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ENERGY & BASICS

OUTLOOK SNAPSHOTS

CreditSights

2023 Sector Snapshot: US Energy & Basics

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Executive Summary

- **We provide our Energy & Basics sector strategy for 2023, including key themes, picks and pans, and risks for the coming year.**
- **We have an Outperform recommendation on Investment Grade Chemicals. In Investment Grade Chemicals about half our coverage is comprised of names that are exposed to global manufacturing and the other half is exposed to agricultural markets and more defensive end markets. The sector trades well wide of the index and in our base case scenario of a bumpy landing, we see the spreads for the overall sector as attractive.**
- **We have a Market perform recommendation on High Yield Chemicals.** Although the macroeconomic backdrop will translate into a substantial contraction in demand as well as liquidity concerns for a few names, larger names in the sector have the balance sheets and ample liquidity to weather through the weak operating environment.
- **We are downgrading our IG Energy sector recommendation to Market perform from Outperform.** Leverage improvement is plateauing for IG Energy as a whole, given most balance sheet goals have been achieved, and incremental cash flow is primarily being directed to dividends and share repurchases. Declining commodity prices may pressure leverage metrics in 2023, but credit metrics will remain very strong compared to historical levels.
- **We maintain our Outperform recommendation on HY Energy.** While we are cognizant of the impacts related to the wave of Energy rising stars, the strong commodity price backdrop and continued focus on balance sheet improvement (both metrics and absolute debt reduction) for many HY issuers, leaves us constructive on the remaining issuers. This is especially true when coupled with tailwinds from rising star capital recycle and minimal new issue from HY issuers that conducted significant amounts of liability management over the past two years.
- **We are upgrading IG Metals, Mining & Steel from Market Perform to Outperform.** Credit fundamentals are weakening with commodity prices declining and cost increasing, while the macro backdrop is uncertain as we head into the New Year. That said, commodity prices are still high from a historical perspective and versus cash cost, while spread levels are wide to the broader IG index and balance sheets are very strong. In addition, we expect the China growth story to improve in 2H23, which should support the China-centric sector.
- **We maintain our Market Perform on HY Metals, Mining & Steel.** Similar to IG Metals, Mining & Steel, credit fundamentals are weakening which is partially offset by strong balance sheets. That said, spreads trade tight to the broader HY index.
- **We rate IG Forestry & Paper as Outperform.** Despite an expected retreat in commodity prices from recent post-COVID recovery highs, spreads remain wide to the larger index and have room for improvement in a risk on environment.
- **We rate HY Paper & Packaging as Market perform.** High quality, high beta names will continue to define performance for the sector as investors are expected to remain relatively risk averse.

Relative Value

US IG and HY vs. Chemicals	OAS			YTW			$ Price				YTD Returns	
	Current	YE 2021	Change	Current	YE 2021	Change	Current	YE 2021	Change	Duration	Excess	Total
US IG	142 bp	98 bp	44 bp	5.4%	2.4%	306 bp	$89.58	$109.14	-$19.57	6.9 yrs	-1.8%	-15.3%
US IG Chemicals	**168 bp**	**109 bp**	**59 bp**	**5.7%**	**2.5%**	**313 bp**	**$88.91**	**$111.27**	**-$22.36**	**7.5 yrs**	**-3.6%**	**-18.0%**
Difference	26 bp	11 bp	15 bp	25 bp	19 bp	7 bp	-$0.66	$2.13	-$2.79	0.6 yrs	-180 bp	-271 bp
US HY	455 bp	310 bp	145 bp	8.6%	4.3%	430 bp	$87.02	$103.31	-$16.29	4.1 yrs	-2.6%	-10.5%
US HY Chemicals	**494 bp**	**347 bp**	**147 bp**	**9.0%**	**4.7%**	**422 bp**	**$85.94**	**$101.16**	**-$15.21**	**4.1 yrs**	**-4%**	**-11.7%**
Difference	39 bp	37 bp	2 bp	33 bp	41 bp	-8 bp	-$1.07	-$2.15	$1.08	0.0 yrs	-140 bp	-117 bp

Source: CreditSights, FactSet, ICE Data Indices, LLC

US IG and HY vs. Energy	OAS			YTW			$ Price				YTD Returns	
	Current	YE 2021	Change	Current	YE 2021	Change	Current	YE 2021	Change	Duration	Excess	Total
US IG	142 bp	98 bp	44 bp	5.4%	2.4%	306 bp	$89.58	$109.14	-$19.57	6.9 yrs	-1.8%	-15.3%
US IG Energy	**154 bp**	**126 bp**	**28 bp**	**5.5%**	**2.7%**	**285 bp**	**$90.91**	**$111.30**	**-$20.39**	**7.5 yrs**	**-1.9%**	**-15.9%**
Difference	12 bp	28 bp	-16 bp	11 bp	32 bp	-21 bp	$1.33	$2.16	-$0.83	0.6 yrs	-10 bp	-67 bp
US HY	455 bp	310 bp	145 bp	8.6%	4.3%	430 bp	$87.02	$103.31	-$16.29	4.1 yrs	-2.6%	-10.5%
US HY Energy	**347 bp**	**359 bp**	**-12 bp**	**7.6%**	**4.9%**	**279 bp**	**$93.29**	**$104.11**	**-$10.83**	**4.3 yrs**	**3.9%**	**-4.8%**
Difference	-108 bp	49 bp	-157 bp	-98 bp	54 bp	-151 bp	$6.27	$0.80	$5.47	0.2 yrs	650 bp	576 bp

Source: CreditSights, FactSet, ICE Data Indices, LLC

US IG and HY vs. Metals, Mining & Steel	OAS			YTW			$ Price				YTD Returns	
	Current	YE 2021	Change	Current	YE 2021	Change	Current	YE 2021	Change	Duration	Excess	Total
US IG	142 bp	98 bp	44 bp	5.4%	2.4%	306 bp	$89.58	$109.14	-$19.57	6.9 yrs	-1.8%	-15.3%
IG Metals, Mining & Steel	**185 bp**	**150 bp**	**35 bp**	**5.8%**	**3.0%**	**280 bp**	**$92.49**	**$114.63**	**-$22.15**	**7.9 yrs**	**-5.5%**	**-20.2%**
Difference	43 bp	52 bp	-9 bp	35 bp	61 bp	-26 bp	$2.91	$5.49	-$2.58	1.0 yrs	-370 bp	-493 bp
US HY	455 bp	310 bp	145 bp	8.6%	4.3%	430 bp	$87.02	$103.31	-$16.29	4.1 yrs	-2.6%	-10.5%
HY Metals, Mining & Steel	**388 bp**	**276 bp**	**113 bp**	**8.0%**	**4.0%**	**404 bp**	**$90.58**	**$105.49**	**-$14.91**	**4.1 yrs**	**0.6%**	**-7.1%**
Difference	-67 bp	-34 bp	-32 bp	-61 bp	-35 bp	-26 bp	$3.57	$2.18	$1.39	0.0 yrs	317 bp	349 bp

Source: CreditSights, FactSet, ICE Data Indices, LLC

US IG and HY vs. Paper & Packaging	OAS			YTW			$ Price				YTD Returns	
	Current	YE 2021	Change	Current	YE 2021	Change	Current	YE 2021	Change	Duration	Excess	Total
US IG	142 bp	98 bp	44 bp	5.4%	2.4%	306 bp	$89.58	$109.14	-$19.57	6.9 yrs	-1.8%	-15.3%
US IG Paper & Packaging	**170 bp**	**124 bp**	**46 bp**	**5.7%**	**2.6%**	**310 bp**	**$91.75**	**$110.30**	**-$18.55**	**5.6 yrs**	**-1.4%**	**-13.0%**
Difference	28 bp	26 bp	2 bp	26 bp	22 bp	4 bp	$2.18	$1.16	$1.02	-1.3 yrs	40 bp	229 bp
US HY	455 bp	310 bp	145 bp	8.6%	4.3%	430 bp	$87.02	$103.31	-$16.29	4.1 yrs	-2.6%	-10.5%
US HY Paper & Packaging	**460 bp**	**351 bp**	**109 bp**	**8.4%**	**4.9%**	**357 bp**	**$88.21**	**$102.83**	**-$14.62**	**3.8 yrs**	**-2.6%**	**-10.2%**
Difference	5 bp	41 bp	-36 bp	-18 bp	55 bp	-74 bp	$1.20	-$0.48	$1.68	-0.3 yrs	0 bp	37 bp

Source: CreditSights, FactSet, ICE Data Indices, LLC

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US Energy & Basics

Chemicals

Executive Summary

- We have an Outperform recommendation on Investment Grade Chemicals. In Investment Grade Chemicals about half our coverage is comprised of names that are exposed to global manufacturing and the other half is exposed to agricultural markets and more defensive end markets. The sector trades well wide of the index and in our base case scenario of a bumpy landing, we see the spreads for the overall sector as attractive.
- We have a Market perform recommendation on High Yield Chemicals. Although the macroeconomic backdrop will translate into a substantial contraction in demand as well as liquidity concerns for a few names, larger names in the sector have the balance sheets and ample liquidity to weather through the weak operating environment
- IG Picks & Pans. Our top two picks are Celanese and Mosiac given the former trades substantially wider than other chemical names and should perform well in a hard landing scenario, while the latter is exposed to the strong fundamentals in Agriculture. Our pan is Dow Chemical since petrochemical markets should see volume losses from slowing demand and margin contraction due to new supply coming online.
- HY Picks & Pans. Our top High Yield Pick is Olin given its favorable approach to capital allocation and our Pans include both Trinseo and Venator due to the elevated leverage and concerns about liquidity.
- New issue outlook. We expect limited new issuance that will consist of refinancing and potential M&A funding. We expect a minimal amount of new issuance in High Yield Chemicals.

Key Themes for 2023

- Focal points for 2023 will be the severity of the contraction in European demand, question marks around a potential rebound in Chinese demand, and whether more resilient demand growth in North America persist.
- A meaningful increase in industry capacity coupled with weakening global demand will pressure petrochemical producer margins in 2023.
- Shareholder rewards will take a back seat to the conservation of liquidity.
- The degree farmer profitability strength will be tempered by slowing industrial uses of agriculture (i.e., corn to ethanol).

Top Risks for 2023

- The potential for liquidity shortfalls remains a prominent risk in High Yield Chemicals.
- Elevated energy and raw material costs will pressure margins as companies may not have the ability to increase prices given the contraction in demand.
- Ongoing supply chain headwinds will hamper growth.
- Slowing downstream demand will reduce operating capacity utilization and negatively impact profitability.

Picks, Pans & Recommendations

Investment Grade Picks

- **Celanese** (Baa3/BBB-/BBB-): Celanese remains committed to its investment grade credit rating and is planning to bring leverage down to 3x by the end of 2024 and continue to expect the company will be able to hold onto IG ratings at the agencies with S&P moving to a negative outlook, but holding Baa3 and Fitch launching on the name at BBB-. Spreads are favorable vs comps given our expectation for a bumpy landing and the coupon steps provide protection in case economic conditions are worse than expected.

- **Mosaic** (Baa2/BBB/BBB-): Operationally, MOS is benefiting from very high fertilizer prices from tight supply & demand fundamentals that have been further exacerbated by the Russia/Ukraine conflict. We expect conditions to remain strong, the company to continue to deliver strong results on the back of high prices and increasing production and expect the company to outperform low BBB peers.

Investment Grade Pans

- **Dow Chemical** (Baa1/BBB/BBB+): Dow sits on a strong balance sheet after reducing leverage in 2021 and the company is set to benefit from the planned completion of new projects and efficiency programs in the near term. However, with margins expected to continue to normalize from recent highs after lapping the turnaround-heavy first half of the year and as supply additions come online over the next couple of years, we have been recommending investors take risk off in the petrochemical sector with a preference towards agricultural credits or more defensive names.

- **Westlake** (Baa2/BBB/BBB): While ECU margins remain robust for now, Olefin margins are expected to decline in the second half of the year and should drag on consolidated results. Meanwhile, the company is beginning to see moderation in construction demand, which may lead to some normalization in ECU margins as PVC demand wanes slightly. With spreads tight to peers, we prefer other names in the space and are underperform on Westlake.

US IG Chemicals Company Recommendations

Outperform	Market Perform	Underperform
BAYNGR	APD	BRASKM
CE	ALB	DOW
CF	FMC	EMN
CTVA	HUN	ECL
DD	LYB	WLK
IFF	NTR	
MOS	PPG	
MXCN		
RPM		
SHW		
SYNNVX		

Source: CreditSights

High Yield Picks

- **Olin** (Ba1/BB+/NR): We remain comfortable with Olin's approach to capital allocation given management's goal of operating the company with investment grade credit metrics and remaining a robust generator of free cash flow through the cycle. We also maintain our favorable view on the company's strategy of matching chlor-alkali production to the weaker side of electrochemical unit demand, which we expect will improve profitability and result in less operational volatility.

High Yield Pans

- **Trinseo** (B2/B-/NR): Trinseo's sizable European presence (roughly 60% of revenues) resulted in the company comparatively more exposed to substantial demand deterioration and elevated energy costs in the region. We do not expect the demand environment to improve until 1Q23 as destocking activity bottoms out around that time frame. Although Trinseo announced several cost-cutting initiatives that will help mitigate the weak demand and unfavorable energy environment, those initiatives (net of cash costs) are unlikely to provide a benefit until 2023.

- **Venator** (Caa1/CCC+/NR): Venator is highly exposed to Europe (roughly 50% of revenues) where substantial contraction in volumes and elevated energy costs in the region resulted in negative adjusted EBITDA. The volume contraction and cost inflation exacerbated an already unfavorable free cash flow profile, which resulted in Venator needing to execute several measures to shore up near-term liquidity. Despite the liquidity generated from both transactions, Venator hired financial advisor Alvarez & Marsal to evaluate both operational and financial initiatives, which at the very least indicates some uncertainty about the company's ability to organically generate cash flow.

US HY Chemicals Company Recommendations

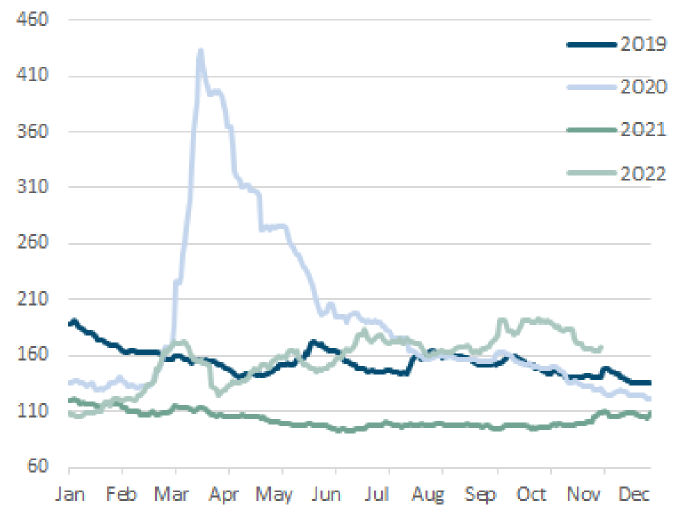
Outperform	Market Perform	Underperform
OLN	CC	NCX
	TROX	TSE
		VNTR

Source: CreditSights

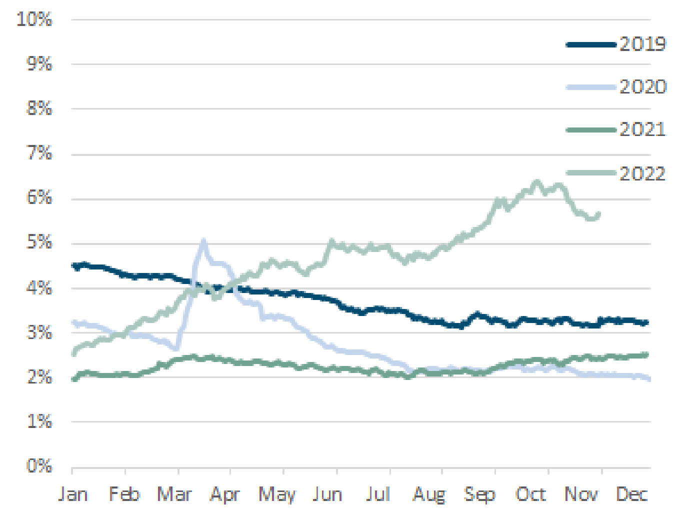
Relative Value

Investment Grade

US IG Chemicals Annual OAS History: 2019-2022



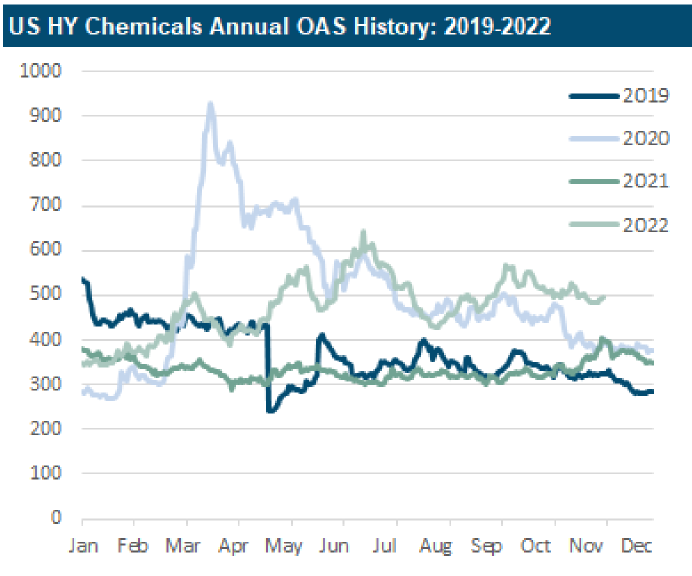
US IG Chemicals Annual YTW History: 2019-2022

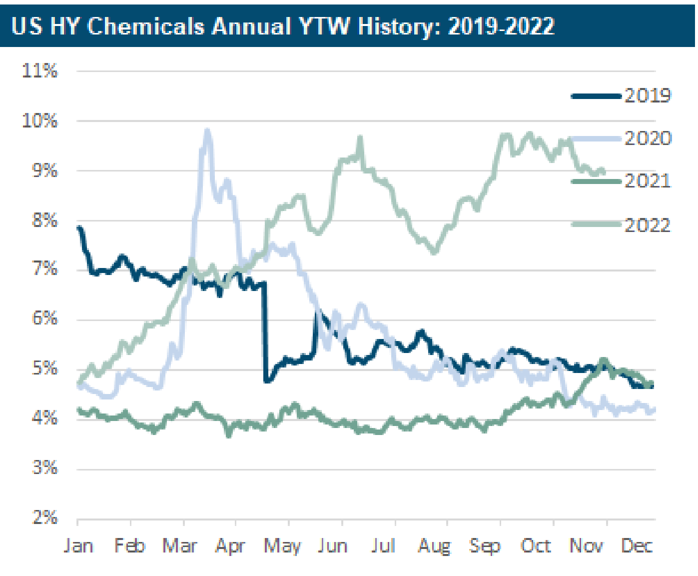


Source: CreditSights, FactSet, ICE Data Indices, LLC

We see value at current spreads as the chemicals sector currently trades fairly wide to the overall index. We have outperforms on five of the seven top issuers, including Bayer, the largest issuer in our coverage universe. We see spreads going tighter in a bumpy landing scenario, with the major catalysts being increasing demand as we traverse through 2023.

High Yield





Source: CreditSights, FactSet, ICE Data Indices, LLC

Although yields in High Yield Chemical are substantially wider YoY, we continue to see the risk/reward skewed to the downside. Concerns regarding a protracted contraction in demand and resulting drain on liquidity will limit upside in the sector. However, a rebound in Chinese demand due to the relaxation of COVID zero measures could result in some upside in 2023.

Fundamental Outlook

IG Chemicals Largest Issuer Fundamental Snapshot

Issuer	Total Outstanding ($B)	Net Leverage Current	Net Leverage YE 2021	YTD Change	FY2023 Leverage Direction
BAYNGR	$17.4	2.6x	3.0x	-0.4x	Lower
DOW	$10.7	1.1x	1.0x	0.1x	Higher
DD	$10.4	2.9x	2.6x	0.3x	Flat
LYB	$9.7	1.1x	1.3x	-0.2x	Higher
SHW	$9.0	2.7x	2.7x	0.0x	Lower
CE	$8.4	3.9x	1.3x	2.6x	Lower
IFF	$7.7	4.1x	4.4x	-0.3x	Lower
ECL	$7.1	3.3x	3.3x	0.0x	Lower
NTRCN	$6.1	0.9x	1.3x	-0.4x	Flat
BRASKM	$4.4	1.3x	0.9x	0.5x	Higher

Source: CreditSights, FactSet, ICE Data Indices, LLC, Company Filings

HY Chemicals Largest Issuer Fundamental Snapshot

Issuer	Total Outstanding ($B)	Net Leverage Current	Net Leverage YE 2021	YTD Change	FY2023 Leverage Direction
NCX	$4.3	2.6x	1.4x	1.2x	Higher
CC	$3.8	2.0x	2.1x	-0.1x	Higher
OLN	$3.0	1.0x	1.2x	-0.2x	Higher
TROX	$2.6	2.6x	2.6x	0.0x	Higher
TSE	$2.4	6.2x	2.9x	3.3x	Higher
VNTR	$1.0	6.2x	4.4x	1.8x	Higher

Source: CreditSights, FactSet, ICE Data Indices, LLC, Company Filings

We expect leverage in High Yield Chemicals to deteriorate in 2023. We expect demand declines and margin pressure arising from cost inflation will translate into substantial contractions in adjusted EBITDA and increases in leverage. In Investment Grade Chemicals, we expect leverage levels to creep up as the sector laps stronger comps but should see improvement in the second half of 2023.

Primary Market Outlook

Investment Grade

We expect roughly $8.0 bn of refinancing issuance in 2023 within IG chemicals but note that Celanese, IFF and Ecolab are in deleveraging mode and we anticipate $1.3 bn of combined maturities will be repaid and not refinanced. In addition to refinancings, we expect continued M&A issuance that will likely be near current refinancing levels.

High Yield

High Yield Chemicals could experience some issuance in 2023 to the extent companies opt to bolster liquidity in an environment where demand growth deteriorates further. Aside from that, near-term maturities are minimal with most companies' sizable maturities occurring over the 2024/2025 timeframe.

Event Risk/M&A Landscape

Given the unfavorable demand environment, we do not anticipate any M&A in High Yield Chemicals in 2023. Trinseo had been the most active on the M&A front given its goal of increasing its exposure to specialty chemicals. In Investment Grade chemicals we expect moderate M&A issuance as the sector engages in normal portfolio restructuring. We see constrained levels while economic uncertainty casts a shadow over transactions, but we expect a pickup in M&A as conditions improve in 2H23.

ESG Considerations

In High Yield Chemicals, we expect Chemours to remain focused on funding the settlement agreement with DuPont and Corteva that outlines how the parties involved will share the funding of existing and future PFAS liabilities. Chemours' next $100 million escrow payment will occur in September 2023. However, annual escrow payments will decline to $50 million in September 2023 through 2028. In Investment Grade Chemicals, Bayer continues to face Glyphosate litigation but the company has been winning more of its court cases recently. On a lower level, DuPont and Corteva face legacy PFOA liabilities from the spinoff of Chemours and the subsequent split up of DowDuPont.

Energy

Executive Summary

- We are downgrading our IG Energy sector recommendation to Market perform from Outperform. Leverage improvement is plateauing for IG Energy as a whole, given most balance sheet goals have been achieved, and incremental cash flow is primarily being directed to dividends and share repurchases. Declining commodity prices may pressure leverage metrics in 2023, but credit metrics will remain very strong compared to historical levels.

- We maintain our Outperform recommendation on HY Energy. While we are cognizant of the impacts related to the wave of Energy rising stars, the strong commodity price backdrop and continued focus on balance sheet improvement (both metrics and absolute debt reduction) for many HY issuers, leaves us constructive on the remaining issuers. This is especially true when coupled with tailwinds from rising star capital recycle and minimal new issue from HY issuers that conducted significant amounts of liability management over the past two years.

- Outperform recommendations for IG Energy entering 2023 include EQT and ET for spread tightening and BWP for spread pickup. Meanwhile, EOG and CVX trade too tight to offer outperformance and OKE may see headwinds from Bakken and Rockies throughput.

- HY Energy picks include rising star OXY for spread compression, stable yield pickup for opco gas pipeline ROCKIE and ratings upside for CEQP. NS remains our top pan given its position as the only leveraging name under coverage.

- We expect Energy new issue to remain subdued, with IG issuance normalize at lower levels compared to recent history and HY issuance potentially setting new lows.

Key Themes for 2023

- Will energy security continue to trump energy transition/ESG?
- Timing and index impacts from Energy rising stars.
- Capital allocation and the continued shift to shareholders rewards.

Top Risks for 2023

- Commodity prices selling off.
- Equity payouts putting pressure on balance sheets.
- Political and regulatory overreach impacting both prices and volumes.

Picks, Pans & Recommendations

Investment Grade Picks

- We see ET spreads continuing to compress towards mid-BBB peers like KMI, offering 30 bp of spread compression. ET is the largest Midstream company, generating twice as much EBITDA as WMB, with a diversified asset base. An improving balance sheet should position the company for ratings improvement in 2023.
- BWP offers significant spread pickup with a very stable asset base, trading 45 bp wide to our IG Midstream average and 70 bp wide to IG Energy. BWP generates 96% of revenue from long-term, take-or-pay commitments with no commodity price or volume exposure.
- EQT continues to trade well wide to other IG E&Ps, and while the balance sheet remains behind most other IG E&P issuers, EQT will catch up on this front as it repays another ~$3 bn of debt. EQT is the largest gas producer in the country and fewer 2023 hedges will allow for material cash flow growth and spread tightening.

Investment Grade Pans

- We expect OKE's leverage to improve to ~3.7x in 2022, but the lack of free cash flow or debt reduction results in CreditSights preferring to pickup spread in BWP or PAA. Given the Bakken concentration and investor concerns regarding the longevity of the Bakken, OKE seems like a name that should be exploring acquisition opportunities with most growth capex behind them and a strong equity multiple.
- We are Underperform on Chevron (CVX: Aa2/AA-/NR) solely based on valuation with the company's 2030s trading at +77, which is 15 bp tight to the Integrated peer group and AA Index average. The company posts group leading metrics, with gross leverage of 0.4x and gearing under 5% after reducing gross debt by $13.7 bn (37%) in the LTM, which is the largest relative decrease in the group. However, this is fully priced into the bonds, and we see limited potential for further tightening. Also, while we have no concerns about the company's cash flow generation, we note CVX currently has the smallest exposure to global LNG markets in the peer group and the exposure they do have is mostly geared towards the Asia rather than Europe, limiting their ability to capitalize on the price spikes that have been a major driver for their peers in 2022.
- We continue to have a favorable view of EOG's credit profile given expectations for it to maintain its position among the highest-quality credits in the E&P universe, but given the constructive outlook for commodity prices we see little room for spreads to tighten further relative to the group. EOG trades ~50 bp inside the IG E&P peer group.

US IG Energy Company Recommendations		
Outperform	**Market Perform**	**Underperform**
ET	ENB	OKE
OXY	WMB	KMI
BWP	XOM	COP
TRGP	PXD	EOG
EQT	MPLX	RDS

Source: CreditSights

High Yield Picks

- Despite material spread compression, we remain constructive on OXY, seeing the potential for 50-60 bp of tightening as a name that should trade tight to DVN, MRO and HES when the company returns to IG. OXY's scale, diversity with petchem and midstream assets, and higher quality Permian assets sets the company apart from most shale players. OXY is also the only Upstream name with a strong ESG angle given its CCUS business

- Opco gas pipeline ROCKIE is the widest HY Midstream name over coverage with 2028s yielding ~8%. ROCKIE generates very stable cash flow from long-term take-or-pay agreements with no commodity price or volume risk, with more than 55% of contracts in place until 2030+. We project 2022 leverage of 3.7x, which is lower than its previous leverage metrics when the pipeline was IG.

- We maintain our Outperform recommendation on CEQP with its 6% 2029s yielding 7.4% and 8% 2029s yielding 7.9%. If CEQP's leverage returns to the 3.5-4x range, as we currently project for 2023, the company could be positioned for ratings upgrades. CEQP has reshaped its asset base over the past year through a series of acquisitions and divestitures that materially increased CEQP's scale and concentrated its asset base in the Bakken and Permian, while maintaining leverage of ~4x or less. The more focused asset base with Permian growth potential makes CEQP a more attractive acquisition target for larger Midstream players.

High Yield Pans

- NS is one of the only names under coverage with increasing leverage and we would prefer to pickup spread in ROCKIE or look to the option value in ETRN. NS has been active with asset sales to support the balance sheet, but the distribution level does not allow NS to generate cash flow to further improve leverage and most non-core assets have been divested at this point. NS' accelerated preferred redemption plan will push leverage four ticks higher than our prior projection to 5.3x at YE22 and further increase by one tick to 5.4x in 2023.

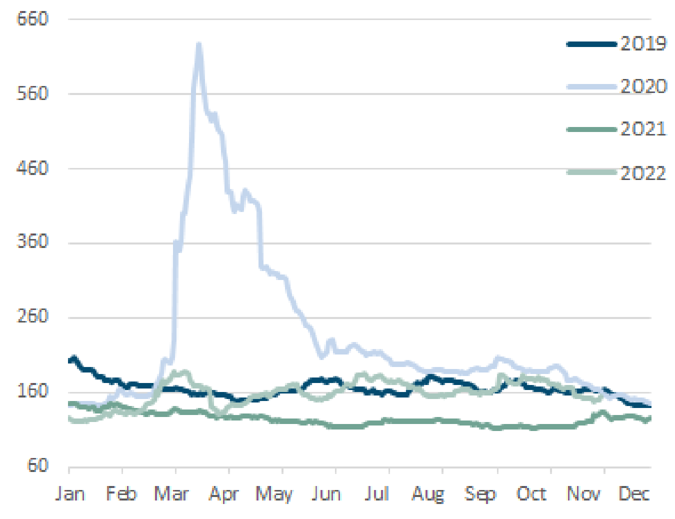
US HY Energy Company Recommendations		
Outperform	**Market Perform**	**Underperform**
OXY	APA	NS
ROCKIE	WES	
CEQP	RRC	
ASCRES	LNG	
ENLC		

Source: CreditSights

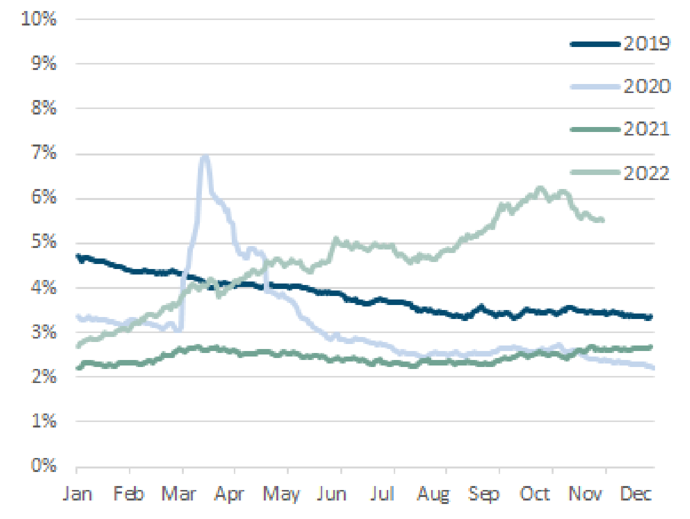
Relative Value

Investment Grade

US IG Energy Annual OAS History: 2019-2022



US IG Energy Annual YTW History: 2019-2022



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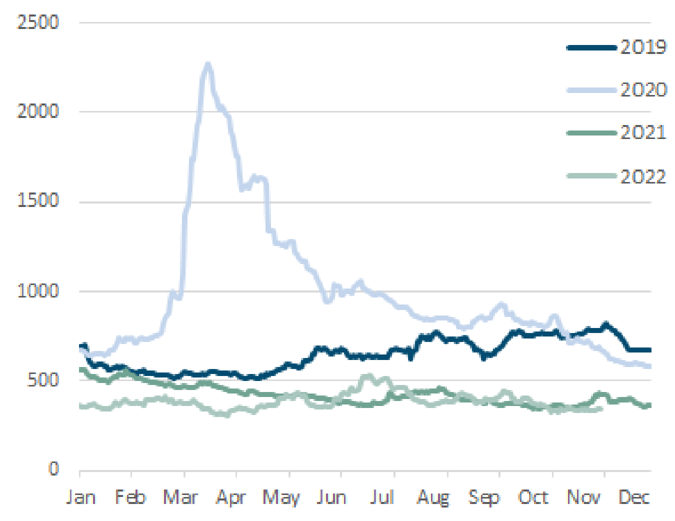
High Yield

US HY Energy Annual OAS History: 2019-2022



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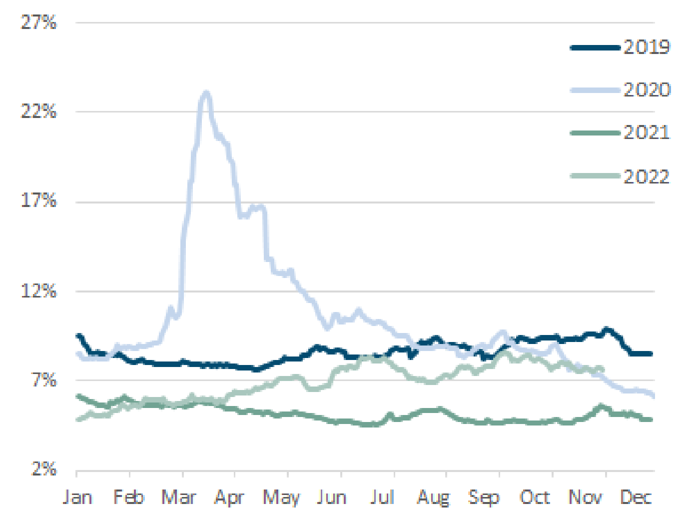


Source: CreditSights, FactSet, ICE Data Indices, LLC

We maintain our Outperform recommendation on HY Energy. While we are cognizant of the impacts related to the wave of Energy rising stars, the strong commodity price backdrop and continued focus on balance sheet improvement (both metrics and absolute debt reduction) for many HY issuers, leaves us constructive on the remaining issuers. This is especially true when coupled with tailwinds from rising star capital recycle and minimal new issue from HY issuers that conducted significant amounts of liability management over the past two years. We expect Midstream and Upstream leverage to improve by one tick to 4.3x and 0.9x, respectively.

Fundamental Outlook

Investment Grade

IG Energy Largest Issuer Fundamental Snapshot					
	Total		Net Leverage		
Issuer	Outstanding ($B)	Current	YE 2021	YTD Change	FY2023 Leverage Direction
Energy Transfer	$33.4	4.1x	4.1x	0.0x	Lower
Shell	$30.8	0.6x	0.9x	-0.3x	Flat
BP	$30.5	0.3x	0.9x	-0.6x	Flat
Exxon	$29.8	0.2x	0.8x	-0.6x	Flat
Kinder Morgan	$26.9	4.6x	4.4x	0.2x	Flat
Enterprise	$26.2	3.1x	3.0x	0.1x	Flat
Williams	$21.3	3.9x	4.2x	-0.3x	Flat
TC Energy	$20.0	5.5x	5.3x	0.2x	Lower
MPLX	$19.1	3.4x	3.6x	-0.2x	Flat
Enbridge	$18.6	5.2x	5.4x	-0.2x	Lower

Source: CreditSights, FactSet, ICE Data Indices, LLC, Company Filings

The IG Energy sector has spent much of the past two years improving the balance sheet and most issuers will maintain a flattish leverage outlook for 2023. A few larger issuers, such as ET, TRP and ENB, will continue to drive leverage lower through both EBITDA growth and debt reduction. However, while shareholders rewards are increasing, we expect these equity payouts to be funded with excess cash flow and don't anticipate balance sheets becoming a source of funding.

High Yield

HY Energy Largest Issuer Fundamental Snapshot					
	Total		Net Leverage		
Issuer	Outstanding ($B)	Current	YE 2021	YTD Change	FY2023 Leverage Direction
Occidental	$16.1	0.9x	2.2x	-1.3x	Lower
Equitrans Midstream	$6.4	5.0x	5.1x	-0.1x	Flat
Western Midstream	$6.3	3.4x	3.5x	-0.1x	Flat
Transocean	$4.7	6.5x	5.9x	0.6x	Lower
Cheniere Energy Partners	$4.2	3.9x	5.6x	-1.7x	Flat
Soutwestern Energy	$4.2	1.5x	3.0x	-1.5x	Lower
Enlink Midstream	$3.9	4.2x	4.7x	-0.5x	Lower
Apache	$3.9	0.8x	1.5x	-0.7x	Flat
Nustar	$2.3	5.1x	5.2x	-0.1x	Higher
Crestwood	$2.3	4.8x	3.9x	0.9x	Lower

Source: CreditSights, FactSet, ICE Data Indices, LLC, Company Filings

High yield Energy issuers remain focused on balance sheet improvement as many progress toward becoming a rising star. NS is an outlier in the space as one of the few names that will be increasing leverage. This is due to NS leaning on its balance sheet to redeem its preferred equity that will step up to 13.75% next year.

Primary Market Outlook

Investment Grade

IG Energy 2023 Primary Market Expectations				
Issuer	Rating	Est. Amount ($B)	Use of Proceeds	Anticipated Timing
CNOOC	A1/A+/A+	$3.8	Refi	2Q/3Q
CVX	Aa2/AA-/NR	$3.2	Refi	1Q/2Q
CNOOC	A1/A+/A+	$3.0	Refi	2Q
ENB	Baa1/BBB+/BBB+	$3.0	Refi	3Q/4Q
KMI	Baa2/BBB/BBB	$3.0	Refi	1Q/3Q
ET	Baa3/BBB-/BBB-	$2.0	Refi	1Q/3Q
PSX	A3/BBB+/NR	$2.0	M&A	2Q/3Q
SHEL	Aa2/A+/AA	$2.0	Refi	4Q
PERTIJ	Baa2/BBB/BBB	$1.6	Refi	2Q
EPD	Baa2/BBB/BBB	$1.2	Refi	1Q
WMB	Baa2/BBB/BBB	$1.0	Refi	4Q
EOG	A3/A-/NR	$1.0	Refi	1Q/2Q

Source: CreditSights, Bloomberg, L.P.

IG Energy issuance declined by ~50% in 2022 to ~$34 bn through the first three quarters of 2022. This compares to $83 bn in 2021 and an average of $104 bn from 2017-2021. We expect new issue to normalize, though at lower levels, in 2023 as the focus on debt paydown subsides. Integrated names and large Midstream players are likely to tap the markets with significant new issues next year.

High Yield

HY Energy 2023 Primary Market Expectations				
Issuer	Rating	Est. Amount ($B)	Use of Proceeds	Anticipated Timing
BPL		$0.5	Refi	2Q
PBF		$0.5	Refi	2Q
WTI		$0.5	Refi	4Q
ROCGAS		$0.4	Refi	1Q

Source: CreditSights, Bloomberg, L.P.

HY Energy issuance fell off a cliff in 2022, down 85% through third quarter to $10 bn, and it doesn't appear likely to bounce back. This compares to $79 bn last year and an average of $54bn over the past five years. However, 2021 new issue was boosted by liability management that removed refi needs over the next few years. When combined with debt repayment plans, we expect HY new issue to remain at these low levels for the next couple years.

Event Risk/M&A Landscape

While further consolidation seems likely, we expect M&A to slow after a very active two years of consolidation that began with large public acquisitions in fall 2020. The sector then saw a merger of equals M&A trend, followed by private/PE sellers throughout 2022. Within Upstream 79% of deal value has been driven by public buyers, while PE flipped to a 6-1 Midstream seller in 2022 from a 2-1 buyer across 2018 and 2019. While cash funded deals (CLR MBO, MRO, EQT) are emerging after a period of very balance sheet friendly M&A, cash flow is being used to repay debt after the deals close, allowing issuers to maintain ratings. Strong valuation and a lack of clear exit opportunities complicate the return of PE.

ESG Considerations

ESG continues to evolve and we expect a continued focus on energy security with natural gas being labeled as a green fuel in Europe and South Korea. Over the long-term fossil fuels will cede market share to renewable energies, but this runway is measured in decades, not years and there are pockets of opportunity to participate in the energy transition. Midstream issuers are already involved in renewable fuels and carbon capture, while OXY is a leader in direct air capture. Paris agreement goals cannot be achieved without CCUS and we expect to see a surge in formal project announcements in 2023, supported by increased IRA credits and increasing Canadian government support.

Metals, Mining & Steel

Executive Summary

- We are upgrading IG Metals, Mining & Steel from Market Perform to Outperform. Credit fundamentals are weakening with commodity prices declining and cost increasing, while the macro backdrop is uncertain as we head into the New Year. That said, commodity prices are still high from a historical perspective, and versus cash cost, while spread levels are wide to the broader IG index and balance sheets are very strong. In addition, we expect the China growth story to improve in 2H23 which should support the China-centric sector.
- We maintain our Market Perform on HY Metals, Mining & Steel. Similar to IG Metals, Mining & Steel, credit fundamentals are weakening which is partially offset by strong balance sheets. That said, spreads trade tight to the broader HY index.
- IG Picks & Pans. Our top pick is Glencore. We expect GLENLN to outperform its peers given its exposure to the two of the best performing commodities YTD (thermal and met coal) and a marketing business that tends to do well in times of commodity price volatility. We believe both S&P and Moody's could potentially upgrade GLENLN from high triple-B to low single-A over the next 6-12 months, which will be a catalyst that will drive spreads towards where BHP and Rio Tinto are trading at. Our pan is ArcelorMittal, given its significant exposure to Europe which is facing significant demand and cost headwinds. While not in our base case, we believe there is a possibility that MTNA could fall to HY in a downside scenario.
- HY Picks. Our top HY pick is First Quantum given its exposure to copper (which is tied to the clean energy growth story) and the fact that the company is still in the midst of the balance sheet deleveraging phase. In contrast, our top pan is US Steel. Steel industry fundamentals have weakened with steel prices declining, while X will push ahead with its growth capex projects.
- New issuance will likely be modest in 2023 with corporates having already taken out or extended their maturity profiles over the last several years of peak cycle economics. In aggregate, our coverage names have ~$5.0 bn of USD bonds maturing in 2023. While we expect funding needs for growth capex and M&A to be modest as well, BHP could issue in size to fund a potential ~$6.5 bn acquisition of OZ Minerals.

Key Themes for 2023

- The salient theme is the China growth story, whether Beijing will pivot away from its zero COVID policies and whether policy support will help stabilize the property market. China is the big elephant in the room for the metals & mining sector, accounting for more than 50% of total demand for commodities. For iron ore, China accounts for more than 2/3 of seaborne demand.
- Additional focal points include the severity of the contraction in Europe and whether we see more resilient demand in North America. Ultimately, the metals & mining sector is an economically sensitive sector, with demand and commodity prices tied to macroeconomic growth, particularly in China.
- Capital allocation in the sector is another theme worth watching in 2023. Will companies scale back shareholder rewards and growth capex given the lower commodity price environment? Will we see more M&A with valuations declining?

Top Risks for 2023

- The biggest risk is weaker economic activity in China, given the sector's exposure to the country. The possibility of the Chinese government prolonging its zero COVID policy is real and could have a damaging impact on economic activity. In addition, the Chinese property market could further decline from the current levels.

- For the US steel sector, inflation/rates and supply chain shortages are the biggest risks. European-exposed credits could face further margin pressure given demand destruction and rising energy cost.

- Capital allocation trends remain aggressive, which will result in declining credit fundamentals. Management teams may argue that they still have the financial flexibility to reward shareholders and push forward with capex projects given the still elevated commodity prices and strong balance sheets.

Picks, Pans & Recommendations

Investment Grade Picks

- **Glencore** (Baa1/BBB+): We expect GLENLN to outperform its peers given its exposure to the two of the best performing commodities YTD (thermal and met coal) and a marketing business that tends to do well in times of commodity price volatility. We believe both S&P and Moody's could potentially upgrade GLENLN from high triple-B to low single-A over the next 6-12 months, which will be a catalyst that will drive spreads towards where BHP and Rio Tinto are trading at.

- **Steel Dynamics** (Baa3/BBB-): We like STLD given its resilient business model and relative value versus Nucor (Baa1/A-). We note that both STLD and NUE maintain an ability to generate cash through the cycle given the lower cost position and operational flexibility of electric arc furnace produced steel. In addition, both STLD and NUE operate downstream fabrication businesses which remain strong at this point and working capital outflows will be an additional source of cash.

- **Teck Resources** (Baa3/BBB-/BBB-): We expect TCKBCN to outperform its peers given its exposure to met coal (which has held up well relative to other commodities). In addition, the Canadian based miner will benefit from ramp-up of its QB2 copper project.

Investment Grade Pans

- **ArcelorMittal** (Baa3/BBB-): We are cautious on the global steelmaker, given its significant exposure to Europe which is facing significant demand and cost headwinds. While not in our base case, we believe there is a possibility that MTNA could fall to HY in a downside scenario.

- **Barrick Gold** (Baa1/BBB+): We are maintaining our Underperform on ABXCN given relatively tight valuations, aggressive capital allocation initiatives, and profit margin compression. The gold miner's profit margins have compressed on persistent cost pressures and weaker gold prices. Moreover, while the risk of a large, leveraging transaction remains low, management is still actively searching for M&A deals and growth capex will increase in the coming years as the company pushes ahead with major greenfield projects in Pakistan and Alaska.

US IG Metals, Mining & Steel Company Recommendations

Outperform	Market Perform	Underperform
Glencore (GLENLN)	Alcoa (AA)	ArcelorMittal (MTNA)
Kinross (KCN)	BHP (BHP)	Anglo American (AALLN)
Steel Dynamics (STLD)	Freeport McMoRan (FCX)	Barrick Gold (ABXCN)
Teck Resources (TCKBCN)	Gerdau (GGBRBZ)	Rio Tinto (RIOLN)
Vale (VALEBZ)	Newcrest (NCMAU)	
	Newmont (NEM)	
	Nucor (NUE)	

Source: CreditSights

High Yield Picks

- **First Quantum** (NA/B+/B+): While lower commodity prices, rising production cost, and operational issues will continue to weigh on earnings, we expect FMCN's EBITDA/FCF generation will remain healthy albeit considerably lower than the record levels seen over the last several quarters. All in all, we still like the FMCN credit story given our constructive long-term view on copper fundamentals and management's continued focus on balance sheet deleveraging.

High Yield Pans

- **US Steel** (Ba1/BB-/BB): We are cautious on X, given our expectations for the credit profile to weaken on the back of declining steel industry trends, rising growth capex needs, and ongoing shareholder returns. Domestic steel prices have declined significantly, while management continue to push ahead with its growth capex projects and share buyback program.

- **Constellium** (B2/B+): We are concerned about CSTM's significant exposure to European markets, which is facing inflationary, demand, energy, and metal supply concerns. For perspective, Europe accounts for 50% of CSTM's revenues and asset base.

US HY Metals, Mining & Steel Company Recommendations

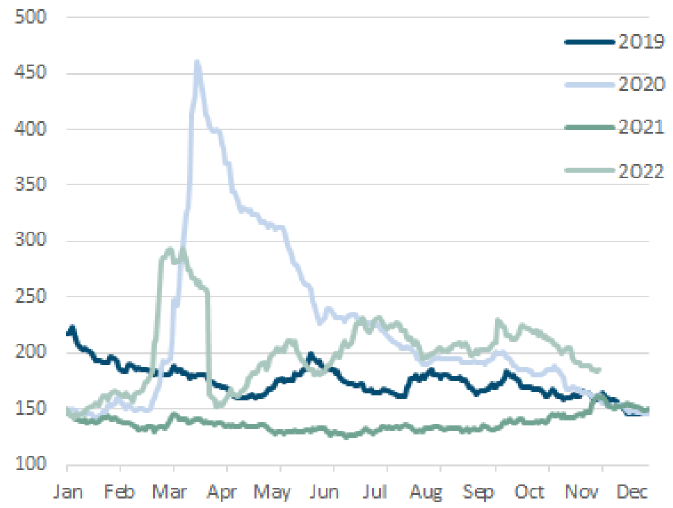
Outperform	Market Perform	Underperform
First Quantum (FMCN)	Cleveland Cliffs (CLF)	Arconic (ARNC)
	CSN Steel (CSNABZ)	Commercial Metals (CMC)
		Constellium (CSTM)
		Fortescue (FMGAU)
		US Steel (X)

Source: CreditSights

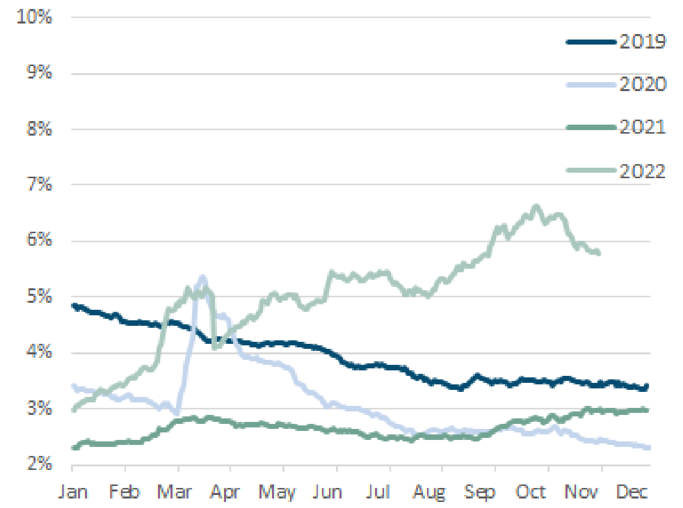
Relative Value

Investment Grade

US IG Metals, Mining & Steel Annual OAS History: 2019-2022



US IG Metals, Mining & Steel Annual YTW History: 2019-2022

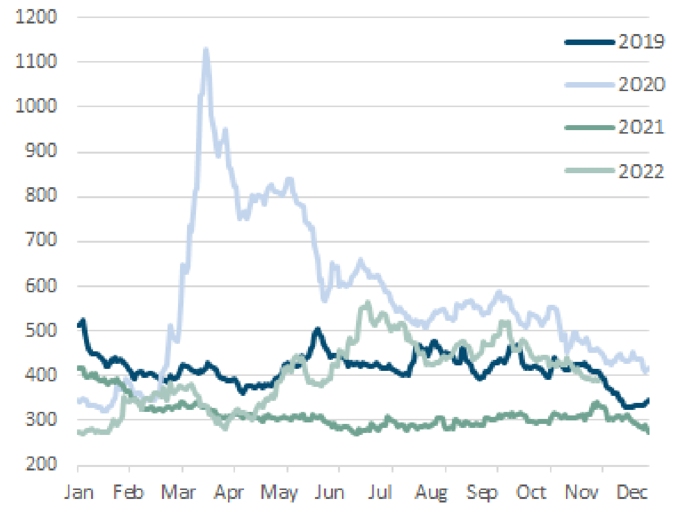


Source: CreditSights, FactSet, ICE Data Indices, LLC

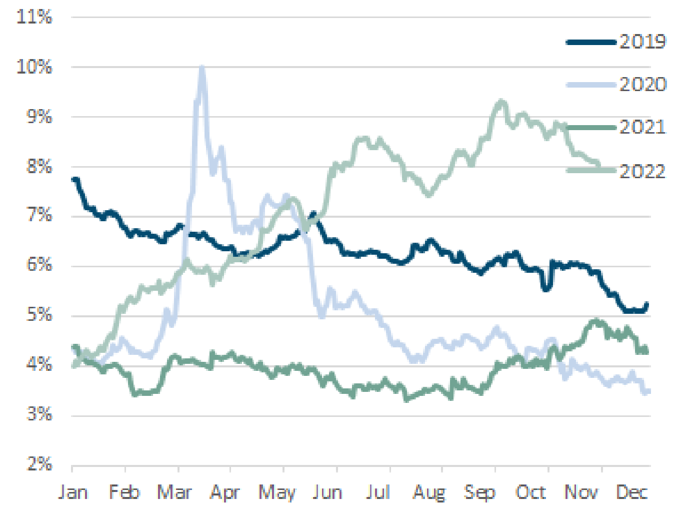
The IG Metals, Mining, & Steel index trades 47 bp wide to the broader IG index. The biggest issuers are Glencore, Anglo American, Vale, Freeport, and Rio Tinto. It is a high-beta sector that is driven largely by China and commodity prices. While China's zero COVID policy and property market remain headwinds, we expect a China macro turnaround in 2H23 with Beijing easing COVID restrictions and infrastructure spending lending support. This should bode well for commodities demand and hence prices. We have an O/P on the biggest name in the sector, Glencore, given its exposure to thermal coal, met coal, and the marketing business, while an upgrade from high triple-B to low single-A is a possibility in 2023.

High Yield

US HY Metals, Mining & Steel Annual OAS History: 2019-2022



US HY Metals, Mining & Steel Annual YTW History: 2019-2022



Source: CreditSights, FactSet, ICE Data Indices, LLC

The HY Metals, Mining & Steel index trades about 50 bp tight to the broader HY index. The sector has gotten smaller over the last several years, with ArcelorMittal, Freeport, and Alcoa migrating up to investment grade. The biggest issuers in the US HY index under our coverage include Fortescue, Cliffs, and Arconic, while FMCN and CSNABZ are large EM HY issuers under our coverage. We expect credit fundamentals to weaken on the back of lower commodity prices and demand, but corporates have strong balance sheets and liquidity positions to muddle through the weaker macro environment. We are particularly cautious on those credits with significant exposure to Europe (CSTM and ARNC).

Fundamental Outlook

IG Metals, Mining & Steel Largest Issuer Fundamental Snapshot

Issuer	Total Outstanding ($B)	Net Leverage Current	Net Leverage YE 2021	YTD Change	FY2023 Leverage Direction
AA	1,750	0.1x	0.0x	0.1x	Higher
AALLN	7,489	0.3x	0.2x	0.1x	Higher
ABXCN	4,379	0.0x	0.0x	0.0x	Higher
BHP	3,823	0.0x	0.2x	-0.2x	Higher
FCX	6,445	0.2x	0.1x	0.1x	Flat
GGBRBZ	1,499	0.2x	0.4x	-0.2x	Higher
GLENLN	11,389	0.1x	0.3x	-0.2x	Flat
KCN	1,249	1.9x	1.0x	0.9x	Flat
MTNA	2,311	0.2x	0.2x	0.0x	Higher
NCMAU	1,650	0.7x	0.2x	0.5x	Flat
NEM	5,593	0.6x	0.2x	0.4x	Flat
NUE	5,249	0.3x	0.3x	0.0x	Higher
RIOLN	5,850	0.1x	0.0x	0.1x	Higher
STLD	3,050	0.3x	0.4x	-0.1x	Higher
TCKBCN	2,547	0.5x	1.0x	-0.5x	Flat
VALEBZ	6,363	0.3x	0.1x	0.2x	Higher

Source: CreditSights, FactSet, ICE Data Indices, LLC, Company Filings

HY Metals, Mining & Steel Largest Issuer Fundamental Snapshot					
	Total	Net Leverage			
Issuer	Outstanding ($B)	Current	YE 2021	YTD Change	FY2023 Leverage Direction
ARNC	1,600	2.0x	1.8x	0.2x	Higher
CLF	2,080	1.0x	1.0x	0.0x	Higher
CMC	900	0.6x	0.7x	-0.1x	Higher
CSNABZ	2,950	1.7x	0.8x	0.9x	Higher
CSTM	1,125	3.0x	3.4x	-0.4x	Higher
FMCN	4,700	1.4x	1.6x	-0.2x	Flat
FMGAU	4,350	0.1x	0.1x	0.0x	Higher
X	749	0.1x	0.2x	-0.1x	Higher

Source: CreditSights, FactSet, ICE Data Indices, LLC, Company Filings

Overall, we expect leverage in the sector to increase in 2023 as the sector laps stronger comps. That said, balance sheets are strong after the last several years of peak cycle economics and this should provide cushioning for the weaker fundamental outlook. In Investment Grade Metals, Mining, & Steel, we expect leverage levels to creep up as the sector laps stronger comps and with commodity prices declining. That said, we should see improvement in the second half of 2023, with the China growth story improving. We expect leverage in High Yield Metals, Mining, & Steel increasing, given the strong prior year comps and weaker commodity prices. We are particularly cautious on those credits with exposure to exposure (CSTM, ARNC).

Primary Market Outlook

Investment Grade

IG Metals, Mining & Steel 2023 Primary Market Expectations				
Issuer	Rating	Est. Amount ($B)	Use of Proceeds	Anticipated Timing
TCKBCN	Baa3/BBB-/BBB-	$0.1	refi	1H
FCX	Baa3/BB+/BBB-	$1.0	refi	1H
GGBRBZ	Baa3/BBB-/BBB	$0.2	refi	1H
GLENLN	Baa1/BBB+/NR	$1.5	refi	2H
BHP	A2/A-/Au	$6.5	M&A	2H
KCN	Baa1/BBB+/NR	$0.5	refi	2H

Source: CreditSights, Bloomberg, L.P.

Investment grade issuance in the metals & mining sector was modest in 2022, and we expect issuance to remain modest in 2023 given the rate environment and with issuers having already extended their maturity profiles over the last several years of peak cycle economics. Glencore and Freeport could tap the debt markets in size given refinancing needs, while BHP could issue in size as well to fund a potential ~$6.5 bn M&A deal of OZ Minerals.

High Yield

HY Metals, Mining & Steel 2023 Primary Market Expectations				
Issuer	Rating	Est. Amount ($B)	Use of Proceeds	Anticipated Timing
CMC	Ba2/BB+/BB+	$0.2	refi	1H

Source: CreditSights, Bloomberg, L.P.

High yield issuance in the metals & mining sector was also modest in 2022, and we expect issuance to remain modest in 2023 given the limited amount of maturities coming due in the year.

Event Risk/M&A Landscape

We expect M&A activity to be relatively muted in 2023 given the uncertain macro environment and higher funding cost. Aside from BHP's proposed acquisition of OZ Minerals for ~$6.5 bn, we expect to see small bolt-on acquisitions and piecemeal asset sales to dominate the M&A arena in the metals & mining sector for the year. We believe companies may look to add EV battery materials (copper, nickel) via M&A in light of the lower valuations. Activist investor and LBO prospects are low in the metals & mining sector.

ESG Considerations

ESG is an increasingly prominent theme in the carbon-intensive metals & mining sector, as industry participants shift their capital allocation plans with an eye towards a cleaner future. The big caps, perhaps under greater investor scrutiny, have taken a leadership role with respect to ESG over the last several years as they pivot away from fossil fuels and into EV battery materials and crop nutrients. Meanwhile, some steelmakers are investing heavily into building out their EAF capacity, which will, for the most part, be used to replace aging BF/BOF complexes that require the use of met coal in the production process. Investments in renewable energy have also increased as industry participants look to secure clean power sources and achieve their lofty carbon reduction targets in the coming decades. It will be interesting to see if companies will push ahead with ESG investments despite a weaker macro environment and with commodity prices declining. Fortescue is an interesting credit to keep an eye on with the company focused on making significant ESG investments despite a declining commodity price environment.

Paper & Packaging

Executive Summary

- We rate IG Forestry & Paper as Outperform. Despite an expected retreat in commodity prices from recent post-COVID recovery highs, spreads remain wide to the larger index and have room for improvement in a risk on environment.

- We rate HY Paper & Packaging as Market perform. High quality, high beta names will continue to define performance for the sector as investors are expected to remain relatively risk averse.

- We like SUZANO and WRK as picks for IG investors. Despite softening commodity prices, these companies will still post strong operating results and FCF with no detriment to credit metrics.

- We like OI and SLVM as picks for HY. OI and SLVM will benefit from fundamentals for their respective key end markets (glass and uncoated freesheet) as the supply/demand balance will continue to favor producers.

- We see new issue for both IG and HY limited to refinancings for the year. We highlight two lower quality HY names, BWY and RYAM, which are facing significant maturities and will likely see a marked increase in their cash interest, as FCF is already particularly limited at RYAM.

Key Themes for 2023

- We expect lower prices for key Forest Products commodities in 2023. New supply combined with normalized to slightly weaker demand is expected to lead to a 5-20% decline in containerboard, pulp, and graphic paper prices. Lumber prices are expected to decline nearly 40%.

- Despite expected top line weakness for producers of key Forest Products commodities, primarily IG within our coverage universe, operating performance is anticipated to remain relatively stable. As such, credit metrics will remain in tack.

- HY Paper & Packaging, dominated by BB credits engaged in rigid packaging for consumer staples, is characterized by the ability to pass through inflationary costs to customers via contracts or active pricing strategies. Despite softening demand in some categories, overall, operating performance should compare positively to 2022, mostly due to the pass through of higher input costs as well as the impact of operating efficiency measures.

- Across both IG and HY, credit metrics are strong, with net leverage well within long-term target ranges and liquidity is strong. There is also limited rising rate exposure, with less than 20% floating rate debt on average in HY capital structures.

Top Risks for 2023

- Across both IG and HY, a deep recession in the US which leads to demand destruction for consumer staples would cause significant downside to expected operating performance.
- An increase in imports from abroad would also create further downward pressure on pricing for key commodities.
- Re adoption of a COVID Zero policy in China which stymies demand outlook for pulp and container board primarily.

Picks, Pans & Recommendations

Investment Grade Picks

- **WestRock (WRK, Baa2/BBB/NR, Outperform)** WRK has established itself as a solid operator in the paper packaging space, as the company has established itself as the #2 player in paper based packaging. WRK's focus and applied discipline has delivered meaningful debt reduction returning it to its net leverage target. The company's focus is to drive growth through innovation, with tailwinds from substrate substitution trends which replace plastic with paper based packaging.
- **Suzano (SUZANO, Baa3/BBB-/BBB-, Outperform)** SUZANO is the dominant player in market pulp, with a lower cost of production relative to its competitors. As weaker global demand is met with additional supply, SUZANO is best able to show solid operating performance, generating ample cash to fund expansion capex and maintaining strong credit metrics.

US IG Paper & Packaging Company Recommendations		
Outperform	Market Perform	Underperform
International Paper (IP)	Packaging Corp of America (PKG)	
WestRock (WRK)	Empresas CMPC (CMPC CI)	
Suzano (SUZANO)	Arauco (CELARA)	

Source: CreditSights

High Yield Picks

- **OI Glass (OI, B1/B+/NR, Outperform)** The longer term volume outlook for glass remains in OI's favor, as tight supply/demand fundamentals support an oversold position for the company into 2023. While volume growth will be constrained, OI will continue to benefit from pass through provisions in contracts and cost efficiencies to preserve margins. All considered, we are confident in OI's ability to weather the macro challenges presented and reach its deleveraging goal for FY22 and beyond. Thus, we remain constructive on the credit.
- **Sylvamo (SLVM, Ba2/BB/NR, Outperform)** SLVM will benefit from higher uncoated freesheet prices over the next two years, balanced by a return to trend for demand. We expect free cash flow to remain strong enough to support shareholder rewards and maintain favorable credit metrics as the company is well below its leverage target.

High Yield Pans

- **Rayonier Advanced Materials (RYAM, Caa2/CCC/NR, Underperform)** RYAM is facing a significant maturity wall via a springing lien. Management has held out a promise of improved operating results supporting its case for refinancing, however, it clearly missed its optimal window. We note Chatham has a large position in the unsecured notes, yet we are not clear on progress negotiating with management. As such, we are concerned about higher interest expense which will constrain FCF, or worse, a possible restructuring.

US HY Paper & Packaging Company Recommendations

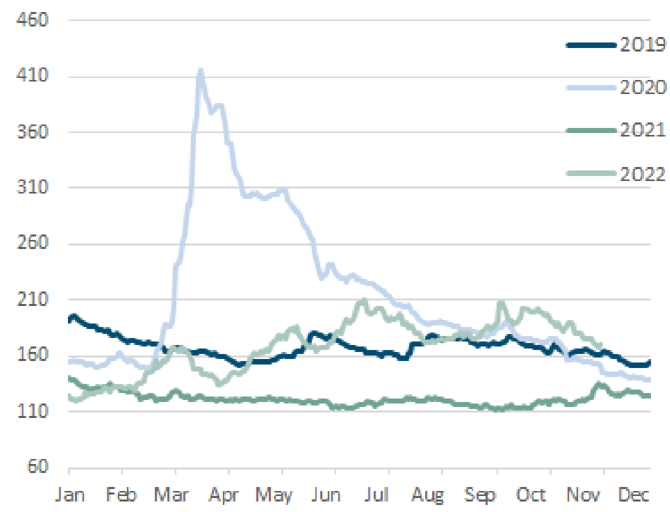
Buy	Outperform	Market Perform	Underperform
Graham Packaging (GRM)	Ardagh Group (ARGID)	Ball Corporation (BALL)	PactivEvergreen (PTVE)
	Ardagh Metal Packaging (AMBP)	Berry Global (BERY)	Rayonier Advanced Materials (RYAM)
	Graphic Packaging (GPK)	Crown Holdings (CCK)	
	Mauser Packaging (BWY)	Louisiana-Pacific (LPX)	
	OI Glass (OI)	Sealed Air Corporation (SEE)	
	Sylvamo (SLVM)	Silgan Holdings (SLGN)	
	Trivium Packaging (TRIVIU)		

Source: CreditSights

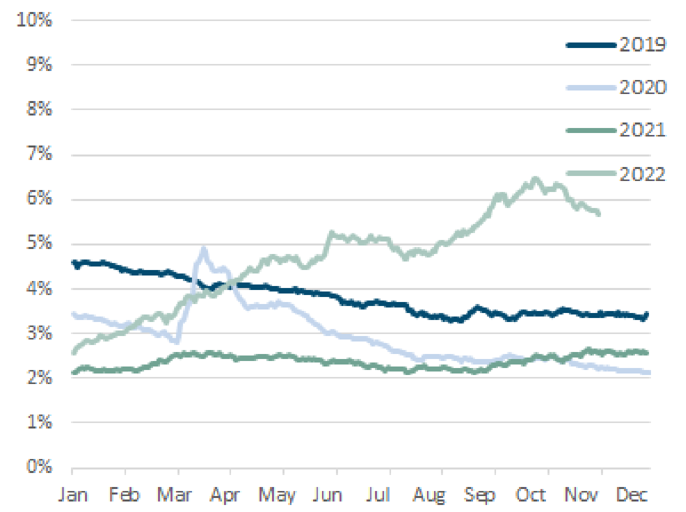
Relative Value

Investment Grade

US IG Paper & Packaging Annual OAS History: 2019-2022



US IG Paper & Packaging Annual YTW History: 2019-2022

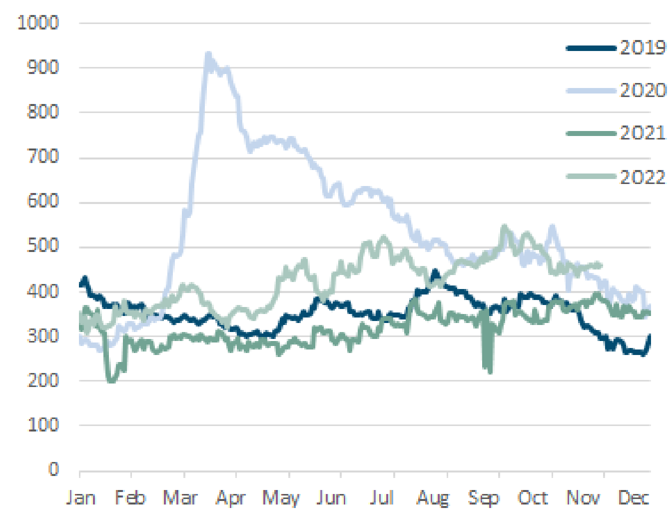


Source: CreditSights, FactSet, ICE Data Indices, LLC

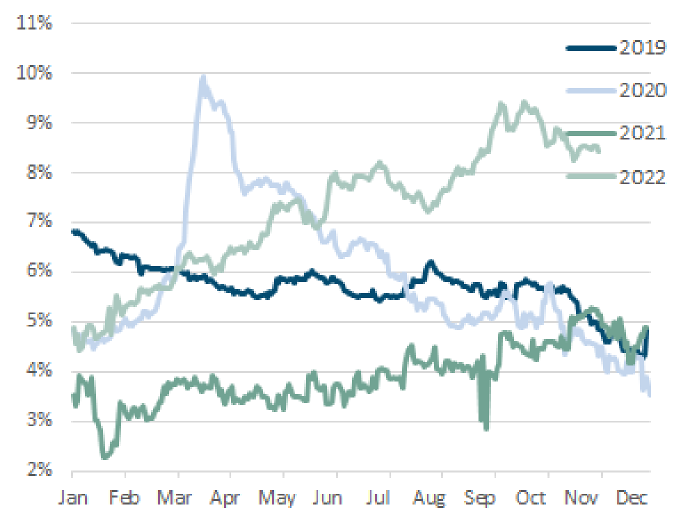
Investment Grade Forestry & Paper historically trades wide to the broader IG index due to lower average credit quality, BBB2 vs A for the IG index. Spreads have widened in tandem with the broader market this year, yet the sector has outperformed through 2022. Our top picks, SUZANO and WRK contribute over 60% of returns, with **International Paper** (IP, Baa2/BBB/BBB, Outperform) rounding it out to nearly 80%. Overall, we remain favorable on the sector, and see further spread tightening despite forecasts for lower commodity pricing into next year. Input prices are also easing which should allow for some degree of margin preservation. Most importantly, balance sheets are extremely healthy with adequate liquidity, hence we expect Forestry & Paper to have the ability to weather a hard landing and investors should look to add opportunistically.

High Yield

US HY Paper & Packaging Annual OAS History: 2019-2022



US HY Paper & Packaging Annual YTW History: 2019-2022



Source: CreditSights, FactSet, ICE Data Indices, LLC

HY Paper & Packaging historically trades tight to the broader index given the sector's stable, defensive nature. Currently, that is not the case however, as investors have been concerned with the impact of inflationary pressures, particularly energy, on margins, as well as demand destruction as consumers find themselves constrained. Overall, higher quality, high beta names such as **Ball Corp** (BALL, Ba1/BB+/NR, Market perform) and **Berry Global** (BERY, Ba2/BB/NR, Market perform) dominate returns. Both are expected to show moderate improvements in operating results in 2023 as the tailwind of moderating costs are met with improved pricing as a result of actions implemented this year, yet further deleveraging is not expected due to an increased focus on shareholder returns. Overall, we see more opportunity in lower quality names, particularly in the single B tier, yet we don't anticipate spread tightening in these names as investors remain relatively risk averse in 2023.

Fundamental Outlook

Investment Grade

IG Paper & Packaging Largest Issuer Fundamental Snapshot

Issuer	Total Outstanding ($MN)	Net Leverage Current	Net Leverage YE 2021	YTD Change	FY2023 Leverage Direction
Suzano (SUZ)*	$76,059.8	2.2x	2.4x	-0.2x	Flat
WestRock (WRK)	$7,787.2	2.2x	2.6x	-0.5x	Flat
Arauco (CELARA)	$5,867.8	1.9x	1.8x	0.1x	Lower
International Paper (IP)	$5,382.0	1.8x	1.4x	0.4x	Higher
Empresas CMPC (CMPC CI)	$4,516.3	1.9x	1.9x	0.0x	Flat
Packaging Corp of America (PKG)	$2,547.4	0.9x	1.1x	-0.2x	Higher

Source: CreditSights, FactSet, ICE Data Indices, LLC, Company Filings
*Brazilian real $R

For IG, we see higher leverage for two of our containerboard names, as lower shipment volumes in 2023 will lead to negative year over year comparisons for EBITDA, hence slightly higher leverage. We note, however, that credit metrics are well within company target ranges, and will remain in these ranges even with the increase. For our LatAm names, we see leverage mostly flat as new pulp capacity comes on line, putting some pressure on pricing, yet improvements in other key end markets such as tissue and paper based packaging.

High Yield

HY Paper & Packaging Largest Issuer Fundamental Snapshot

Issuer	Total Outstanding ($MN)	Net Leverage Current	Net Leverage YE 2021	YTD Change	FY2023 Leverage Direction
Berry Global (BERY)	$9,255.0	3.7x	3.8x	-0.1x	Flat
Ball Corporation (BALL)	$8,833.0	3.9x	3.4x	0.6x	Higher
Ardagh Group (ARGID)	$8,769.0	6.6x	4.7x	1.9x	Flat
Crown Holdings (CCK)	$6,886.0	3.6x	3.2x	0.4x	Higher
Graphic Packaging (GPK)	$5,495.0	3.7x	5.4x	-1.7x	Lower
Mauser Packaging (BWY)	$5,278.9	4.5x	5.8x	-1.3x	Lower
OI Glass (OI)	$4,611.0	3.7x	3.8x	0.0x	Lower
PactivEvergreen (PTVE)	$4,233.0	4.5x	7.6x	-3.2x	Flat
Silgan Holdings (SLGN)	$3,838.0	4.1x	4.0x	0.1x	Flat
Sealed Air Corporation (SEE)	$3,639.1	2.7x	3.0x	-0.3x	Flat
Ardagh Metal Packaging (AMBP)	$3,403.0	4.5x	3.7x	0.8x	Higher
Trivium Packaging (TRIVIU)	$2,855.0	4.3x	6.0x	-1.7x	Flat
Graham Packaging (GRM)	$1,908.0	5.9x	5.7x	0.2x	Lower
Sylvamo (SLVM)	$1,229.0	1.4x	2.1x	-0.7x	Lower
Rayonier Advanced Materials (RYAM)	$872.5	5.1x	5.3x	-0.2x	Lower
Louisiana-Pacific (LPX)	$346.0	-0.1x	0.0x	-0.1x	Higher

Source: CreditSights, FactSet, ICE Data Indices, LLC, Company Filings

HY Paper and Packaging should see mostly flat to lower leverage in FY23, as the impact of improved pricing and contractual pass throughs should translate into flat to slightly higher operating results. The key exception is for our beverage can producers, namely **Ardagh Metal Beverage Packaging** (AMPBEV, B3/B/NR, Outperform), **Ball**

Corporation (BALL, Ba1/BB+/NR, Market perform), and **Crown Holdings** (CCK, Ba2/BB+/NR, Market perform) which are facing weaker demand and higher fixed cost absorption as plants are idled to work through excess inventory. The remainder of the sector is expected to be flat to improved, mostly on EBITDA growth.

Primary Market Outlook

Investment Grade

IG Paper & Packaging 2023 Primary Market Expectations

Issuer	Rating	Est. Amount ($MN)	Use of Proceeds	Anticipated Timing
WRK	(Baa2/BBB/NR)	$490	refinance	2Q
PKG	(Baa2/BBB/NR)	$400	refinance	2Q
CELARA	(Baa3/BBB-/NR)	$500	refinance	2Q
CMPC	(Baa3/BBB-/BBB)	$500	refinance	2Q

Source: CreditSights, Bloomberg, L.P.

IG saw limited new supply in 2022 as most maturities were addressed via cash on hand or asset sale proceeds. For 2023, we expect less than $2 billion from IG, with the only use of proceeds being refinancing activity, as all major capex is either fully funded and/or nearing completion.

High Yield

HY Paper & Packaging 2023 Primary Market Expectations

Issuer	Rating	Est. Amount ($MN)	Use of Proceeds	Anticipated Timing
BERY	(B2/BB/NR)	$800	refinance	1Q
BALL	(Ba1/BB+/NR)	$735	refinance	1Q
CCK	(Ba2/BB+/NR)	$588	refinance	2Q
GPK	(Ba2/BB+/NR)	$700	refinance	1Q
BWY	(Caa2/CCC/NR)	$2,093	refinance	1Q
OI	(Ba3/B+/NR)	$674	refinance	3Q
SEE	(Ba3/BB+/NR)	$423	refinance	3Q
RYAM	(Caa2/CCC/NR)	$334	refinance	1Q

Source: CreditSights, Bloomberg, L.P.

2022 saw limited new issue in HY as most issuers addressed their needs over the prior two years. For 2023, nearly all issuance is tied to refinancing upcoming maturities. We note two of our lower grade names, **Mauser Packaging** (BWY, Caa2/CCC/NR, Outperform) and **Rayonier Advanced Materials** (RYAM, Caa2/CCC/NR, Underperform) that effectively have their entire capital structures coming due next year. We believe BWY has a more sellable story than RYAM, yet are mindful of the incremental interest expense that both are facing due to higher rates.

Event Risk/M&A Landscape

We don't foresee significant event risk for the sector in 2023. As far as M&A, given the consolidated nature of most industries, there is room for tuck in acquisitions, yet we don't expect any transformative transactions which would lead to significant re-leveraging. Asset sales are more likely, with proceeds going toward debt reduction or shareholder rewards. In this vein, we note our names under coverage that are currently engaged with activists. CCK recently attracted the attention of Carl Ichan, who, among other things, is calling for a divestiture of non-core assets. BERY also recently reported two new board directors and created a capital allocation advisory committee after nearly 3 years of engagement with Canyon Capital and other investors. RYAM has an activist bondholder situation with Chatham Asset regarding its upcoming springing maturity.

Related Research

Crown Holdings: Icahnic

Activist Hedge Fund Monitor | November 2022

Berry Global: Shareholder Activism by Ancora

Berry Global: Shareholder Activism by Canyon

RYAM: Activist Investor Comes Knocking

ESG Considerations

Sustainability is undoubtedly a key focus for Paper & Packaging, hence all of our names, across all substrates are making stated efforts to improve their environmental impact and be good corporate citizens where they do business. Further, some have issued debt under green bond frameworks which compel them to meet these goals under their indentures. However, given the nature of the businesses and reliance on natural resources, ESG driven investors may have concerns with how these goals are being measured, monitored, and if third party oversight is used. Within our universe, we are not currently aware of any companies that have major red flags in this area.

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