up 3% on a constant currency basis. McDonald's continues to have the highest Profit Margin at 57%, compared to 31% for the overall sector.
- Leverage for the sector increased by 0.1x to 3.6x, with Walgreens Boots the key driver (+0.4x). Debt grew 4% y/y to $134bn, primarily driven by Starbucks as it issued debt to partly fund shareholder returns.
- Interest coverage was down 0.6x to 7.3x, largely due to Starbucks (-1.8x).
- The Earnings Payout ratio decreased by 4% y/y to 68%, with Cash to Shareholders declining 3% y/y for the overall sector as Kroger significantly lowered share buybacks in the LTM period.

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Exhibit 1: Sector Constituents

	Sector	Debt outst ($mn)	Share
1.	McDonald's Corp	21,121	39%
3.	Starbucks Corporation	11,359	21%
4.	Kroger Co/The	11,326	21%
5.	Walgreens Boots Alliance Inc	9,971	19%
	Total	**53,778**	**100%**

Exhibit 2: Revenue

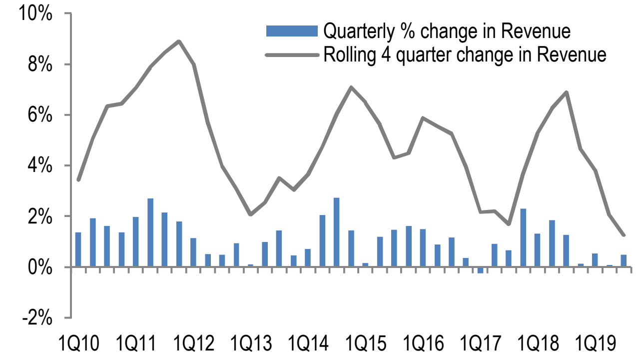


Exhibit 3: EBITDA

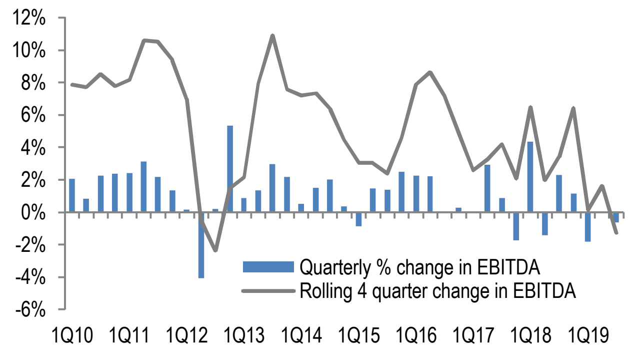


Exhibit 4: Debt

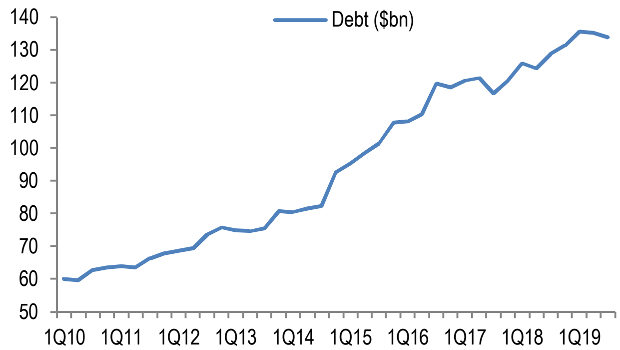


Exhibit 5: Cash to Shareholders

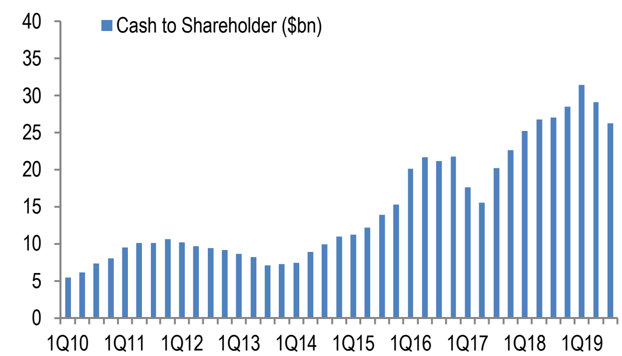


Exhibit 6: Gross and Net Leverage

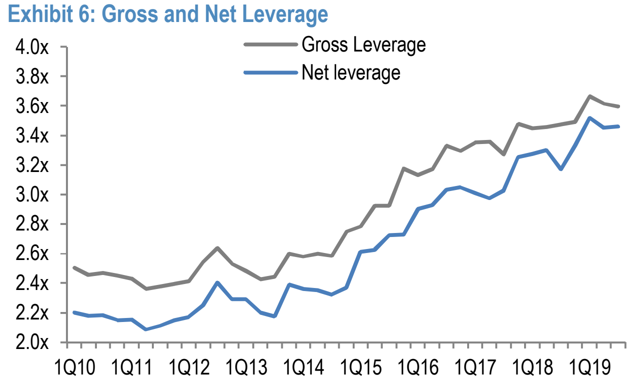


Exhibit 7: Interest Coverage Ratio

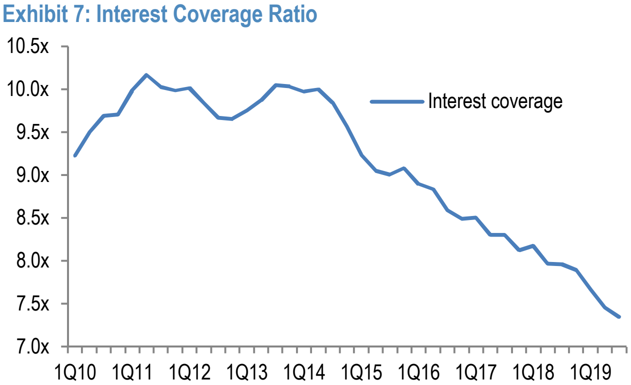
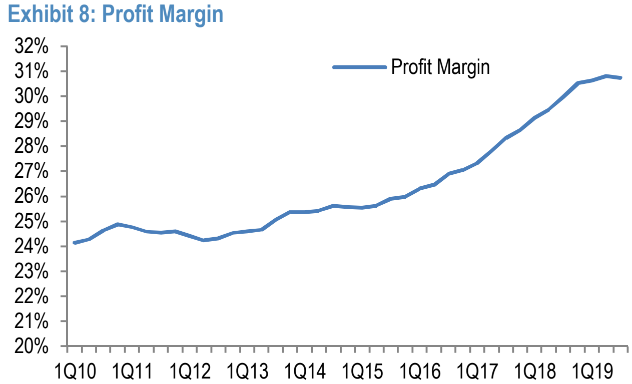


Exhibit 8: Profit Margin



Source for all exhibits on this page: J.P. Morgan, Capital IQ

Healthcare

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We recently downgraded our recommendation for the **Healthcare Services subsector to Neutral** from Overweight. While we continue to view the sector's two large vertical transactions positively and believe deleveraging plans are achievable, our recommendation change reflects recent spread outperformance within the sector to what we now view as more reasonable levels against the broader market. We also see headline risk for many names in the sector heading into 2020, as regulatory and operational disruption is a constant source of noise in the current climate and with uncertainties that are expected to persist including the future of Medicare-for-All proposals. All of this is likely to remain in the forefront as we move towards the 2020 Presidential Election. On the Distributor side, major questions remain regarding this part of the supply chain which has been put under a microscope due to the President's Blueprint, continued drug pricing trends, and ongoing Opioid litigation. And further as it relates to Opioids, we continue to be cautious after the group reached a settlement with two counties in Track One of the bellwether MDL in Cleveland, Ohio in October and continues to push toward a Global Settlement. Taking everything together, we believe that we are in the early stages of resolving this litigation and see it continuing to be a key theme for the sector for 2020. At the same time, we also note that Distributors represent a generally small percentage of the subsector taken as a whole (less than 10%).

Largest issuers in the sector:

#	Issuer	Debt in JULI ($mn)	Share	Revenue ($bn)	EBITDA ($bn)	Debt ($bn)	Leverage	Int Cov	Profit Margin	Earnings Payout Ratio
1	CVS Health Corp	60,286	34%	253	16	90	4.7x	6.2x	8%	13%
2	UnitedHealth Group Inc	40,544	23%	240	21	45	2.1x	12.9x	9%	42%
3	Cigna Corp	32,788	18%	153	13	39	3.1x	9.5x	8%	11%
4	Anthem Inc	19,288	11%	100	7	21	2.9x	9.8x	7%	36%
5	CARDINAL HEALTH INC	7,072	4%	148	3	8	2.9x	10.1x	2%	33%
	Sector Summary	**178,152**	**100%**	**1,197**	**72**	**233**	**3.4x**	**9.3x**	**8%**	**25%**

Change

#	Issuer	Revenue (y/y chg)	EBITDA (y/y chg)	Debt (y/y chg)	Leverage (y/y chg)	Int Cov (y/y chg)	Profit Margin (y/y chg)	Earnings Payout Ratio (y/y chg)
1	CVS Health Corp	2%	-13%	-8%	0.2x	-5.8x	-1%	1%
2	UnitedHealth Group Inc	9%	13%	34%	0.3x	-1.1x	0%	8%
3	Cigna Corp	4%	1%	-2%	-0.1x	-4.9x	0%	0%
4	Anthem Inc	10%	9%	6%	-0.1x	0.3x	0%	21%
5	CARDINAL HEALTH INC	6%	-3%	-7%	-0.1x	1.0x	0%	-21%
	Sector Summary	**6%**	**2%**	**4%**	**0.1x**	**-3.3x**	**0%**	**6%**

Source: J.P. Morgan, Capital IQ CVS leverage shown on an adjusted basis for operating leases.

- Revenue for the sector increased 6% y/y driven by membership growth as well as growth in PBM and ancillary services for the group. On the other hand, EBITDA increased 2% y/y. Anthem was the outlier on the positive side while CVS, the largest issuer in the sector, was a negative outlier as legacy pharmacy and LTC issues continue to flow through results.
- Debt increased by 4% y/y, led by UnitedHealth as a result of M&A activity. When excluding UNH, the rest of the sector saw a decrease of 1% y/y. Meanwhile, profit margin for the sector did not change y/y and remained at 8% with consistent results across most companies.
- Leverage increased by 0.1x y/y to 3.4x, as the two largest issuers (CVS and UNH) continued to take leverage modestly higher, while the rest of the sector exhibited some deleveraging.
- The earnings payout ratio increased 6% y/y to 25%, mostly on account of Anthem boosting its dividend. Most of the rest of the issuers have kept the payout ratio consistent, with CVS and CI most notably holding shareholder returns ~flat as they continue to delever.

Exhibit 1: Sector Constituents

	Sector	Debt outst ($mn)	Share
1.	CVS Health Corp	60,286	34%
2.	UnitedHealth Group Inc	40,544	23%
3.	Cigna Corp	32,788	18%
4.	Anthem Inc	19,288	11%
5.	CARDINAL HEALTH INC	7,072	4%
6	Humana Inc	5,518	3%
7.	McKesson Corp	4,990	3%
8	Laboratory Corp of America Holdings	4,712	3%
	Total	**178,152**	**100%**

Exhibit 2: Revenue

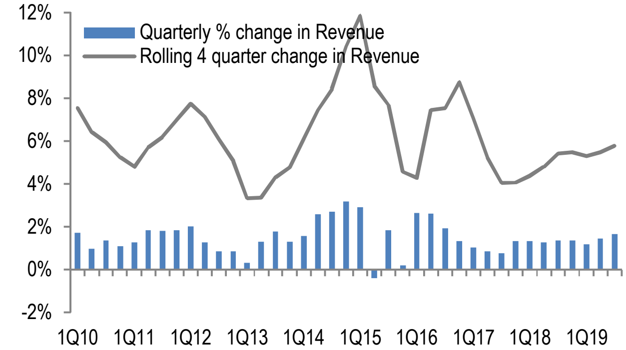


Exhibit 3: EBITDA

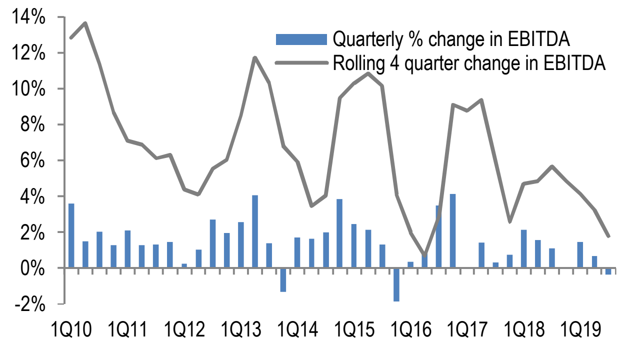


Exhibit 4: Debt

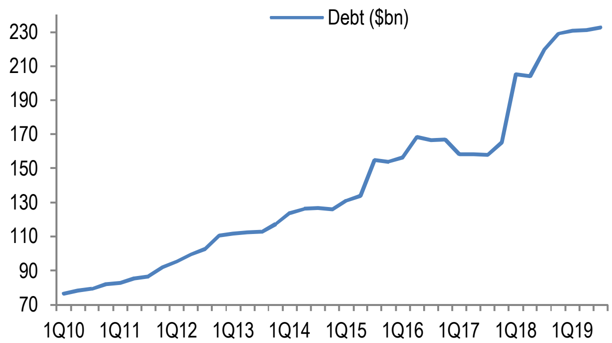


Exhibit 5: Cash to Shareholders

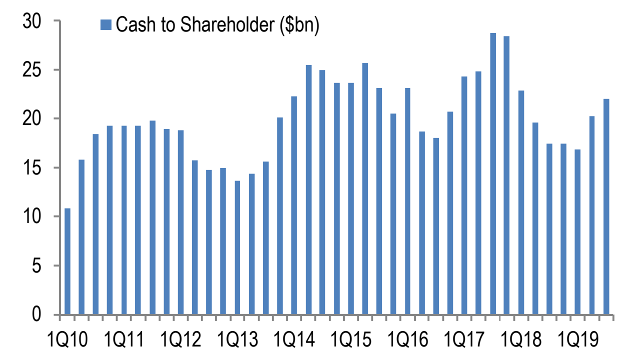


Exhibit 6: Gross and Net Leverage

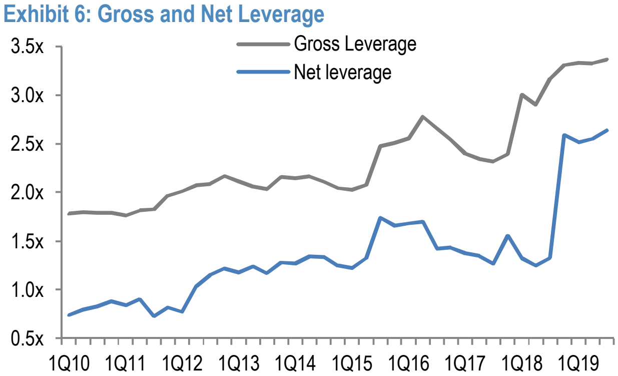
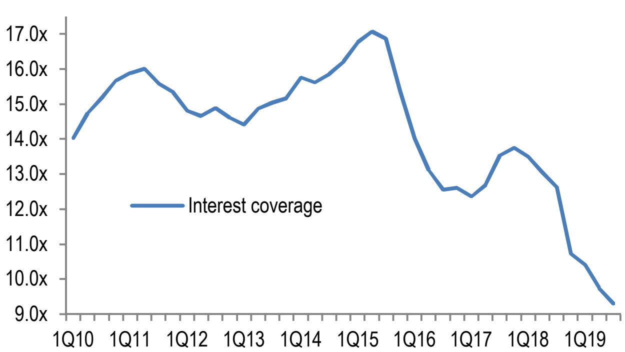
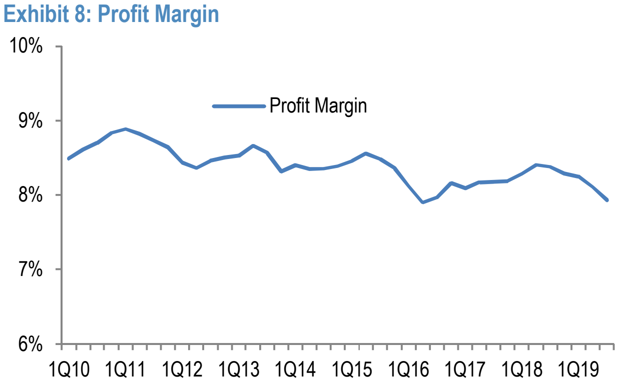


Exhibit 7: Interest Coverage Ratio



Source for all exhibits on this page: J.P. Morgan, Capital IQ

Exhibit 8: Profit Margin



Metals and Mining

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We remain **Neutral Metals and Mining**. China remains the key end market for base metals demand, and JPM economists forecast a slight moderation in GDP growth in that region (from +6.1% in 2019 to +5.9% in 2020). Our commodity strategists have turned slightly more constructive on their outlook for base metals (and less bullish on the prospects for precious metals) due to signs of stabilizing global growth and an easing of geopolitical risks. Directionally speaking however, they continue to expect precious metal prices will average higher y/y in 2020 and base metal prices will average lower y/y. Iron ore prices remain at historically elevated levels but are expected to fall further in 2020 as incremental Vale supply comes back on line. Across our metals universe, steel remains the weakest commodity, with US HRC prices down ~30% YTD in 2019 but forecasted to rise only modestly next year. Met coal prices have declined by a similar magnitude and are expected to fall further in 2020. While fundamentals are generally forecasted to weaken across the sector into next year, balance sheets for metals & mining companies remain in solid shape with leverage metrics among the lowest of IG credit sectors. We think the near term outlook is most favorable for the gold producers, which could see credit ratings improvement from synergy realization following a period of M&A, and incremental debt repayment. The lack of meaningful bond issuance in the sector should remain favorable from a technical perspective.

Largest issuers in the sector:

#	Issuer	Debt in JULI ($mn)	Share	Revenue ($bn)	EBITDA ($bn)	Debt ($bn)	Leverage	Int Cov	Profit Margin	Earnings Payout Ratio
1	Rio Tinto PLC	7,361	24%	41	18	15	0.8x	37.3x	44%	81%
2	Newmont Goldcorp Corp	6,715	22%	10	4	7	1.9x	12.9x	34%	23%
3	BHP Billiton Ltd	6,452	21%	44	22	25	1.1x	14.5x	50%	82%
4	Barrick Gold Corp	5,802	19%	9	4	6	1.3x	12.7x	48%	12%
5	Nucor Corp	3,860	13%	24	3	4	1.3x	26.6x	14%	38%
	Sector Summary	**30,190**	**100%**	**129**	**51**	**57**	**1.3x**	**19.9x**	**42%**	**50%**

Change

#	Issuer	Revenue (y/y chg)	EBITDA (y/y chg)	Debt (y/y chg)	Leverage (y/y chg)	Int Cov (y/y chg)	Profit Margin (y/y chg)	Earnings Payout Ratio (y/y chg)
1	Rio Tinto PLC	2%	-2%	12%	0.1x	5.2x	-2%	36%
2	Newmont Goldcorp Corp	1%	-4%	-6%	0.0x	0.2x	-2%	12%
3	BHP Billiton Ltd	3%	-1%	-7%	-0.1x	0.4x	-2%	51%
4	Barrick Gold Corp	17%	29%	-3%	-0.4x	3.7x	5%	8%
5	Nucor Corp	0%	-9%	2%	0.1x	1.6x	-1%	14%
	Sector Summary	**2%**	**0%**	**-2%**	**-0.1x**	**1.8x**	**0%**	**26%**

Source: J.P. Morgan, Capital IQ

- Revenue for the sector increase by 2% y/y while EBITDA for the sector was flat y/y. EBITDA growth was negative for 4 out of the 5 companies in our analysis. Barrick Gold Corp was the only company in the sector with positive EBITDA growth (+29% y/y). Profit margins for the sector were stable y/y at 42%.
- The sector debt declined by 2% y/y which resulted in a 0.1x decline in leverage. The sector is currently one of the least levered sectors in our analysis. The gross leverage for the sector is 1.3x compared to 3.0x for US HG corporates.
- Interest expense for the sector declined by 7.4% y/y resulting in an improvement in interest coverage for the sector. The interest coverage for the sector increased by 1.8x to 19.9x.
- Cash to shareholder for the sector increased by 18.6% y/y resulting in a 26% increase in earnings payout ratio.

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Exhibit 1: Sector Constituents

	Sector	Debt outst ($mn)	Share
1.	Rio Tinto PLC	7,361	24%
2.	Newmont Goldcorp Corp	6,715	22%
3.	BHP Billiton Ltd	6,452	21%
4.	Barrick Gold Corp	5,802	19%
5.	Nucor Corp	3,860	13%
	Total	**30,190**	**100%**

Exhibit 2: Revenue

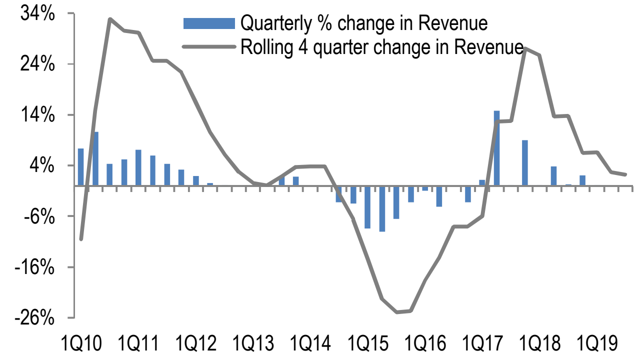


Exhibit 3: EBITDA

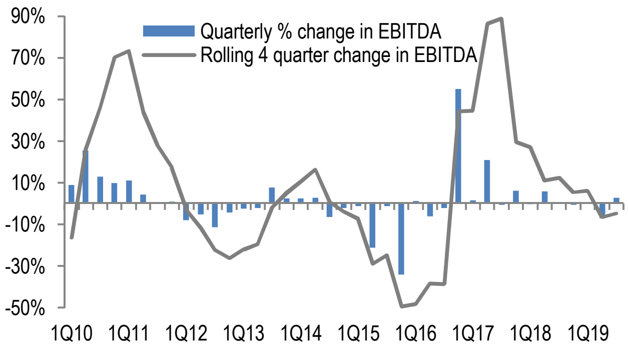


Exhibit 4: Debt

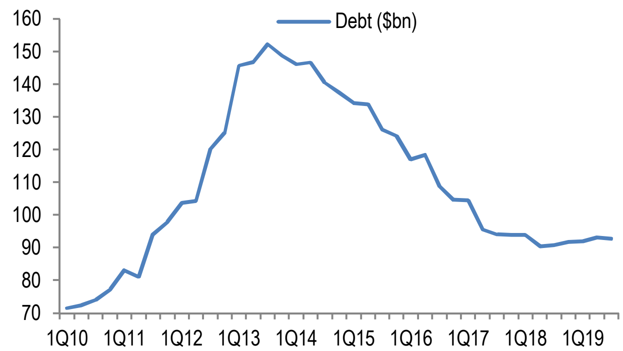


Exhibit 5: Cash to Shareholders

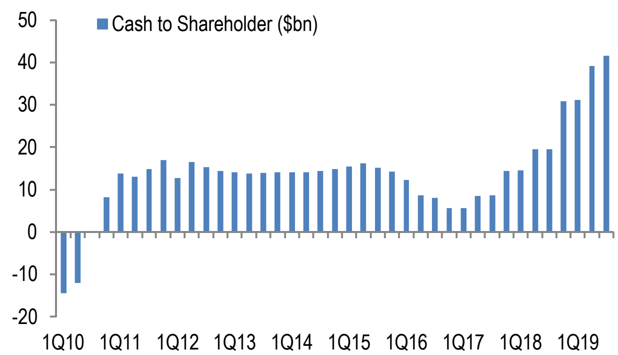


Exhibit 6: Gross and Net Leverage

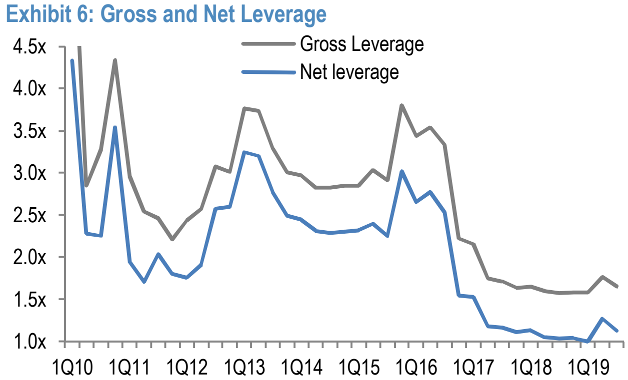


Exhibit 7: Interest Coverage Ratio

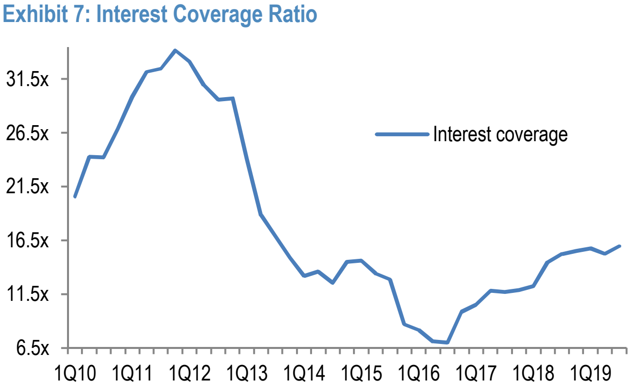
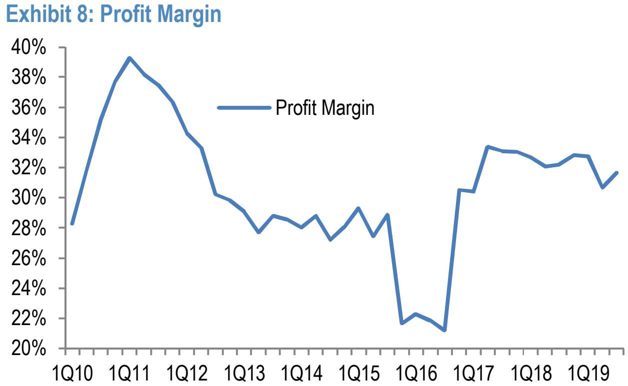


Exhibit 8: Profit Margin



Source for all exhibits on this page: J.P. Morgan, Capital IQ

Non-Food Retail

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We recommend investors **Underweight the HG Non-Food Retail sector** based on rich relative value, with the sector currently trading 32bp inside the JULI. Credit fundamentals in the sector remain solid with moderate leverage and rising retail sales, while profit margins have trended lower as companies invest in price, e-commerce, and omni-channel capabilities. Financial policies have inched more aggressive for some companies (LOW, JWN) and remain a watch item more broadly. The composition of the sector is weighted towards well-capitalized single A issuers with weaker apparel and department stores comprising a much smaller percentage.

Largest issuers in the sector:

#	Issuer	Debt in JULI ($mn)	Share	Revenue ($bn)	EBITDA ($bn)	Debt ($bn)	Leverage	Int Cov	Profit Margin	Earnings Payout Ratio
1	Walmart Inc	42,045	40%	521	32	76	2.2x	9.9x	7%	40%
2	Home Depot Inc	29,614	28%	111	18	35	1.8x	12.8x	17%	72%
3	Lowe's Cos Inc	15,933	15%	72	8	22	2.6x	9.7x	12%	67%
4	Target Corp	10,242	10%	78	7	14	1.9x	13.4x	10%	39%
5	Costco Wholesale Corp	4,468	4%	153	6	9	1.4x	27.2x	4%	20%
	Sector Summary	**105,391**	**100%**	**960**	**74**	**164**	**2.1x**	**11.1x**	**11%**	**52%**

#	Issuer	Revenue (y/y chg)	EBITDA (y/y chg)	Debt (y/y chg)	Leverage (y/y chg)	Int Cov (y/y chg)	Profit Margin (y/y chg)	Earnings Payout Ratio (y/y chg)
1	Walmart Inc	2%	-2%	-10%	-0.2x	-1.4x	0%	7%
2	Home Depot Inc	5%	5%	2%	0.0x	-0.5x	0%	7%
3	Lowe's Cos Inc	1%	3%	8%	0.1x	0.1x	0%	18%
4	Target Corp	3%	6%	7%	0.0x	0.6x	0%	-6%
5	Costco Wholesale Corp	5%	5%	3%	0.0x	2.1x	0%	3%
	Sector Summary	**3%**	**1%**	**-3%**	**-0.1x**	**-0.8x**	**0%**	**8%**

Source: J.P. Morgan, Capital IQ

- LTM Revenue for the Non-Food Retail sector grew 3% y/y, as five out of six companies in our analysis recorded growth. However, this was the lowest growth this sector has seen since 3Q17. EBITDA grew by 1% y/y while Profit Margin for the sector has been roughly unchanged for the last four quarters at ~10.5%, and is around the lowest level since 4Q12.
- Debt for the sector decreased by 3% y/y to $164bn, mainly driven by a 10% y/y decline at Walmart. This is the highest decline in debt for the sector since 2Q10. EBITDA slightly increased for the sector over the same period resulting in Gross Leverage for the sector down 0.1x to 2.1x.
- Interest Coverage fell 0.8x y/y to 11.1x, as interest expense for the sector increased 7.6%, mainly driven by a 16% increase at Walmart and ~10% increase at Home Depot.
- The Earnings Payout Ratio grew 8% y/y to 52%, with Cash to Shareholders up 18% y/y. The growth in Cash to Shareholders was driven by a 40% y/y increase at Lowe's, as the company increased its share repurchase activity, and approximately 20% y/y increases at both Walmart and Home Depot. Dividends for the sector increased 10%, mainly driven by an increase at Home Depot.

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Exhibit 1: Sector Constituents

	Sector	Debt outst ($mn)	Share
1.	Wal-Mart Stores Inc	42,045	40%
2.	Home Depot Inc/The	29,614	28%
3.	Lowe's Cos Inc	15,933	15%
4.	Target Corp	10,242	10%
5.	Costco Wholesale Corp	4,468	4%
	Total	**105,391**	**100%**

Exhibit 2: Revenue

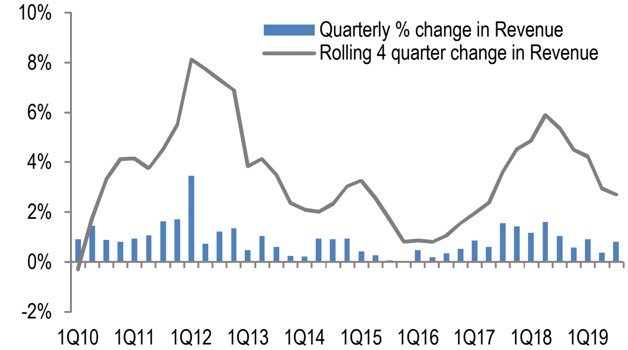


Exhibit 3: EBITDA

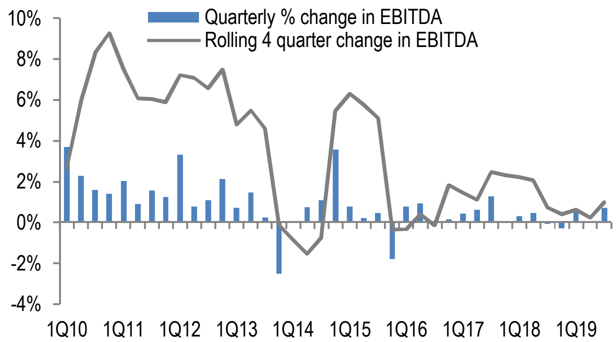


Exhibit 4: Debt

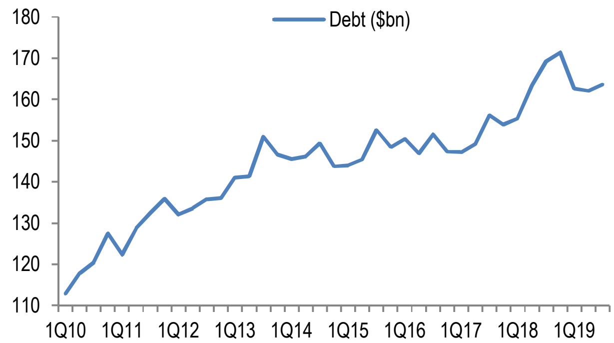


Exhibit 5: Cash to Shareholders

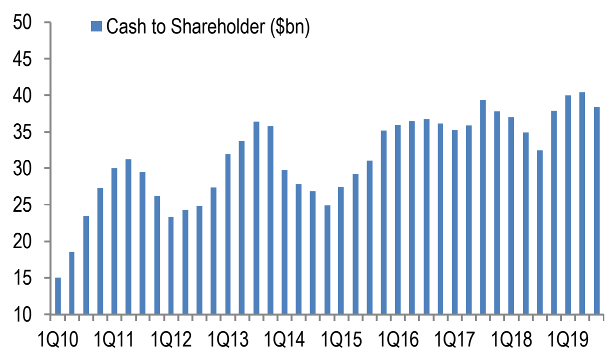


Exhibit 6: Gross and Net Leverage

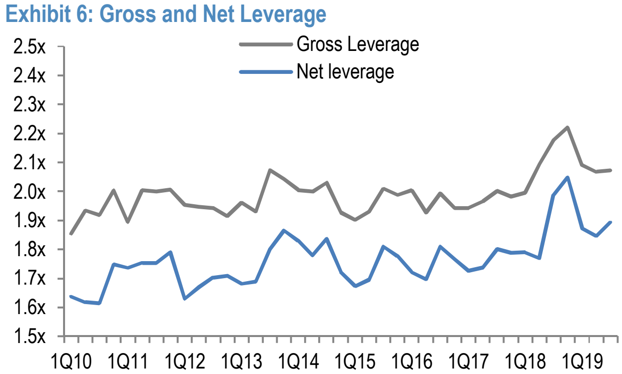


Exhibit 7: Interest Coverage Ratio

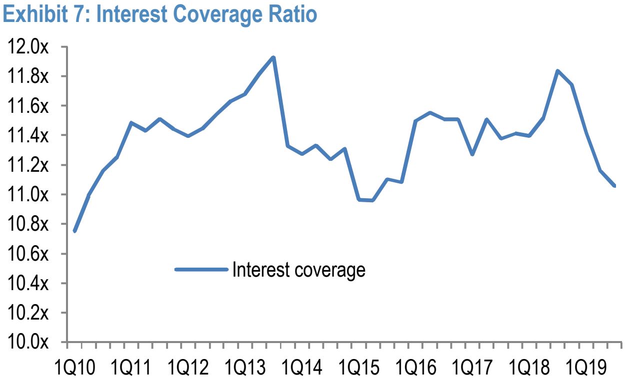
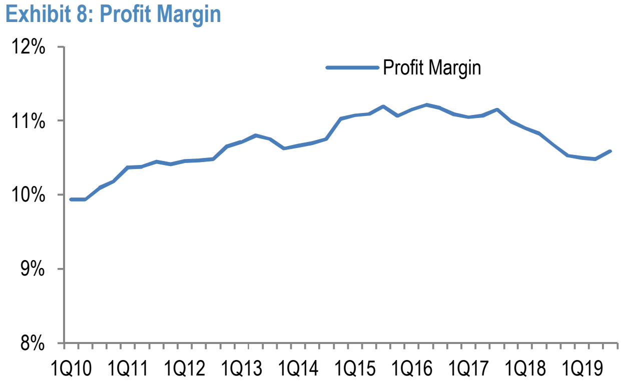


Exhibit 8: Profit Margin



Source for all exhibits on this page: J.P. Morgan, Capital IQ

Pharmaceuticals

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We divide our view of the overall Pharma/Devices space into three subsectors. We recently downgraded our view for **Biotech and Generics to Underweight** from Neutral, with branded pricing trends, uncertainties surrounding biosimilars, continued drug pricing scrutiny out of Washington, and potential for further large M&A expected to remain overhangs as we move into 2020 and given valuations which in our view do not reflect enough of these uncertainties. On the Generics side, there has been some level of stabilization following the deal between MYL and PFE's Upjohn unit to merge and we are positively biased on the combination over the long-term, though we would like to see more certainty as it relates to regulatory approvals. Separately, we continue to recommend a **Neutral position for Large-Cap Pharma**. We expect the sector to maintain relatively highly rated and show fair operating performance, though we see this offset by regulatory overhangs and tight valuations in the space. In addition, we remain cautious of long-term industry fundamentals and credit metrics and see shareholder returns and tuck-in M&A picking up for these names throughout 2020. In **Medical Devices, we carry an Underweight** due largely to current valuations, which are compressed against Large-cap Pharma and at tights against the broader market from a historical perspective driven by a number of strong technicals which kept valuations in during 2019. As some of these technicals fade, we expect the sector to underperform.

Largest issuers in the sector:

#	Issuer	Debt in JULI ($mn)	Share	Revenue ($bn)	EBITDA ($bn)	Debt ($bn)	Leverage	Int Cov	Profit Margin	Earnings Payout Ratio
1	Pfizer Inc	33,998	10%	53	22	54	2.4x	14.7x	42%	96%
2	AbbVie Inc	31,286	9%	33	14	39	2.7x	9.7x	44%	62%
3	Amgen Inc	25,035	8%	23	12	30	2.5x	9.2x	53%	100%
4	Gilead Sciences Inc	24,878	8%	22	10	25	2.4x	10.4x	47%	53%
5	Johnson & Johnson	24,609	7%	82	28	30	1.1x	58.5x	35%	67%
	Sector Summary	**330,660**	**100%**	**611**	**221**	**482**	**2.5x**	**15.0x**	**38%**	**57%**

Change

#	Issuer	Revenue (y/y chg)	EBITDA (y/y chg)	Debt (y/y chg)	Leverage (y/y chg)	Int Cov (y/y chg)	Profit Margin (y/y chg)	Earnings Payout Ratio (y/y chg)
1	Pfizer Inc	-1%	1%	29%	0.5x	-2.7x	1%	32%
2	AbbVie Inc	2%	2%	-6%	-0.2x	-1.0x	0%	-48%
3	Amgen Inc	0%	-4%	-12%	-0.2x	-0.2x	-2%	-55%
4	Gilead Sciences Inc	0%	-4%	-7%	-0.1x	0.6x	-2%	10%
5	Johnson & Johnson	0%	1%	-3%	-0.1x	31.4x	0%	26%
	Sector Summary	**3%**	**5%**	**4%**	**0.1x**	**1.4x**	**1%**	**-3%**

Source: J.P. Morgan, Capital IQ

- Revenue growth for the quarter was 3% y/y while EBITDA grew at a pace of 5% y/y. Profit margin for the sector increased 1% y/y to 38%. Revenue was about flat for most companies in the sector while EBITDA was down 4% y/y for both Amgen and Gilead Sciences reflecting increased competition for key products.
- Leverage for the sector increased by 0.1x to 2.5x. Debt for the sector increased by 4% y/y driven by Pfizer which saw a 29% rise in the debt post the acquisition of Array, offset by many other companies which reduced debt modestly on a y/y basis.
- Interest coverage improved by 1.4x y/y to 15.0x. The improvement in interest coverage was driven by a robust increase in EBITDA paired with a modest increase in interest expense for the sector. Johnson & Johnson has consistently reduced its interest expense and was down 53% y/y in 3Q19.
- The earnings payout ratio for the sector was down 3% y/y to 57% as Cash to shareholders decreased by 2% y/y while EBITDA increased by 5% y/y. Dividends for the sector increased by 5% y/y while Share Buybacks were down 10% y/y, resulting in the decrease in Cash to shareholders.

Exhibit 1: Sector Constituents

	Sector	Debt outst ($mn)	Share
1.	Pfizer Inc	33,998	10%
2.	AbbVie Inc	31,286	9%
3.	Amgen Inc	25,035	8%
4.	Gilead Sciences Inc	24,878	8%
5.	Johnson & Johnson	24,609	7%
6.	Bristol-Myers Squibb Co	23,061	7%
7.	CELGENE CORP	19,848	6%
8.	Merck & Co Inc	19,183	6%
9.	GlaxoSmithKline PLC	18,088	5%
10.	Abbott Laboratories	17,802	5%
11.	Others	92,873	28%
	Total	**330,660**	**100%**

Exhibit 2: Revenue

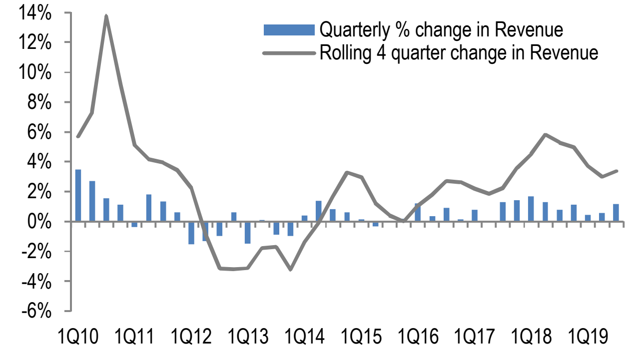


Exhibit 3: EBITDA

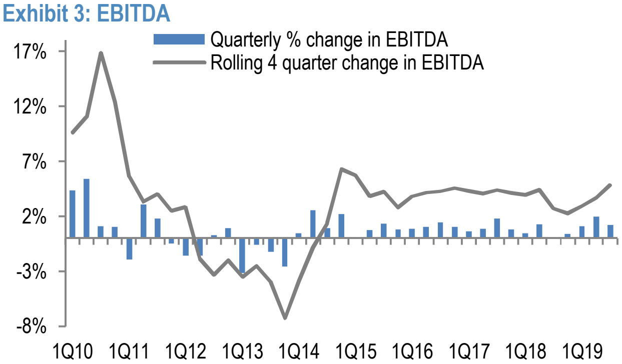


Exhibit 4: Debt

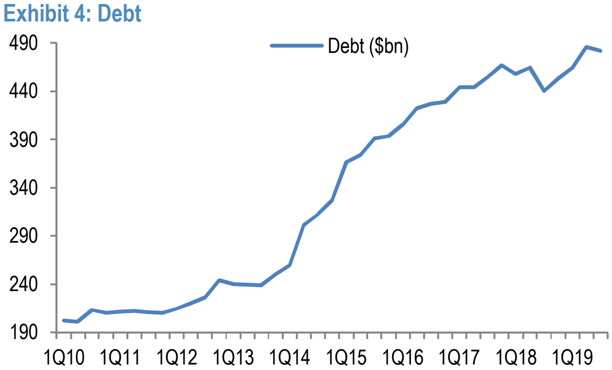


Exhibit 5: Cash to Shareholders

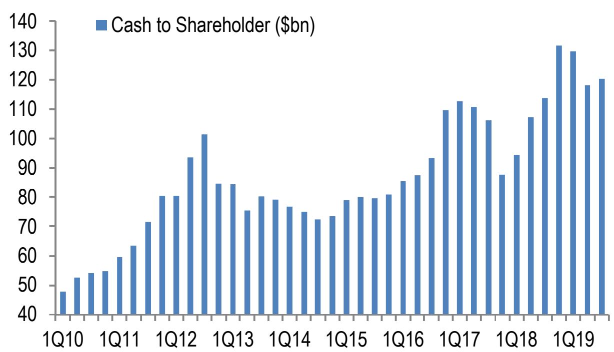


Exhibit 6: Gross and Net Leverage

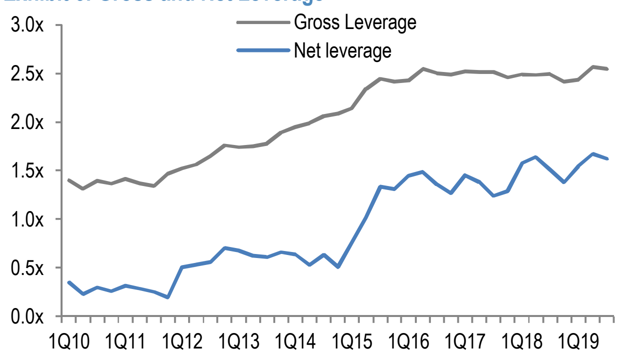


Exhibit 7: Interest Coverage Ratio

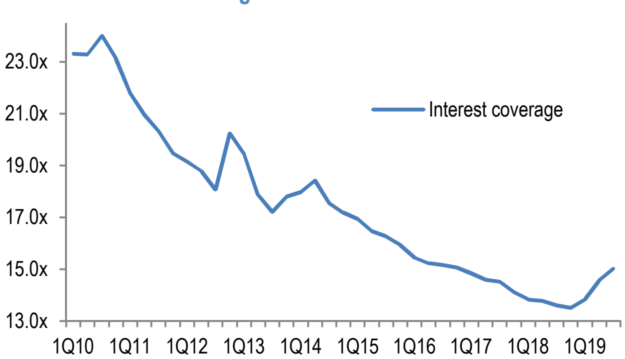
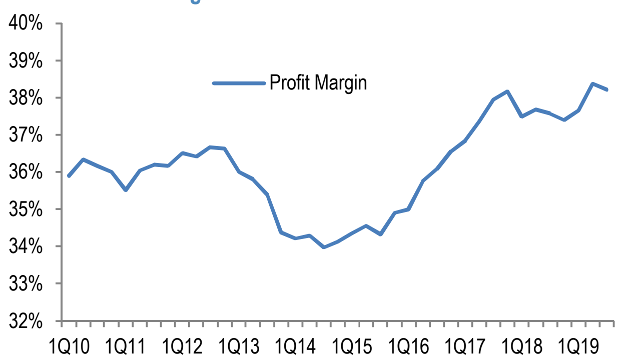


Exhibit 8: Profit Margin



Source for all exhibits on this page: J.P. Morgan, Capital IQ

Railroad/Shipping

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Transports performance YTD has been strong in absolute terms and has slightly outperformed the overall market on a total return basis but has underperformed on our primary metric of duration adjusted exceed return (Transports 26bp tighter with a total return of 14.5% and an excess return of 4.3% vs. JULI 37bp tighter and returns of 14.1% and 4.8% respectively). In Rails, we continue to like CSX 10yrs (management now committed to high BBB, cheap vs. less efficient peer NSC) and UNP (cheap across the curve vs. highest quality comps). We remain most bearish on UPS (more debt issuance to fund pensions), R (better value in aircraft leasing), and CNRCN (a great credit but simply too rich vs. peers) bonds.

The core of Transportation credit of course is the Rails, which are naturally a "defensive" sector in most years. In 2018, Rails were choppy as leverage was reset more aggressively through debt funded buybacks (with notable downgrades at UNP and angst at CSX). In 2019, the debt financed buybacks continued and while ratings were stable we attribute the lagging performance in '19 to the simple fact that Rails continue to trade rich (especially in the 10yr bucket, where Rails sit 28bp tight to single As). In a rallying market, Rails tend to lag. And given that our JULI target for YE20 is 18bp tighter than today's level, we would expect many of the tightest trading sectors to lag. That's one driver of our downshift from Neutral to **Underweight on Rails specifically and Transports overall**.

Big picture sentiment in Transports of course will swing with any tariff and trade news on the tape. We are ultimately of the view that a trade deal with China is more likely than not leading into the election – which could of course improve investor perception in the sub-sectors. However, as noted, we don't think Rail credit performance, for example, is primarily driven by fundamentals. In Rails specifically, volumes in 2019 have been depressed across most commodities (our equity team's latest forecast is for -2.7% overall, split Coal -6.5%, Intermodal -3.4%, Merchandise -0.7%). For 2020, we expect a slight rebound to +1.9% growth (Intermodal +3.4%, Merchandise +1.5%, with Coal declining -2.6%). In Parcel/Freight, the ongoing reconfiguration of logistics networks continues with the push for faster shipping. FedEx has jettisoned Amazon and ratings remain under pressure with Moody's now negative at Baa2. FDX needs to refrain from material share repurchases and perhaps restructure its Boeing freighter order book to reduce capex in order to keep mid-BBB status. The FDX curve remains very steep as well (~70bp 10s-30s, the FDX 29s issued in July at +110bp traded at one point ~40bp wider and currently sit nearly 30bp wider to new issue). With this in mind, we have downgraded our outlook on Parcel/Freight from Neutral to Underweight.

Note that we remain most bullish on Aviation (Airlines/EETC, Aircraft Leasing) credit within our broader Transportation bucket (although we did also downgrade the subsector, but in this case from Overweight to Neutral). In Aviation, ESG concerns for the Airlines (and to a lesser extent for the Lessors) will increasingly dominate the conversation. According to JPM analysis, there is a dearth of markets susceptible to sailboat substitution, but that's not the whole story of course. We expect U.S. industry unit revenue (RASM) to decline from just under +2% in 2019 to just above flat in 2020 as the MAX flies again. On a global basis, traffic has clearly decelerated from a decade of 6%+ growth to only 4.5% YTD (China/Europe weakness, MAX grounding), but retirements also slowed as an offset, keeping global load factors at or near record levels. As a result, the Lessors were able to remarket most of the record number of aircraft subject to bankruptcy in 2019 without material cash flow pain (and we suspect the bankruptcy cycle has peaked for now or is close). However, our view on Aviation fundamentals is much less bullish at this stage of the cycle—another reason why we are slightly less constructive on the credit side.

Largest issuers in the sector:

#	Issuer	Debt in JULI ($mn)	Share	Revenue ($bn)	EBITDA ($bn)	Debt ($bn)	Leverage	Int Cov	Profit Margin	Earnings Payout Ratio
1	Union Pacific Corp	24,443	26%	22	11	28	2.5x	10.7x	49%	115%
2	CSX Corp	17,129	19%	12	6	17	2.7x	8.9x	52%	83%
3	United Parcel Service Inc	15,101	16%	73	8	26	3.3x	12.5x	11%	50%
4	FedEx Corp	14,791	16%	70	9	33	2.7x	15.3x	13%	16%
5	Norfolk Southern Corp	11,135	12%	12	5	13	2.4x	8.8x	46%	55%
	Sector Summary	**92,379**	**100%**	**204**	**45**	**132**	**2.7x**	**10.8x**	**38%**	**67%**

Change

#	Issuer	Revenue (y/y chg)	EBITDA (y/y chg)	Debt (y/y chg)	Leverage (y/y chg)	Int Cov (y/y chg)	Profit Margin (y/y chg)	Earnings Payout Ratio (y/y chg)
1	Union Pacific Corp	-1%	3%	23%	0.4x	-2.1x	2%	16%

2	CSX Corp	2%	7%	26%	0.4x	-0.9x	3%	18%
3	United Parcel Service Inc	4%	-17%	13%	0.9x	-3.8x	-3%	8%
4	FedEx Corp	4%	8%	94%	0.1x	0.0x	0%	-7%
5	Norfolk Southern Corp	2%	10%	14%	0.1x	0.2x	3%	-15%
	Sector Summary	**3%**	**3%**	**14%**	**0.4x**	**-1.6x**	**2%**	**7%**

Source: J.P. Morgan, Capital IQ

- Revenue for the sector has increased 3% y/y which is 3% lower than the 6% y/y increase in 2Q. Union Pacific Corp is the only large issuer with y/y decline in revenue at -1%. Rest of the large issuers reported similar y/y revenue growth with 2% y/y revenue increase for CSX Corp and Northfolk Southern Corp, and 4% y/y revenue increase for FedEx Corp and United Parcel Services Inc.
- EBITDA has increased 3% y/y for the sector. United Parcel Services Inc. is the only large issuer with negative y/y EBITDA growth at -17%, while Norfolk Southern Corp reported the highest positive y/y EBITDA growth at 10%.
- Debt increased by 14% y/y which is 7% higher than the 7% y/y debt increase for 2Q. Among the large issuers, FedEx Corp reported the highest y/y debt increase at 94% followed by CSX Corp with 26% y/y debt growth. Meanwhile, Gross Leverage has increased 0.4x y/y and y/y profit margin growth is at 2% for the sector.
- The earnings payout ratio has increased 7% y/y which is 1% higher than the 6% y/y increase in 2Q. Among large issuers, CSX Corp and Union Pacific Corp had the highest y/y growth in earnings payout ratio at 18% and 16% respectively. Norfolk Southern Corp and FedEx Corp reported the highest y/y decline in earnings payout ratio at -15% and -7% respectively.
- Interest coverage for the sector has decreased 1.6x y/y, while United Parcel Service Inc and Union Pacific Corp had 3.8x and 2.1x decline in y/y Interest coverage ratio respectively. Norfolk Southern Corp reported highest y/y Interest coverage increase at 0.2x among the large issuers.

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Exhibit 1: Sector Constituents

	Sector	Debt outst ($mn)	Share
1.	Union Pacific Corp	24,443	26%
2.	CSX Corp	17,129	19%
3.	United Parcel Service Inc	15,101	16%
4.	FedEx Corp	14,791	16%
5.	Norfolk Southern Corp	11,135	12%
6.	Canadian Pacific Railway Ltd	5,216	6%
7.	Ryder System Inc	4,563	5%
	Total	**92,379**	**100%**

Exhibit 2: Revenue

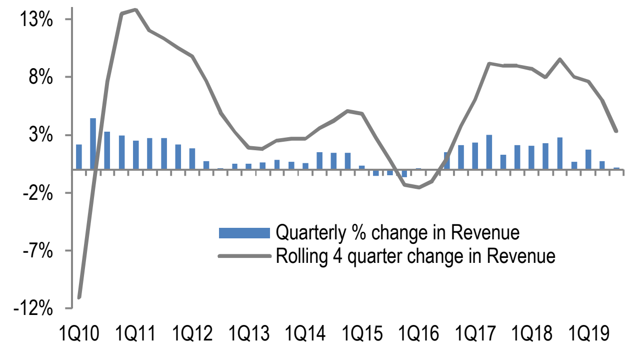


Exhibit 3: EBITDA

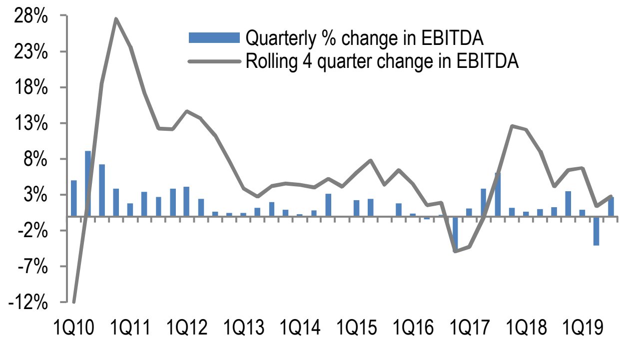


Exhibit 4: Debt

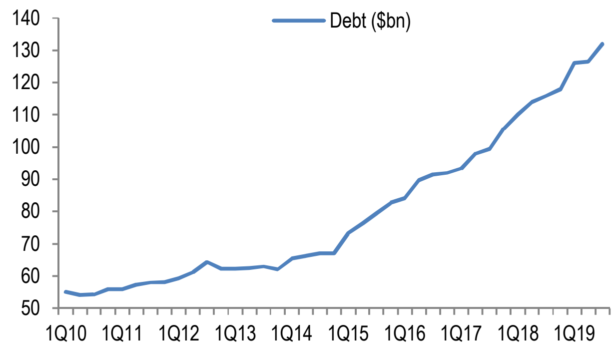


Exhibit 5: Cash to Shareholders

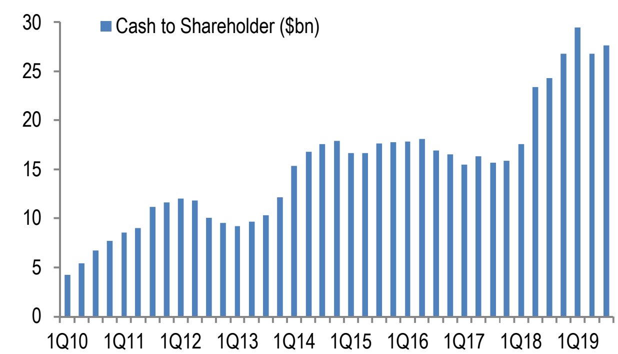


Exhibit 6: Gross and Net Leverage

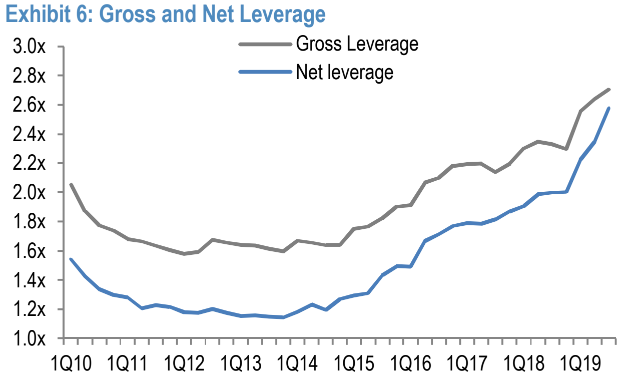


Exhibit 7: Interest Coverage Ratio

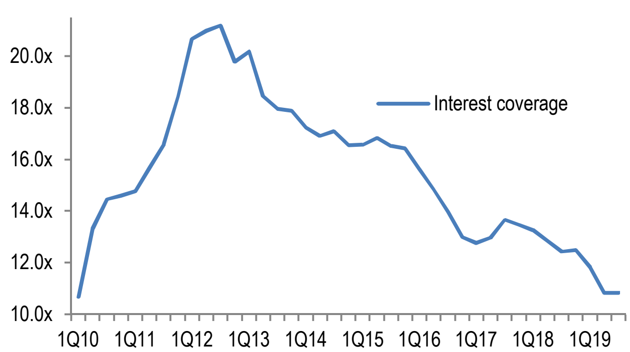
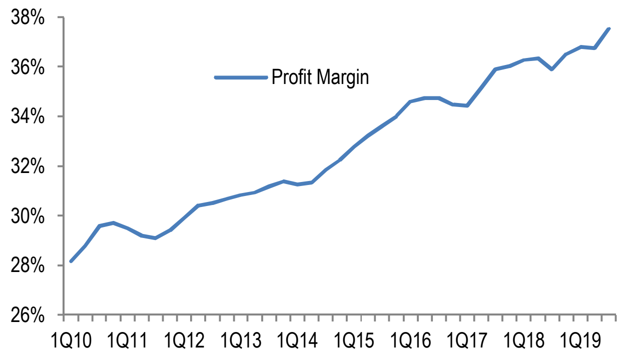


Exhibit 8: Profit Margin



Source for all exhibits on this page: J.P. Morgan, Capital IQ

Technology

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We remain **Underweight Technology** based largely on valuation with spreads underperforming the broader JULI index ex-EM. In addition to tight valuations, the sector is under pressure from the trade dispute between the U.S. and China and slowing IT spending growth. Companies across the sector from hardware to software to semiconductors have provided muted guidance to conclude the year. We also continue to see the large legacy technology firms (CSCO, IBM, ORCL) struggling to drive solid organic growth. M&A remains a key theme in the sector with the proposed takeover of HPQ by XRX and PYPL's purchase of Honey Science for $4bn. We expect moderate levels of M&A activity heading into 2020 as we believe consolidation and a need for organic growth will be driving factors, while an election year and an uncertain regulatory environment could be offsetting factors.

Largest issuers in the sector:

#	Issuer	Debt in JULI ($mn)	Share	Revenue ($bn)	EBITDA ($bn)	Debt ($bn)	Leverage	Int Cov	Profit Margin	Earnings Payout Ratio
1	Apple Inc	83,029	27%	260	76	108	1.4x	21.4x	29%	109%
2	Microsoft Corp	67,708	22%	130	57	86	1.5x	21.7x	44%	59%
3	Oracle Corp	53,757	18%	40	20	57	2.9x	9.6x	50%	166%
4	International Business Machines Corp	39,686	13%	77	19	60	3.1x	16.2x	25%	49%
5	Dell Technologies Inc.	23,493	8%	92	12	52	4.5x	4.0x	13%	126%
	Sector Summary	**305,122**	**100%**	**721**	**235**	**411**	**2.0x**	**18.4x**	**37%**	**96%**

Change

#	Issuer	Revenue (y/y chg)	EBITDA (y/y chg)	Debt (y/y chg)	Leverage (y/y chg)	Int Cov (y/y chg)	Profit Margin (y/y chg)	Earnings Payout Ratio (y/y chg)
1	Apple Inc	-2%	-7%	-6%	0.0x	-3.9x	-1%	4%
2	Microsoft Corp	13%	21%	5%	-0.2x	4.3x	3%	9%
3	Oracle Corp	-1%	1%	-2%	-0.1x	0.3x	1%	51%
4	International Business Machines Corp	-4%	-1%	28%	0.7x	-11.7x	1%	4%
5	Dell Technologies Inc.	6%	19%	7%	-0.5x	0.0x	1%	115%
	Sector Summary	**2%**	**3%**	**2%**	**0.0x**	**-1.5x**	**0%**	**18%**

Source: J.P. Morgan, Capital IQ

- Revenue for the sector has increased 2% y/y which is 3% lower than the 5% y/y increase in 2Q. Among the large issuers, Microsoft Corp had the highest positive y/y growth in revenue at 13% and International Business Machines had the highest negative y/y growth at -4%.
- EBITDA has increased by 3% y/y for the sector. Microsoft Corp and Dell Technologies Inc. had the highest positive y/y EBITDA growth at 21% and 19%, respectively. These large positive y/y EBITDA increases have been offset by 7% y/y decline for Apple Inc.
- Debt increased by 2% y/y which is 7% lower than debt increase y/y for 2Q. The increase was mainly driven by International Business Machines Corp (28% y/y) and Dell Technologies Inc. (7% y/y) which partially offset by decline in debt in Apple Inc (-6% y/y) and Oracle Corp (-2% y/y). Meanwhile, Gross Leverage is unchanged y/y. Profit margin is also unchanged on y/y growth basis.
- The earnings payout ratio has increased 18% y/y which is 22% lower than the 40% y/y increase in 2Q. Among large issuers, Dell Technologies Inc. and Oracle Corp had the highest y/y growth in earnings payout ratio at 115% and 51%, respectively.
- Interest coverage for the sector has decreased 1.5x y/y, while International Business Machines Corp and Apple Inc, had 11.7x and 3.9x decline in y/y Interest coverage ratio, respectively. Microsoft Corp reported highest y/y Interest coverage increase at 4.3x among the large issuers.

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Exhibit 1: Sector Constituents

	Sector	Debt outst ($mn)	Share
1.	Apple Inc	83,029	27%
2.	Microsoft Corp	67,708	22%
3.	Oracle Corp	53,757	18%
4.	International Business Machines Corp	39,686	13%
5.	Dell Technologies Inc.	23,493	8%
6.	Intel Corp	20,946	7%
7.	Cisco Systems Inc	16,504	5%
	Total	**305,122**	**100%**

Exhibit 2: Revenue

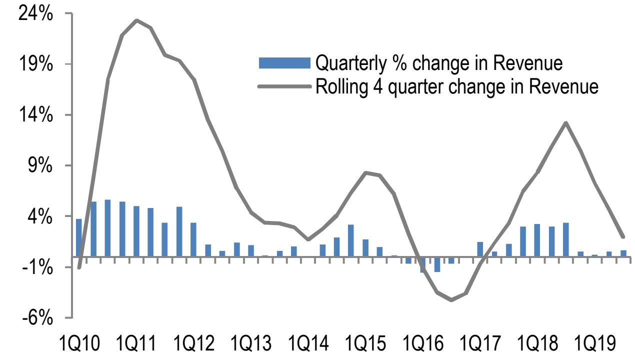


Exhibit 3: EBITDA

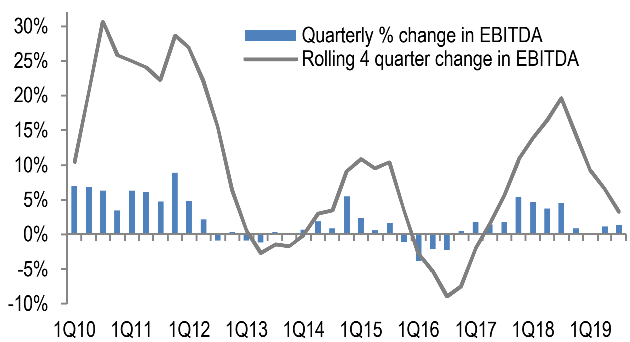


Exhibit 4: Debt

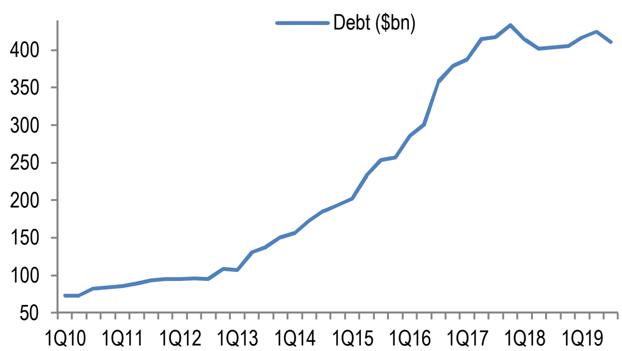


Exhibit 5: Cash to Shareholders

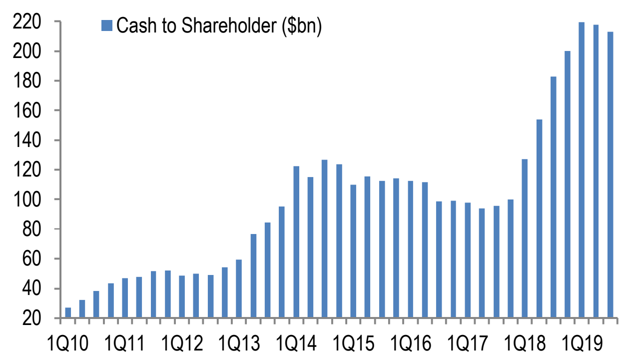


Exhibit 6: Gross and Net Leverage

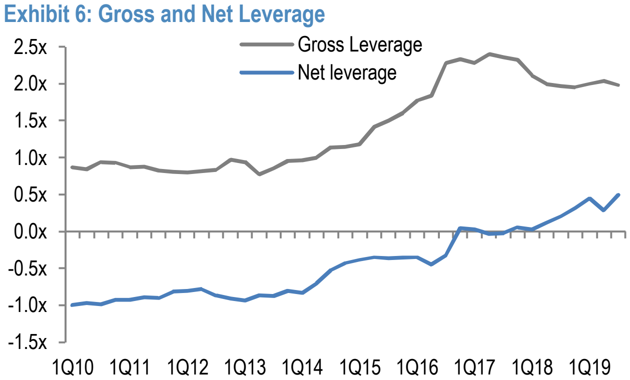


Exhibit 7: Interest Coverage Ratio

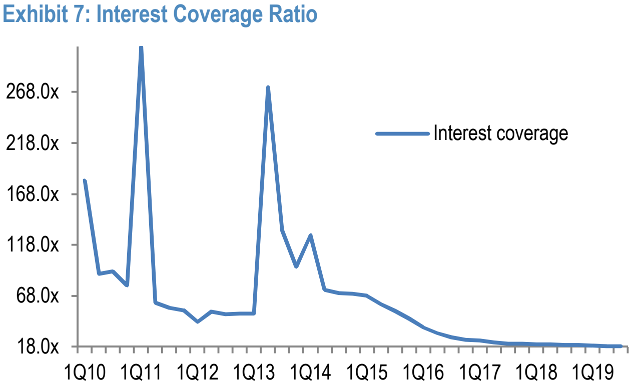
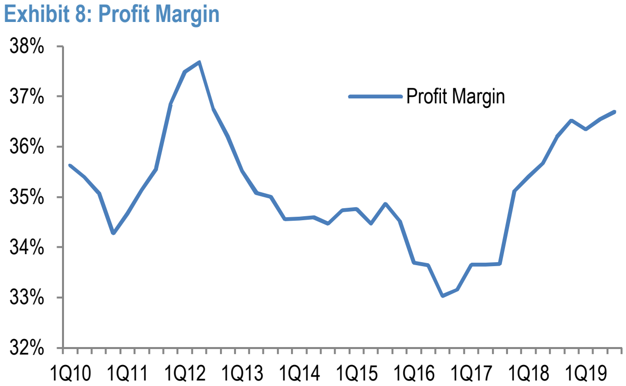


Exhibit 8: Profit Margin



Source for all exhibits on this page: J.P. Morgan, Capital IQ

Telecoms—Domestic

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We maintain our **Overweight recommendation on Domestic Telecom**, which has been one of the strongest performing sectors in the JULI index ex-EM. Supporting the strong performance has been a continued focus on de-leveraging from both AT&T and Verizon and a strong, but relatively benign year from a credit perspective for the tower operators and data centers. Notably, AT&T released guidance for FY2020 along with a 3-Year financial and capital allocation plan. This follows the involvement of activist investor Elliot Management's call for significant operational changes at AT&T. The guidance implies revenue growth of 1-2%, stable adj. EBITDA margins, FCF in the $28bn range, and $5-10bn of asset monetization. AT&T will be repurchasing roughly 3% of its outstanding shares/year (which is expected to be front loaded). Verizon's results continue to be solid with limited catalysts in the near-term, though we will be looking for incremental information from the rating agencies on an upgrade to single-A. On the cell tower side, results remain solid with both AMT and CCI benefiting from the significant increases in data usage, with consistent capital with limited M&A this year.

Largest issuers in the sector:

#	Issuer	Debt in JULI ($mn)	Share	Revenue ($bn)	EBITDA ($bn)	Debt ($bn)	Leverage	Int Cov	Profit Margin	Earnings Payout Ratio
1	AT&T Inc	100,163	54%	182	60	167	2.8x	7.1x	33%	24%
2	Verizon Communications Inc	76,005	41%	131	48	109	2.3x	10.0x	36%	21%
3	Rogers Communications Inc.	8,274	4%	11	5	15	3.2x	8.1x	40%	21%
	Sector Summary	**184,442**	**100%**	**325**	**112**	**290**	**2.6x**	**8.3x**	**34%**	**23%**

Change

#	Issuer	Revenue (y/y chg)	EBITDA (y/y chg)	Debt (y/y chg)	Leverage (y/y chg)	Int Cov (y/y chg)	Profit Margin (y/y chg)	Earnings Payout Ratio (y/y chg)
1	AT&T Inc	-3%	2%	-9%	-0.3x	-0.5x	2%	1%
2	Verizon Communications Inc	1%	0%	-4%	-0.1x	0.2x	0%	0%
3	Rogers Communications Inc.	2%	5%	23%	0.5x	0.3x	1%	4%
	Sector Summary	**-2%**	**1%**	**-6%**	**-0.2x**	**-0.2x**	**1%**	**1%**

Source: J.P. Morgan, Capital IQ

- LTM Revenue for the sector declined for the fourth consecutive quarter at 2% y/y and 1% q/q. This underperformance was driven by a 3% decrease from AT&T, which was partially offset by Verizon and Rogers Communications. This quarter also reported the around the lowest revenue ($320bn in 1Q19) since 2Q14 ($324bn). However, EBITDA was up 1% y/y and down 1% q/q. As a result, Profit Margin for the sector rose 1% y/y to 34%.
- Gross leverage for the sector fell 0.2x over the year to 2.6x, which is the lowest level since 1Q17. This reflects a gradual decline for the fifth quarter in a row since its peak of 2.9x in 2Q18. Over this period, Debt decreased 6% y/y while EBITDA increased slightly by 1% y/y.
- Interest Coverage was down by 0.2x y/y to 8.3x and fell in each subsequent quarter after its recent peak of 8.5x in 4Q18. Interest expense increased 5% over the year, outpacing the 1% y/y EBITDA growth. This is primarily driven by a y/y reduction of 0.5x in Interest Coverage at AT&T, which reported a 9% increase in interest expense versus a 2% growth in EBITDA.
- The Earnings Payout ratio was up modestly by 1% y/y to 23%. AT&T leads with 24% in Earnings Payout ratio, while Roger Communications grew the most at 4% y/y. Cash to Shareholders increased by 6% ($1.4bn) y/y, which was driven by the increase in Dividends of 10% ($2.3bn) y/y and modestly offset by the issuance of capital stock from A&T.

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Exhibit 1: Sector Constituents

	Sector	Debt outst ($mn)	Share
1.	AT&T Inc	100,163	54%
2.	Verizon Communications Inc	76,005	41%
3.	Rogers Communications Inc	8,274	4%
	Total	**184,442**	**100%**

Exhibit 2: Revenue

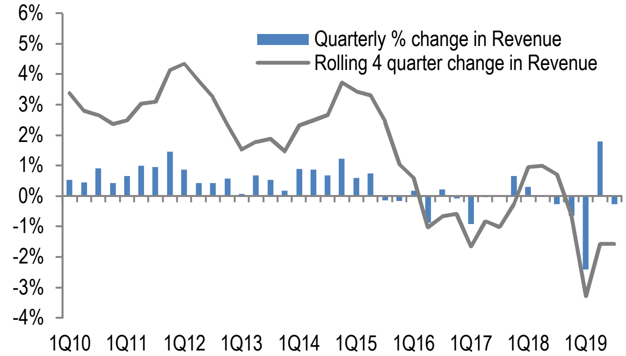


Exhibit 3: EBITDA

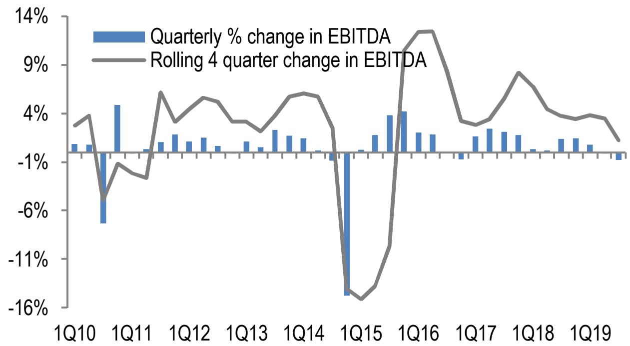


Exhibit 4: Debt

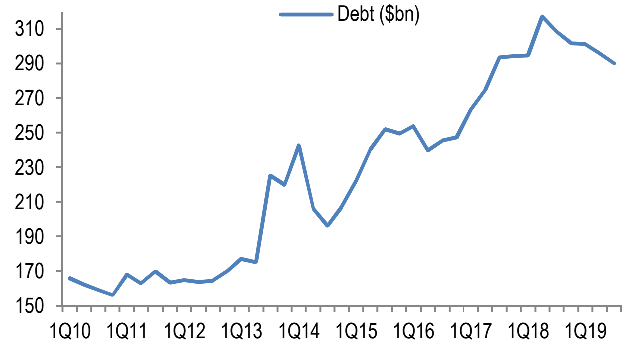


Exhibit 5: Cash to Shareholders

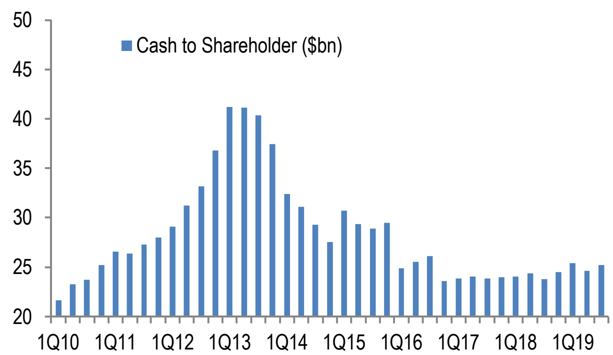


Exhibit 6: Gross and Net Leverage

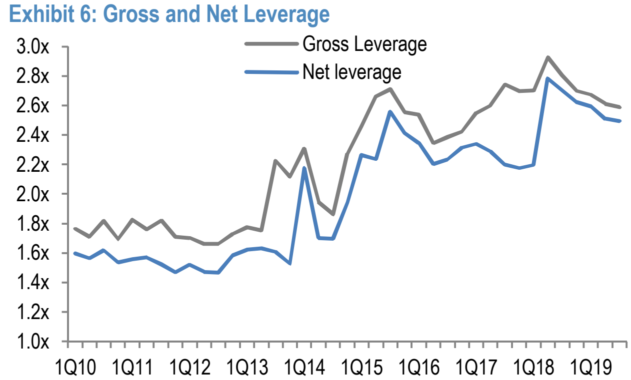


Exhibit 7: Interest Coverage Ratio

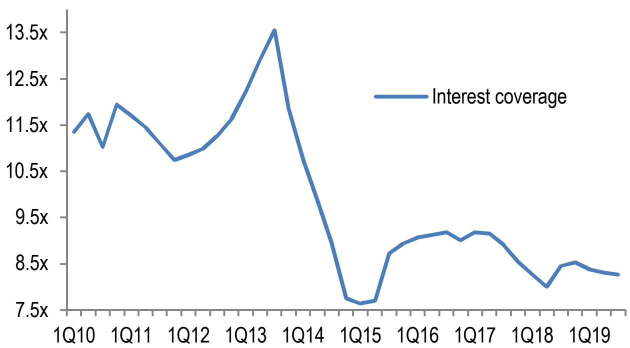
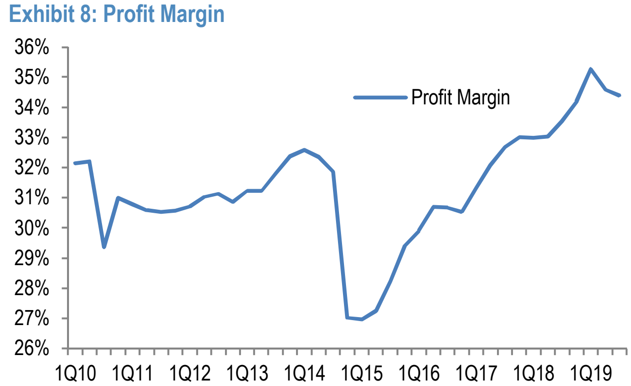


Exhibit 8: Profit Margin



Source for all exhibits on this page: J.P. Morgan, Capital IQ

Telecoms—Yankee

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We maintain our **Overweight recommendation** on the Yankee Telecom sector. Yankee Telecom spreads have enjoyed a strong year of performance with spreads 16bps tighter than the JULI ex-EM year-to-date. Furthermore, the spread between Yankees and Domestics has tightened from nearly 30bps earlier this year to only 8bps. We believe the inherently defensive nature of the sector, coupled with significant balance sheet enhancement initiatives (dividend cuts, asset sales) have supported the sector's outperformance. In terms of sector themes, we expect Vodafone and Telefonica to continue de-leveraging, while Orange and Deutsche Telekom maintain operational strength. We expect the sector to outperform once again in 2020, though we take a more measured approach given the strong run in 2019.

Largest issuers in the sector:

#	Issuer	Debt in JULI ($mn)	Share	Revenue ($bn)	EBITDA ($bn)	Debt ($bn)	Leverage	Int Cov	Profit Margin	Earnings Payout Ratio
1	Vodafone Group PLC	21,207	34%	49	17	66	4.0x	9.1x	34%	8%
2	Telefonica SA	15,334	24%	55	17	62	3.7x	6.5x	30%	5%
3	Deutsche Telekom AG	13,399	21%	90	31	74	2.4x	10.6x	34%	13%
4	Orange SA	7,217	11%	47	14	48	3.3x	10.1x	30%	15%
5	BT Group PLC	5,703	9%	30	10	22	2.3x	10.9x	32%	20%
	Sector Summary	**62,861**	**100%**	**271**	**88**	**272**	**3.4x**	**9.2x**	**32%**	**10%**

#	Issuer	Revenue (y/y chg)	EBITDA (y/y chg)	Debt (y/y chg)	Leverage (y/y chg)	Int Cov (y/y chg)	Profit Margin (y/y chg)	Earnings Payout Ratio (y/y chg)
1	Vodafone Group PLC	-9%	-2%	27%	0.9x	-4.6x	2%	-31%
2	Telefonica SA	-8%	-14%	-3%	0.4x	-3.4x	-2%	-6%
3	Deutsche Telekom AG	1%	38%	6%	-0.7x	1.8x	9%	-4%
4	Orange SA	-3%	0%	7%	0.2x	1.6x	1%	-2%
5	BT Group PLC	-6%	8%	-3%	-0.2x	-1.6x	4%	-2%
	Sector Summary	**-4%**	**7%**	**7%**	**0.3x**	**-1.8x**	**2%**	**-13%**

Source: J.P. Morgan, Capital IQ

- Yankee telecoms saw a drop in Revenue (-4% y/y) while there was a strong increase in EBITDA (7%) over the year. Revenue for the sector is at its lowest since 2Q16. Notable increase in EBITDA for Deutsche Telekom AG drove the increase in EBITDA for the sector.
- Debt growth (7% y/y) was in line with the rise in EBITDA (7% y/y). However, leverage rose by 0.3x over the year to 3.4x as the two largest companies in the sector increased leverage meaningfully. Deutsche Telekom AG (+6% y/y) and Vodafone (+27% y/y) were the major drivers for the increase in debt.
- Interest coverage for the sector decreased by 1.8x y/y to 9.2x as the increase in interest expense (18% y/y) more than offset the growth in EBITDA.
- Earnings payout ratio decreased by 13% over the year to 10%. Cash to Shareholders was significantly down (39% y/y) as the companies in the sector net issued equity. Dividends for the sector were also down by 14% y/y.

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Exhibit 1: Sector Constituents

	Sector	Debt outst ($mn)	Share
1.	Vodafone Group PLC	21,207	34%
2.	Telefonica SA	15,334	24%
3.	Deutsche Telekom AG	13,399	21%
4.	Orange SA	7,217	11%
5.	BT Group PLC	5,703	9%
	Total	**62,861**	**100%**

Exhibit 2: Revenue

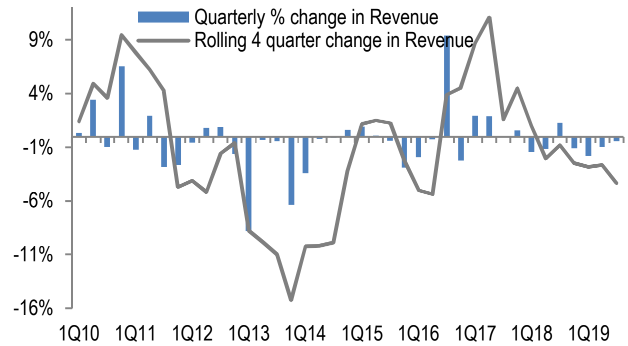


Exhibit 3: EBITDA

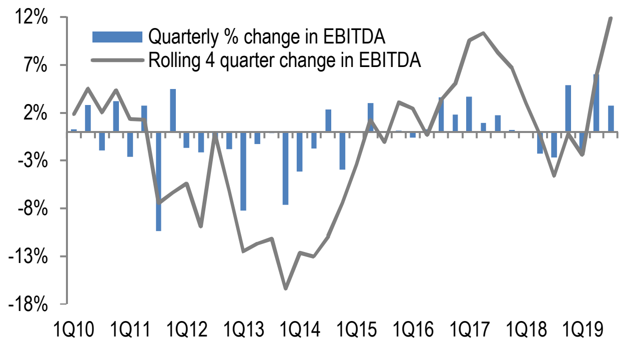


Exhibit 4: Debt

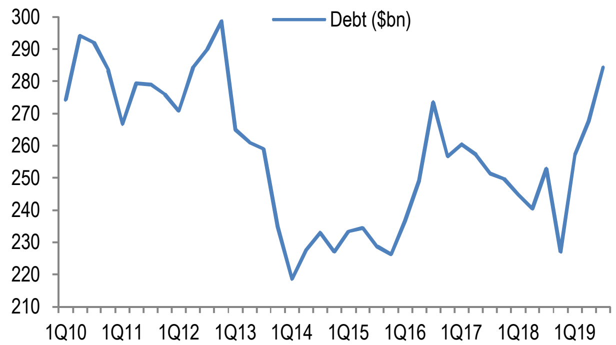


Exhibit 5: Cash to Shareholders

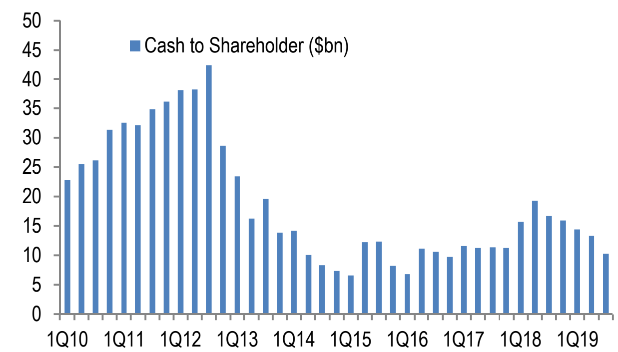


Exhibit 6: Gross and Net Leverage

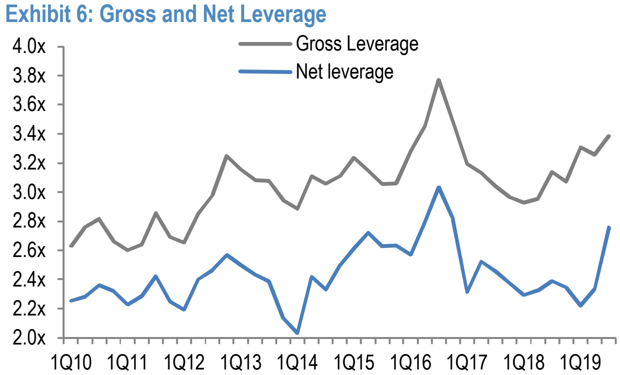


Exhibit 7: Interest Coverage Ratio

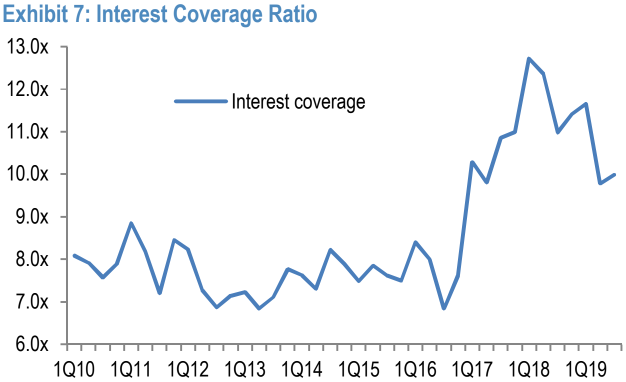
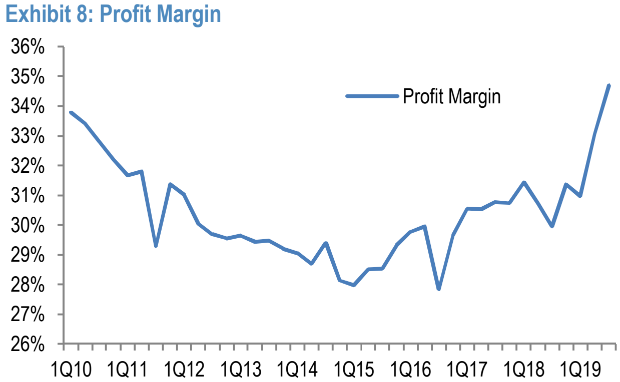


Exhibit 8: Profit Margin



Source for all exhibits on this page: J.P. Morgan, Capital IQ

Utilities

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We maintain our **Overweight on HoldCo's**, **Neutral on OpCo's** and **Neutral on GenCo's**. During the third quarter, the Utilities sector widened ~8bp, while the JULI and JULI Non-Financial indices both widened by ~12bp. In 3Q, utility HoldCo's widened by ~8bp, while OpCo's and GenCo's widened by ~9bp and ~2bp, respectively. YTD, Utilities have performed in-line with the broader JULI index, both tightening by ~23bp. The generic utility holdco/opco relationship has remained at ~28bp, compared to the 3-year average range of +25-30bp, and we continue to think this spread tightens to the lower end of the range as holdco debt reduction remains a priority for several names.

For utilities, third quarter results are typically the most important from an annual earnings contribution perspective, as 3Q encompasses peak summer demand from the hottest months. Broadly, the industry experienced incrementally positive 3Q earnings, which was largely driven by extreme heat during the summer months, primarily in ERCOT. Further, relatively stable earnings YTD allowed several utility management teams to increase or narrow full year earning ranges. Outside of favorable weather conditions, utility earnings continue to benefit from supportive regulators as grid infrastructure spending remains elevated.

Key themes in the sector remain unchanged as management teams continue to implement elevated multi-year capital spending plans to update existing grid infrastructure. Grid modernization has been a consistent theme for the sector over the last several quarters, particularly as utilities continue to grapple with seemingly more volatile weather events such as the recent wildfires in California. For merchant generators, power pricing remains a near-term weakness, but should be partially offset by cost reduction programs and a decline in growth investments. While power pricing in ERCOT remained strong this summer, reserve margins are expected to improve next summer, moderating scarcity pricing in the coming years. Regardless, we expect overall power market fundamentals to be soft as forward curves have generally remained flat.

Largest issuers in the sector:

#	Issuer	Debt in JULI ($mn)	Share	Revenue ($bn)	EBITDA ($bn)	Debt ($bn)	Leverage	Int Cov	Profit Margin	Earnings Payout Ratio
1	Duke Energy Corp	45,177	12%	25	11	62	5.8x	4.9x	44%	15%
2	Berkshire Hathaway Energy Co	28,146	7%	20	7	42	5.9x	4.0x	36%	4%
3	Exelon Corp	27,966	7%	35	10	39	4.1x	5.8x	27%	13%
4	Dominion Resources Inc	24,841	6%	15	7	42	6.3x	3.7x	43%	-35%
5	Southern Company	24,661	6%	22	9	48	5.5x	4.9x	40%	20%
	Sector Summary	**382,521**	**100%**	**320**	**114**	**616**	**5.5x**	**4.5x**	**37%**	**15%**

Change

#	Issuer	Revenue (y/y chg)	EBITDA (y/y chg)	Debt (y/y chg)	Leverage (y/y chg)	Int Cov (y/y chg)	Profit Margin (y/y chg)	Earnings Payout Ratio (y/y chg)
1	Duke Energy Corp	4%	5%	9%	0.2x	-0.1x	1%	-1%
2	Berkshire Hathaway Energy Co	1%	1%	7%	0.3x	0.0x	0%	3%
3	Exelon Corp	-2%	-5%	8%	0.5x	-0.9x	-1%	2%
4	Dominion Resources Inc	17%	7%	10%	0.2x	-0.9x	-4%	-56%
5	Southern Company	-8%	12%	2%	-0.6x	0.7x	7%	2%
	Sector Summary	**1%**	**4%**	**12%**	**0.5x**	**-0.4x**	**1%**	**-1%**

Source: J.P. Morgan, Capital IQ

- Revenue growth for the Utilities sector remains subdued and has slowed to 1% y/y in 3Q19. This is a multi-year low since 4Q16 (-4% y/y). EBITDA increased by 4% y/y and as a result, Profit margin increased by 1% y/y to 37%.
- The Utilities sector typically has a higher leverage relative to those in other sectors. The sector leverage rose by 0.5x y/y to a record high of 5.5x in 3Q19. This was the around the largest jump in leverage since 3Q02, and was primarily driven by a modest increase of 12% in Debt over the same period. Debt rose to record high of $616bn, and was led by NextEra Energy Inc which reported a 28% debt increase y/y primarily used for M&A financing.
- Interest Coverage fell eight consecutive quarters and most recently by 0.4x y/y to 4.5x, the lowest level since 1Q06.
- The Earnings Payout ratio decreased 1% y/y to 15% in 3Q19, as Cash to Shareholders decreased 14% y/y and EBITDA modestly increased by 4% y/y.

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Exhibit 1: Sector Constituents

	Sector	Debt outst ($mn)	Share
1.	Duke Energy Corp	45,177	12%
2.	Berkshire Hathaway Energy Co	28,146	7%
3.	Exelon Corp	27,966	7%
4.	Dominion Resources Inc/VA	24,841	6%
5.	Southern Company	24,661	6%
6.	NextEra Energy Inc	20,901	5%
7.	Edison International	17,782	5%
8.	FirstEnergy Corp	16,705	4%
9.	American Electric Power Co Inc	15,962	4%
10.	Xcel Energy Inc	14,896	4%
11.	Others	145,486	38%
	Total	**382,521**	**100%**

Exhibit 2: Revenue

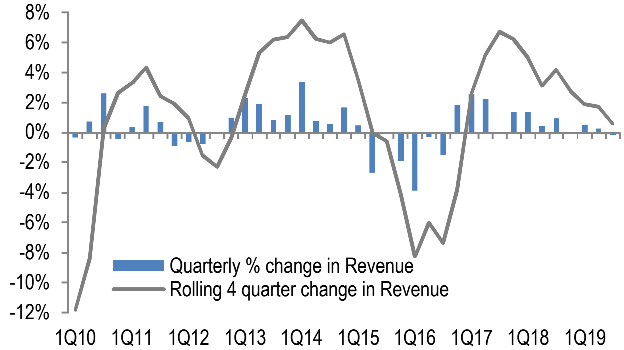


Exhibit 3: EBITDA

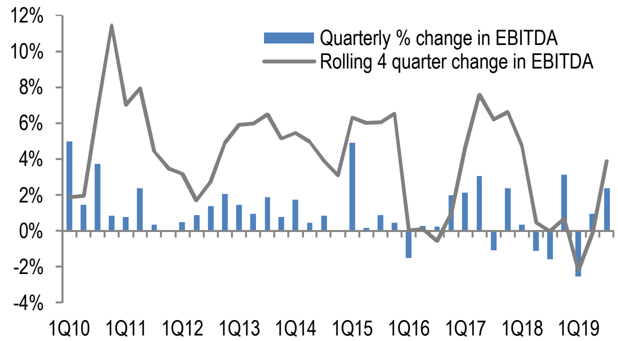


Exhibit 4: Debt

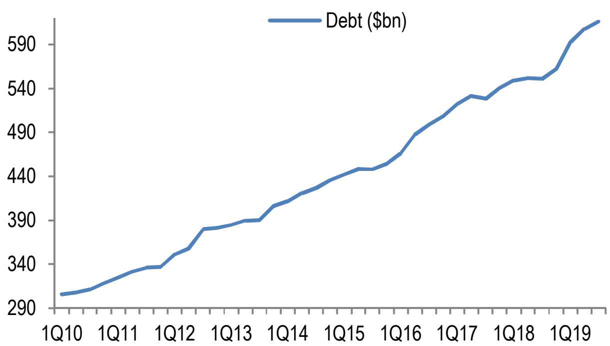
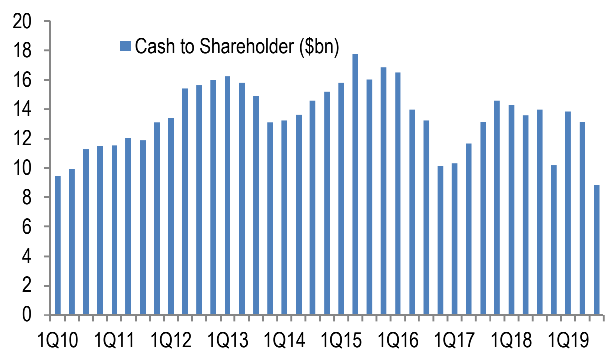


Exhibit 5: Cash to Shareholders



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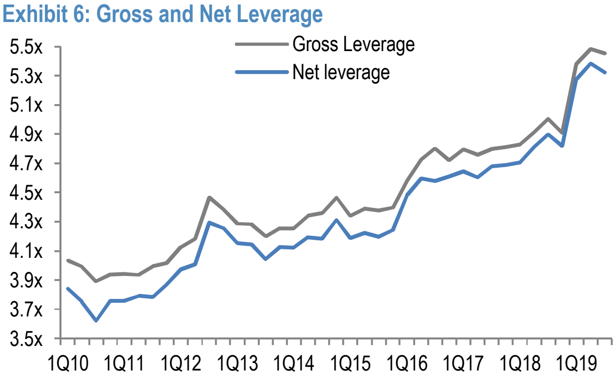

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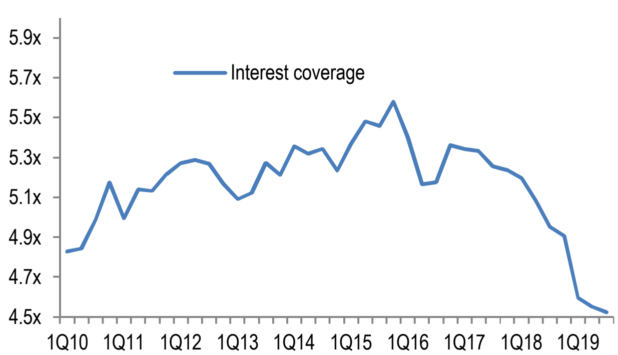
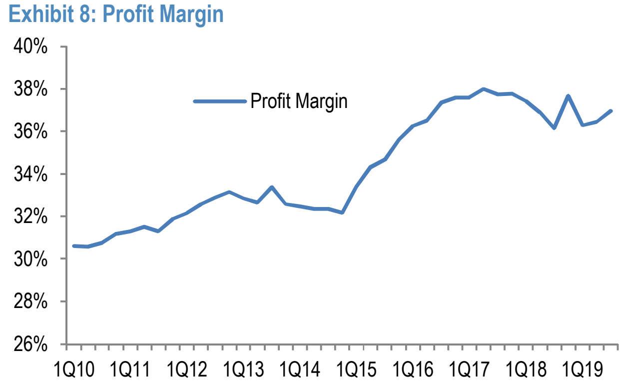


Exhibit 8: Profit Margin



Source for all exhibits on this page: J.P. Morgan, Capital IQ

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Methodology

The analyses in this report are based on about 200 non-Financial High Grade bond issues. For balance sheet and income statement data such as Revenue and Cash the figures shown are a simple sum of each company in the analysis. Financial ratios are calculated by taking each issuer's ratio and weighting it by its debt in relationship to the total debt of all issuers or of all issuers in the sector. In this process the top and bottom 10% of each ratio (weighted by debt) is eliminated from the calculations, to avoid distortion from outliers. Note that for all charts a constant composition methodology is used. This means when a company falls to high yield its current and all prior data from the company is eliminated from the analysis. We use the same list of companies with the same weights for all the history. The benefit of this approach is that it removed distortions from changes in composition. The downside is that the data over time are not comparable to bond indices, as indices rebalance regularly.

The data sources for the analysis include J.P. Morgan analysts, and Capital IQ. J.P. Morgan analysts have vetted the data and helped clean up or explain divergences for mergers or other events. These are highlighted in the commentary in each sector, which is included thanks to their participation.

Summary sections include analysis and exhibits for Non-Financial sectors. Six credit metrics are shown for each of the Industrial and Utility sectors discussed. Some of these metrics are not commonly a focus for each sector but are included so that the summary metrics can be analyzed. The sector-based analysis provides a brief summary of the complex trends occurring in each sector, and we refer clients to the extensive research from our industry sector credit analysts for more detail and insight. The appropriate analyst's name is included on the sector pages.

Exhibit 1: Industrial and Utility Credit Ratios Analyzed

Ratios
Gross Debt / EBITDA
Net Debt / EBITDA
EBITDA / Interest Expense
EBITDA / Revenue
Cash to Shareholders / EBITDA

Source: J.P. Morgan.

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All authors named within this report are research analysts unless otherwise specified. In Europe, Sector Specialists may be shown on this report as contacts but are not authors of the report or part of the Research Department.

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CSX - J.P. Morgan Credit Opinion History

	Date	Action	Rating/Designation	Ticker/ISIN
Issuer	21 Apr 17	Upgrade	Overweight	CSX
Issuer	20 Jul 17	Downgrade	Neutral	CSX
Issuer	17 Oct 17	Upgrade	Overweight	CSX
Issuer	17 Jan 18	Downgrade	Neutral	CSX
Issuer	25 Jul 19	Upgrade	Overweight	CSX
3.250% '27 *	21 Aug 17	Initiate	Neutral	US126408HH96
3.250% '27 *	17 Oct 17	Upgrade	Overweight	US126408HH96
3.250% '27 *	17 Jan 18	Downgrade	Neutral	US126408HH96
3.250% '27 *	25 Jul 19	Upgrade	Overweight	US126408HH96
2.600% '26	21 Apr 17	Upgrade	Overweight	US126408HE65
2.600% '26	20 Jul 17	Downgrade	Neutral	US126408HE65
2.600% '26	21 Aug 17	Terminate	Not Covered	US126408HE65
3.400% '24	17 Nov 16	Terminate	Not Covered	US126408HB27
3.700% '23	15 Aug 16	Terminate	Not Covered	US126408GZ04

Union Pacific - J.P. Morgan Credit Opinion History

	Date	Action	Rating/Designation	Ticker/ISIN
Issuer	19 Jun 18	Upgrade	Neutral	UNP
Issuer	25 Jan 19	Upgrade	Overweight	UNP
3.000% '27 *	21 Aug 17	Initiate	Underweight	US907818EP96
3.000% '27 *	19 Jun 18	Upgrade	Neutral	US907818EP96
3.000% '27 *	25 Jan 19	Upgrade	Overweight	US907818EP96
3.250% '25	15 Aug 16	Terminate	Not Covered	US907818DY13
4.050% '46	23 Aug 17	Terminate	Not Covered	US907818EJ37
4.750% '43	15 Aug 16	Terminate	Not Covered	US907818DU90

United Parcel Service - J.P. Morgan Credit Opinion History

	Date	Action	Rating/Designation	Ticker/ISIN
Issuer	01 Oct 13	Initiate	Underweight	UPS
2.450% '22 *	01 Oct 13	Initiate	Underweight	US911312AQ92

Ryder System, Inc. - J.P. Morgan Credit Opinion History

	Date	Action	Rating/Designation	Ticker/ISIN
Issuer	21 Nov 19	Downgrade	Underweight	R
2.500% '22 *	21 Aug 17	Initiate	Neutral	US78355HKF54
2.500% '22 *	21 Nov 19	Downgrade	Underweight	US78355HKF54
2.500% '20	23 Aug 17	Terminate	Not Covered	US78355HJZ38
3.45% '21	30 Sep 16	Terminate	Not Covered	US78355HKB41
3.500% '17	15 Aug 16	Terminate	Not Covered	US78355HJR12

Canadian National Railway - J.P. Morgan Credit Opinion History

	Date	Action	Rating/Designation	Ticker/ISIN
Issuer	31 Oct 13	Initiate	Underweight	CNRCN
4.450% '49 *	19 Nov 18	Initiate	Underweight	US136375CV26
2.750% '26	04 Dec 18	Terminate	Not Covered	US136375CJ97
4.500% '43	30 Sep 16	Terminate	Not Covered	US136375BZ49

***Indicates representative/primary bond/instrument.**

The table(s) above show the recommendation changes made by J.P. Morgan Credit Research Analysts in the subject company and/or instruments over the past three years (or, if no recommendation changes were made during that period, the most recent change). Notes: Effective April 11, 2016, J.P. Morgan changed its Credit Research Ratings System. Please see the Explanation of Credit Research Ratings below for the new definitions. The previous rating system no longer should be relied upon. For the history prior to April 11, 2016, please call 1-800-447-0406 or e-mail research.disclosure.inquiries@jpmorgan.com.

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We use the following ratings for bonds (issues) and issuers: Overweight (over the next three months, the recommended risk position is expected to outperform the relevant index, sector, or benchmark); Neutral (over the next three months, the recommended risk position is expected to perform in line with the relevant index, sector, or benchmark); and Underweight (over the next three months, the recommended risk position is expected to underperform the relevant index, sector, or benchmark). J.P. Morgan Emerging Markets Sovereign Research uses Marketweight, which is equivalent to Neutral. NR is Not Rated. In this case, J.P. Morgan has removed the rating for this particular security or issuer because of either a lack of a sufficient fundamental basis or for legal, regulatory or policy reasons. The previous rating no longer should be relied upon. An NR designation is not a recommendation or a rating. NC is Not Covered. An NC designation is not a rating or a recommendation.

For CDS, we use the following rating system: Long Risk (over the next three months, the credit return on the recommended position is expected to exceed the relevant index, sector or benchmark); Neutral (over the next three months, the credit return on the recommended position is expected to match the relevant index, sector or benchmark); and Short Risk (over the next three months, the credit return on the recommended position is expected to underperform the relevant index, sector or benchmark).

J.P. Morgan Credit Research Ratings Distribution, as of October 05, 2019

	Overweight	Neutral	Underweight
Global Credit Research Universe	26%	57%	18%
IB clients*	66%	64%	61%

*Percentage of subject companies within each of the "buy," "hold" and "sell" categories for which J.P. Morgan has provided investment banking services within the previous 12 months. Please note that the percentages might not add to 100% because of rounding.
The Credit Research Rating Distribution is at the issuer level. Issuers with an NR or an NC designations are not included in the table above. This information is current as of the end of the most recent calendar quarter.

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