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SECTOR WEIGHTING VIEWS

Monthly Update — November 2018

Back to Basics? Risk Compensation as a Function of Leverage

Monthly Update

Fundamental credit risk has been thrust back into investor focus with the ongoing saga at General Electric (GE: Baa1/BBB+). The situation has led a +30 bps move in the IG Index since early October, with spreads hitting their widest level in two years, capping a -3.7% total return YTD for Corporates. Investors have spent much of the past several weeks rationalizing the risks in their corporate bond portfolios, taking extra care to identify credits that appear particularly over-levered for their current ratings and/or risk compensation levels (i.e. spreads).

This month we take an in depth look at the amount of systemic leverage that has accumulated in IG credits over the past several years. We attempt to differentiate the instances of "bad debt" versus "good debt," determine if and where investors are being best compensated for these additional risks, and seek to identify situations that are most vulnerable to bond investors.

While GE represents the more obvious and recent example of "what can go wrong when debt levels are high for an IG company," some of the higher risk situations out there appear more akin to Teva Pharmaceutical (TEVA: Ba2/BB) – a more straightforward fallen angel situation that played out during 2016-2017. **TEVA represented the seemingly more common risk of a company that bites off more than it can chew in a debt-funded acquisition, runs into operating difficulties, threatens to miss debt reduction targets, then loses the faith of bondholders.** This compares to GE, which represents a more complex set of shortcomings related to managerial ideologies, and a seemingly outdated approach to building an industrial conglomerate – as well as the threat of residual demons from the Financial Crisis at legacy GECC.

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Nevertheless, conglomerates also do appear to be under fire. This week, United Technologies (UTX: Baa1/A-*-) became the most recent to announce a transformative restructuring, with plans to break the legacy units into three separate companies – Aerospace, Carrier and Otis. While management has committed to IG ratings at each of the new, independent companies, UTX is already carrying significantly higher leverage than it had traditionally, as a result of a large debt-funded acquisition (Rockwell Collins). To make good on their promise, UTX will need to focus proceeds on debt reduction, while balancing shareholder expectations *and* keeping the still-present activist investors at bay. While they are in an enviable position compared to GE from a simplicity standpoint, the execution of these plans remains a delicate balancing act, which will require support from the debt markets.

Last month, we reiterated our "up-in-quality" mantra; suggesting investors spend the remaining weeks of 2018 targeting yield buckets in lower beta corporate issues, which would allow them to accomplish several key strategies ahead of year-end. We stand by those sentiments, but shift focus to relative value as a function of leverage. For too long, investors' appetite for yield enabled issuers to stack more and more debt on their balance sheets.

This month, we take a look at the fundamentals of non-financial Index constituents in an attempt to gauge the effectiveness of current risk premiums relative to recent and expected bond market volatility. We also provide an update on Energy, given the drastic price action in oil contracts over the past several weeks.

Good Debt, Bad Debt: High profile credits with even higher profile balance sheets

The fallout from GE would seem a cautionary tale for investors: even blue chip credits are susceptible to balance sheet deterioration. While corporate leverage (ex-financials) is off its cyclical peak in 3Q 2016, Net leverage in the S&P 500 (ex-financials) is still 1.8x, in the same zip code as overall leverage in the late 90s, just before the dotcom bubble burst. As the broader market is dogged by the likes of GE (IG Index out over 10 bps MTD), de-risking tactics are becoming more pronounced, within the context of credit fundamentals versus compensation. Under this framework, we highlight leverage shocks to the market this year and determine where compensation may miss the mark in relation to credit metrics.

Assessing Leverage and Spread Volatility – Industrials

Chart 1. Industrials – Leverage Statistics

Name	Debt Ticker	Composite Rating	Debt / EBITDA	Net Debt / EBITDA	EBITDA / Interest Expense	FCF / Net Debt	EBITDA	Interest Expense	Cash & Cash Equivalents	Total Debt
Boeing Co/The	BA	A	1.98x	1.36x	11.82x	45.16%	$ 13,654,000	$ 1,154,766	$ 8,562,000	$ 27,075,000
Caterpillar Inc	CAT	A-	1.83x	1.07x	13.12x	39.00%	$ 9,647,000	$ 735,370	$ 7,189,000	$ 17,607,000
CRH PLC	CRHID	BBB	3.36x	2.86x	9.46x	5.21%	$ 4,407,985	$ 465,771	$ 2,157,643	$ 14,494,345
CSX Corp	CSX	BBB+	2.44x	2.38x	9.36x	10.66%	$ 5,880,000	$ 628,117	$ 663,000	$ 14,363,528
Deere & Co	DE	A	2.21x	1.58x	12.03x	21.05%	$ 4,411,200	$ 366,574	$ 2,814,300	$ 9,766,400
FedEx Corp	FDX	BBB	3.00x	2.71x	8.34x	0.87%	$ 11,028,000	$ 1,321,823	$ 2,369,000	$ 33,050,407
General Dynamics Corp	GD	A	3.84x	3.48x	13.26x	8.97%	$ 5,153,000	$ 388,700	$ 1,862,000	$ 19,783,599
General Electric Co	GE	BBB+	4.15x	3.17x	4.51x	-1.89%	$ 18,573,000	$ 4,122,124	$ 13,862,000	$ 77,108,000
Honeywell International Inc	HON	A	2.42x	1.56x	19.50x	31.22%	$ 8,631,000	$ 442,645	$ 8,176,000	$ 20,862,000
Lockheed Martin Corp	LMT	BBB+	4.01x	3.86x	6.47x	8.53%	$ 7,926,000	$ 1,225,080	$ 1,181,000	$ 31,744,792
3M Co	MMM	A+	2.04x	1.70x	20.60x	12.71%	$ 9,504,000	$ 461,434	$ 3,185,000	$ 19,358,000
Northrop Grumman Corp	NOC	BBB	4.29x	4.63x	6.07x	7.15%	$ 4,767,000	$ 784,718	$ 1,228,000	$ 20,453,893
Norfolk Southern Corp	NSC	BBB+	2.55x	2.23x	8.78x	9.39%	$ 5,032,000	$ 572,909	$ 729,000	$ 12,839,672
Union Pacific Corp	UNP	BBB+	2.34x	2.27x	12.18x	11.08%	$ 11,100,000	$ 911,073	$ 1,810,000	$ 26,007,489
United Parcel Service Inc	UPS	A+	4.53x	4.11x	6.81x	5.61%	$ 11,214,678	$ 1,647,932	$ 4,097,000	$ 50,771,000
*United Technologies Corp	UTX	BBB+	3.10x	2.07x	9.58x	12.34%	$ 10,830,095	$ 1,130,127	$ 11,068,000	$ 33,539,254

**Recently closed on Rockwell Collins purchase; company splitting*

Source: Moody's adjusted Financial Metrics

GE takes center stage as the tail wagging the rest of the Industrial sector, sparking fears that other operators could run afoul amidst elevated debt burdens. The gross and net leverage figures depicted in the chart above reflect Moody's standard ratings adjustments – while the actual face value levels read significantly higher. Perhaps more surprising are the net and gross figures for industry bellwethers LMT, NOC and more recently UPS, which sit on the high side of their IG peers. UPS increased LT debt substantially as it paid down its CP program this year. Meanwhile, NOC's elevated leverage is a function of M&A activity. UTX's backwards looking net leverage of 2x is a misnomer, as it doesn't take into consideration the added burden of Rockwell Collins, nor the uncertainty of the recently announced break-up, which will not likely be resolved until 2020.

Chart 2. Industrials – Debt Raised and Debt Usage

Name	Debt Ticker	Composite Rating	Debt Out	Avg Cpn	Avg Mty	LTM Dividends	LTM Share Buybacks	LTM Debt Change	Notes
Boeing Co/The	BA	A	13,016	4.654	10.7	3,818	10,061	2,453	Partial repurchase funding
Caterpillar Inc	CAT	A-	29,661	3.292	6.6	1,908	1,495	(262)	Modest debt reduction
CRH PLC	CRHID	BBB	10,059	3.486	9.2	543	235	1,046	Terming out high cost debt
CSX Corp	CSX	BBB+	14,750	4.544	19.3	748	3,123	2,982	Partial repurchase funding
Deere & Co	DE	A	31,999	2.920	4.0	806	741	1,882	Partial repurchase funding
FedEx Corp	FDX	BBB	17,327	3.670	17.1	574	1,354	1,732	Partial repurchase funding
General Dynamics Corp	GD	A	11,500	2.966	5.1	1,052	756	6,600	Acquisition funding; terming out credit facility
General Electric Co	GE	BBB+	110,651	3.976	9.3	5,515	(64)	(19,388)	Reduction in CP; recent drop in dividend prog.
Honeywell International Inc	HON	A	12,248	2.552	6.4	2,234	3,563	(116)	Modest debt reduction
Lockheed Martin Corp	LMT	BBB+	14,699	4.142	15.3	2,297	1,318	(764)	Modest debt reduction
3M Co	MMM	A+	14,271	2.510	9.5	3,105	3,552	726	Partial repurchase funding
Northrop Grumman Corp	NOC	BBB	14,334	3.810	11.9	790	209	7,400	M&A funding
Norfolk Southern Corp	NSC	BBB+	11,922	4.671	23.2	801	2,548	1,537	Partial repurchase funding
Union Pacific Corp	UNP	BBB+	22,420	4.025	17.1	2,238	8,155	5,010	Funding repurchase program
United Parcel Service Inc	UPS	A+	19,659	3.306	11.8	2,946	991	5,367	Repay CP program; fund pension needs
*United Technologies Corp	UTX	BBB+	37,938	3.831	11.1	2,139	83	11,945	Rockwell Collins acquisition; planning debt reduction in conjunction w/ restructuring

**Recently closed on Rockwell Collins purchase; company splitting*

Source: Bloomberg

We have published numerous commentaries on GE, including our outlook that investors should hold the name, given the robust liquidity sources available to the Company, as well as the wealth of strategic options available to management to generate capital and pare down their liabilities. Obviously, we expect that the name will remain subject to heightened volatility over the near-term; but consider risk premiums in the name adequate to compensate investors given the prospect of recovery. **Rail paper presents an opportunity for investors seeking to trade up** to lower volatility credits within the Index Industrial constituents. **We believe UTX is likely to be subject to greater volatility going forward**, until more details for debt recapitalization are finalized in the Company's proposed restructuring. Though CRHID offers good risk/reward relative to its current leverage and credit fundamentals, **the name is likely to remain among the more cyclical, with any additional wavering of global economic trends versus the remainder of the peer group**.

Chart 3. Industrials – Spread Performance 5-yr Bonds

Selected Industrial Spread Vol (5yr Bonds)	Composite Rating	Current	High	Low	Mean	Median	Standard Deviation	Current STD from Mean	Current Diff from YTD wide	Est Net Leverage (x)
*BA 2.8 03/01/23	A	52	58	33	43	42	4	1.99	-6	1.36x
*CAT 3.45 05/15/23	A-	69	69	37	57	57	7	1.77	0	1.07x
CRHID 3 7/8 05/18/25	BBB	151	153	78	115	120	19	1.88	-2	2.86x
CSX 3.7 11/01/23	BBB+	69	88	49	70	68	10	-0.13	-19	2.38x
*DE 3.45 06/07/23	A	70	70	43	58	57	6	2.00	-1	1.58x
FDX 4 01/15/24	BBB	81	87	49	65	64	11	1.48	-6	2.71x
*GD 3 3/8 05/15/23	A	64	64	44	53	52	5	2.13	0	3.48x
GE 3 3/8 03/11/24	BBB+	292	354	49	101	94	49	3.85	-62	3.17x
HON 3.35 12/01/23	A	50	59	6	37	40	10	1.33	-9	1.56x
LMT 3.1 01/15/23	BBB+	81	81	40	58	59	10	2.32	0	3.86x
*MMM 3 1/4 02/14/24	A+	61	61	35	44	40	8	2.29	0	1.70x
NOC 2.55 10/15/22	BBB	86	87	52	66	67	7	2.58	-1	4.63x
NSC 3.85 01/15/24	BBB+	86	89	49	72	75	11	1.21	-3	2.23x
*UNP 3 1/2 06/08/23	BBB+	67	76	58	66	64	5	0.18	-10	2.27x
UPS 2 1/2 04/01/23	A+	53	60	30	48	48	6	0.91	-8	4.11x
*UTX 3.65 08/16/23	BBB+	103	103	76	84	82	7	2.86	0	2.07x

*Issued after 12/31/17

Source: FTN Financial, Bloomberg historical G-Spread; Moody's adjusted Financial Metrics

Assessing Leverage and Spread Volatility – TMT

Chart 4. Tech/Media/Telecom– Leverage Statistics

Name	Debt Ticker	Composite Rating	Debt / EBITDA	Net Debt / EBITDA	EBITDA / Interest Expense	FCF / Net Debt	EBITDA	Interest Expense	Cash & Cash Equivalents	Total Debt
Comcast Corp*	CMCSA	A-	2.63x	2.28x	9.05x	13.37%	$ 30,381	$ 3,358	$ 10,616	$ 79,876
Walt Disney Co/The***	DIS	A	1.74x	1.49x	18.96x	31.95%	$ 17,543	$ 925	$ 4,326	$ 30,547
Discovery Inc	DISCA	BBB-	5.64x	5.53x	4.91x	9.49%	$ 3,362	$ 684	$ 392	$ 18,977
Amazon.com Inc	AMZN	A	2.37x	1.64x	14.02x	29.14%	$ 27,928	$ 1,991	$ 20,425	$ 66,277
AT&T Inc**	T	BBB	4.05x	3.90x	5.62x	3.29%	$ 56,385	$ 10,041	$ 8,657	$ 228,589
Vodafone Group PLC***	VOD	BBB+	3.34x	2.66x	11.66x	2.33%	$ 21,291	$ 1,826	$ 14,472	$ 71,153
QUALCOMM Inc	QCOM	A-	2.87x	1.08x	8.58x	22.50%	$ 6,767	$ 789	$ 12,123	$ 19,435
Broadcom Inc**	AVGO	BBB-	2.00x	1.56x	14.98x	32.97%	$ 9,452	$ 631	$ 4,136	$ 18,872
International Business Machine***	IBM	A	1.76x	0.98x	15.24x	30.15%	$ 18,481	$ 1,213	$ 14,495	$ 32,538

** CMCA launched $27bn on October 2*
*** Full Year PF figures not included*
**** M&A Pending*

Source: Bloomberg, FTN Financial, Moody's

TMT remains one of the more active M&A sectors in the Index, primarily driven by consolidation in the Media/ Telecom space. The headliners which have been discussed ad nauseam are **Disney's (DIS)** purchase of (most of) **21st Century Fox (FOXA)**, **Comcast's (CMCSA)** purchase of **Sky (SKYLN)**, and **AT&T's (T)** purchase of **Time Warner (TWX)**. Fortunately, from a bondholder's perspective, the vast majority of M&A initiatives has been tempered with explicit debt reduction commitments. Some are in position to achieve their leverage targets with great ease – DIS may not even have to issue new debt if the sale of Fox's Regional Sports Networks (RSNs) garners a large enough windfall. Whereas other are facing market skepticism due to significant nominal debt totals – AT&T is constantly reminded that it debt total of over $160bn rivals that of foreign governments. Other unique situations include **Qualcomm (QCOM)**, which raised $11bn to help fund an acquisition that never happened and are using the leftover cash for share repurchases.

Chart 5. TMT – Debt Raised and Debt Usage

Name	Debt Ticker	Composite Rating	Debt Out	Avg Cpn	Avg Mty	LTM Free Cash Flow	LTM Dividends	LTM Share Buybacks	LTM Debt Change	Notes
Comcast Corp*	CMCSA	A-	99,028	4.152	9/16/2032	14,631	3,223	5,505	37,837	2.2x lev target within 18-24 months
Walt Disney Co/The***	DIS	A	19,141	2.980	10/22/2026	9,830	2,515	3,367	(859)	~2.3x PF net lev; RSN sale tempers debt req'd
Discovery Inc	DISCA	BBB-	16,675	4.052	11/23/2028	1,971	-	-	2,427	Expecting net lev below 4x by YE18; 3.5x LT target
Amazon.com Inc	AMZN	A	24,250	3.617	3/1/2034	13,278	-	-	(1,000)	
AT&T Inc**	T	BBB	161,506	4.275	11/30/2031	19,224	12,783	214	(2,979)	2.5x lev target by YE19; sub-2x by YE22
Vodafone Group PLC***	VOD	BBB+	52,827	3.209	9/26/2033	7,412	4,019	1,211	12,008	~3.0x PF net lev; 2.5-3.0x LT target
QUALCOMM Inc	QCOM	A-	15,500	3.382	12/4/2028	3,111	3,466	21,984	(5,500)	Cash-funded buybacks; Gross Lev 2.4x intact
Broadcom Inc**	AVGO	BBB-	19,859	3.357	10/12/2023	7,442	2,714	5,541	6,170	No timetable or leverage target; "committed to IG"
International Business Machine***	IBM	A	40,874	2.811	7/28/2024	13,292	5,637	2,934	(1,044)	3.3x PF net lev; $20-25bn new issuance coming

** CMCA launched $27bn on October 2*
*** Full Year PF figures not included*
**** M&A Pending*

Source: Bloomberg, Company Filings

Of the names with "work to do" as far as balance sheet management, we see two types of relative value. On the defensive side, we think CMCSA represents the better Single-A exposure vs DIS. While DIS remains the gold standard in TMT, spreads adequately reflect that, even in the face of potential issuance. CMCSA on the other hand, is firmly in post-M&A integration and deleveraging mode, as it has already launched its landmark debt deal, and has a proven track record of execution after transformative M&A (see, NBC Universal).

Additionally, we see AT&T (T) as the best risk-reward within TMT, as too much emphasis has been placed on the nominal debt level of the company, as well as its reputation as the "old telephone company," run by "rubes." AT&T spreads are in excess of +60 bps wide to Verizon at some points on the curve. While the nominal debt level is substantial, we also note that Free Cash Flow is substantial as well, at over $25bn on a pro forma annualized basis. Execution risk and challenging subscriber trends justifiably have spreads wide of its most direct peer (Verizon), but we view this as a situation where the company is beholden to the bondholder base more so than the stockholder base. We understand the margin for error would seem relatively small, but we think – not unlike **DELL** or **Charter (CHTR)** after their own large transactions – T's reliance on the capital markets is likely to dictate a conservative approach to the balance sheet from here, and spreads more than adequately compensate.

On the bearish side, we are skeptical of two tech companies that are levering up for sizable deals. **IBM** – once lumped in with the ultra-defensive bellwethers of the Tech sector – is planning to raise as much as $25bn to fund the acquisition of **Red Hat (RHT)** in an attempt to spur top line growth (again). The firm is no longer an AA-rated credit. With leverage well over 3x, it appropriately trades wide of similarly rated tech peers. While we do not doubt the firm's commitment to Single-A ratings, we also do not get the sense that IBM is in a hurry to rein in the balance sheet post-M&A either. Next year figures to be a 'show me' year for IBM as it attempts to integrate a sizable addition, effectively hitting the reset button in many ways to sustain revenue growth. We suspect the new issue will present a better buying opportunity versus the current debt stack.

The other tech firm making waves is **Broadcom (AVGO)**, which decided to purchase software company **CA** for nearly $19 bn and funding it entirely with debt. Considering AVGO's swing and miss on QCOM earlier this year, the CA purchase reads more like a move of desperation, as it doesn't necessarily have any obvious rationale. Management has not given much color around debt reduction plans. **In fact, the company has been more adamant about share buybacks and *more* M&A in its most recent earnings call**. AVGO resides at the lower end of the rating spectrum, and in a softer credit market, it predictably exhibits higher volatility than peers. Given the added uncertainties around the CA deal, we would rather seek exposure to more contained credits in the mid-to-low-BBB area, such as **Hewlett Packard Enterprises (HPE)** or Dell secured paper.

Chart 6. TMT – Spread Performance 5-yr Bonds

Selected TMT Spread Vol (10yr Bonds)	Composite Rating	Current	High	Low	Mean	Median	Standard Deviation	STD from Mean	Diff from YTD wide	Est Net Leverage (x)
IBM 3.3 01/27/27	A	104	105	48	69	69	11	3.20	-1	3.30x
AVGO 3 1/2 01/15/28	BBB-	230	230	143	171	168	19	3.12	0	2.50x
VOD 4 3/8 05/30/28*	BBB+	184	187	135	157	154	11	2.41	-3	3.00x
T 4.1 02/15/28	BBB	184	189	132	156	156	12	2.40	-5	2.90x
DISCA 3.95 03/20/28	BBB-	184	186	148	165	164	9	2.15	-2	4.80x
QCOM 3 1/4 05/20/27	A-	138	141	100	118	117	10	1.97	-4	0.70x
AMZN 3.15 08/22/27	A	82	87	63	73	73	6	1.54	-5	0.55x
CMCSA 3.15 02/15/28	A-	120	130	67	102	103	15	1.26	-9	3.30x
DIS 2.95 06/15/27	A	74	87	46	64	63	8	1.21	-14	2.30x

**Issued after 12/31/2017* *Source: Bloomberg, FTN Financial*

Note: Estimated Net Leverage accounts for assumed M&A-related changes to EBITDA, Debt, and/or Cash

Assessing Leverage and Spread Volatility – Consumer

Chart 7. Consumer – Leverage Statistics

Name	Debt Ticker	Composite Rating	Debt / EBITDA	Net Debt / EBITDA	EBITDA / Interest Expense	FCF / Net Debt	EBITDA	Interest Expense	Cash & Cash Equivalents	Total Debt
Walmart Inc**	WMT	AA	2.00x	1.55x	12.96x	21.40%	$ 35,182	$ 2,715	$ 15,840	$ 70,380
Keurig Dr Pepper Inc**	KDP	BBB	7.71x	7.66x	7.48x	0.87%	$ 2,193	$ 293	$ 94	$ 16,902
Campbell Soup Co**	CPB	BBB-	5.94x	5.81x	7.91x	4.60%	$ 1,764	$ 223	$ 226	$ 10,477
Conagra Brands Inc*	CAG	BBB-	2.67x	2.62x	7.60x	12.86%	$ 1,503	$ 198	$ 75	$ 4,014
General Mills Inc**	GIS	BBB	5.87x	5.71x	6.01x	6.24%	$ 2,671	$ 445	$ 433	$ 15,686
Reckitt Benckiser Group PLC	RBLN	A-	3.40x	3.00x	9.38x	5.56%	$ 4,983	$ 531	$ 2,023	$ 16,957
Nestle SA**	NESNVX	AA-	2.12x	1.76x	22.85x	7.12%	$ 18,774	$ 822	$ 6,765	$ 39,852
Johnson & Johnson	JNJ	AAA	1.69x	1.12x	21.42x	28.66%	$ 28,384	$ 1,325	$ 16,056	$ 47,912

** CAG launched $7bn on October 15*
*** Full Year PF figures not included*

Source: Bloomberg, FTN Financial, Moody's

The M&A wave hit the Food Processors (also called "Packaged Food") subgroup in late 2017 and has carried into 2018. There are several consolidation efforts to enhance product diversity and pump top line growth in a traditionally slower growth industry. While the higher grade names in Consumer have made more manageable deals within their free cash flow capacity – **Walmart's (WMT)** $16bn investment in Indian e-commerce via FlipKart, or **Nestlé's (NESNVX)** $7.5bn rights agreement with Starbucks (SBUX) – several other deals have stretched balance sheets to borderline High Yield levels. Fortunately, all of the management teams have emphasized debt reduction plans to right-size their balance sheets within a few years of each deal's completion. *Unfortunately*, the market has placed more confidence in others, viewing some initiatives as unrealistic relative to cash flow and/or synergy assumptions.

Chart 8. Consumer – Debt Raised and Debt Usage

Name	Debt Ticker	Composite Rating	Debt Out	Avg Cpn	Avg Mty	LTM Free Cash Flow	LTM Dividends	LTM Share Buybacks	LTM Debt Change	Notes
Walmart Inc**	WMT	AA	46,205	3.795	11/1/2029	18,428	6,107	5,801	9,359	1.4x net lev; debt reduction through FCF
Keurig Dr Pepper Inc**	KDP	BBB	12,225	3.982	5/4/2028	1,147	419	76	8,000	5.5x PF net lev; 3x lev target by 2021
Campbell Soup Co**	CPB	BBB-	7,450	4.012	9/17/2026	888	422	-	5,300	5.1x PF net lev; 3x net lev by 2021
Conagra Brands Inc*	CAG	BBB-	10,157	4.928	11/15/2028	618	342	652	7,335	5.0x PF net lev; 3.5x gross lev by 2021
General Mills Inc**	GIS	BBB	14,056	3.669	3/15/2026	2,239	1,150	(1,100)	5,855	4.6x PF net lev; 3.5x net lev by 2020
Reckitt Benckiser Group PLC	RBLN	A-	11,250	3.199	5/24/2025	1,854	1,156	(78)	(500)	3.1x net lev; lev reduced from M&A deal
Nestle SA**	NESNVX	AA-	25,560	2.300	9/19/2026	10,824	7,124	7,083	11,444	1.5x PF net lev; pay down with FCF
Johnson & Johnson	JNJ	AAA	31,140	3.106	8/5/2030	18,470	9,339	2,187	2,711	Sub-1x PF net lev

** CAG launched $7bn on October 15*
*** Full Year PF figures not included*

Source: Bloomberg, Company Filings

We have expressed an overall reluctance to the packaged food industry in 2018 due to elevated leverage and persistent tail risk. We lean on spread value vs leverage and cash flow to evaluate the risk-reward of particular credits. On the bearish side, we view **Keurig Dr Pepper (KDP)** as the most susceptible to ratings pressure over time, as post-M&A net leverage of nearly 5.5x is firmly into High Yield territory, and ratings are still 2 notches from High Yield (in other words, ratings agencies are less hesitant to cut to BBB- from BBB vs cutting to junk from BBB-). We see better value in a credit like **Conagra (CAG)**, which shows similar spreads but with less pro forma leverage. We are also leery of **Campbell's (CPB)** due to uncertainty on multiple fronts. The firm has an activist shareholder who seems intent on breaking up the company or selling it outright, all while attempting to integrate a new acquisition (Snyder-Lance for $6bn). CPB spreads reflect the risks at hand, but with leverage over 5x in a slow growth environment, it would seem there are more negative catalysts than positive ones from here. **General Mills (GIS)** appears to be the dealmaker starting from the least levered level, at only 4.6x net leverage. The firm has a shorter leverage reduction timeline (2020 vs 2021 from CAG, CPB, and KDP), which implies a more aggressive approach to cutting down debt (as evidenced by very few share repurchases on an LTM basis). Spreads have widened with the market and are consistently the tightest of the "Levered M&A" bunch, but compared to more stable peers, such as **Kellogg (K)** or **Mondelez (MDLZ)**, GIS offers a nice +10-20 bp spread pickup.

Chart 9. Consumer – Spread Performance 5-yr Bonds

Selected Consumer Spread Vol (5yr Bonds)	Composite Rating	Current	High	Low	Mean	Median	Standard Deviation	STD from Mean	Diff from YTD wide	Est Net Leverage (x)
KDP 4.057 05/25/23*	BBB	**153**	153	105	118	117	10	3.67	0	5.45x
GIS 3.7 10/17/23*	BBB	**122**	122	82	97	95	9	2.75	0	4.55x
CPB 3.65 03/15/23*	BBB-	**171**	183	95	128	130	18	2.36	-12	5.10x
WMT 2.55 04/11/23	AA	**56**	73	18	39	39	9	1.77	-17	1.40x
CAG 4.3 05/01/24*	BBB-	**147**	148	123	131	126	10	1.65	-1	5.00x
JNJ 3 3/8 12/05/23	AAA	**62**	65	36	52	51	7	1.44	-4	0.60x
RBLN 3 5/8 09/21/23	A-	**91**	103	60	81	82	10	1.01	-12	3.05x
NESNVX 3 1/8 03/22/23*	AA-	**43**	53	32	41	41	6	0.32	-11	1.50x

**Issued after 12/31/2017*
Source: Bloomberg, FTN Financial
Note: Estimated Net Leverage accounts for assumed M&A-related changes to EBITDA, Debt, and/or Cash

Assessing Leverage and Spread Volatility – Health Care Supply

Chart 10. HC Supply – Leverage Statistics

Name	Debt Ticker	Composite Rating	Debt / EBITDA	Net Debt / EBITDA	EBITDA / Interest Expense	FCF / Net Debt	EBITDA	Interest Expense	Cash & Cash Equivalents	Total Debt
Allergan PLC	AGN	BBB-	3.14x	3.16x	8.05x	21.83%	$ 7,926,100	$ 984,199	$ 1,187,900	$ 24,892,035
Becton Dickinson and Co	BDX	BBB-	5.09x	4.80x	6.20x	4.19%	$ 4,734,000	$ 762,973	$ 1,384,000	$ 24,085,000
*CVS Health Corp	CVS	BBB	5.44x	2.82x	7.11x	5.21%	$ 15,777,389	$ 2,220,379	$ 41,587,000	$ 85,763,857
**Express Scripts Holding Co	ESRX	BBB	2.02x	1.65x	12.38x	34.67%	$ 7,594,400	$ 613,331	$ 3,705,700	$ 15,321,624
Medtronic PLC	MDT	A-	3.03x	2.58x	8.33x	8.51%	$ 9,763,000	$ 1,172,544	$ 4,380,000	$ 29,579,000
Thermo Fisher Scientific Inc	TMO	BBB	3.60x	3.45x	8.69x	17.14%	$ 6,109,400	$ 702,852	$ 937,000	$ 22,015,971

*Purchasing Aetna
**Being purchased by Cigna

Source: Moody's adjusted Financial Metrics

Health Care Supply has been an active sector for M&A and will likely continue to be so in 2019. Of the index constituents included, most are in some phase of transformative acquisitions. CVS already launched its debt for managed care operator Aetna earlier in the year, and the deal was finalized this week. ESRX is being purchased by Cigna, and the deal is expected to close over the next several weeks. AGN is now several years removed from its merger with Activis, and continues to make headway in its effort to pay down debt, having reduced its debt burden by over $5 bn in the past year, bringing next leverage down to the low 3x range. Meanwhile, BDX leverage remains elevated at >5x on a gross basis, having closed on its ~$25 bn deal for CR Bard at the end of last year. The Company does not appear to have made substantial headway in the last twelve months.

Chart 11. HC Supply – Debt Raised and Debt Usage

Name	Debt Ticker	Composite Rating	Debt Out	Avg Cpn	Avg Mty	LTM Dividends	LTM Share Buybacks	LTM Debt Change	Notes
Allergan PLC	AGN	BBB-	25,159	3.480	7.1	1,109	2,366	(5,235)	Paying down acquisition debt
Becton Dickinson and Co	BDX	BBB-	20,815	3.263	8.0	927	-	1,879	Not yet paying down acquisition debt
*CVS Health Corp	CVS	BBB	67,022	4.192	11.0	2,038	(260)	37,482	Launched acquisition debt funding
**Express Scripts Holding Co	ESRX	BBB	12,936	3.938	7.6	-	394	569	Small repurchase program
Medtronic PLC	MDT	A-	24,545	3.734	10.8	2,598	1,357	(4,358)	Debt Reduction
Thermo Fisher Scientific Inc	TMO	BBB	18,403	3.035	7.0	258	133	(1,650)	Debt Reduction

*Purchasing Aetna
**Being purchased by Cigna

Source: Bloomberg

AGN paper offers the best risk reward at current levels, as bonds still appear to reflect past levels of elevated leverage versus the current reality of the balance sheet's standing. Although bonds demonstrated the greatest level of volatility in the peer group (with a Standard Deviation of 19 bps YTD), bonds should offer far greater stability going forward, with the prospect for additional spread tightening on the horizon. **Investors looking to move up in quality to avoid a further increase in systemic volatility should seek to target MDT paper**, which has demonstrated consistency in recent turbulence, as well as a more measured approach to acquisition activity.

Chart 12. HC Supply – Spread Performance 5-yr Bonds

Selected HC Supply Spread Vol (5yr Bonds)	Composite Rating	Current	High	Low	Mean	Median	Standard Deviation	Current STD from Mean	Current Diff from YTD wide	Est Net Leverage (x)
AGN 2.8 03/15/23	BBB-	129	155	73	113	115	19	0.84	-26	3.16x
BDX 3.363 06/06/24	BBB-	132	143	98	119	119	10	1.30	-11	4.80x
*CVS 3.7 03/09/23	BBB	122	125	86	102	102	9	2.29	-2	2.82x
ESRX 3.05 11/30/22	BBB	93	127	76	101	100	12	-0.61	-33	1.65x
MDT 3 5/8 03/15/24	A-	80	83	43	63	65	9	1.77	-3	2.58x
TMO 3 04/15/23	BBB	106	110	53	83	86	11	2.08	-3	3.45x

Source: FTN Financial, Bloomberg historical G-Spread; Moody's adjusted Financial Metrics

Assessing Leverage and Spread Volatility – Pharmaceuticals

Chart 13. Pharma – Leverage Statistics

Name	Debt Ticker	Composite Rating	Debt / EBITDA	Net Debt / EBITDA	EBITDA / Interest Expense	FCF / Net Debt	EBITDA	Interest Expense	Cash & Cash Equivalents	Total Debt
AbbVie Inc	ABBV	BBB+	3.28x	3.03x	10.43x	14.65%	$ 13,782,000	$ 1,321,795	$ 3,547,000	$ 45,268,149
Abbott Laboratories	ABT	BBB	3.43x	3.02x	7.64x	14.32%	$ 7,550,000	$ 988,626	$ 3,065,000	$ 25,866,916
Amgen Inc	AMGN	A-	3.27x	2.48x	9.57x	22.02%	$ 13,309,000	$ 1,391,323	$ 11,956,000	$ 43,499,589
AstraZeneca PLC	AZN	BBB+	5.66x	4.80x	6.17x	-8.11%	$ 4,280,000	$ 693,251	$ 3,684,000	$ 24,227,625
Celgene Corp	CELG	BBB	3.71x	3.47x	9.91x	16.14%	$ 6,291,000	$ 634,543	$ 1,503,000	$ 23,343,992
Gilead Sciences Inc	GILD	A-	2.66x	1.63x	11.18x	31.94%	$ 12,952,000	$ 1,158,588	$ 13,234,000	$ 34,402,843
GlaxoSmithKline PLC	GSK	A	3.64x	3.19x	11.20x	1.09%	$ 12,253,161	$ 1,094,451	$ 5,448,688	$ 43,688,888
Johnson & Johnson	JNJ	AAA	1.75x	1.12x	21.63x	29.79%	$ 27,989,000	$ 1,294,067	$ 17,569,000	$ 48,842,000
Eli Lilly & Co	LLY	A+	2.61x	1.73x	17.51x	16.22%	$ 7,737,600	$ 441,973	$ 6,817,300	$ 20,172,429
Merck & Co Inc	MRK	AA-	2.06x	1.72x	17.71x	18.99%	$ 15,365,000	$ 867,642	$ 7,826,000	$ 31,610,000
Mylan NV	MYL	BBB-	4.44x	4.34x	6.06x	12.38%	$ 3,469,400	$ 572,496	$ 330,200	$ 15,389,300
Novartis AG	NOVNVX	AA-	2.45x	1.67x	13.92x	15.77%	$ 15,088,000	$ 1,084,115	$ 14,000,000	$ 37,033,525
Pfizer Inc	PFE	AA-	2.81x	2.69x	13.78x	13.99%	$ 22,442,000	$ 1,628,533	$ 2,704,000	$ 62,998,099
Roche Holding AG	ROSW	NR	1.36x	0.93x	22.62x	29.67%	$ 21,346,407	$ 943,533	$ 9,035,702	$ 28,367,994
Sanofi	SANFP	AA-	3.95x	3.19x	19.19x	4.79%	$ 10,879,332	$ 566,936	$ 8,098,168	$ 42,017,777
*Shire PLC	SHPLN	BBB-	3.00x	2.96x	10.96x	15.28%	$ 6,818,300	$ 621,939	$ 259,700	$ 20,421,885

*Being purchased by Takeda

Source: Moody's adjusted Financial Metrics

Like Health Care Supply, Pharmaceuticals remain deep in their own consolidation cycle, with the prospect for additional big ticket M&A deals on the horizon. PFE, AZN and MRK are all still reportedly pursuing potential expansion via large-scale deals. AZN stands out as having elevated net leverage as a result of weaker cash flows over the past year. PFE and AZN were once potential merger candidates in a deal that fell through back in 2014. Takeda recently launched its USD funding package for Shire, and the deal is expected to close over the next several months. MYL has the most elevated debt levels besides AZN, and still carries high relative operating uncertainty to other names in the peer group, given its position as a generics operator. The sector still presents high operating challenges because of pricing competition.

Chart 14. Pharma – Debt Raised and Debt Usage

Name	Debt Ticker	Composite Rating	Debt Out	Avg Cpn	Avg Mty	LTM Dividends	LTM Share Buybacks	LTM Debt Change	Notes
AbbVie Inc	ABBV	BBB+	37,292	3.394	11.2	5,159	7,353	1,843	Mostly funding repurchase program
Abbott Laboratories	ABT	BBB	19,593	3.405	11.9	1,943	536	(4,413)	Paying down acquisition debt
Amgen Inc	AMGN	A-	35,478	3.643	11.4	3,501	16,459	274	Debt raise not meaningful
AstraZeneca PLC	AZN	BBB+	18,440	3.428	10.6	3,484	(37)	1,207	Modest debt increase
Celgene Corp	CELG	BBB	20,350	3.829	12.0	-	8,827	6,100	Funding large repurchase program
Gilead Sciences Inc	GILD	A-	27,500	3.773	11.8	2,917	1,754	(1,750)	Funding repurchase program
GlaxoSmithKline PLC	GSK	A	27,538	3.347	9.8	5,277	(46)	4,144	Funding high dividends
Johnson & Johnson	JNJ	AAA	31,140	3.106	11.7	9,339	2,187	2,711	Funding repurchase program
Eli Lilly & Co	LLY	A+	11,648	3.181	10.4	2,287	3,151	872	Debt raise not meaningful
Merck & Co Inc	MRK	AA-	21,393	3.217	9.9	5,178	4,381	(3,738)	Modest debt reduction; expected M&A
Mylan NV	MYL	BBB-	14,129	3.689	8.7	-	912	(568)	Modest debt reduction; outpaced by buybacks
Novartis AG	NOVNVX	AA-	25,392	2.560	8.4	6,966	2,260	2,307	Funding repurchase program
Pfizer Inc	PFE	AA-	37,771	3.859	11.5	7,924	5,863	945	Expected M&A
Roche Holding AG	ROSW	NR	18,391	2.897	6.9	7,468	397	(690)	Modest debt reduction
Sanofi	SANFP	AA-	27,481	1.692	5.7	4,503	1,137	8,903	Significant debt increase; presumably M&A
*Shire PLC	SHPLN	BBB-	14,025	2.764	4.8	323	(223)	(3,075)	Debt reduction; being purchased by Takeda

*Being purchased by Takeda

Source: Bloomberg

MYL has been subject to the most volatility in this peer group, and will likely continue to do so given the secular difficulties in generics, and the dangerous lessons learned by investors who were hit hard in the Teva Pharmaceutical (TEVA: Ba2/BB) saga, which played out throughout 2016-17. **SHPLN bonds offer greater stability than demonstrated over the past twelve months** with the likely closing of its deal with Takeda in the near-term. New debt has already been absorbed in the market, despite the fact that The Company paid a steeper concession than likely was intended. Takeda was a victim of unfortunate timing, as they launched at perhaps the least opportune time since the deal was announced back in May of this year. **Investors seeking to move up in quality and limit volatility going forward should target AMGN paper** domestically, and seek out the relative stability of EU operators GSK, ROSW and SANFP. PFE and MRK are unlikely to blow up their balance sheets — even with the prospect larger scale deals — but they are still subject to the uncertainty of further announcements and potential large debt issuances into the market, potentially over the next year.

Chart 15. Pharma – Spread Performance 5-yr Bonds

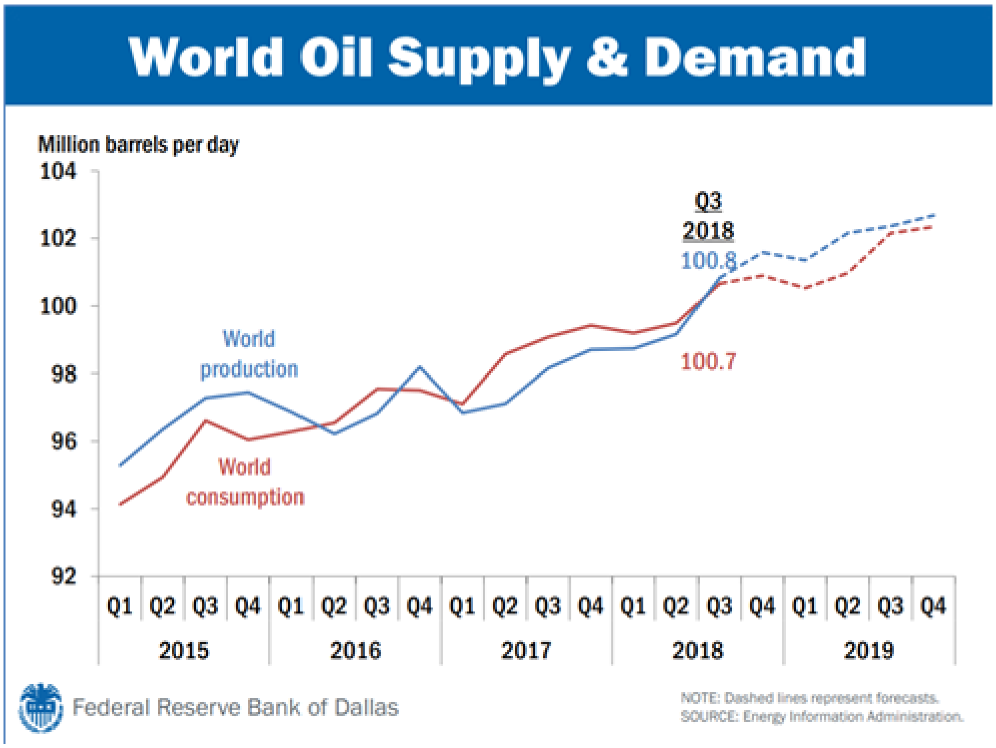
Selected Pharma Spread Vol (5yr Bonds)	Composite Rating	Current	High	Low	Mean	Median	Standard Deviation	Current STD from Mean	Current Diff from YTD wide	Est Net Leverage (x)
*ABBV 3 3/4 11/14/23	BBB+	116	121	82	94	89	11	1.98	-5	3.03x
ABT 3.4 11/30/23	BBB	76	95	46	73	74	12	0.24	-19	3.02x
AMGN 2 1/4 08/19/23	A-	92	94	50	74	77	10	1.79	-2	2.48x
*AZN 3 1/2 08/17/23	BBB+	110	112	73	82	77	11	2.69	-1	4.80x
*CELG 3 1/4 02/20/23	BBB	125	130	71	96	99	11	2.53	-5	3.47x
GILD 2 1/2 09/01/23	A-	82	83	41	63	64	9	2.13	-2	1.63x
*GSK 3 3/8 05/15/23	A	71	75	51	60	60	4	2.41	-4	3.19x
JNJ 2.05 03/01/23	AAA	23	33	14	21	22	5	0.44	-10	1.12x
LLY 2.35 05/15/22	A+	35	51	21	37	39	8	-0.22	-16	1.73x
MRK 2.8 05/18/23	AA-	57	70	29	43	44	7	1.99	-13	1.72x
MYL 4.2 11/29/23	BBB-	176	179	108	138	136	17	2.22	-3	4.34x
NOVNVX 3.4 05/06/24	AA-	73	79	30	53	57	11	1.85	-6	1.67x
*PFE 3.2 09/15/23	AA-	51	54	39	44	44	3	2.23	-4	2.69x
*ROSW 3 1/4 09/17/23	NR	51	54	34	42	40	6	1.65	-2	0.93x
*SANFP 3 3/8 06/19/23	AA-	64	66	40	51	50	6	2.02	-1	3.19x
SHPLN 2 7/8 09/23/23	BBB-	146	146	83	115	116	16	1.85	-1	2.96x

Issued after 12/31/17 *Source: FTN Financial, Bloomberg historical G-Spread; Moody's adjusted Financial Metrics*

Energy Sector Update – Measured Pain on the Energy Train

Global supply/demand uncertainty has driven the narrative around oil prices in recent weeks, driving both WTI and Brent contracts down 25% over four weeks – testing the resolve of producers and investors along the way. The current combination of elevated global production and ticking signs of a weakening global economy has led oil prices down to their lowest levels since October 2017. Complicating today's situation further, political tensions between the US and Saudi Arabia have been elevated.

Graph 1.



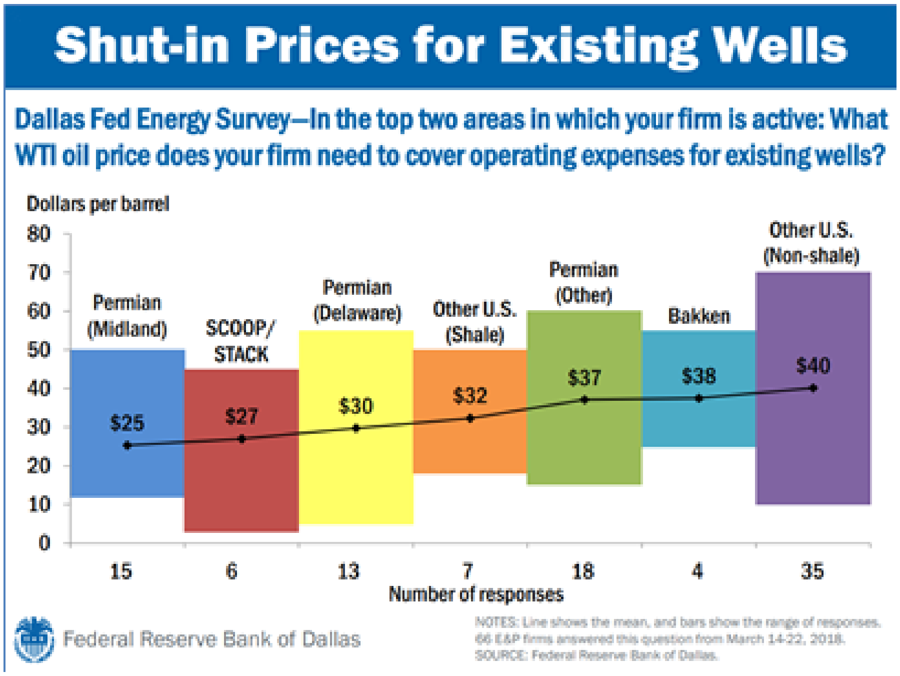
Source: Federal Reserve Board of Dallas

We maintain our view for the WTI CL1 front-month contract to settle around $65/bbl at year-end and into Q1 2019, as we expect a directional lean towards coordinated OPEC+ production cuts at both this week's G20 and the formal OPEC meeting Dec 6.

The volatile price action leading into the Dec 6 OPEC+ meeting in Vienna holds to the playbook last seen 2 years ago, when OPEC actively elevated production in the months leading into announced production cuts in Nov/Dec 2016 (totaling 1.2MMbbl/d from OPEC and 650kbbl/d from producers outside of OPEC including Russia). This time around, we expect coordinated production cuts from OPEC+ to total around 1MMbbl/d, with Saudi Arabia already indicating they will cut production by 500kbbl/d. **We think that's the number that is needed to stabilize prices and reduce oversupply concerns.**

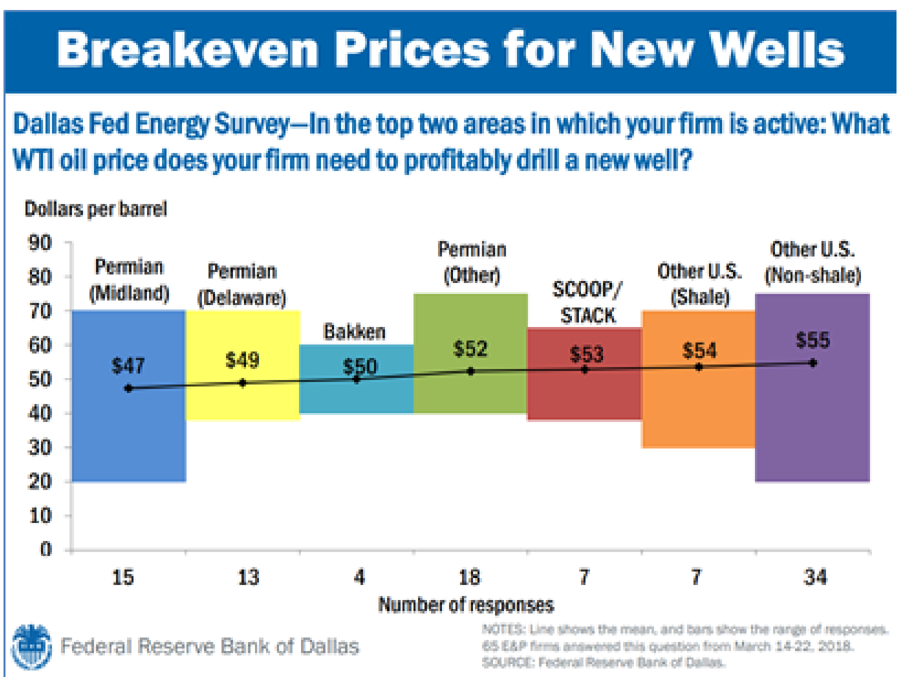
US shale — now the global swing producer with 11MM barrels of daily production — has grown and evolved since the trauma of the 2015/16 oil crash. US shale producers within the Investment Grade Index have all shored up their balance sheets and improved operating margins over the past 3 years, leaving them all better positioned to weather this current cycle. Specifically, we highlight average lifting cost break-evens across US shale regions, where operating expenses on existing wells are in the range of $25-40/bbl, and lifting costs for new wells frame in the $47-55/bbl context.

Graph 2.



Source: Federal Reserve Board of Dallas, November 2018

Graph 3.



Source: Federal Reserve Board of Dallas, November 2018

Our interpretation of these metrics in the current oil price environment is that **IG US shale producers can survive and largely remain cash flow positive at $50/bbl with existing wells, but will be less inclined to tap new wells at $50/bbl.**

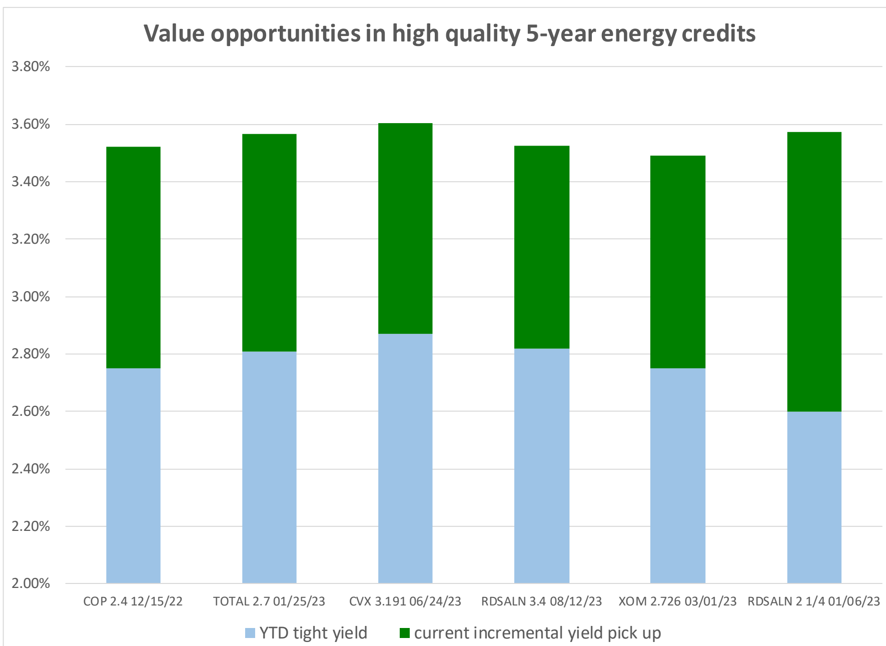
With this view in mind in the current spread context, we look at opportunities to put money to work across various risk appetites.

Higher Beta Calls: CVECN, PAA:
We still like **Cenovus Energy (CVECN: Ba1/BBB/BBB-)** paper here on the backup. The company remains on track to continue overall debt reduction, and the 500MM maturity next year is manageable. CVECN management indicates strong operating margins through the cycle, with $2.2B in operating margins at $50/bbl and $1.4B at $40/bbl.

We see **Plains All American (PAA: Ba1/BBB-/BBB-)** poised to continue to outperform, with organic EBITDA growth into 2019 set to help management execute on balance sheet improvement goals. Specifically, PAA expects the Sunrise and Cactus II pipeline projects to enter service within the next 6 months, adding much needed takeaway capacity for Permian basin production. PAA expects 2019 EBITDA growth of 14-15% and leverage is expected to continue to decline as a result.

Higher Quality Calls: RDSALN, COP, TOTAL, XOM, CVX
We see opportunities to pick up high-quality 5y energy paper at new wides of the year. These are global integrated energy names with fortress balance sheets that have demonstrated resilience through the commodity cycle.

Graph 4.



Source: Bloomberg, TRACE

For the purposes of Sector Weighting Views, the "Index" we are using is the Citigroup's Big Credit Index, a broad market index of Investment Grade Corporate Bonds. Index data is made available via Yield Book. Details about the composition of the Citigroup's broad market index available upon request. The Sector breakdowns referred to herein are defined by FTN Credit Strategy and may vary from that of the Index. Other available credit indices from other providers may show different allocations among sector groups.

FTN SECTOR WEIGHTING VIEWS

Overweight: Relative to the broad market index, the sector is expected to outperform other High-Grade Sectors on an Excess Return basis over the next 6 months.

Marketweight: Relative to the broad market index, the sector is expected to perform in-line with other High-Grade Sectors on an Excess Return basis over the next 6 months.

Underweight: Relative to the broad market index, the sector is expected to under perform other High-Grade Sectors on an Excess Return basis over the next 6 months.

FTN FINANCIAL CREDIT STRATEGY

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