Healthcare Industry: Quarterly Trends and Spread Chartbook

Amazon penetrates further into the pharmaceutical supply chain; White House blueprint modestly addresses U.S. drug pricing.

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Executive Summary

In the second quarter, Amazon increased its presence in the healthcare industry while the Trump administration unveiled its proposed plan to hold down U.S. drug pricing. In June, Amazon's new healthcare initiative in partnership with Berkshire Hathaway and JPMorgan Chase appointed an industry expert as CEO. In addition, the firm stepped further into the drug distribution channel with its intention to purchase PillPack, a privately held online pharmacy. We remain skeptical that these well-resourced players will be able to directly contain rising U.S. healthcare costs for the foreseeable future. In May, the White House released a policy paper, "The Trump Administration Blueprint to Lower Drug Prices and Reduce Out-of-Pocket Costs," that essentially reiterates prior proposals including those found in the administration's 2019 budget plan. We see this "blueprint" as having only modest influence on controlling drug costs in the U.S., which we expect can be readily managed by brand name drug manufacturers.

Key Takeaways

- Our credit rating changes since the end of the second quarter were relatively balanced, with two upgrades, two downgrades, and one company placed Under Review Developing. These rating actions were driven by a variety of situations ranging from sizeable business development to stressed operational performance.
- New debt issuance in the second quarter of $30 billion nearly met last year's total. But, including $68 billion issued by healthcare companies in the first quarter, the total of new debt in the first half of $98 billion almost doubled the amount in the first half of 2017. Most of the new debt related to completing business development transactions, including Bayer's acquisition of Monsanto and GlaxoSmithKline's buyout of it consumer healthcare joint venture partner Novartis. After the consummation of these major deals, we see quarterly new issuance slowing and focused toward refinancing efforts.
- Since the end of the first quarter, healthcare sector bonds have widened less than Morningstar Inc.'s Corporate Bond Index. In the pharmaceutical sector, bonds from biopharmaceutical developers Celgene, Biogen, and Amgen recently traded the widest relative to Morningstar Inc.'s Corporate Bond Index when adjusted for rating, while bonds from AstraZeneca, AbbVie, and Shire traded the tightest. In medical technology and services, Stryker's bonds widened substantially in the quarter and now offer the widest spread relative to the index in this sector, while Thermo Fisher's bonds represent the tightest. The supply chain sector, which is taking the brunt of Amazon's growing presence in the healthcare industry, offers the widest spreads on average relative to the index in the industry.

Healthcare Headlines

Credit Rating Actions

Since the end of the first quarter, our rating actions in the healthcare industry were distributed as follows: two upgrades, two downgrades, one under review developing, nine affirmations, and 12 withdrawals for business reasons.

Exhibit 1 Credit Rating Actions

Health Care Issuer	Ticker	Old Rating	Current Rating	Rating Action/ Review Status	Action Date
Boston Scientific Corp	BSX	BBB-	BBB+	Upgraded	4/11/2018
HCA Healthcare Inc	HCA	BB	BB+	Upgraded	4/12/2018
Mallinckrodt PLC	MNK	BB-	B+	Downgraded	5/17/2018
Bayer AG	BAYRY	A-	BBB+	Downgraded	6/11/2018
Shire PLC	SHPG	BBB-	BBB-	UR	5/9/2018
Tenet Healthcare Corp	THC	B-	B-	Affirmed	4/4/2018
DaVita Inc	DVA	BB+	BB+	Affirmed	4/5/2018
Fresenius Medical Care AG & Co. KGaA	FMS	BBB-	BBB-	Affirmed	4/5/2018
Cardinal Health Inc	CAH	A-	A-	Affirmed	4/11/2018
Medtronic PLC	MDT	A+	A+	Affirmed	4/11/2018
Edwards Lifesciences Corp	EW	A-	A-	Affirmed	4/12/2018
AbbVie Inc	ABBV	BBB+	BBB+	Affirmed	6/12/2018
Sanofi SA	SNY	AA-	AA-	Affirmed	6/18/2018

Source: Morningstar Credit Ratings, LLC as of July 10, 2018

Credit Rating Changes and Reviews

During the quarter, our rating changes were driven by a hodgepodge of situations ranging from sizeable business development to stressed operational performance. We do not discern a specific secular trend in the healthcare space from these idiosyncratic factors that influenced ratings in the quarter.

Our two upgrades during the past quarter were Boston Scientific Corp (BBB+, stable) and HCA Healthcare Inc (BB+, stable). We upgraded Boston Scientific to BBB+ from BBB in April given our expectation for improved financial flexibility after the firm satisfies most of its legal and tax obligations ($1.4 billion) by the end of 2018 utilizing free cash flow totaling $1.9 billion, by our estimates. Once it pays those obligations, Boston should enjoy adjusted free cash flow to range between $2.0 billion to $2.5 billion from 2019 to 2022, which has helped boost the firm's Cash Flow Cushion. We also upgraded HCA's rating to BB+ from BB in the second quarter to reflect a better view of two factors that affect the firm's Business Risk pillar: the economic moat and uncertainty assessments. In early April, Morningstar's Equity Research Group increased its moat assessment on HCA to narrow from none given returns on invested capital exceeding its capital costs, combined with the company's substantial local market share. The Group also reduced the uncertainty score to high from very high considering HCA's relatively steady results within healthcare services. Shortly thereafter, on April 12, we raised HCA's rating as these two improvements benefited the firm's Business Risk enough for the one-notch upgrade.

Negative rating actions during the quarter were isolated to the downgrades of Mallinckrodt PLC (B+, stable) and Bayer AG (BBB+, stable). In May, we lowered Mallinckrodt's rating by one notch to reflect significant operational pressure from the company's transformation into an innovative specialty medicine firm, heavy reliance on its best-seller Acthar Gel, and high financial leverage from an inflated debt load coupled with earnings compression. Underperformance of Acthar led to a dramatic fall in the firm's equity cushion over the last year, pushing the Distance to Default pillar into very weak territory. Acthar and top-selling medicines, Inomax and Ofirmev, together represent 81% of overall revenue, which contributes to very high Business Risk. After the completion of Bayer's acquisition of Monsanto Co (not rated) on June 10, we downgraded the firm's rating to BBB+ from A- to reflect significantly higher debt load following purchase of Monsanto for $63 billion along with potential challenges in successfully integrating the large entity over the next few years. Resulting elevated debt load from the transaction may keep gross leverage above 4 times EBITDA over the next few years, by our estimates, which weighs on a weak Cash Flow Cushion pillar. Bayer's rating also reflects its diverse product portfolio that spans human and animal pharmaceutical industries, and agricultural markets, which favors our Business Risk pillar. Following this rating action, we withdrew Bayer's rating for business reasons.

Following Takeda Pharmaceutical's (not rated) announcement of its intentions to acquire Shire PLC (BBB-/UR) for $62 billion in early May, we placed Shire's BBB- rating Under Review Developing. Takeda expects to fund the proposed purchase with available cash and incremental debt amounting to 46% of the purchase price and stock totaling 54% of the price, which will stress Takeda's balance sheet. The firm plans to drop net debt leverage to 2.0 times or less over the medium term (from approximately 5 times by our estimation) through strong cash generation. We look to ascertain the ultimate capital structure following the acquisition by Takeda. The extra debt burden and the effect of this to our Cash Flow Cushion and Solvency Score pillars may determine the direction of the final rating outcome.

Other Healthcare Events

- Novartis AG (AA, stable) wasted little time reallocating expected proceeds from the sale of its 36.5% stake to GlaxoSmithKline PLC (A, stable) of their consumer healthcare joint venture for GBP 9.2 billion, or $13 billion. Shortly after making the announcement of the transaction on March 29, the firm entered into an agreement to acquire AveXis Inc, a clinical-stage gene therapy company, for $8.7 billion on April 9. Both deals are expected to complete by the middle of the year. Furthermore, Novartis announced at the end of the second quarter its intention to repurchase $5 billion in shares through 2019 using cash from the divestment. At the same time, the firm stated plans to spin-off its once-struggling eye care unit Alcon by the first half of 2019. We consider these actions to have little influence on the current rating.
- Amazon.com Inc (A, stable) increased inroads into the healthcare market with the announcement at the end of June of its intention to purchase privately held online pharmacy PillPack. As a result, the markets were spooked and temporarily pressured spreads for drug wholesalers AmerisourceBergen Corp (A, stable), Cardinal Health Inc (A-, stable), and McKesson Corp (A-, stable), and pharmaceutical retailers CVS Health Corp (BBB+/UR-) and Walgreens Boots Alliance Inc (BBB, stable). During the quarter, Amazon's new healthcare initiative in partnership with Berkshire Hathaway Inc (not rated) and JPMorgan Chase & Co (A, stable) took a step forward with the appointment of Dr. Atul Gawande as chief executive officer in June. The new CEO brings an expert view of the healthcare industry as founder

of Ariadne Labs, a firm dedicated to finding ready ways to better manage medical settings. The partnership, in general, looks to bend the healthcare cost curve utilizing its scale advantage with more than 1 million employees, collectively. We remain skeptical that even these well-resourced players will be able to directly move the needle on U.S. healthcare costs any time soon.

Recent New Debt Issuance

Healthcare issuers on our coverage list issued slightly more than $30 billion of new bonds in the second quarter of 2018, which nearly matched the total of $31.7 billion in the second quarter of 2017. Through the first half of the year, the sector issued around $98 billion, almost doubling the amount in the first half of the prior year. Given Bayer's jumbo offering of $15 billion and subsequent euro-based issuance (EUR 5 billion), most of the new debt (89%) was used to fund business development activities with the balance dedicated to debt repayment (11%).

Exhibit 6 Second-Quarter Debt Issuance

Announcement Date	Healthcare Issuer	Ticker	M* rating	Size (mm)	Projected use of proceeds
5/10/2018	GlaxoSmithKline PLC*	GSK	A	$6,000	Fund acquisition of Novartis' share of consumer healthcare JV
5/17/2018	Becton, Dickinson, and Co	BDX	BBB	EUR 300	Redeem existing debt
5/17/2018	Becton, Dickinson, and Co	BDX	BBB	GBP 250	Redeem existing debt
5/17/2018	Valeant Pharmaceuticals Int'l Inc	VRX	B-	$750	Redeem existing debt
6/12/2018	Sanofi SA	SNY	AA-	$2,000	General corporate purposes including redeeming existing debt
6/18/2018	Bayer AG*	BAYRY	WO	$15,000	Fund acquisition of Monsanto
6/19/2018	Bayer AG*	BAYRY	WO	EUR 5,000	Fund acquisition of Monsanto
Total				$30,319	

* Previously highlighted as potential new issuers.

Source: Morningstar Credit Ratings, LLC and company reports.

Potential New Debt Issuance

Considering the funding of previous acquisition activities (Bayer and GlaxoSmithKline) in the second quarter along with the removal of potential issuances of companies that were recently withdrawn, our estimate of potential new issuance has dramatically fallen to about $13 billion from $62 billion at the end of the first quarter of 2018. Most of this estimated debt issuance pertains to possible refinancing and further leveraging of the capital structure. Walgreens is the lone firm in our coverage universe with a pending acquisition that may utilize incremental debt.

Exhibit 7 Potential New Debt Issuance

Health Care Issuer	Ticker	M* Rating	Potential Size (mm)	Use Of Proceeds
AbbVie Inc	ABBV	BBB+	$6,000	May refinance $6 billion in 2018 debt maturities
Baxter International Inc	BAX	A	$4,500	Operating well below its 2.0 times leverage target.
Walgreens Boots Alliance Inc	WBA	BBB	$2,000	May permanently finance some of recent $4.4 billion Rite Aid store purchases with new debt
Total			$12,500	

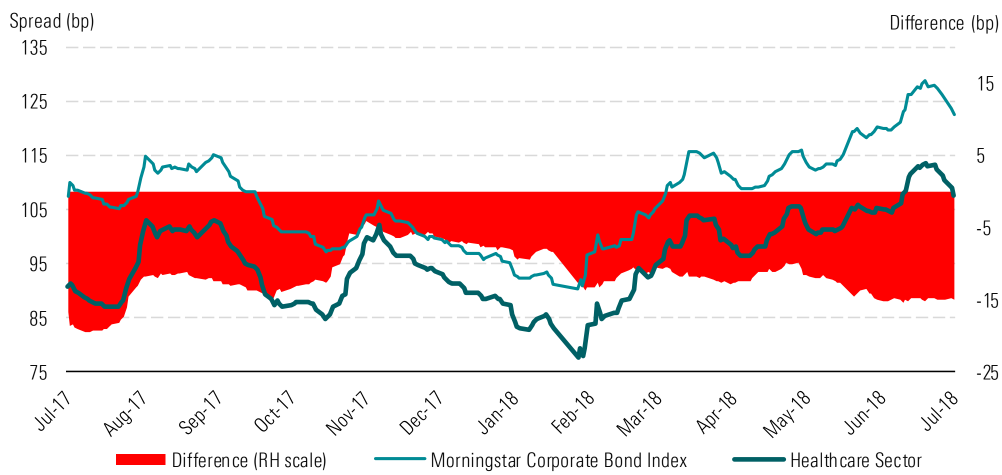
Source: Morningstar Credit Ratings, LLC

Healthcare Industry Spreads

Trailing 12 Months

The healthcare industry has continued to perform roughly in line with the broad corporate market, and over the past 12 months, spreads in healthcare widened by 16 basis points while Morningstar Inc.'s Corporate Bond Index widened by 13 basis points during that period. Since the U.S. presidential election in November 2016, healthcare industry spreads have performed in line with the broad index, with healthcare spreads tightening by 15 basis points as Morningstar Inc.'s Corporate Bond Index tightened by 13 basis points. So far, no regulatory action under the current administration has had a meaningful influence on the credit profiles of most healthcare firms, yielding a largely neutral impact on creditors.

Exhibit 8 Healthcare Industry Spreads vs. Morningstar Inc's Corporate Bond Index (Trailing 12 Months)

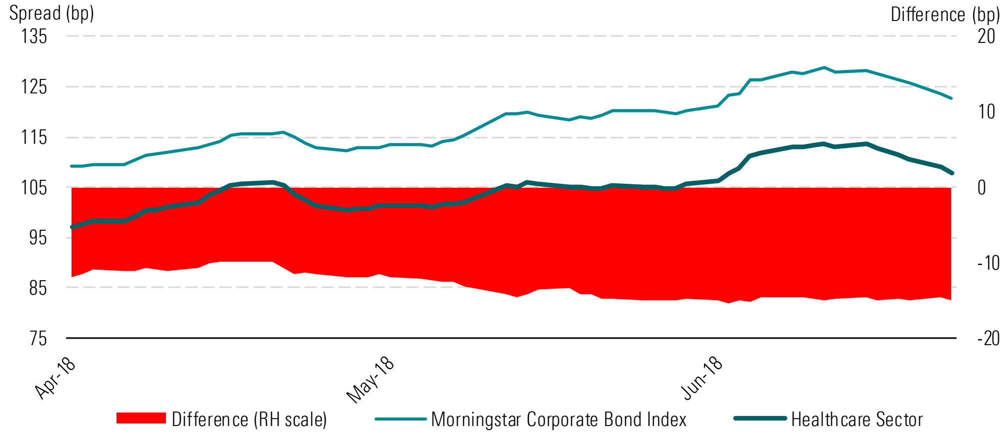


Source: Morningstar Credit Ratings, LLC and Morningstar, Inc as of July 10, 2018

Trailing Three Months

Since our last quarterly report in early April, spreads in the healthcare industry have widened only 11 basis points relative to a 14-basis-point widening of Morningstar Inc.'s Corporate Bond Index. Headwinds to the healthcare industry, including uncertainty of healthcare reform and prescription drug pricing, have eased over the year. Efforts to repeal and replace the Affordable Care Act have taken a back seat to other government initiatives, such as rolling out new tax reform, with little expected during this midcycle election period. Additionally, once-aggressive rhetoric directed at high drug pricing was muted by mild proposals called out in the administration's blueprint for lower drug costs to patients.

Exhibit 9 Healthcare Industry Spreads vs. Morningstar Inc's Corporate Bond Index (Since April 5, 2018)

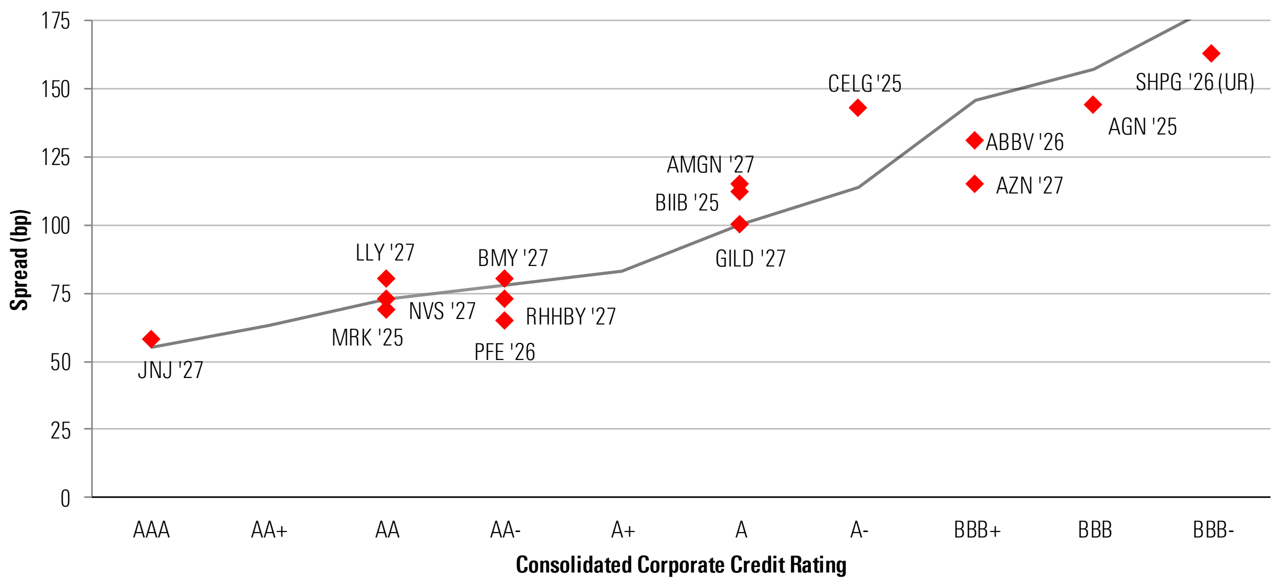


Source: Morningstar Credit Ratings, LLC and Morningstar Inc. as of July 10, 2018

Spread Charts by Healthcare Sector

Pharmaceuticals

Exhibit 10 Pharmaceuticals vs. Morningstar Corporate Bond Index



Source: Morningstar Credit Ratings, LLC, Morningstar Inc., and Interactive Data as of July 10, 2018
(UR) = rating under review / (p) = positive outlook / (n) = negative outlook.

Sector Trends

Since our previous publication in April, average spreads in the pharmaceutical sector widened by 11 basis points, adjusting for those companies that are no longer covered by Morningstar Credit Ratings. This change parallels the 11-basis point widening for the healthcare sector and is within the 14 basis points of widening in Morningstar Inc.'s Corporate Bond Index during the period. Relative to the index, bonds that recently traded more than 10 basis points wider than the index were those from biopharmaceutical developers Celgene Corp (A-, stable), Biogen Inc (A, stable), and Amgen Inc (A, stable). On the other hand, bonds from AstraZeneca PLC (BBB+, stable), AbbVie Inc (BBB+, stable), and Shire recently traded tighter by 15 basis points or more than the index when adjusting for rating category. In May, the White House released a policy paper, "The Trump Administration Blueprint to Lower Drug Prices and Reduce Out-of-Pocket Costs," that essentially reiterates prior proposals including those found in the administration's 2019 budget plan, which we saw as having only modest influence on controlling drug costs. This "blueprint" seeks to contain overall pharmaceutical costs through intensifying generic drug competition, nipping at the fringes of negotiating drug pricing in Medicare Part D, increasing transparency of drug price changes, and allowing pharmacists and insurers to provide information on drug choices to patients to allow for lower out-of-pocket payment. Longer term, the potential policies will look to revisit rebating in the pharmaceutical industry as well as looking at fiduciary status for pharmacy benefit managers. While we expect slight pressure on brand name drug pricing from these recent measures, we see branded drug developers easily managing the impact.

Issuer Highlights

- Our estimate that AbbVie (BBB+, stable) can overcome nearing biosimilar competition in Europe to Humira with newer oncology medicines and potential contribution from its late-stage research pipeline, prompted us to revise the firm's rating outlook to stable from negative in June. Our conviction is reinforced by AbbVie's settlements with Amgen (A, stable) in September 2017, and Biogen (A, stable) and its partner Samsung Bioepis in April 2018, which fixes the timing of biosimilar launches of Humira in Europe in October 2018 and in the U.S. in 2023. Solid contributions from expanding clinical utility of AbbVie’s oncology portfolio, specifically Venclexta and Imbruvica, along with potential near-term commercialization of novel late-stage drug candidates in women’s health (elagolix) and immunology (risankizumab and upadacitinib), may serve to partially stem Humira erosion until U.S. competition intensifies in 2023.
- The negative outlook on Mylan NV's (BBB-, negative) rating reflects the difficulty the firm is experiencing in deleveraging its balance sheet while it contends with significant operational challenges. These headwinds include increased pricing pressure in the U.S. generics market and subdued expectations for its best-selling EpiPen brand (severe allergic reactions) given increasing generic competition. As such, Mylan missed its original deleveraging plan that looked to reduce net leverage to 3 times within 18 months after the Meda purchase (or around the end of 2017). The firm remains committed to an investment-grade rating and now plans to drop net leverage below 3.5 times in 2018 or a full turn lower than 4.5 times for the latest 12 months as of March 31, 2018, by our estimation. The main catalyst for a rating downgrade over the next year or so is prolonged inflated leverage whether through operational stresses or a continued heavy debt load, such that the Solvency Score pillar further deteriorates.
- Shire's rating was placed Under Review Developing in May after Takeda announced its pursuit of the company for approximately $62 billion. The proposed purchase will pressure Takeda's balance sheet as funding is planned to come from available cash and incremental debt amounting to 46% of the purchase price and stock totaling 54% of the price. The firm plans to drop net debt leverage to 2.0 times or less over the medium term (from approximately 5 times by our estimation) through strong cash generation. We look to ascertain the ultimate capital structure following the acquisition by Takeda. The extra debt burden and the effect of this to our Cash Flow Cushion and Solvency Score pillars may determine the direction of the final rating outcome.
- Following placing Sanofi SA's AA- rating under review with negative implications in January after it announced its intention to acquire Bioverativ, we affirmed the firm's rating in June. Despite an increased debt load related to the purchases of Bioverativ for $11.6 billion and Ablynx for EUR 3.9 billion, a broadened product portfolio along with seven novel therapies introduced since 2014 may drive revenue and EBITDA growth in the low single digits compounded annually in 2017-22. This operational performance helps mitigate pressure on the firm's moderate Cash Flow Cushion stemming from an inflated debt level that has already pushed up gross leverage for the trailing 12 months as of March 31, 2018, by one turn since the end of 2017. We subsequently withdrew Sanofi's rating in June following this resolution of the under review negative status.
- We downgraded Bayer's credit rating to BBB+ from A- in June after it completed its acquisition of Monsanto due to incremental debt needed to fund the transaction. New debt issuance so far ($15 billion plus EUR 5 billion) is less than originally anticipated, reduced by proceeds from a reduction in ownership of its material science business Covestro (EUR 6.5 billion through January 2018) and required

divestments of certain agriculture segments (EUR 6.1 billion). However, we still see gross leverage staying above 4 times EBITDA over the next few years, which weighs on a weak Cash Flow Cushion pillar. After we resolved the under review negative status with the downgrade, Bayer's rating was withdrawn.

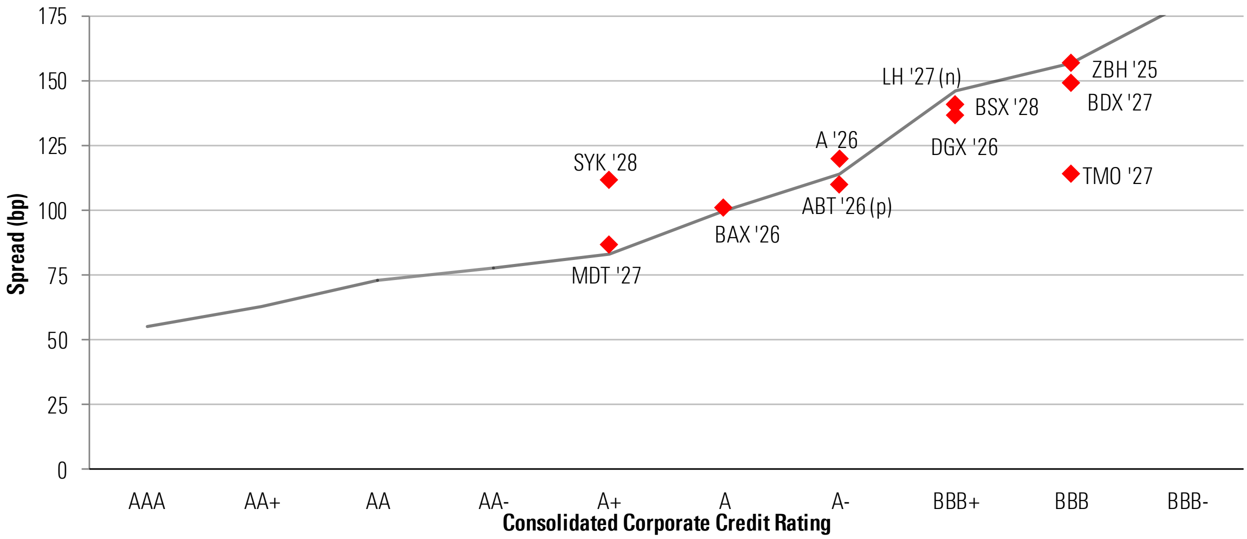
Exhibit 11 Investment-Grade Pharmaceutical Spreads

Health Care Issuer	Rating	Rating Outlook/ Review Status	Coupon	Maturity	Yield	Spread	Difference From Index	Average Difference
Celgene Corp	A-	Stable	3.88%	8/15/2025	4.25%	+143	29	
Biogen Inc	A	Stable	4.05%	9/15/2025	3.97%	+115	15	
Amgen Inc	A	Stable	3.20%	11/2/2027	3.97%	+112	12	
Eli Lilly and Co	AA	Stable	3.10%	5/15/2027	3.65%	+80	7	
Johnson & Johnson	AAA	Stable	2.95%	3/3/2027	3.31%	+58	3	
Bristol-Myers Squibb Company	AA-	Stable	3.25%	2/27/2027	3.64%	+80	2	
Novartis AG	AA	Stable	3.10%	5/17/2027	3.58%	+73	0	
Gilead Sciences Inc	A	Stable	2.95%	3/1/2027	3.84%	+100	0	
Mylan NV	BBB-	Negative	3.95%	6/15/2026	4.61%	+178	-2	-2
Merck & Co Inc	AA	Stable	2.75%	2/10/2025	3.50%	+69	-4	
Roche Holding AG	AA-	Stable	2.38%	1/28/2027	3.57%	+73	-5	
Pfizer Inc	AA-	Stable	3.00%	12/15/2026	3.49%	+65	-13	
Allergan PLC	BBB	Stable	3.80%	3/15/2025	4.25%	+144	-13	
AbbVie Inc	BBB+	Stable	3.20%	5/14/2026	4.15%	+131	-15	
Shire PLC	BBB-	UR	3.20%	9/23/2026	4.47%	+163	-17	
AstraZeneca PLC	BBB+	Stable	3.13%	6/12/2027	3.99%	+115	-31	

Source: Morningstar Credit Ratings, LLC, Morningstar, Inc., and Interactive Data as of July 10, 2018

Medical Technology and Services

Exhibit 12 Medical Technology and Services vs. Morningstar Corporate Bond Index



Source: Morningstar Credit Ratings, LLC, Morningstar Inc., and Interactive Data as of July 10, 2018.
(UR) = rating under review / (p) = positive outlook / (n) = negative outlook.

Sector Trends

During the quarter, the average spread in medical technology and services widened by 12 basis points, performing between Morningstar's Corporate Bond Index (14 basis points of widening) and the broad healthcare sector (11 basis points of widening). In general, bonds in this sector trade about 6 basis points tighter than the index on average. Rumors in the quarter regarding Stryker Corp (A+, stable) looking to acquire Boston Scientific Corp (BBB+, stable) may have contributed to significant widening of Stryker's bonds by 27 basis points since our last quarterly report in April to recently trade 29 basis points wider than the index. On the flipside, bonds issued by Thermo Fisher Scientific Inc's (BBB, stable) traded tightest with a spread of 43 basis points inside of the index. Of note during the quarter was a reduction of medical devices subject to a 25% tariff on importation from China to 27 product types from around 49 originally. The lion's share of these medical technology items is now represented by medical imaging (specifically MRI, computed tomography, ultrasound, and X-ray) and other technologies including pacemakers, radiation therapy, and electrocardiographs. AdvaMed estimates that the new duty will impact around $836 million of medical devices and diagnostics-related products. The tariff went into effect on July 6 even though U.S. med tech manufacturers, in general, generate a trade surplus with China. The ultimate effect to manufacturers remains in question as they can apply to the U.S. Trade Representative for a one-year exemption from these duties within 90 days after initiation of the tariffs.

Issuer Highlights

- Abbott Laboratories' (A-, positive) positive outlook is informed by the potential for continued improvement in the firm's credit pillars considering its recent deleveraging efforts enabled by U.S. tax reform. Abbott significantly reduced its debt load in the first quarter to about $22 billion from $28 billion at the end of 2017 and intends to redeem another $2 billion by the end of 2018. With these actions, pro forma gross leverage has declined to 3.4 times for the trailing 12 months and could decline to about 3 times by the end of 2018 helped by profit growth, by our estimates. The company still projects that net leverage will fall to about 2 times by the end of 2018. If the company follows through on these goals and looks likely to sustain this lower leverage, we could see improvement in our A- rating on Abbott.
- In April, we upgraded Boston Scientific's rating to BBB+ from BBB given our expectation for improved financial flexibility after the firm satisfies most of its legal and tax obligations ($1.4 billion) by the end of 2018 utilizing free cash flow totaling $1.9 billion, by our estimates. Once it pays those obligations, Boston should enjoy adjusted free cash flow to range between $2.0 billion to $2.5 billion from 2019 to 2022, which has helped boost the firm's Cash Flow Cushion. At the end of the first quarter of 2018, the company owed $5.8 billion in total debt, or gross debt/adjusted EBITDA of 2.3 times by our estimates, and we expect profit growth to be the primary driver of future deleveraging to the low-2s going forward. Considering the company's limited deleveraging ambitions beyond its current leverage, which is within management's target, our rating outlook is stable.
- We currently view Laboratory Corp of America Holdings (BBB+, negative) as operating on the weak end of its rating, and a continued delay in deleveraging to pursue another acquisition caused us to cut our outlook to negative from stable in August 2017. Specifically, the company did not achieve its stated leverage target following the 2015 Covance acquisition. The more recent acquisition of Chiltern has pushed already-elevated pro forma gross leverage above its 2.5 to 3.0 times sustainable range. Management noted that deleveraging remains a top priority, so we think it could deleverage into the high-2s by the end of 2018. However, our negative outlook reflects the risk that LabCorp may continue pursuing debt-financed acquisitions or shareholder returns that further delay deleveraging.

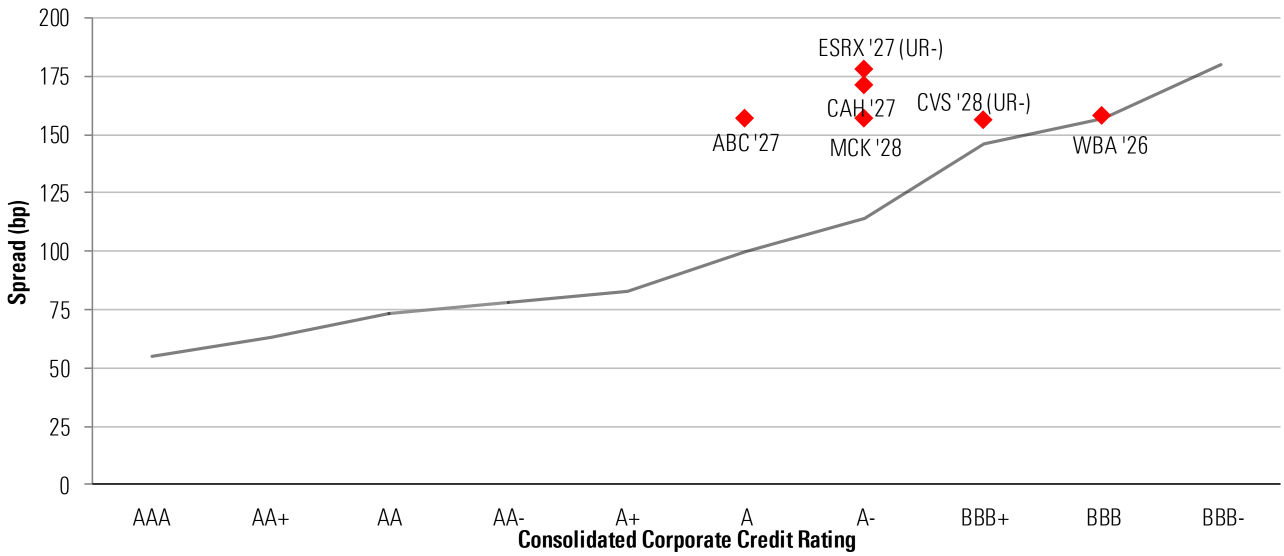
Exhibit 13 Investment-Grade Medical Technology and Services Spreads

Health Care Issuer	Rating	Rating Outlook/ Review Status	Coupon	Maturity	Yield	Spread	Difference From Index	Average Difference
Stryker Corp	A+	Stable	3.65%	3/7/2028	3.97%	+112	29	
Agilent Technologies	A-	Stable	3.05%	9/22/2026	4.04%	+120	6	
Medtronic PLC	A+	Stable	3.35%	4/1/2027	3.72%	+87	4	
Baxter International Inc	A	Stable	2.60%	8/15/2026	3.85%	+101	1	
Zimmer Biomet Holdings Inc	BBB	Stable	3.55%	4/1/2025	4.39%	+157	0	
Abbott Laboratories	A-	Positive	3.75%	11/30/2026	3.94%	+110	-4	
Laboratory Corp of America Holdings	BBB+	Negative	3.60%	9/9/2027	4.26%	+141	-5	-7
Becton, Dickinson and Co	BBB	Stable	3.70%	6/6/2027	4.34%	+149	-8	
Quest Diagnostics Inc	BBB+	Stable	3.45%	6/1/2026	4.21%	+137	-9	
Boston Scientific Corp	BBB+	Stable	4.00%	3/1/2028	4.26%	+141	-16	
Thermo Fisher Scientific Inc	BBB	Stable	3.20%	8/15/2027	3.98%	+114	-43	

Source: Morningstar Credit Ratings, LLC, Morningstar, Inc., and Interactive Data as of July 10, 2018

Pharmaceutical and Medical Supply Chain

Exhibit 14 Supply Chain vs. Morningstar Corporate Bond Index



Source: Morningstar Credit Ratings, LLC, Morningstar Inc., and Interactive Data as of July 10, 2018
(UR) = rating under review / (p) = positive outlook / (n) = negative outlook.

Sector Trends

As the currently most volatile sector in our healthcare coverage universe, average spreads in the pharmaceutical and medical supply chain widened 25 basis points since our last healthcare quarterly report in April. This compares with the broad healthcare sector that widened 11 basis points and Morningstar's Corporate Bond Index that widened 14 basis points. This sector experiences the greatest brunt of Amazon's foray into the healthcare industry, with the average bond spread in this sector that is 39 basis points wider than the index. During this year, some players in the supply chain are rejiggering contracting models to address consumer and political outrage of high drug costs. Express Scripts detailed a point-of-sale rebate program in early May on the footsteps of UnitedHealth Group Inc's (non-NRSRO rating: A-, stable) announcement in March of the launch of its rebate program. UnitedHealth was the first to introduce this type of plan (effective in its commercial plans in 2019) that will pass on more than 80% of manufacturer rebates at the pharmacy counter. Express Scripts' program is not as ambitious and looks to redirect to patients one third of the rebate that it receives from Sanofi SA (not rated) and Regeneron Pharmaceuticals Inc (not rated) for only the cholesterol-lowering medicine Praluent as of July 1, 2018. If the program is successful, though, Express Scripts may apply it to other high-cost drugs. The ratings of Express Scripts as well as CVS remain under review with negative implications reflecting the pending combinations of Express Scripts/Cigna and CVS/Aetna, respectively, taking into consideration the expected increases in leverage to fund these merger activities.

Issuer Highlights

- Express Scripts Holding Co's A- credit rating remains under review with negative implications based on its plan to be acquired by Cigna Corp (non-NRSRO rating: BBB/UR-). This deal, which is projected to close around the end of 2018, promises to substantially increase leverage at the combined entity relative to the stand-alone entities. Therefore, we expect Express Scripts' credit profile to weaken materially and to be connected to Cigna's rating if this deal closes as currently planned. As of March 31, 2018, Express Scripts owed $15.0 billion of debt and held $2.3 billion in cash, resulting in gross and net leverage around 2.0 and 1.7 times, respectively, for the trailing 12-month period. Cigna has stated that it anticipates initially owing $41 billion in debt after the merger is completed, and pro forma leverage looks set to rise to the mid-3s if the merger with Cigna closes as expected at the end of 2018, or much higher than Express Scripts' stand-alone leverage. This rising leverage looks likely to cut into Express Script's A- rating and could even cut into Cigna's BBB rating. Notably, though, Cigna management appears committed to deleveraging to maintain its investment-grade status, which will likely inform our credit view of the combined entity.
- Our BBB+ credit rating on CVS Health Inc. was placed under review with negative implications in December 2017 based on its planned combination with managed-care organization Aetna Inc (not rated). This acquisition is expected to close in late 2018 and increase pro forma gross leverage to the mid-4s. CVS already issued $40 billion of new debt in the first quarter to help fund the merger. Management aims to reduce gross leverage to the mid-3s in the next couple years and to low-3s in the long term. However, that projected leverage is higher than the firm's previous goal, and the company's willingness to boost and keep leverage well above its previous target suggests a downgrade may be warranted in the merger scenario. Assuming the merger closes as expected, rising leverage could cut into the company's Cash Flow Cushion and Distance to Default pillar enough to cause a one-notch downgrade based on our current understanding of the deal.

Exhibit 15 Pharmaceutical/Medical Supply Chain Spreads

Health Care Issuer	Rating	Rating Outlook/ Review Status	Coupon	Maturity	Yield	Spread	Difference From Index	Average Difference
Express Scripts Holding Co	A-	UR-	3.40%	3/1/2027	4.62%	+178	64	
AmerisourceBergen Corp	A	Stable	3.45%	12/15/2027	4.42%	+157	57	
Cardinal Health Inc	A-	Stable	3.41%	6/15/2027	4.55%	+171	57	
McKesson Corp	A-	Stable	3.95%	2/16/2028	4.42%	+157	43	39
CVS Health Corp	BBB+	UR-	4.30%	3/25/2028	4.41%	+156	10	
Walgreen Boots Alliance Inc	BBB	Stable	3.45%	6/1/2026	4.41%	+158	1	

Source: Morningstar Credit Ratings, LLC, Morningstar, Inc., and Interactive Data as of July 10, 2018

High-Yield Healthcare

Sector Trends

We updated our ratings and outlooks on three of the five high-yield credits that we presently cover in the healthcare industry during the second quarter. Specifically, we upgraded HCA on better moat and uncertainty assessments from the Morningstar Equity Research Group that positively influenced its Business Risk pillar enough to upgrade. In addition, we downgraded Mallinckrodt's credit rating to B+ as the firm's operations experience rough waters during its transformation into a specialty medicine innovator. The last of our rating updates was an affirmation of Tenet Healthcare Corp's B- rating with a change in our outlook to positive from stable to reflect successful deleveraging. During the quarter, we also withdrew ratings for five high-yield issuers.

Issuer Highlights

- In April, we upgraded HCA's rating to BB+ from BB to reflect a better view of two factors that affect the firm's Business Risk pillar: the economic moat and uncertainty assessments. In early April, Morningstar's Equity Research Group increased its moat assessment on HCA to narrow from none given returns on invested capital exceeding its capital costs, combined with the company's substantial local market share. The Group also reduced the uncertainty score to high from very high considering HCA's relatively steady results within healthcare services. Shortly thereafter, we raised HCA's rating on April 12 as these two improvements benefited the firm's Business Risk enough for the one-notch upgrade.
- In May, we downgraded Mallinckrodt's credit rating to B+ from BB- to reflect significant operational pressure from the company's transformation into an innovative specialty medicine firm, heavy reliance on its best-seller Acthar Gel, and high financial leverage from an inflated debt load coupled with earnings compression. Underperformance of Acthar, representing about 43% of total revenue, led to a dramatic fall in the firm's equity cushion over the last year, pushing the Distance to Default pillar into very weak territory. Acthar and top-selling medicines Inomax and Ofirmev together represent 81% of overall revenue, which contributes to very high Business Risk.
- Our rating outlook on Tenet (B-) is positive as we see a path for the firm to hit its net leverage target of 5 times or less by the end of 2019 through planned and potential divestiture proceeds along with rising profit prospects. Given the possibility for deleveraging to a more manageable level over the next couple of years that could yield improvement in its Cash Flow Cushion, Solvency Score, and Distance to Default pillars, we see potential to upgrade Tenet's rating within that time frame.
- Valeant Pharmaceuticals International Inc's (B-, negative) rating outlook is negative since we view the firm's operational recovery as highly uncertain as its operational deterioration bottoms in the next year or so. Valeant strengthened its balance sheet having achieved its goal of decreasing debt by more than $5 billion by February 2018 while it extended nearing debt maturities through a series of refinancing. We expect that incremental marketing and research expenses needed to foster growth of new dermatology, gastrointestinal, and eye care products may hold EBITDA generation flat on a compounded annual basis through 2022 based on modestly increasing revenue, in our estimation. As such, we think that free cash flow averaging around $1.4 billion per year over the next five years tied to relatively steady operations may be the primary vehicle for leverage improvement.

Exhibit 16 High-Yield Healthcare Senior Unsecured Bonds

Health Care Issuer	Rating	Rating Outlook/ Review Status	Coupon	Maturity	Worst Date	Price	YTW	STW	Average Spread
HCA Healthcare Inc	BB+	Stable	5.88%	2/15/2026	8/15/2025	101.75	5.57%	+275	
Teva Pharmaceutical Industries Ltd	BB	Stable	3.15%	10/1/2026	10/1/2026	81.86	5.97%	+314	
Tenet Healthcare Corp	B-	Positive	7.00%	8/1/2025	8/1/2025	99.53	7.08%	+426	+434
Valeant Pharmaceuticals International Inc	B-	Negative	6.13%	4/15/2025	4/15/2025	92.75	7.51%	+470	
Mallinckrodt PLC	B+	Stable	5.50%	4/15/2025	4/15/2025	79.25	9.65%	+683	

Source: Morningstar Credit Ratings, LLC, Morningstar, Inc., and Interactive Data as of July 10, 2018

Appendix

IG Pharmaceutical Tickers	**JNJ**	**MRK**	**NVS**	**LLY**	**BMY**	**PFE**	**Roche**	**GILD**	**GSK**	**AMGN**	**BIIB**
Morningstar LLC Rating	AAA	AA	AA	AA	AA-	AA-	AA-	A	A	A	A
Outlook	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable
Information from Morningstar's Equity Research Group:											
Moat	Wide	Wide	Wide	Wide	Wide	Wide	Wide	Wide	Wide	Wide	Wide
Moat Trend	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable
Uncertainty	Low	Low	Low	Medium	Medium	Low	Low	Medium	Medium	Medium	Medium
TTM as of Date ($s in millions)	4/1/2018	3/31/2018	3/31/2018	3/31/2018	3/31/2018	3/31/2018	3/31/2018	3/31/2018	3/31/2018	3/31/2018	3/31/2018
Revenues	$78,693	$40,725	$51,279	$23,343	$21,040	$52,673	CHF 53,940	$24,690	£30,024	$22,939	$12,594
Adj'd EBITDA	$25,743	$14,828	$15,293	$6,830	$5,343	$20,273	CHF 22,018	$14,236	£8,986	$12,353	$6,906
Adj'd EBITDA %	33%	36%	30%	29%	25%	38%	41%	58%	30%	54%	55%
Total Debt	$32,533	$23,556	$34,110	$11,698	$7,700	$40,841	CHF 18,960	$29,054	£17,457	$35,541	$5,933
Cash & Investments	$15,204	$18,379	$6,422	$10,165	$9,022	$11,421	CHF 11,997	$23,998	£4,004	$32,172	$5,916
Net Total Debt/(Cash)	$17,329	$5,177	$27,688	$1,533	($1,322)	$29,420	CHF 6,963	$5,056	£13,453	$3,369	$17
Market Capitalization	$341,652	$167,606	$198,169	$89,871	$91,828	$218,949	$194,171	$99,795	$103,132	$129,489	$72,760
Enterprise Value	$358,981	$172,783	$225,857	$91,404	$90,506	$248,369	$201,386	$104,851	$122,240	$132,858	$72,777
Debt % of EV	9%	14%	15%	13%	9%	16%	10%	28%	20%	27%	8%
TD/EBITDA	1.3x	1.6x	2.2x	1.7x	1.4x	2.0x	0.9x	2.0x	1.9x	2.9x	0.9x
Net TD/EBITDA	0.7x	0.3x	1.8x	0.2x	-0.2x	1.5x	0.3x	0.4x	1.5x	0.3x	0.0x
Adj TD/EBITDAR*	1.5x	1.8x	2.5x	2.4x	1.6x	2.2x	1.3x	2.1x	2.3x	2.9x	0.9x
Interest Expense	$989	$756	$802	$240	$197	$1,271	CHF 571	$1,147	£702	$1,316	$238
EBITDA/Interest	26.0x	19.6x	19.1x	28.5x	27.1x	16.0x	38.6x	12.4x	12.8x	9.4x	29.1x
(EBITDA-CapX)/Int	22.6x	17.5x	16.9x	24.9x	22.0x	14.4x	32.2x	11.9x	10.6x	8.9x	25.5x
OCF	$21,749	$5,187	$13,090	$4,309	$5,589	$16,864	CHF 19,235	$11,184	£6,637	$11,519	$5,773
CapX	($3,377)	($1,623)	($1,711)	($870)	($1,003)	($1,984)	(CHF 3,649)	($593)	-£1,543	($651)	($853)
FCF	$18,372	$3,564	$11,379	$3,439	$4,586	$14,880	CHF 15,587	$10,591	£5,094	$10,868	$4,920
FCF/Debt	56%	15%	33%	29%	60%	36%	82%	36%	29%	31%	83%
Share Repurchases	($4,460)	($2,878)	($4,355)	($1,500)	($636)	($6,603)	(CHF 362)	($1,438)	-£36	($13,271)	($1,032)
Dividends	($9,025)	($5,183)	($6,966)	($2,231)	($2,575)	($7,746)	(CHF 7,175)	($2,797)	-£3,910	($3,469)	$0
Net FCF	$4,887	($4,497)	$58	($292)	$1,375	$531	CHF 8,049	$6,356	£1,148	($5,872)	$3,888

Source: Company Filings and Morningstar Credit Ratings, LLC as of July 10, 2018

*Adj TD includes total debt plus underfunded pension liabilities plus 8 times rents

IG Pharmaceutical Tickers	**CELG**	**AZN**	**ABBV**	**AGN**	**SHPG**	**MYL**
Morningstar LLC Rating	A-	BBB+	BBB+	BBB	BBB-/UR	BBB-
Outlook	Stable	Stable	Stable	Stable		Negative
Information from Morningstar's Equity Research Group:						
Moat	Narrow	Wide	Narrow	Wide	Narrow	None
Moat Trend	Positive	Negative	Negative	Stable	Positive	Negative
Uncertainty	Medium	Medium	Medium	Medium	Medium	Very High
TTM as of Date ($s in millions)	3/31/2018	3/31/2018	3/31/2018	3/31/2018	3/31/2018	3/31/2018
Revenues	$13,581	$22,238	$29,612	$16,040	$15,226	$11,873
Adj'd EBITDA	$5,924	$5,009	$12,671	$7,693	$5,997	$3,249
Adj'd EBITDA %	44%	23%	43%	48%	39%	27%
Total Debt	$20,271	$19,854	$37,287	$26,563	$18,521	$15,133
Cash & Investments	$4,740	$3,873	$9,474	$2,032	$318	$367
Net Total Debt/(Cash)	$15,531	$15,981	$27,813	$24,530	$18,203	$14,765
Market Capitalization	$61,291	$89,510	$149,650	$59,658	$53,468	$18,902
Enterprise Value	$76,822	$105,491	$177,463	$84,188	$71,671	$33,667
Debt % of EV	26%	19%	21%	32%	26%	45%
TD/EBITDA	3.4x	4.0x	2.9x	3.5x	3.1x	4.7x
Net TD/EBITDA	2.6x	3.2x	2.2x	3.2x	3.0x	4.5x
Adj TD/EBITDAR*	3.5x	4.5x	3.1x	3.5x	3.3x	4.7x
Interest Expense	$561	$680	$1,128	$1,057	$564	$528
EBITDA/Interest	10.6x	7.4x	11.2x	7.3x	10.6x	6.2x
(EBITDA-CapX)/Int	10.0x	5.5x	10.7x	6.9x	9.3x	5.7x
OCF	$5,193	$3,350	$10,503	$6,608	$4,808	$2,234
CapX	($305)	($1,253)	($553)	($363)	($764)	($249)
FCF	$4,888	$2,097	$9,950	$6,245	$4,044	$1,986
FCF/Debt	24%	11%	27%	24%	22%	13%
Share Repurchases	($6,240)	$0	($1,946)	($1,903)	$0	($932)
Dividends to Shareholders	$0	($3,514)	($4,217)	($1,232)	($281)	$0
Net FCF	($1,352)	($1,417)	$3,787	$3,110	$3,763	$1,053

Source: Company Filings and Morningstar Credit Ratings, LLC as of July 10, 2018

*Adj TD includes total debt plus underfunded pension liabilities plus 8 times rents

Medical Technology Tickers	**MDT**	**SYK**	**BAX**	**ABT**	**A**	**BSX**	**DGX**	**LH**	**TMO**	**ZBH**	**BDX**
Morningstar LLC Rating	A+	A+	A	A-	A-	BBB+	BBB+	BBB+	BBB	BBB	BBB
Outlook	Stable	Stable	Stable	Positive	Stable	Stable	Stable	Negative	Stable	Stable	Stable
Information from Morningstar's Equity Research Group:											
Economic Moat	Wide	Wide	Narrow	Narrow	Narrow	Narrow	Narrow	Narrow	Narrow	Wide	Narrow
Moat Trend	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Positive	Positive	Stable	Stable
Uncertainty	Medium	Medium	Medium	Medium	Medium	High	Medium	Medium	Medium	Medium	Medium
Pro Forma Credit Metrics ($s in millions)											
TTM as of Date ($s in millions)	4/27/2018	3/31/2018	3/31/2018	3/31/2018	4/30/2018	3/31/2018	3/31/2018	3/31/2018	3/31/2018	3/31/2018	3/31/2018
Revenues	$29,953	$12,730	$10,763	$28,445	$4,720	$9,266	$7,694	$10,843	$22,006	$7,864	$16,410
Adj'd EBITDA	$9,492	$3,425	$2,275	$6,431	$1,143	$2,501	$1,550	$2,096	$5,543	$2,816	$4,243
Adj'd EBITDA %	32%	27%	21%	23%	24%	27%	20%	19%	25%	36%	26%
Total Debt	$25,757	$7,904	$3,553	$21,891	$2,115	$5,765	$3,859	$6,777	$20,936	$9,962	$22,691
Cash and Investments	$11,227	$2,455	$2,947	$4,955	$3,011	$257	$124	$362	$950	$615	$1,267
Net Total Debt/(Cash)	$14,530	$5,449	$606	$16,936	($896)	$5,508	$3,735	$6,415	$19,986	$9,347	$21,424
Market Capitalization	$118,126	$65,168	$39,963	$110,118	$20,371	$46,306	$15,346	$18,874	$86,161	$23,336	$65,344
Enterprise Value	$132,656	$70,617	$40,569	$127,054	$19,475	$51,814	$19,081	$25,289	$106,147	$32,683	$86,768
Debt % of EV	19%	11%	9%	17%	11%	11%	20%	27%	20%	30%	26%
TD/EBITDA	2.7x	2.3x	1.6x	3.4x	1.9x	2.3x	2.5x	3.2x	3.8x	3.5x	5.3x
Net TD/EBITDA	1.5x	1.6x	0.3x	2.6x	-0.8x	2.2x	2.4x	3.1x	3.6x	3.3x	5.0x
Adj TD/EBITDAR*	2.9x	2.6x	2.4x	3.6x	2.2x	2.5x	3.1x	3.6x	4.0x	3.6x	5.6x
Interest Expense	$1,146	$252	$87	$905	$78	$233	$157	$246	$619	$324	$740
EBITDA/Interest	8.3x	13.6x	26.1x	7.1x	14.7x	10.7x	9.9x	8.5x	9.0x	8.7x	5.7x
(EBITDA-CapX)/Int	7.4x	11.3x	18.5x	5.8x	11.2x	9.6x	8.1x	7.2x	8.1x	7.3x	4.5x
OCF	$4,684	$1,705	$2,111	$6,104	$1,249	$1,505	$1,159	$1,380	$3,722	$1,797	$3,074
CapX	($1,068)	($580)	($666)	($1,138)	($269)	($267)	($283)	($313)	($533)	($451)	($926)
FCF	$3,616	$1,125	$1,445	$4,966	$980	$1,238	$876	$1,067	$3,189	$1,347	$2,148
FCF/Debt	14%	14%	41%	23%	46%	21%	23%	16%	15%	14%	9%
Share Repurchases	($2,171)	($300)	($1,035)	($150)	($140)	$0	($365)	($265)	($250)	$0	$0
Dividends	($2,494)	($653)	($332)	($1,880)	($229)	$0	($246)	$0	($238)	($194)	($814)
Net FCF	($1,049)	$172	$78	$2,936	$611	$1,238	$265	$802	$2,701	$1,153	$1,334

Source: Company Filings and Morningstar Credit Ratings, LLC as of July 10, 2018

*Adj TD includes total debt plus underfunded pension liabilities plus 8 times rents

Supply Chain Tickers	**ABC**	**MCK**	**CAH**	**ESRX**	**CVS**	**WBA**
Morningstar LLC Rating	A	A-	A-	A-/UR-	BBB+/UR-	BBB
Outlook	Stable	Stable	Stable			Stable
Information from Morningstar's Equity Research Group:						
Economic Moat	Wide	Wide	Wide	Wide	Narrow	None
Moat Trend	Stable	Stable	Stable	Stable	Positive	Stable
Uncertainty	Medium	Medium	Medium	Medium	Medium	Medium
Pro Forma Credit Metrics ($s in millions)						
TTM as of Date ($s in millions)	3/31/2018	3/31/2018	3/31/2018	3/31/2018	3/31/2018	5/31/2018
Revenues	$165,700	$208,357	$134,426	$100,179	$185,944	$134,830
Adj'd EBITDA	$2,377	$3,872	$3,480	$7,462	$12,304	$8,453
Adj'd EBITDA %	1%	2%	3%	7%	7%	6%
Total Debt	$4,530	$7,880	$9,578	$14,986	$65,094	$15,043
Cash	$2,091	$2,672	$2,175	$2,318	$42,023	$1,818
Net Total Debt/(Cash)	$2,439	$5,208	$7,403	$12,669	$23,071	$13,225
Market Capitalization	$19,374	$27,950	$15,587	$45,252	$69,376	$62,720
Enterprise Value	$21,813	$33,158	$22,990	$57,921	$92,447	$75,945
Debt % of EV	21%	24%	42%	26%	70%	20%
TD/EBITDA	1.9x	2.0x	2.8x	2.0x	5.3x	1.8x
Net TD/EBITDA	1.0x	1.3x	2.1x	1.7x	1.9x	1.6x
Adj TD/EBITDAR*	2.1x	2.9x	2.9x	2.1x	5.8x	3.6x
Interest Expense	$243	$283	$319	$616	$1,283	$685
EBITDA/Interest	9.8x	13.7x	10.9x	12.1x	9.6x	12.3x
(EBITDA-CapX)/Int	8.2x	11.6x	9.8x	11.6x	8.1x	10.1x
EBITDAR/(Interest+Rent)	8.0x	6.6x	8.6x	11.0x	4.0x	2.8x
OCF	$1,059	$4,345	$2,938	$5,863	$6,829	$7,444
CapX	($373)	($580)	($340)	($322)	($1,943)	($1,507)
FCF	$686	$3,765	$2,598	$5,541	$4,886	$5,937
FCF/Debt	15%	48%	27%	37%	8%	39%
Share Repurchases	($160)	($1,709)	($450)	($2,521)	($740)	($6,288)
Dividends	($328)	($262)	($578)	$0	($2,041)	($1,786)
Net FCF	$198	$1,794	$1,570	$3,019	$2,105	($2,137)

Source: Company Filings and Morningstar Credit Ratings, LLC as of July 10, 2018

*Adj TD includes total debt plus underfunded pension liabilities plus 8 times rents

HY Healthcare Tickers	**HCA**	**TEVA**	**MNK**	**THC**	**VRX**
Morningstar LLC Rating	BB+	BB	B+	B-	B-
Outlook	Stable	Stable	Stable	Positive	Negative
Information from Morningstar's Equity Research Group:					
Moat	Narrow	None	None	None	None
Moat Trend	Stable	Negative	Negative	Stable	Negative
Uncertainty	High	Extreme	Extreme	Very High	Extreme
TTM as of Date ($s in millions)	3/31/2018	3/31/2018	3/31/2018	3/31/2018	3/31/2018
Revenues	$44,414	$21,820	$2,983	$19,179	$8,610
Adj'd EBITDA	$8,346	$5,906	$1,233	$2,582	$3,358
Adj'd EBITDA %	19%	27%	41%	13%	39%
EBITDAR	$8,635	$6,106	$1,257	$2,793	$3,435
EBITDAR %	19%	28%	42%	15%	40%
Total Debt	$33,291	$30,752	$6,814	$14,889	$25,268
Cash & Investments	$1,086	$1,418	$512	$974	$909
Net Total Debt/(Cash)	$32,205	$29,334	$6,302	$13,915	$24,359
Market Capitalization	$39,956	$24,586	$1,743	$3,627	$8,313
Enterprise Value	$72,161	$53,920	$8,045	$17,542	$32,672
Debt % of EV	46%	57%	85%	85%	77%
TD/EBITDA	4.0x	5.2x	5.5x	5.8x	7.5x
Net TD/EBITDA	3.9x	5.0x	5.1x	5.4x	7.3x
Adj TD/EBITDAR*	4.1x	5.3x	5.6x	6.1x	7.5x
Interest Expense	$1,702	$939	$366	$1,035	$1,782
EBITDA/Interest	4.9x	6.3x	3.4x	2.5x	1.9x
(EBITDA-CapX)/Int	3.1x	5.4x	2.9x	1.9x	1.8x
EBITDAR/(Interest+Rent)	4.3x	5.4x	3.2x	2.2x	1.8x
OCF	$5,446	$4,533	$843	$1,127	$1,774
CapX	($3,138)	($835)	($168)	($652)	($157)
FCF	$2,308	$3,698	$674	$475	$1,617
FCF/Debt	7%	12%	10%	3%	6%
Share Repurchases	($2,050)	$0	($418)	$0	$0
Dividends	($123)	($827)	$0	$0	$0
Distributions to non-controlling interests	($395)	$0	$0	($259)	$0
Net FCF	($260)	$2,871	$256	$216	$1,617

Source: Company Filings and Morningstar Credit Ratings, LLC as of July 10, 2018

*Adj TD includes total debt plus underfunded pension liabilities plus 8 times rents

Morningstar® Credit Research

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