Machinery, E&C and Waste

2024 Year Ahead: Darkest before dawn yet Machines likely to rise in the end

Price Objective Change

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Equity
Americas
Machinery, E&C and Waste

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Headwinds finally catch Machinery: EPS momentum fades

We advise investors to be nimble - we see a challenging start to the year, yet a more favorable development unfolding as we approach 2025. Machinery withstood cyclical headwinds all through '23 due to high backlogs, stimulus, capex, & tight supply/demand. These headwinds (& weak data points: ABI, ISM) finally catch up to Machinery: backlogs slow, pricing moderates, inventories rightsized. EPS beats are tougher to come by '24.

But retain some exposure: multiple re-rating is compelling

While we see orders slowing, we believe lead indicators are likely to bottom & gradually recover towards year-end (see Global Wave, ISM Services vs Manuf spread, BofA copper forecasts, mortgage rates). Our report illustrates that Machinery multiples tend to follow these indicators. As a result, investors are not likely to (fully) underwrite lower backlogs into 2025 if indicators are gradually improving and the Fed is starting to reduce rates.

The 'Don't Fight the Fed' theme is nuanced with Machinery

Our analysis on prior easing cycles suggests: i) multiples typically re-rate yet sometimes occurs in year 2 (i.e., 2025 event?), ii) swing factor for stock performance is if EPS revisions are falling faster than the multiple expansion (i.e., is the Fed easing due to weak demand?), iii) end markets recovery can take up to two years. Machinery's upside case: trough EPS is much higher vs those prior cycles, multiple expands late '24-2025.

End markets: no rising tide, bifurcation starts to emerge…

All Machinery end markets observed multi-year growth post COVID yet this is changing in 2024 - capex is slowing, fleet age is normalizing, inventory is rightsized. Some verticals are clearly down double-digits in 2024 (ag equipment, trucks), some flattish (oil & gas, mining equip't), some low-mid single digit growth (infrastructure construction).

…yet the story on 2024 is ultimately who can grow in '25?

A key development in '24 is what green shoots emerge to provide visibility on '25? We see upside bias in mining (rising miner FCF) & trucks (spot freight rates), while ag (farm income) & Access (non-res) appears vulnerable. As a result, prefer CAT (Buy) to DE (N) in large cap Machinery: both on ~13.5x PE yet we see higher support for CAT's markets.

Construction: prefer rental (URI) over suppliers (TEX, OSK)

Bottom-up analysis suggests construction slows yet nuance view is required: tailwinds (infrastructure) vs headwinds (CRE). Top picks are URI (Buy) - re-rating story, flex capex, VMC (URI) – infrastructure, positive price vs cost. We are cautious on rental suppliers (OSK U/P, TEX d/grade to U/P in separate note) as we see Access equip't nearing a peak.

Stocks: trucks, Waste vs cyclical valuation spread is high

We make several ratings changes today in separate notes. Trucks: we expect production to fall 20% in '24 - downturn is more reflected in cons for PCAR (up to N) vs CMI (down to U/P). Waste: Defensive valuation premium near record highs vs cyclicals – we take one waste Buy off the table (GFL to N). Top waste pick is RSG (Buy) – cleanest '24 story.

Exhibit 1: Summary of PO Changes
Summary of PO Changes

Ticker	Rating	PO (Old)
CAT	Buy	$319 ($258)
WM	Neutral	$185 ($174)
RSG	Buy	$182 ($172)
WCN	Buy	$165 ($155)
CWST	U/P	$86 ($89)
IPGP	U/P	$91 ($86)
TKR	U/P	$71 ($67)
AGCO	Neutral	$132 ($131)
CNHI	Buy	$13.50 ($12)
URI	Buy	$650 ($490)
OSK	U/P	$102.5 ($89)
VMC	Buy	$260 ($225)
MLM	Neutral	$550 ($490)

Source: BofA Global Research, & U/P = Underperform
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CRE = Commercial Real Estate,

Cons = consensus

ISM = Institute Supply Management

ABI = Architecture Billings Index

Equip't = equipment

Manuf = Manufacturing

Non-res = non residential

Refer to important disclosures on page 33 to 36. Analyst Certification on page 32. Price Objective Basis/Risk on page 27.
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Timestamp: 19 January 2024 06:00AM EST

2024: two quarter Bear, six quarter Bull

Headwinds finally catch Machinery: EPS momentum fades

Machinery withstood cyclical headwinds all through '23 due to high backlogs, stimulus, positive capex, & tight supply/demand dynamics. These headwinds (weak data points: ABI, used values, PMI) finally catch up to Machinery in 1H: backlogs slow, pricing moderates, capex plateaus, inventories rightsized. EPS beats are tougher to come by in '24.

But retain some exposure: multiple re-rating is compelling

While we see orders slowing, we believe lead indicators are likely to bottom & gradually recover towards year-end (see Global Wave, ISM Services vs Manufacturing spread, BofA copper forecasts, mortgage rates). Our report illustrates that Machinery multiples tend to follow these indicators with a bit of a delay. As a result, investors are not likely to fully underwrite lower backlogs if indicators are gradually improving and the Fed is easing.

Don't Fight the Fed theme is a bit nuanced with Machinery

Our analysis on prior easing cycles suggests: i) multiples typically re-rate yet sometimes occurs in year 2 (i.e., 2025 event?), ii) swing factor for stock performance is if EPS revisions are falling faster than the multiple expansion (i.e., is the Fed easing due to weak demand?), iii) end markets recovery can take up to two years. Machinery's upside case: EPS revisions more resilient vs those prior cycles, multiple expands late '24-2025.

End markets: no rising tide - bifurcation starts to emerge…

All Machinery end markets observed multi-year growth post COVID yet this is changing in 2024 - capex is slowing, fleet age is normalizing, inventory is rightsized. Some verticals are clearly down double-digits in 2024 (ag equipment, trucks), some flattish (oil & gas, mining equip't), some low-mid single digit growth (infrastructure construction).

…yet the story on 2024 is ultimately who can grow in '25?

Valuation multiples are in 'peak-to-mid cycle' territory. Thus, the key development in '24 is what green shoots emerge to provide visibility on '25? We see upside bias in mining (rising miner FCF, copper deficit) & trucks (spot freight rates, EPA '27) yet access & ag equip't appear vulnerable to the downside. As a result, prefer CAT (Buy) to DE (Neutral) in large cap Machinery: both on ~13.5x PE yet we see higher support for CAT's markets.

Downside risk: price-cost flips, secular themes unwind

Downside risk near-term is pricing momentum fades faster than expected (weak ag equip't pricing the canary in the coal mine?) as costs creep up (steel, shipping). Long-term, election uncertainty unwinds some secular themes (stimulus, green capex).

Upside risk: China recovers after being counted out

Machinery is typically viewed as a play on China. While growth disappointed all 2023, a stronger than expected recovery provides direct (trucks, construction) and indirect exposure (big consumer of iron ore, copper, ag), driving global equipment demand.

Cyclical vs defensives: rotation risk on high alert

Defensives (like waste) great place to hide in uncertainty yet we are mindful of valuation. Waste trades near record premium to Machinery (~100% vs historical average 35%). As lead indicators turn 'less negative', defensive premium typically starts to narrow.

Stock watch

We make several ratings changes today in separate notes: GFL to N, CMI to U/P, PCAR to N, TEX to U/P. On pages 22-25, we discuss estimate & PO changes across Machinery, construction, aggregates & waste. In large cap Machinery, we prefer CAT (Buy) to Deere (N): both on ~13.5x PE yet we see higher support for CAT's markets. Top cyclical pick is URI (Buy) - valuation re-rating case, flex capex to capture share of growth verticals. We are cautious on rental suppliers (OSK U/P, TEX d/grade to U/P) as we see Access equip't near a peak. Our top defensive (waste) pick is RSG (Buy) – given cleanest 2024 story.

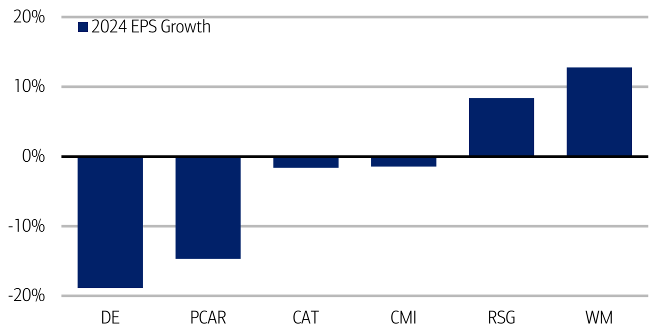
1) Expectations: Machinery is constrained

Consensus is forecasting flat to negative EPS growth for cyclical Machinery in 2024. We are broadly in line with this view. Fundamentals remain constrained with limited earnings momentum: i) 2024 will likely be a 'pay back' as the tightening cycle finally pressures demand and earnings – we are starting to see this in construction, farm equipment, and truck order trends, ii) tight equipment markets continue to 'loosen up' with rising supply vs falling demand – providing less support for above average price increases, iii) capex is plateauing following a three year upturn, iv) inventories are more than balanced – no 'rebuild/restock' required, and v) global GDP is decelerating in the 1H.

That said, investor positioning is already bracing for challenged fundamentals: i) long only exposure is light in Machinery (exhibit 8), ii) Fund Managers are not overweight Industrials (exhibit 7) – consistent with weak PMI data (contraction territory), iii) defensives (waste) valuation is a 103% premium to cyclicals (Machinery), suggesting investors are bracing for a slowdown. If industrial indicators/data bottom, inflect, and gradually recover (a potential 2H24 event – see next section), the valuation discount for cyclicals start to narrow. While difficult to time, exhibit 4 illustrates the rotations that can occur 9-12 months after we see peak defensive vs cyclical valuation premiums.

Exhibit 2: Machinery EPS growth: no growth expected for 2024

Large cap Machinery – flat to negative earnings growth is expected in 2024 compared to more defensive names (waste) squeezing out earnings growth.



Source: Bloomberg

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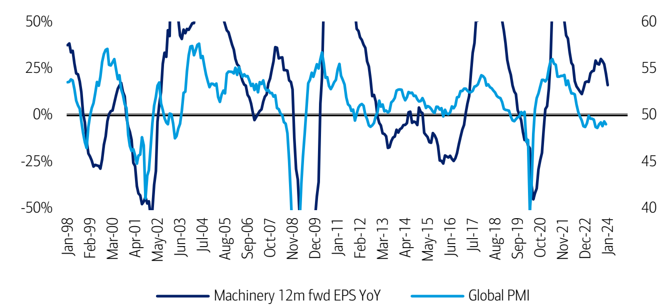
Exhibit 3: Industrial PMI data vs Machinery earnings cycle

In periods when Global PMI is in contraction (sub 50), Machinery earnings growth typically slows



Source: BofA US Equity & Quant Strategy, FactSet Ownership

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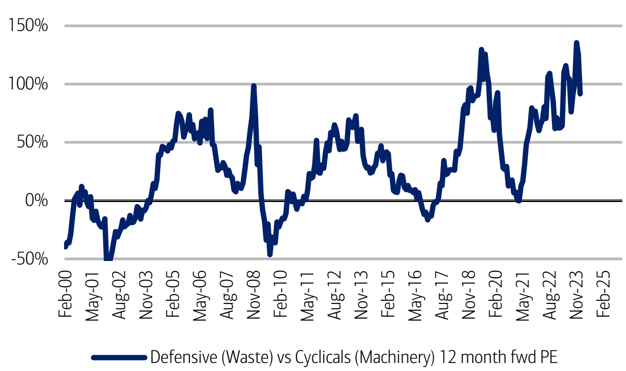
Exhibit 4: Defensive (Waste) vs Machinery (Cyclical) valuation PE

Defensive premium vs cyclicals - near record levels



Source: DataStream, Bloomberg, Waste (average WM, RSG), cyclicals (average CAT, DE)

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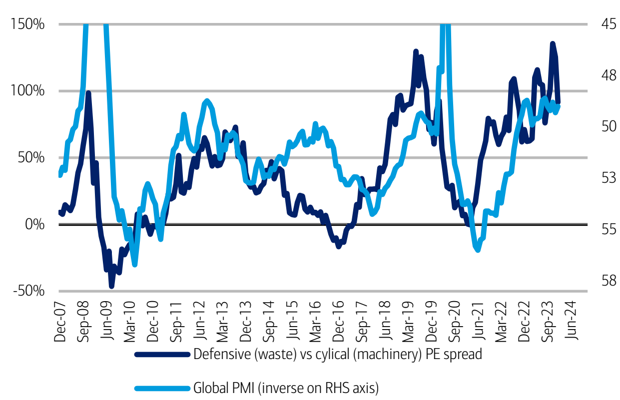
Exhibit 5: Defensive premium vs Global PMI (inverse in chart)

PMI bottoms and recovers (inverse below), defensive premium narrows



Source: DataStream, Bloomberg, Waste (average WM, RSG), cyclicals (average CAT, DE)

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Exhibit 6: Machinery vs Waste performance after valuation spread hits record highs (100-130% premium)
After defensive (waste) vs cyclical (machinery) valuation spread hits record highs, there is massive rotations in performance on a 3/6/9/12 month basis

	CAT				DE			
	3 month	6 month	9 month	12 month	3 month	6 month	9 month	12 month
Nov-08	-23%	-1%	24%	56%	-3%	25%	29%	42%
Aug-09	23%	13%	-5%	18%	16%	10%	-9%	28%
Jul-22	5%	41%	23%	43%	20%	37%	25%	37%
Nov-23								
	WM				RSG			
	3 month	6 month	9 month	12 month	3 month	6 month	9 month	12 month
Nov-08	-5%	-10%	-3%	7%	1%	-4%	8%	17%
Aug-09	-5%	4%	-15%	-5%	-2%	9%	-9%	1%
Jul-22	3%	0%	7%	9%	2%	-5%	5%	16%

Source: Bloomberg

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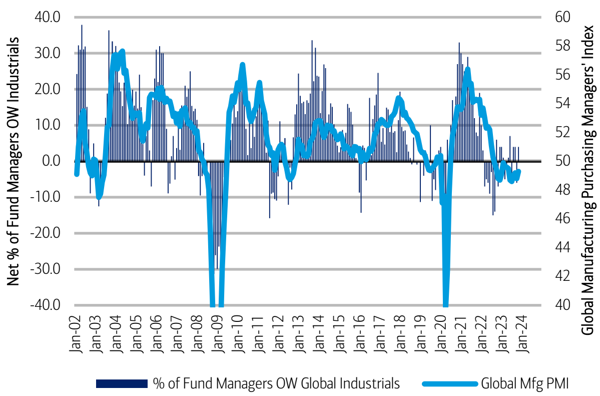
Exhibit 7: Fund Manager Positioning in Industrials vs Global PMI
PMIs recover, fund managers typically shift overweight. PMIs stay in contraction territory (sub 50) – positioning typically Neutral/Underweight.



Source: FactSet, BofA US Equity & Quant Strategy

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Exhibit 8: Machinery hated, Conglomerates loved
LO relative exposure to Machinery (cyclical) vs. Industrial Conglomerates (defensive) within S&P 500 (as of 10/2023)

Source: BofA US Equity & Quant Strategy, FactSet Ownership

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2) Lead Indicators: PMIs (eventually) turn

For now, lead industrial indicators remain weak and suggest a challenged 1H for earnings. In our view, risk-reward on Machinery starts to tilt favorably as lead indicators bottom, inflection, and ultimately rise – a likely 2H24-1H25 event, in our view.

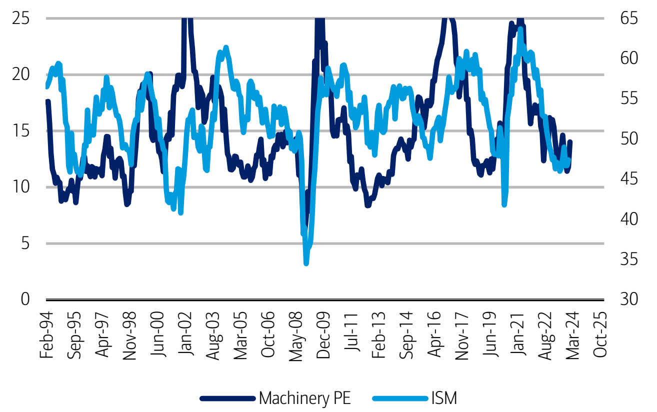
- **ISM below 50 for 14 months – what comes next?** (exhibit 11)**:** There are four periods (five including right now) where the ISM remained below 50 (contraction) for more than 14 months. Typically, cyclicals relative performance after those 14 months is positive on a 12 month basis. The exception – 1990s – where the ISM remained in contraction for a total of 25 months, one of the longest stretches.

- **Machinery multiples expand when ISM rises** (exhibit 9-10)**:** Machinery multiples de-rated as Global PMI & ISM rolled over the last year and a half. In our view, multiples likely expand as PMIs and ISM slowly recover in the 2H24-2025. While the overall share price performance broke down in 2023 (exhibit 12-13) – a function of a more resilient earnings profile this cycle - the multiples still tracked with the PMIs.

- **Follow Consumer to gauge Manufacturing** (exhibit 14-15)**:** ISM Services (gauge of consumer) is the true indication of a recession: every time ISM Services falls below 50 – a recession occurs - vs ISM Manuf below 50 over a dozen instances. The spread between ISM Manufacturing vs ISM Services is wide – if US consumer holds, the contraction in Manufacturing is shallow, gradually recovers and the 'spread' narrows. Downside risk: spread narrows because ISM Services enters recession.

- **BofA Industrial Momentum Indicator** (exhibit 16): Our proprietary flagship indicator, the BofA Industrial Momentum Indicator (inputs: investor positioning, fund manger expectations, copper, truck shipper survey) remains in a tight range. Encouragingly, the low is likely established – limiting downside to PMIs – yet still waiting for the 'inflection' to provide evidence of the upturn.

Exhibit 9: Machinery 12 month forward PE vs ISM
Machinery multiple re-rates typically with ISM going up



Source: Bloomberg

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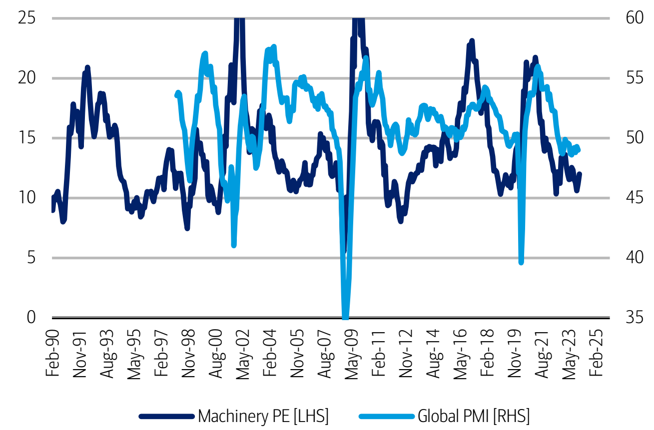
Exhibit 10: Machinery 12 month forward PE vs Global PMI
Machinery multiple re-rates typically with Global PMI going up



Source: Bloomberg

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Exhibit 11: What happens next after the ISM Manufacturing is below 50 (contraction) for 14 months?
Typically, cyclical machinery performs post 14 months of ISM in contraction with 1990's a clear exception (ISM remained below 50 for nearly 25 months)

	SPX				CAT				DE			
Date	3 month	6 month	9 month	12 month	3 month	6 month	9 month	12 month	3 month	6 month	9 month	12 month
Jun-90	-15%	-8%	5%	4%	-20%	-11%	-9%	-6%	-35%	-36%	-33%	-29%
Jun-96	2%	10%	13%	32%	11%	11%	18%	58%	5%	1%	9%	37%
Sep-01	10%	10%	-5%	-22%	17%	27%	9%	-17%	16%	21%	27%	21%
Apr-09	13%	19%	23%	36%	24%	55%	47%	91%	6%	10%	21%	45%

Source: Bloomberg

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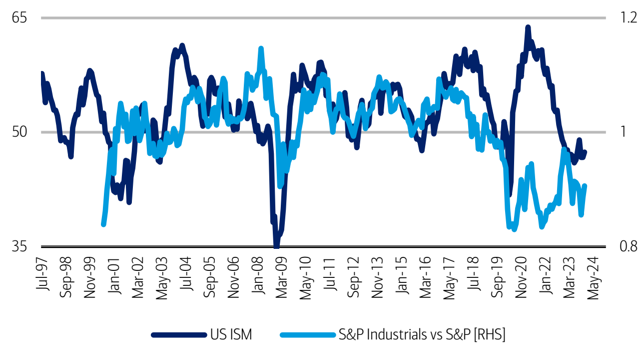
Exhibit 11: What happens next after the ISM Manufacturing is below 50 (contraction) for 14 months?
Typically, cyclical machinery performs post 14 months of ISM in contraction with 1990's a clear exception (ISM remained below 50 for nearly 25 months)

SPX

CAT

DE

Exhibit 12: S&P Industrial relative performance vs ISM
Typically, Industrials relative performance follows the ISM



Source: Bloomberg

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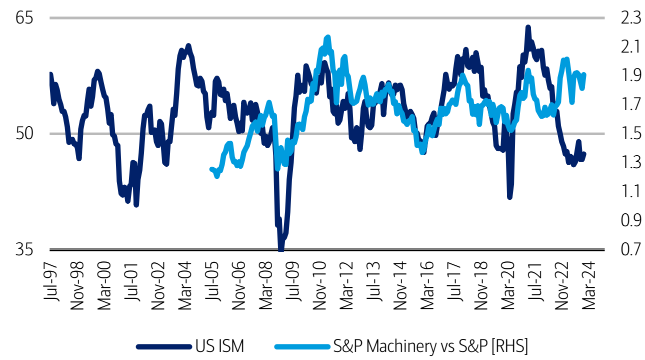
Exhibit 13: S&P Machinery relative performance vs ISM
Typically, Machinery relatively follows the ISM



Source: Bloomberg

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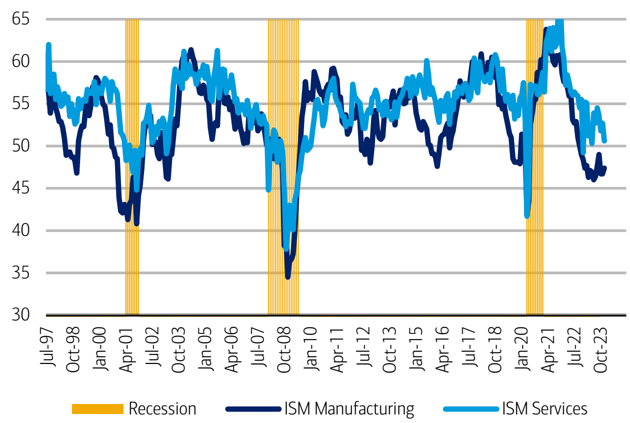
Exhibit 14: ISM Services (above 50) vs ISM Manufacturing (sub 50)
ISM Manufacturing below 50 nearly a dozen instances. ISM Services below 50 typically marks a true recession.



Source: Bloomberg

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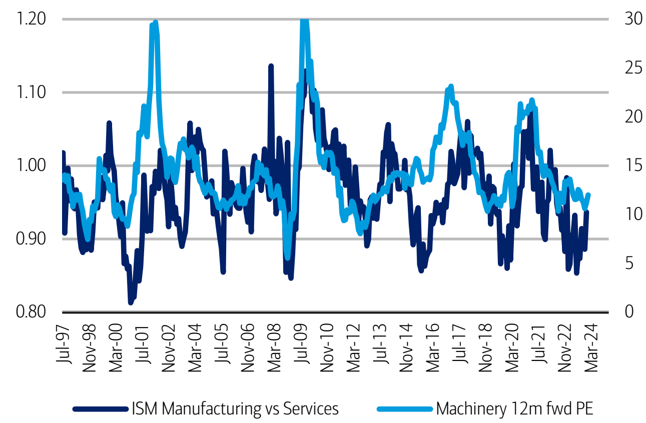
Exhibit 15: Machinery multiple vs ISM Manuf vs Services spread
Typically, Machinery multiple re-rates as ISM Manufacturing vs Services spread narrows.



Source: Bloomberg

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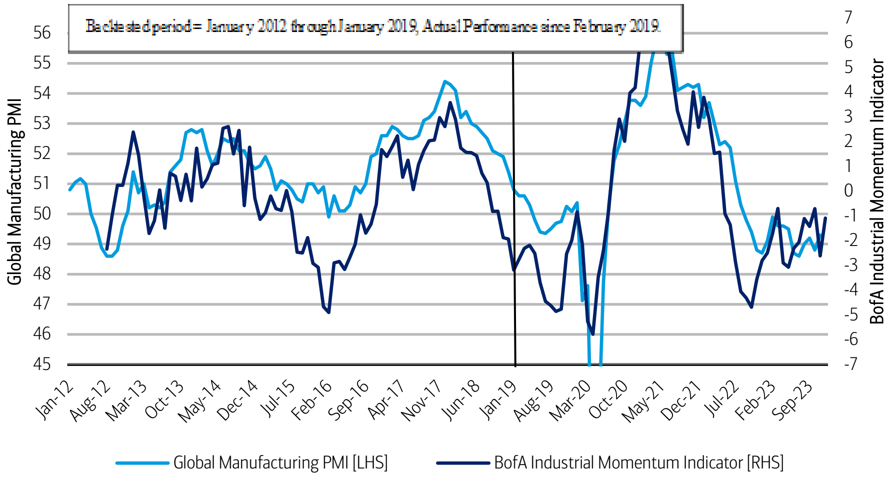
Exhibit 16: BofA Industrial Momentum Indicator vs Global Manufacturing PMI

Bottoms in the BofA Industrial Momentum Indicator lead bottoms in Global Manufacturing PMI



Source: BofA Global Research, Backtested period = January 2012 through January 2019, Actual Performance since February 2019. This performance is back-tested and does not represent the actual performance of any account or fund. Back-tested performance depicts the theoretical (not actual) performance of a particular strategy over the time period indicated. No representation is being made that any actual portfolio is likely to have achieved returns similar to those shown herein. Disclaimer: The indicator identified as BofA Industrial Momentum Indicator above is intended to be an indicative metric only and may not be used for reference purposes or as a measure of performance for any financial instrument or contract, or otherwise relied upon by third parties for any other purposes, without the prior written consent of BofA Global Research. This indicator was not created to act as a benchmark

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3) Don't fight the Fed…only sometimes

BofA's baseline scenario is for the Fed to start cutting rates by 25bp per quarter in June, until it reaches a terminal rate of 3% in 2026. Our analysis indicates a few insights into prior easing cycles. There is not a 'clear cut' rule, yet some guideposts: i) multiples typically re-rate, ii) swing factor for stock performance is if EPS revisions are falling faster than the multiple expansion (i.e., is the Fed is easing because of weak demand?), and iii) end market demand recovery can take up to two years in an easing cycle.

- **Machinery multiples re-rate in easing cycles**: In periods of 'easing cycles' (1990s, early 2000s, mid 2000s, 2019/20), Machinery multiples re-rated.
- **But sometimes earnings fall too fast (**exhibit 17**):** Periods when Machinery typically struggled vs S&P in an easing cycle is in the initial start of the easing cycle because negative EPS revisions outweigh the multiple expansion. In these periods, the outperformance was 'delayed' to some extent. Essentially, earnings were falling faster than the multiple re-rating in the early innings.
- **Rate cuts take time to get end markets revived** (exhibit 18): Easing cycles do not automatically trigger an immediate revival for growth. As exhibit 18 illustrates, recovery in the ISM, ABI, truck orders, non-res spending were at times delayed – waiting until year 2 (or sometimes year 3) to kick start demand.

Exhibit 17: Machinery bellwethers – performance in easing cycles: breaking down earnings revisions vs multiple de(re)rating

Machinery bellwether performance over the last three decades in certain fed cycles

Prior Easing Periods	Δ in Fed Funds rate (Bps)	S&P 500	CAT Share Px	CAT EPS Revisions	CAT Multiple	DE Share Px	DE EPS Revisions	DE Multiple
1990	-125	-7%	-19%	-47%	29%	-24%	-19%	-4%
1991	-300	26%	-7%	-33%	27%	2%	-32%	35%
1992	-100	4%	22%	10%	12%	-9%	-35%	26%
1993	0	7%	66%	103%	-37%	69%	129%	-60%
1994	250	-2%	24%	128%	-104%	-10%	50%	-61%
1995	0	34%	7%	5%	2%	60%	17%	43%
1996	-25	20%	28%	26%	2%	15%	11%	4%
1997	25	31%	29%	28%	1%	44%	24%	20%
1998	-75	27%	-5%	-6%	1%	-44%	-12%	-31%
1999	75	20%	2%	-12%	15%	32%	-51%	83%
2000	100	-10%	1%	-10%	11%	6%	44%	-39%
2001	-475	-13%	10%	-9%	20%	-5%	-29%	25%
2002	-50	-23%	-12%	-18%	6%	5%	35%	-30%
2003	-25	26%	82%	59%	22%	42%	39%	3%
2004	125	9%	17%	74%	-57%	14%	69%	-54%
2005	200	3%	18%	36%	-18%	-8%	9%	-17%
2006	100	14%	6%	19%	-13%	40%	8%	32%
2007	-100	4%	18%	8%	11%	96%	41%	55%
2008	-400	-38%	-38%	-16%	-23%	-59%	18%	-77%
2009	0	23%	28%	-48%	76%	41%	-51%	92%
2010	0	13%	64%	112%	-47%	54%	89%	-35%
2011	0	0%	-3%	60%	-63%	-7%	37%	-44%
2012	0	13%	-1%	0%	-1%	12%	16%	-5%
2013	0	30%	1%	-34%	36%	6%	-4%	10%
2014	0	11%	1%	21%	-20%	-3%	-20%	17%
2015	25	-1%	-26%	-46%	20%	-14%	-28%	14%
2016	25	10%	36%	-10%	46%	35%	-9%	44%
2017	75	19%	70%	136%	-66%	52%	87%	-35%
2018	100	-6%	-19%	66%	-85%	-5%	61%	-66%
2019	-75	29%	16%	-15%	31%	16%	-5%	21%
2020	-150	16%	23%	-33%	56%	55%	-2%	58%
2021	0	27%	14%	66%	-53%	27%	102%	-74%
2022	425	-19%	16%	23%	-7%	25%	19%	6%
2023	100	24%	23%	37%	-14%	-7%	26%	-32%

Source: Bloomberg

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Exhibit 18: Industrial End markets in easing cycles: takes some time to work through the system and kickstart demand
Typically, one year out of the easing cycle starts to improve metrics

Year	Δ in Fed Funds	ABI		ISM		Class 8 Trucks	Combines	Private Non-Res Spend	Mining	CAT NA Retail Sales	
	rate (Bps)	Starting	Ending	Starting	Ending					Starting	Ending
1990	-125			47.4	40.8	-30%	6%		44%		
1991	-300			40.8	46.8	3%	-7%		-18%		
1992	-100			46.8	54.2	71%	-16%		15%		
1993	0			54.2	55.6	21%	7%		54%		
1994	250			55.6	56.1	55%	1%	7%	-16%		
1995	0			56.1	46.2	-54%	10%	13%	19%		
1996	-25	53.4	44.6	46.2	55.2	-4%	6%	8%	27%		
1997	25	44.6	51.3	55.2	54.5	110%	8%	9%	5%		
1998	-75	51.3	55.2	54.5	46.8	18%	-4%	11%	-12%		
1999	75	55.2	57.7	46.8	57.8	-33%	-47%	5%	-28%		
2000	100	57.7	53.2	57.8	43.9	-39%	5%	10%	-11%		
2001	-475	53.2	45.6	43.9	45.3	-13%	11%	0%	25%		
2002	-50	45.6	47.8	45.3	51.6	33%	-21%	-13%	-15%		
2003	-25	47.8	50.3	51.6	60.1	19%	-3%	-4%	-3%	-1%	24%
2004	125	50.3	48.1	60.1	57.2	89%	40%	4%	107%	24%	29%
2005	200	48.1	50.3	57.2	55.1	-14%	1%	8%	44%	29%	12%
2006	100	50.3	55.4	55.1	51.4	-1%	-7%	16%	7%	12%	-7%
2007	-100	55.4	52.9	51.4	50.1	-44%	13%	24%	15%	-7%	-13%
2008	-400	52.9	34.7	50.1	34.5	-2%	22%	11%	19%	-13%	-21%
2009	0	34.7	44.0	34.5	55.8	-33%	15%	-16%	-32%	-21%	-46%
2010	0	44.0	52.4	55.8	56.6	49%	9%	-23%	26%	-46%	48%
2011	0	52.4	50.5	56.6	53.0	69%	-4%	-2%	49%	48%	51%
2012	0	50.5	51.5	53.0	50.1	-25%	-1%	17%	7%	51%	-11%
2013	0	51.5	49.0	50.1	56.5	17%	8%	4%	-44%	-11%	-1%
2014	0	49.0	52.9	56.5	55.7	42%	-25%	15%	-32%	-1%	0%
2015	25	52.9	51.0	55.7	48.7	-24%	-28%	12%	-17%	0%	-10%
2016	25	51.0	55.1	48.7	54.4	-36%	-21%	7%	-18%	-10%	-14%
2017	75	55.1	52.2	54.4	59.7	59%	9%	2%	91%	-14%	23%
2018	100	52.2	49.8	59.7	54.9	65%	10%	5%	33%	23%	14%
2019	-75	49.8	51.3	54.9	47.9	-63%	-7%	7%	-24%	14%	-4%
2020	-150	51.3	42.1	47.9	60.2	54%	0%	-1%	-37%	-4%	-9%
2021	0	42.1	51.8	60.2	58.6	27%	24%	0%	72%	-9%	1%
2022	425	51.8	48.4	58.6	48.4	-15%	15%	12%	45%	1%	13%
2023	100	48.4	45.3	48.4	47.4	-7%	3%	19%	7%	13%	

Source: Bloomberg

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4) End markets: capex growth bifurcates

All key Machinery end markets observed multi-year growth following the COVID recession: mining equipment, farm equipment, trucks, construction equipment, oil & gas equipment. Capital spending accelerated as customers invested to replace equipment, lower fleet ages, and meet rising demand. Heading into 2024, the overall capital spending environment slowing with some end markets more steady than others. We see some markets clearly down (farm equipment, trucks), some flat (oil & gas), and some markets with slightly growth (rental construction, mining – driven by larger miners).

In our view, a big question into 2024 is what end markets are likely to grow in 2025 as the Fed embarks on an easing cycle and GDP growth re-accelerates. In our view, we see a positive upside bias to mining (upside to metal prices, miner FCF is strong), oil & gas (ample FCF, LNG opportunities emerge), and trucks (spot freight inflects). We are more cautious on growth prospects for farm equipment (farmer margin under pressure, rising inventories) and rental equipment (units back to peak, fleet age normalizes) – these two end markets are more vulnerable to a decline in 2025, in our view.

- **Mining** (exhibit 19-24): Capital spending is moderating in 2024 following 3 year upturn yet remains slightly positive: Top 10 miners aggregate capex +3%. If we look at the 'Big 4' miners, capex growth is stronger (+12% YoY). BHP, the biggest miner in the world, is guiding capex up ~16%. While capex is not likely to return to peak levels (2012/13), years of underinvesting, strong financial position (FCF positive), aging fleet, and potential metal deficits suggest bias is to the upside on a multi-year basis. BofA Metals team sees upside to iron ore and copper in the 2H – a green shoot that can lead to more project announcements (higher capex) in 2025.

- **Oil & Gas** (exhibit 25-26): BofA forecasts global D&C capex growth of +3% in 2024 – very weak North Am (-6%) vs strong international (+12%). Offshore capex to remain positive while North America onshore to remain constrained. There is a more promising story emerging in 2025, likely supported by strong cash flow development. North Am D&C capex growth of 11-12% in 2025 (vs international +9% in 2025), including some expectations of LNG start-ups in 1H25.

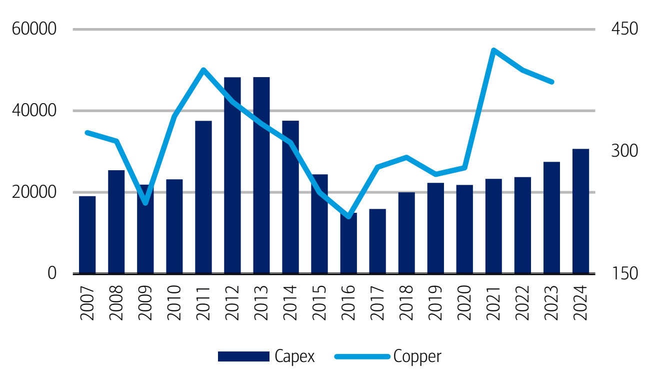
- **Trucks** (exhibit 27-32): Third party forecasts (source: ACT) expect heavy duty truck production to fall 20% to 272k units in 2024 – closer to normalized levels – following the ramp in production ('21: 264k, +23%, '22 315k, +19%, '23e: 339k, +8%). The downturn in truck production is a function of a decline in trucker capex, lower ordering activity, fleet age normalizing, weak freight conditions, and declining used values. While there signs that truck production likely bottoms and recovers in 2025 (spot freight rates, pre-buy ahead of EPA 2027), yet conditions remain soft.

- **Farming** (exhibit 33-36): Deere expects Large Ag demand to fall 10-15% in 2024. The decline in combine orders (~25%) reflects farmers pulling back on discretionary purchases. The concern is if crop prices remain depressed, farmer margins remain under pressure, farmer sentiment is depressed, and dealer inventories build, the upside to 2025 is much more limited as farmers defer another year of new orders. Farm equipment is vulnerable to a two-year downturn if trends remain weak.

- **Rental equipment** (exhibit 37-40). Rental operators capex typically drives aerial work platform sales. While we expect rental capex to remain elevated in 2024, we believe the rental equipment cycle is reaching its peak and growth beyond 2024 is likely limited: units are back to peak levels, rental fleet age is returning to normal (i.e., less catalyst to drive capex higher), and used aerial values are declining on a YoY basis. Additionally, rental operators can instantly flex capex down if uncertainty starts to creep into the construction market, leaving rental equipment vulnerable.

Exhibit 19: Big 4 miners capex (BHP, RIO, AAL GLEN) vs Copper Price

Mining capex to be up 12% in 2024 – following the higher copper price



Source: BofA Metals & Mining team (BHP, Rio, Anglo, Glencore), $bn

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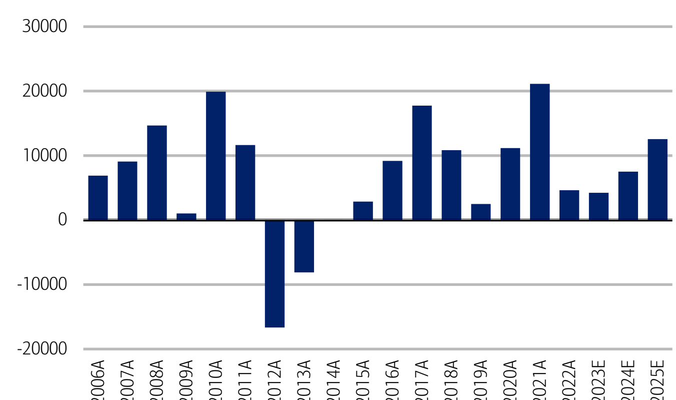
Exhibit 20: Miner Free Cash Flow minus Dividends

Ample flexibility for potential projects with FCF to cover dividends



Source: BofA Metals & Mining team (BHP, Rio, Anglo, Glencore), $bn

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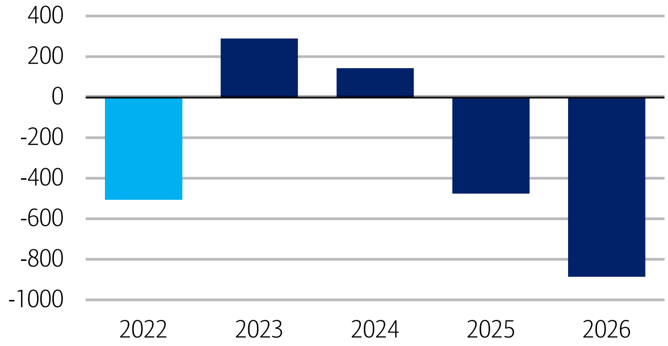
Exhibit 21: COPPER: Forecast 2023-2026E copper surplus (kt)
BofA forecasts copper surplus to shrink and turn to a deficit 2024E-2025E



Source: Bloomberg, Mysteel, BofA Global Research

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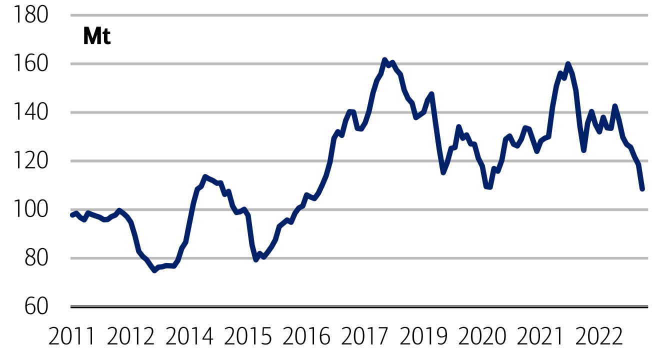
Exhibit 22: Iron ore inventories at Chinese ports
Iron ore stocks at ports have fallen close to 2020 levels



Source: Bloomberg, BofA Global Research

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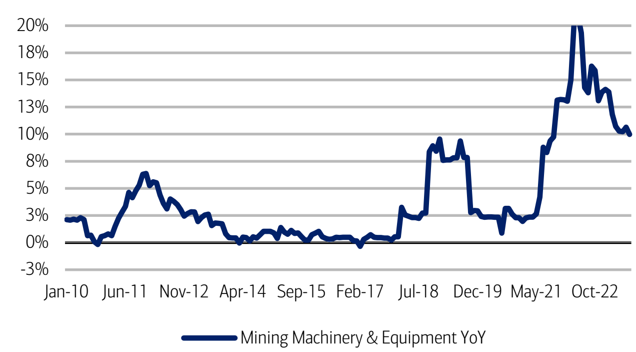
Exhibit 23: Mining equipment prices remain elevated on a YoY basis
Mining machinery equipment remains elevated



Source: Bloomberg

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Exhibit 24: Finning Canada CAT Mining Equipment Population Age
Equipment age should drive extended rebuild demand

Equipment Type	# of Active Units *As at June 30, 2023*	Average Age *Years*
Ultra Class Trucks *797, 794AC,798AC*	~405	11.5
Large Mining Trucks *793, 789, 785, 777*	~1,270	7
Mining Support Equipment *Graders, dozers, loaders*	~1,115	7
Mining Shovels *Electric rope shovels & hydraulic mining shovels*	~140	8.5

Source: Bloomberg, BofA Global Research

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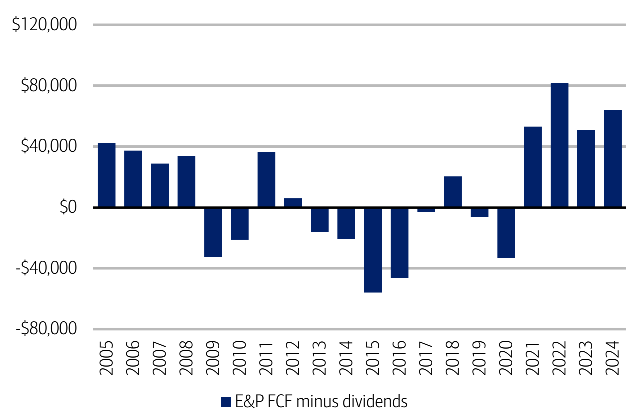
Exhibit 25: Oil & Gas: E&P FCF minus dividends – healthy
E&Ps ample flexibility for potential projects with FCF to cover dividends



Source: BofA Energy team (Exxon, Chevron, Conoco, Shell, BP), $bn

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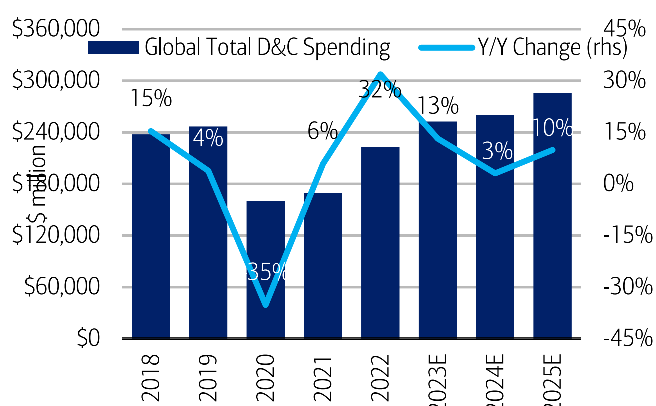
Exhibit 26: Oil & Gas: Global D&C Spending, 2018 – 2025E
We see global D&C spending increasing 3%/10% YoY in 2024E/25E



Source: Spears and Associates, Baker Hughes, Rystad, BofA Global Research

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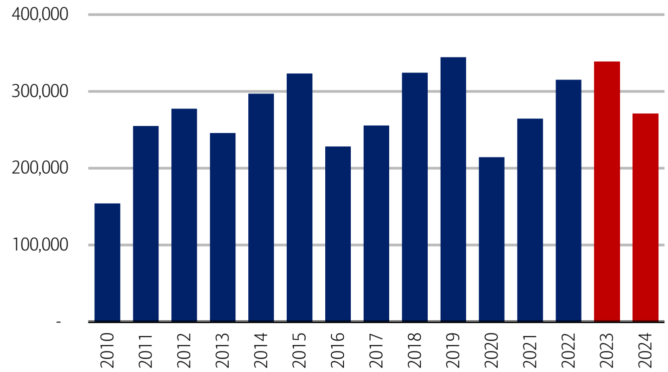
Exhibit 27: CL8 Truck Production
ACT expects truck production to decline 20% YoY in 2024



Source: Bloomberg, ACT

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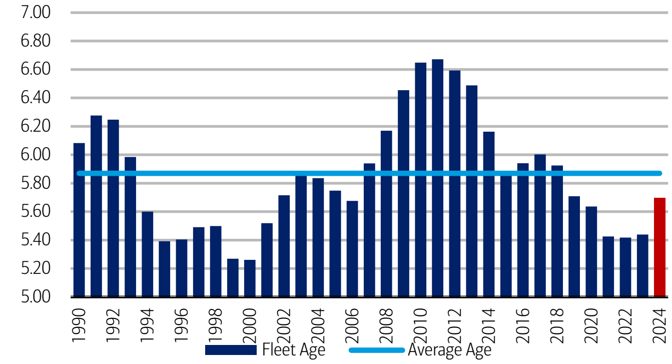
Exhibit 28: NA Cl8 Average Truck Fleet Age
NA Cl8 Truck fleet is normalizing after years of robust orders/production



Source: Bloomberg, ACT

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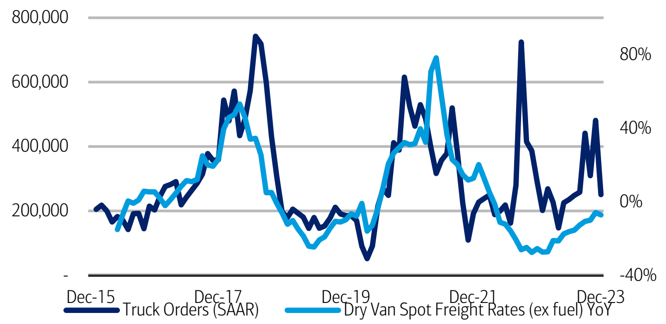
Exhibit 29: Heavy Duty truck orders (SAAR) vs Spot Freight Rates YoY
Order rates running ahead of spot freight rates



Source: Bloomberg, ACT

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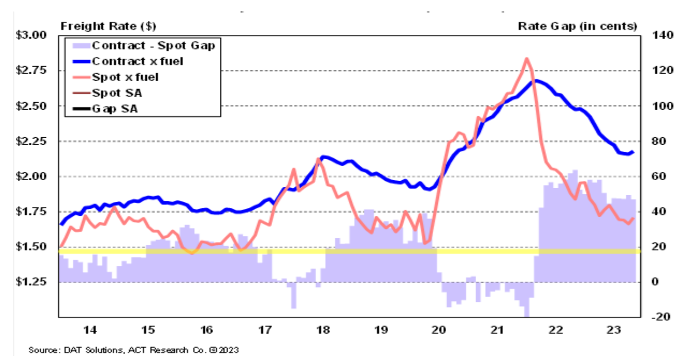
Exhibit 30: DAT Trendlines Spot Rates: Aggregate Revenue per Mile
Spot rates have been trending down with a wide spread vs contract



Source: ACT

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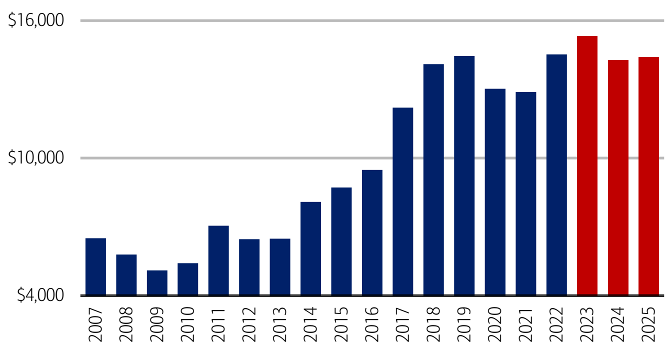
Exhibit 31: Trucker Capex
Trucker capex is expected to be down in 2024



Source: Company Filings (includes: J.B. Hunt, Werner, Arcbest, Knight-Swift, FedEx, UPS)

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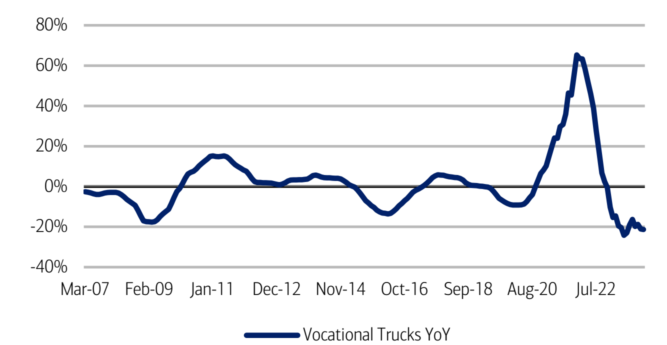
Exhibit 32: Used Vocational Trucks YoY
Used truck prices have been falling



Source: RB Global

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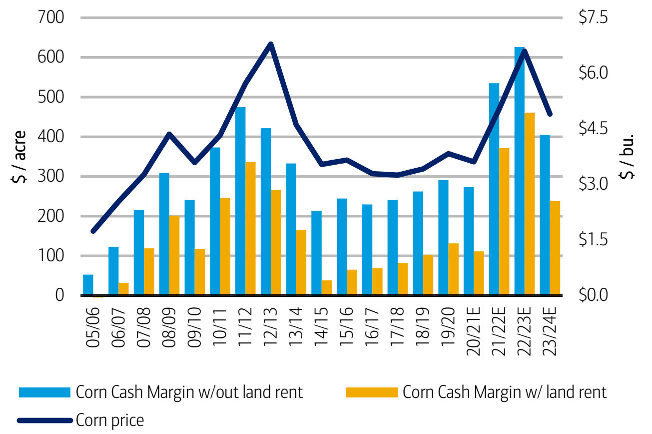
Exhibit 33: Corn Cash Margin vs Price
Cash margins will moderate in 2023/24



Source: USDA

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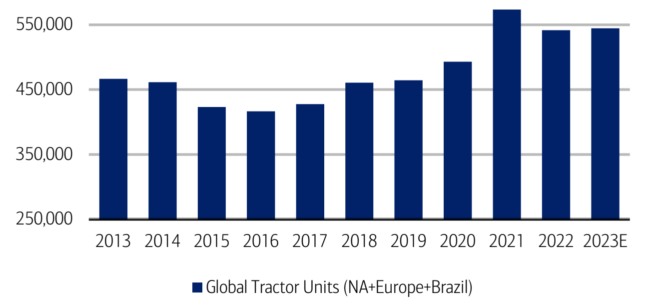
Exhibit 34: Total tractor units (North America+Europe+Brazil)
Tractor units have recovered in recent years (albeit includes small ag)



Source: Deere company Filings, BofA Global Research Estimates

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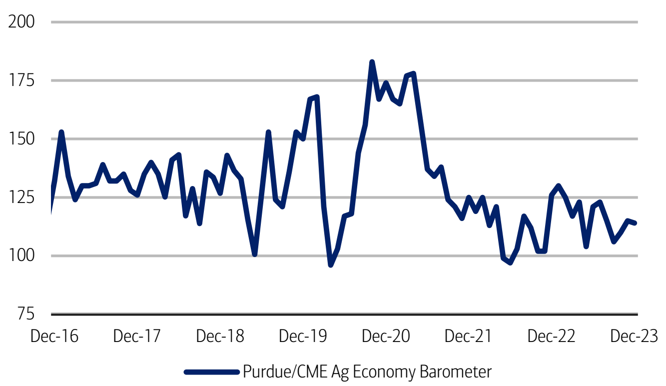
Exhibit 35: US farmer sentiment
US farmer sentiment is depressed



Source: Purdue Ag Barometer

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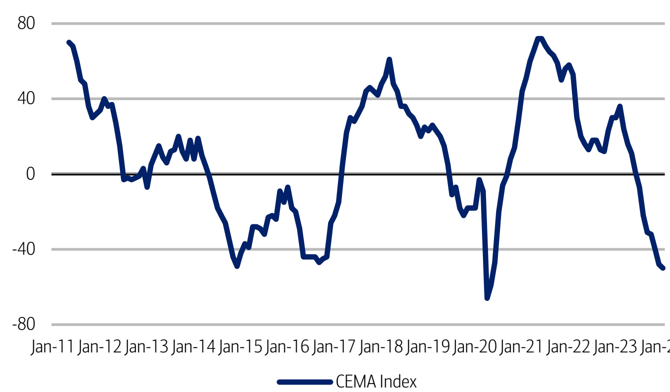
Exhibit 36: EU farmer sentiment
EU farmer sentiment is near very weak levels



Source: CEMA

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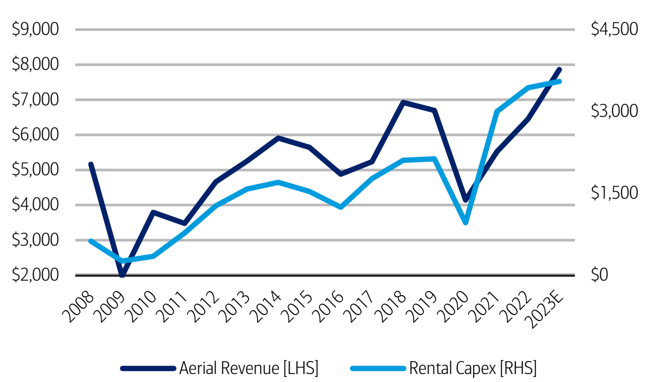
Exhibit 37: AWP revenue vs Gross Rental Capex
Capex could plateau in next 1-2 years if 'tail' of construction market fades



Source: Aerial Revenue (TEX + OSK), rental capex (URI)

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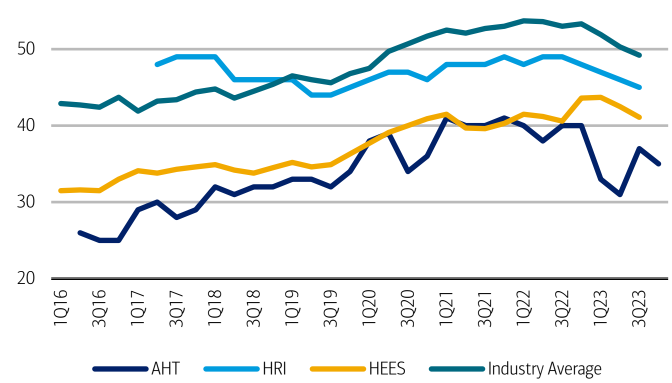
Exhibit 38: Rental fleet age (months)
The rental industry age fleet age is moderating



Source: Company Filings (AHT, HRI, HEES)

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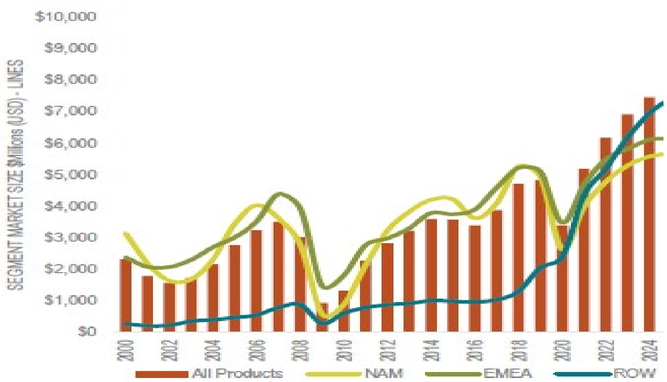
Exhibit 39: Access & Material Handling Equipment Geo Mix
North America and Europe back to peak levels and start to plateau



Source: Linamar Company Filings

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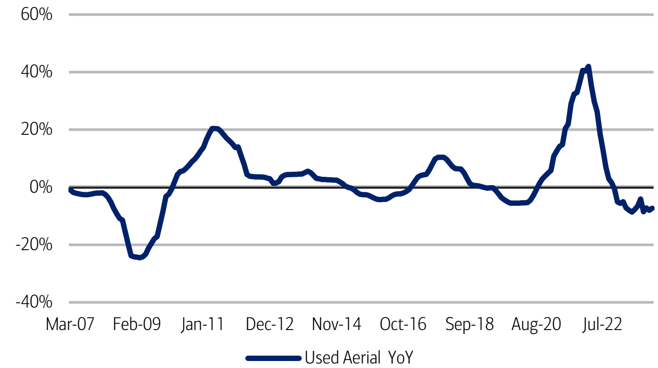
Exhibit 40: Used aerial equipment pricing YoY
Used aerial equipment pricing is moderating



Source: RB Global

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5) Construction: be selective

Construction spending growth is likely to moderate from record highs to a low growth backdrop in 2024. We still see some tailwinds (infrastructure, data centers, manufacturing) yet headwinds are building in more cyclical, rate sensitive areas (offices, commercial real estate, warehouses, etc). The Fed potentially cutting rates is a positive yet this is on a lag – residential construction recovers first, commercial construction recovers 12-18 months later. Simply put, we see a slowing construction backdrop yet not a severe downturn given unique bright spots such as infrastructure.

We advise investors to adopt a more nuanced approach to construction-exposed companies. In our view, certain areas in our coverage – rental operators – can flex capex to capture higher share of the growth verticals (infrastructure, manufacturing, etc). Other areas of our coverage – access equipment manufacturers – are more vulnerable to supply risks (peers raising capacity) and more dependent on the 'tail' of the construction market to absorb rising volumes (i.e., smaller rental operators and contractors impacted by rates and tightening lending). We discuss further in the stock selection on page 10:

- **Starts data slowing but still holding (leads spending, exhibit 42):** Non-res construction starts are up 7% YTD (2022 was a record year) with clear bifurcation in the market: heavy engineering +16%, institutional +10%, warehouses -31%, retail/shopping -12%. Starts typically leads construction spending (see: exhibit 42), suggesting spending growth to moderate yet remain stable in 2024.

- **Infrastructure awards tracking above record levels (exhibit 43):** Total value of state & local government contract awards are at approximately $115.7bn YTD, 9% above the record levels seen in 2022, and 38% above 2021. Government shutdown and continuing resolutions are a risk, yet we note that a big step up in federal funding already took place in 2022 and 2023 and is coming down the pipeline – thus, the potential disruption is expected to be less severe. ARTBA projects the total value of overall transportation construction work to grow 14% in 2024 (+14% YoY).

- **Most private non-res sectors feeling the pinch (exhibit 44)**: In our view, the 'light construction' areas are likely to fall double digits next year given the impact of cumulative Fed rate hikes, tightening lending standards, and pull back in starts in categories such as offices (ex-data centers), retail/shopping, warehouses, etc. The one exception has been hotels/lodging which has rebounded (and expected to continue into 2024 as the travel industry bounces back) following its steep downturn during the pandemic. To be clear, the most economically sensitive areas are now 20-25% of the overall market (lower than prior cycles) given the rise in public funding and manufacturing activity.

- **Manufacturing construction in a manufacturing recession (exhibit 45):** Remarkably, construction spending in manufacturing is up over 75% this year in spite the fact that manufacturing economy is in a contraction (i.e., ISM has been below 50 for fourteen consecutive months). This is a result of the stimulus and onshoring incentive programs that are underpinning more manufacturing projects (semiconductor facilities, LNG, battery plants, etc.). While spending is likely to moderate in 2024, we expect manufacturing activity to recover as well.

- **Non-residential construction spending to be up slightly in 2024:** If we assume the most economically sensitive areas of non-res construction market to decline 20-30%, heavy/energy areas up 8-10%, and public non-res up 10-13%, the result is overall non-res construction spending dollars likely flat to up 3% in 2024.

Exhibit 41: Non-res construction outlook: weakness in private markets yet more resiliency than feared given infrastructure, manufacturing, datacenters
BofA expects spending growth to slow in 2024 yet remain positive

	2016	2017	2018	2019	2020	2021	2022	2023E	2024E	2023E	2024E
Nonresidential	727,178	734,089	769,308	837,598	855,314	844,408	921,237	1,120,595	1,154,702	21.6%	3.0%
Lodging	27,077	28,660	31,464	33,461	28,483	19,082	19,745	24,442	25,297	23.8%	3.5%
Office	67,907	68,685	76,662	88,724	92,831	89,902	91,623	100,963	83,502	10.2%	-17.3%
Data Centers											*8.5%*
Office (ex-Data Centers)											*-30.0%*
Commercial	78,696	87,626	86,422	84,345	89,714	97,394	121,349	136,199	105,554	12.2%	-22.5%
Warehouses											*-25.0%*
Commercial (ex-Warehouses)											*-20.0%*
Health care	40,574	43,120	43,450	46,263	48,599	50,327	54,757	63,693	68,152	16.3%	7.0%
Educational	91,629	96,685	101,210	108,952	110,692	100,988	102,086	116,245	122,057	13.9%	5.0%
Religious	3,752	3,586	3,499	3,730	3,472	3,096	2,946	3,376	3,545	14.6%	5.0%
Public safety	8,177	8,539	9,353	12,012	17,667	12,826	11,574	13,320	13,986	15.1%	5.0%
Amusement and recreation	23,652	26,569	28,068	30,416	28,288	27,102	30,001	33,492	34,664	11.6%	3.5%
Transportation	43,339	46,137	53,219	57,448	60,734	59,075	58,725	64,844	72,950	10.4%	12.5%
Communication	22,179	23,696	24,502	22,184	23,876	23,091	24,306	24,879	26,994	2.4%	8.5%
Power	101,540	95,951	99,569	117,960	118,168	119,108	109,816	119,529	131,481	8.8%	10.0%
Highway and street	93,187	89,620	91,745	99,402	102,321	103,381	114,107	135,158	152,052	18.4%	12.5%
Sewage and waste disposal	24,151	22,901	23,931	26,119	27,189	28,811	32,660	41,824	47,052	28.1%	12.5%
Water supply	13,940	14,168	15,477	16,397	18,952	20,284	23,402	27,863	31,346	19.1%	12.5%
Conservation and development	7,745	7,464	8,229	9,207	8,903	7,911	9,434	11,671	12,663	23.7%	8.5%
Manufacturing	79,633	70,682	72,508	80,978	75,425	82,030	114,706	203,097	223,407	77.1%	10.0%

Source: US Census Bureau, BofA Global Research estimates

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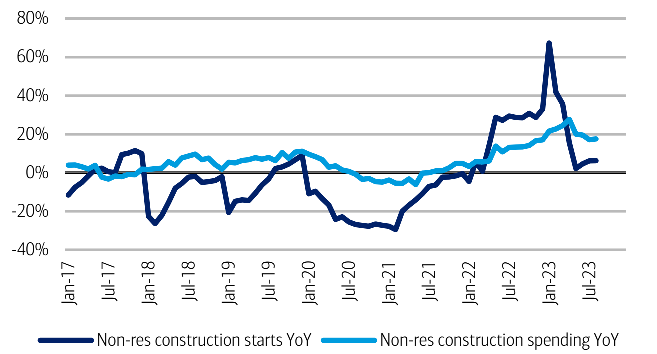
Exhibit 42: Non-res construction starts vs spending YoY
Growth in starts in 2022 and 2023 likely to keep spending positive 2024



Source: Bloomberg

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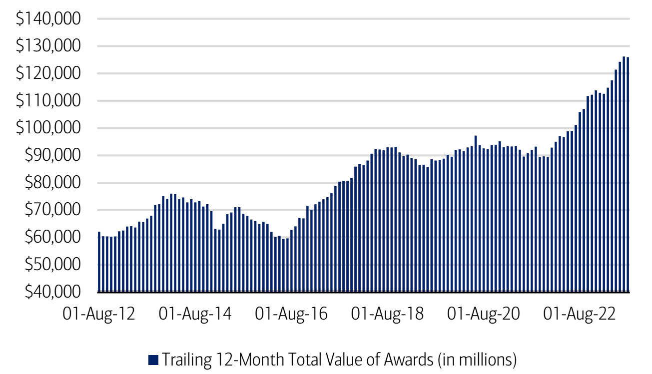
Exhibit 43: Highway contract awards near record highs
Support growth in public driven construction areas (highways, roads)



Source: ARTBA

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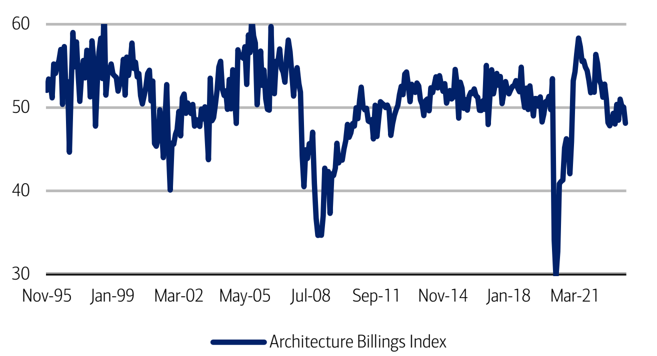
Exhibit 44: Architecture Billings Index – gauge of private non-res
Billings remains below 50 – suggesting a decline in activity



Source: Bloomberg

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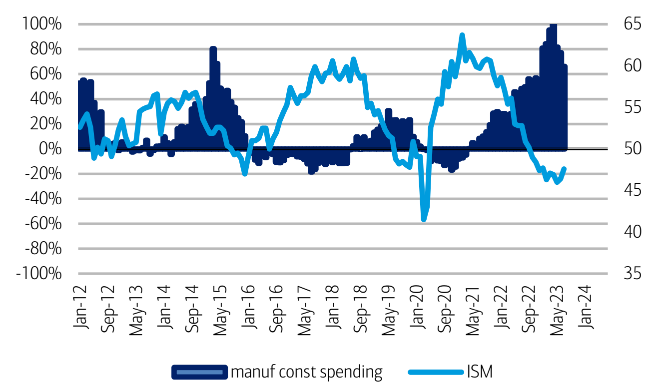
Exhibit 45: Manufacturing spending vs manufacturing activity
ISM sub 50 (manufacturing recession) yet spending is up (reshoring)



Source: Bloomberg

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6) Downside risk: too much equipment

Easing inflation cascades into deflationary pressure

Inflationary pressures are cooling through 2024. This is positive – to some extent – as the Fed can eventually ease and manage a soft landing or perhaps no landing scenario. In our view, the risk for Machinery is if easing inflation evolves into deflationary pressure with a lack of pricing power in the system. After all, a tight environment is generally inflationary and favorable for cyclical sectors that can pass along inflation (and then some) to expand margin. The last three years, the Machinery sector benefited from a certain level of 'tightness' in equipment markets - low inventories trying to meet a rising level of demand. We are no longer in a 'tight' backdrop outside of some niche areas.

The degree of 'unwinding' of a tight backdrop is worth monitoring: dealer inventories are more than healthy, lead times are restored, fleet age normalizing, and used equipment values are moderating from peak levels. Case in point: Deere is guiding farm equipment pricing of +1.5% in 2024, following a 20-30% increase the last two years, as inventories have normalized and farmers pull back on purchasing decisions with a lower corn price. The biggest risk for Machinery is if too much equipment chases contracting demand – resulting in excess slack in the channel – a deflationary event, as some cost pressures start to rear its head (higher steel price, higher shipping costs, etc).

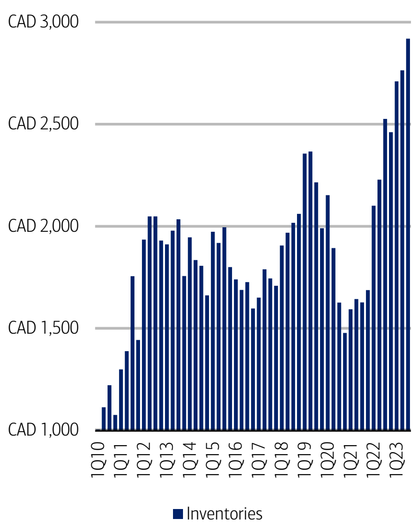
- **Farm equipment – canary in coal mine?** (exhibit 51): Farm equipment prices are expected to be up only 1-2% in 2024. After extreme tightness in the equipment market (i.e., not enough supply to match demand) that underpinned 20-30% price increases over a 2-3 year period, the market 'caught up' - production ramped, farmers replaced fleet, dealers replenished inventory, and order rates cooled as corn prices rolled over from the peak – resulting in only price increases of 1-2% for 2024.

- **Used values the lead indicator** (exhibit 53-56): auction values on a YoY basis remain in negative territory across almost all categories – aerials, construction (large, medium), transportation (vocational, truck tractors). That said, the YoY declines are somewhat holding in certain categories (aerials). We caution to say used values have stabilized or bottomed given some sequential bleeding lower. Simply put, used values continue to moderate yet not 'break lower' to the downside yet. If used values break lower, suggests too much supply chasing slowing demand.

- **Inventories – more than healthy** (exhibit 46-50): Inventory levels across dealers and OEMs remain elevated. Demand remains stable enough to support this level of inventory yet there is no upside driver of a 're-stock' effect following three years of bringing the supply-demand backdrop into balance post covid.

- **Costs creeping up**: The risk is if pricing power is diminishing at a time when cost deflation is simply not occurring at the same speed. Some companies hinted in Q3 earnings that costs are abating – freight, logistics, fuel, raw materials, etc. The recent spike in HRC (hot rolled coil) steel and threats around shipping costs is something to monitor at a time when equipment pricing moderates.

Exhibit 46: CAT dealer: Finning Inventories
Finning (CAT's largest dealer) inventories high



Source: FTT Company Filings

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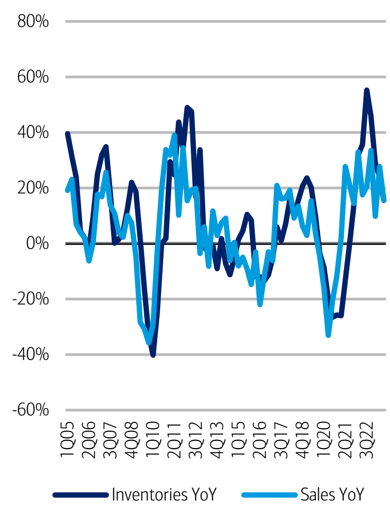
Exhibit 47: FTT inventory YoY vs sales YoY
Inventory growth outpacing sales growth



Source: FTT Company Filings

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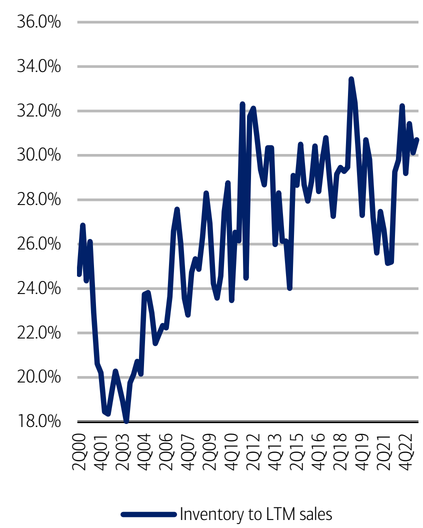
Exhibit 48: FTT inventory to LTM sales
Finning inventory to LTM sales rising



Source: FTT Company Filings

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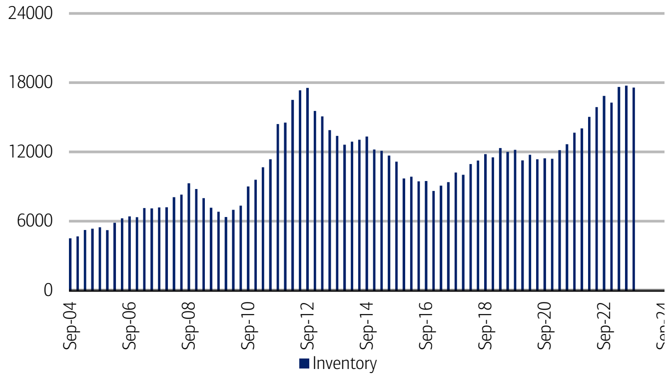
Exhibit 49: OEM: Caterpillar inventory
Caterpillar inventories rising in 2023



Source: CAT Filings

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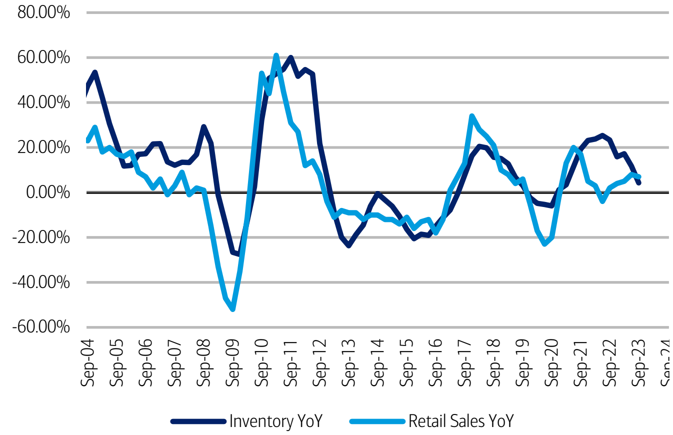
Exhibit 50: CAT inventory vs Retail Sales YoY
Inventory growth is moderating with sales growth



Source: CAT Filings

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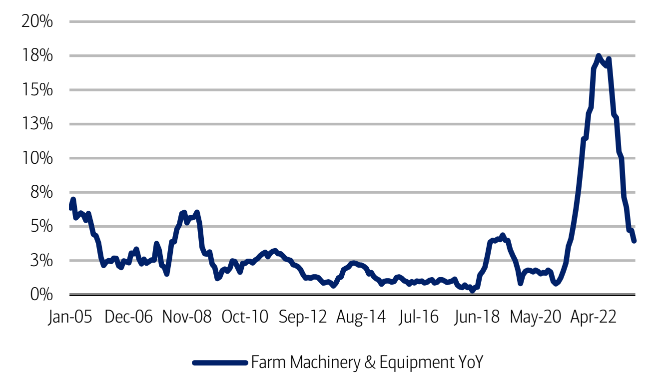
Exhibit 51: Farm equipment prices starting to moderate YoY basis
Mining machinery equipment remains elevated



Source: Bloomberg, PPI

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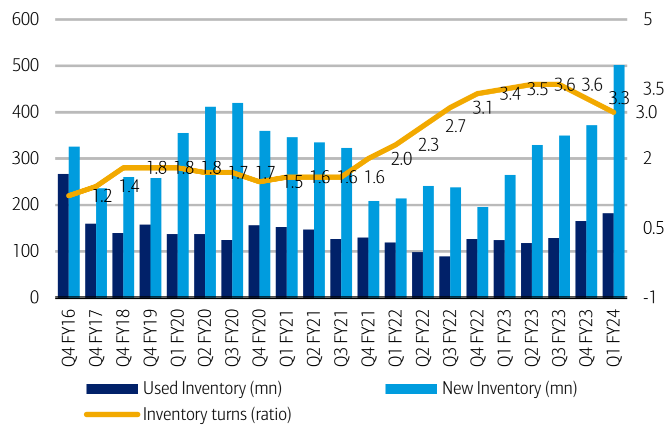
Exhibit 52: TITN Equipment Inventory
New and used inventory is rising



Source: TITN company filings

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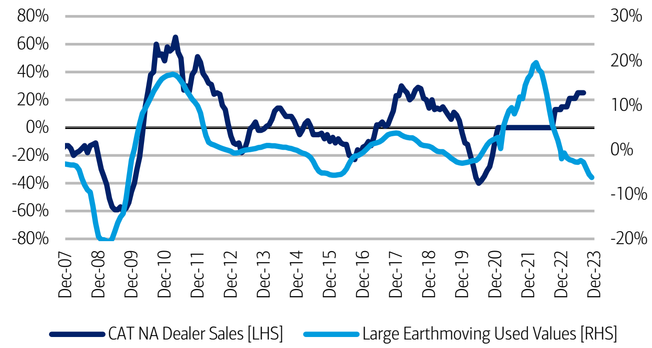
Exhibit 53: Earthmoving used values vs CAT Dealer Retail Sales
Used values moderated through 2023 – not seeing that impact on retail



Source: CAT filings, Copyright© 2023 RB Global

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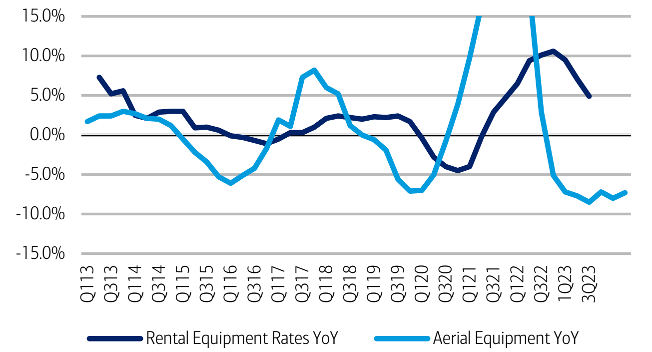
Exhibit 54: Equipment Rental Rates vs Used equipment values (aerials)
Used values moderated through most of 2023



Source: Census Data, Copyright© 2023 RB Global

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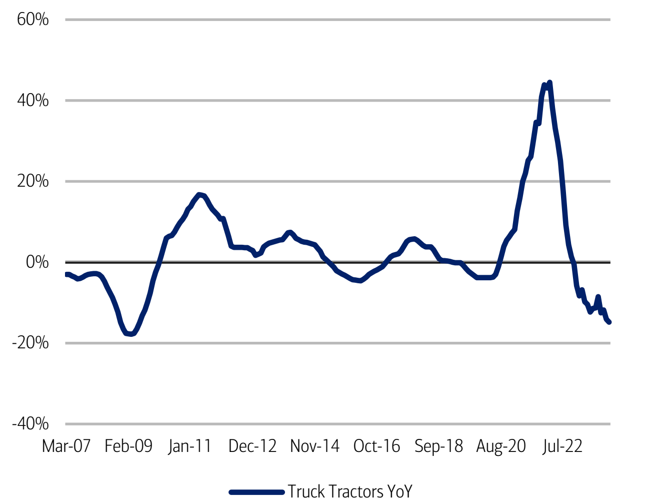
Exhibit 55: Trucks: Tractor used values YoY
Moderated over the last 12 months



Source: Copyright© 2023 RB Global

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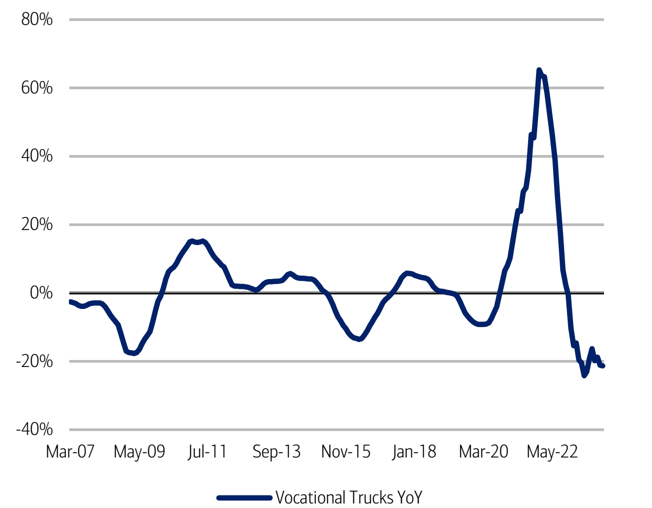
Exhibit 56: Trucks: Vocational used values YoY
Moderated over the last 12 months



Source: Copyright© 2023 RB Global

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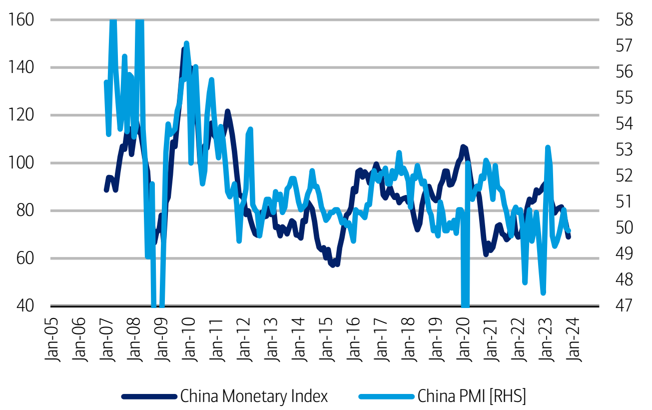
7) Upside risk: A China surprise

China growth outlook looms large over the Machinery sector as an idiosyncratic driver. The sector is typically viewed as a play on "*emerging markets, commodities, and global growth*". Our best estimate is that the direct revenue exposure is minimal and company specific – China accounts for ~5% of Caterpillar revenue and ~10% of Cummins revenue on a consolidated basis. However, the indirect exposure for CAT (and the Sector) is rather large. For example, China is one of the largest consumers of metals (50% of copper). Chinese growth concerns could impact global mine production, weighing on equipment demand in Australia & Chile. The US-China trade war weighed on farmer purchasing decisions given China purchases roughly 20% of US soybean production.

Machinery end markets remain incredibly weak in China for most of 2023 – China excavators fell 26% (domestic -42%) and China PMI trended mostly below 50 implying a contraction in the manufacturing sector. The Chinese economy has been beset by multiple headwinds and investors are cautious, according to BofA strategist Michael

Hartnett. What keeps us somewhat intrigued by a 'China upside surprise' is the fact that: i) key industrial metals (iron ore, copper) are elevated in spite of a property correction – what happens if the property market stabilizes? ii) China excavator domestic excavator demand rebounded in December (+24% YoY), iii) China credit metrics are nearing cyclical lows. There is no doubt this could be a structural dynamic, yet these levels are also when the policy makers typically step in (relative to prior cycles).

Exhibit 57: China Monetary Index vs China PMI
China Monetary Index nearing cyclical lows – leads China PMI



Source: Bloomberg

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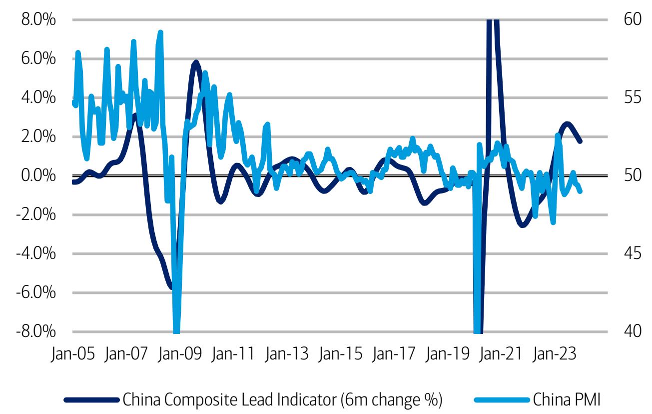
Exhibit 58: China OECD Composite Lead indicator vs PMI
China OECD Composite Lead Indicator typically leads China PMI



Source: Bloomberg

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Exhibit 59: China excavator sales (domestic) plummeted last 2 years
China domestic demand is nearing lows 2008, 2015, and 2016

Source: Bloomberg

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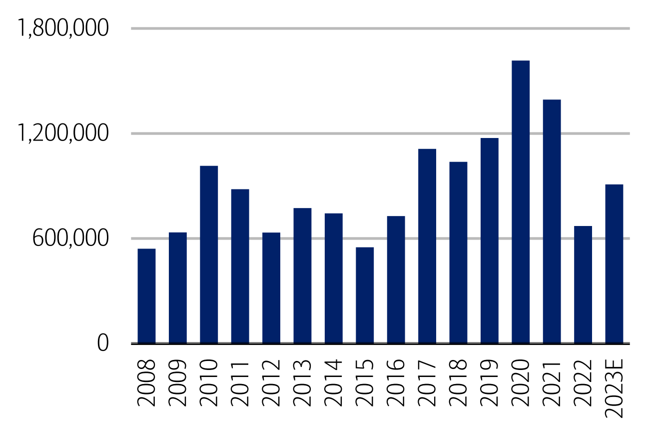
Exhibit 60: China heavy duty truck sales
China heavy duty truck sales recovered 27% in 2023



Source: Bloomberg

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8) Recession watch: what is priced in?

Generally speaking, our trough EPS scenario incorporates 15-20% revenue declines versus 20-25% in 2020, 30-40% in 2015/16 (oil-led industrial recession) and 30-50% in the Financial Crisis. Time will likely tell if this scenario is too conservative relative to more severe recessions (2009) or too extreme. In our view, it is a helpful exercise in establishing 'worst case' scenarios as recession risks intensify and evolve into a more 'hard landing' scenario. We kept the exercise fairly simple and straightforward – see Exhibits 61-63. In our view, it is important to keep in mind the following:

- Simply put, it is important to keep in mind that several Machinery end markets have observed downturns in the following years: mining (2013-16), farming (2013-15), oil & gas (2015/16). This is why we apply a more conservative revenue decline.

- Construction, which is economically sensitive and typically follows housing, is vulnerable to a hard-landing. That said, there are tailwinds around heavy non-residential and public infrastructure given rising public funding next few years.

- We assume more conservative decremental margin /operating leverage in prior cycles. There is not notable 'excess' in the system that could result in prolonged de-stocking, in our view, and pricing remains positive for most companies. That said, higher R&D spending in certain areas (precision ag, EVs, etc) and retaining labor in a tight market could create a year of high decrementals.

Exhibit 61: Scenarios: Trough EPS and EBITDA assumptions for Machinery, Engineering & Construction

BofA assumes EPS and EBITDA declines to be less severe than a hard landing recession

Companies	Current 2023E	Recession Scenario	% Delta	Key assumptions to hypothetical trough
CAT	$20.70	$14.50	-30%	Revenue -19% (Construction -20%, Resources -15%, E&T -17%), decremental margin of 30%; vs EPS declined 46% in 2015-16, -62% in 2009
DE	$34.63	$20.25	-42%	Revenue -30% (Precision Ag 30%, Small Ag -30%, C&F 30%), decremental margin of 30%; vs EPS declined 47% 2013-16, -40% 2009
AGCO	$15.80	$7.50	-53%	Revenue -20%, decremental margin of 27%; vs EPS declined ~60% 2013-16, -62% 2009
CNHI	$1.68	$0.75	-55%	Revenue -28% (Construction -30%, Agriculture -27.5%), decremental margin of 30%
PCAR	$9.00	$5.75	-36%	Revenue -26% (trucks -25%, Parts -30%, Financial Services -30%), decremental marign of 25% vs EPS declined 46% in 2020, -15% in 2016, -90% in 2009
CMI	$19.82	$14.50	-27%	Revenue -12% Engines -15%, components -12.5%, Power Systems -10%), decremental margin 25% vs EPS declined 20% in 2020, -10% in 2016, -34% in 2009
KMT	$1.61	$1.10	-32%	Revenue -15%, decremental margin of 20% vs EPS declined 69% in 2020, -56% in 2015/16, -71% in 2009
TKR	$6.85	$4.50	-34%	Revenue -14% (Engineered Bearings -15%, Industrial Motion -12.5%), decremental margin of 25% vs EPS declined 11% in 2020, -10% in 2015/16, -80% in 2009
OSK	$8.49	$5.75	-32%	Revenue -20% (Access -30%, Vocational -15 %, Defense +5%), decremental margin of 17% vs EPS declined 39% in 2020, -25% in 2015/16
TEX	$7.05	$3.75	-47%	Revenue -18.5% (Access -25%, MP -10%) decremental margin of 36% vs EPS declined 99% in 2020, -62% in 2015/16
IPGP	$4.68	$3.35	-28%	Revenue -15% decremental margin of 40% vs EPS declined 60% in 2019-20, -62% in 2015/1, -85% 2009
Companies	Current 2023E	Recession Scenario	% Delta	Key assumptions to hypothetical trough
URI	$6,825	$5,975	-12%	Revenue -10% (Resi -30%, Non-res -20%, oil & gas -15%, Infrastructure +12%), decremental margin 60%; vs EBITDA -10% 2020, -3% 2016, -41% 2009
VMC	$1,975	$1,715	-13%	Revenue -10% (Resi -20%, Non-res -25%, Infrastructure +10%), decremental margin 35%; vs EBITDA +4% 2020, -64% 2009
MLM	$2,110	$1,825	-13%	Revenue -10% (Resi -20%, Non-res -25%, Infrastructure +10%), decremental margin 40%; vs EBITDA +11% 2020, -43% 2009
ACM	$967	$875	-10%	Revenue -7% (Private -17%, State & Local +5%, Govt +3%), decremental margin 20%;
J	$1,425	$1,235	-13%	Revenue -6% (Infrastructure +5%, Govt +3%, Cities+Manufacturing -15%), decremental margin 20%;
FLR	$617	$420	-32%	Revenue -8% (Energy Solutions -12%, Urban -10%, Mission 0%), decremetnal margin 15% vs EBITDA -40% 2015/16, -48% in 2010
HRI	$1,475	$1,251	-15%	Revenue -10% (Contractor -12.5%, Industrial -10%, Infrastructure +12.5%, Other -22%, Service Revenue -8%), decremental margin 50%
HEES	$680	$592	-13%	Revenue -12% (Rental -10%, new equipment -60%, used equipment -20%, Parts 0%, Service Revenue 0%), decremental gross margin 70%
ALSN	$1,095	$757	-31%	Revenue -22% (NA on Hwy -8%, NA off hwy -78%, Defense 0%, Non-NA on hwy -33%, Non-NA off hwy -32%, Service Parts -17%), decremental margin 57.5%
ESAB	$470	$386	-18%	Revenue -15% (Organic -10%, FX -5%, M&A 0%), decremental margin 25%

Source: BofA Global Research, KMT = Kennametal, CAT = Caterpillar, DE = Deere, CNHI = CNH Industrial, PCAR = PACCAR, CMI = Cummins, KMT = Kennametal, TKR = Timken, OSK = Oshkosh, TEX = Terex, URI = United Rentals, VMC = Vulcan Materials, MLM = Marietta, ACM = AECOM, J = Jacobs Solutions, FLR = FLuor, HRI = Herc Rental, HEES = H&E Rental, ALSN = Allison Transmission

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Exhibit 62: Valuation based on hypothetical downside scenarios

Valuation on hypothetical recession scenario ($mn)

		Recession Scenario PE		Implied Scenario		Average Trough
Ticker	Recession	low	high	low	high	Valuation
CAT	$14.50	17	20	$246.50	$290.00	$268.25
DE	$20.25	17	20	$344.25	$405.00	$374.63
AGCO	$7.50	14	16	$105.00	$120.00	$112.50
CNHI	$0.75	14	16	$10.50	$12.00	$11.25
PCAR	$5.75	14	16	$80.50	$92.00	$86.25
CMI	$14.50	14	16	$203.00	$232.00	$217.50
KMT	$1.10	14	16	$15.40	$17.60	$16.50
TKR	$4.50	14	16	$63.00	$72.00	$67.50
OSK	$5.75	14	16	$80.50	$92.00	$86.25
TEX	$3.75	13	15	$48.75	$56.25	$52.50
IPGP	$3.35	20	23	$67.00	$77.05	$72.03

Source: BofA Global Research, KMT = Kennametal, CAT = Caterpillar, DE = Deere, CNHI = CNH Industrial, PCAR = PACCAR, CMI = Cummins, KMT = Kennametal, TKR = Timken, OSK = Oshkosh, TEX = Terex, URI = United Rentals, VMC = Vulcan Materials, MLM = Marietta, ACM = AECOM, J = Jacobs Solutions, FLR = FLuor, HRI = Herc Rental, HEES = H&E Rental, ALSN = Allison Transmission

Exhibit 62: Valuation based on hypothetical downside scenarios
Valuation on hypothetical recession scenario ($mn)

Recession Scenario PE	**Implied Scenario**	**Average Trough**

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Exhibit 63: Valuation based on hypothetical downside scenarios
Valuation on hypothetical recession scenario ($mn)

Companies	Hypothetical Trough EBITDA	Multiple	Enterprise Value	2023E Net Debt	Equity Value	2023E Shares	Implied Scenario Trough Value
URI	$5,975	7	$41,825	11,744	30,081	68.4	$440
VMC	$1,715	18	$30,870	3,530	27,340	132.7	$206
MLM	$1,825	18	$32,850	3,700	29,150	62.1	$470
ACM	$875	13	$11,375	957	10,418	131.3	$79
J	$1,235	13	$16,055	1,950	14,105	127.0	$111
FLR	$420	10	$4,200	(1,042)	5,242	173.0	$30
HRI	$1,251	5.5	$6,881	3614	3,266	28.9	$113
HEES	$592	5	$2,960	1209	1,751	36.3	$48
ALSN	$757	8	$6,056	2012	4,044	90.5	$45
ESAB	$386	12	$4,634	898	3,736	61.1	$61

Source: BofA Global Research, KMT = Kennametal, CAT = Caterpillar, DE = Deere, CNHI = CNH Industrial, PCAR = PACCAR, CMI = Cummins, KMT = Kennametal, TKR = Timken, OSK = Oshkosh, TEX = Terex, URI = United Rentals, VMC = Vulcan Materials, MLM = Marietta, ACM = AECOM, J = Jacobs Solutions, FLR = FLuor, HRI = Herc Rental, HEES = H&E Rental, ALSN = Allison Transmission

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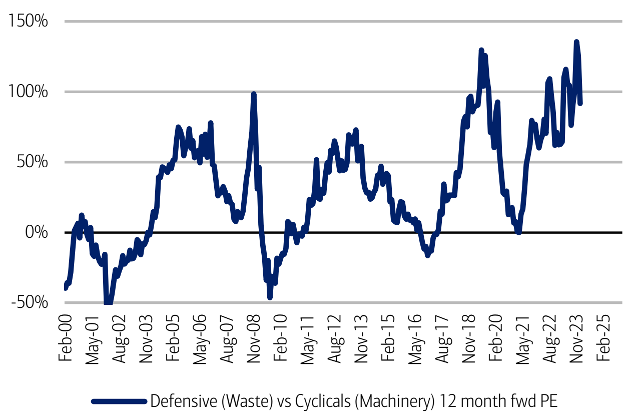
9) Defensive vs cyclical spread is high

Some of the most defensive names in our coverage have been the waste stocks. The defensive names (waste) are trading at a premium (97%) to the cyclical Machinery stocks, above the historical average (35%). That said, this premium can contract and expand through the cycle. In periods of an industrial slowdown, weak China, and downturn in lead indicators, the defensive premium can expand to ~100%. Intuitively, this makes sense as defensive names are more ‘resilient’. That said, as we enter a recession (and most importantly, start to recover), investors start to look forward.

For example, exhibit 45 illustrates the valuation spread overlapped with the Global PMI (inverse in the exhibit below) – as the PMI turns ‘less negative’ and improves, the defensive premium starts to narrow. If the Global PMI turns positive (i.e., above 50 = manufacturing expansion), the premium can narrow significantly. In summary, we believe defensives/waste is a great place for investors to hide during the uncertainty, yet be mindful as indicators bottom and start to improve as it can result in rotations.

Exhibit 64: Defensive (Waste) vs Machinery (Cyclical) valuation PE

Defensive premium has narrowed somewhat yet still elevated levels



Source: DataStream, Bloomberg, Waste (average WM, RSG), cyclicals (average CAT, DE)

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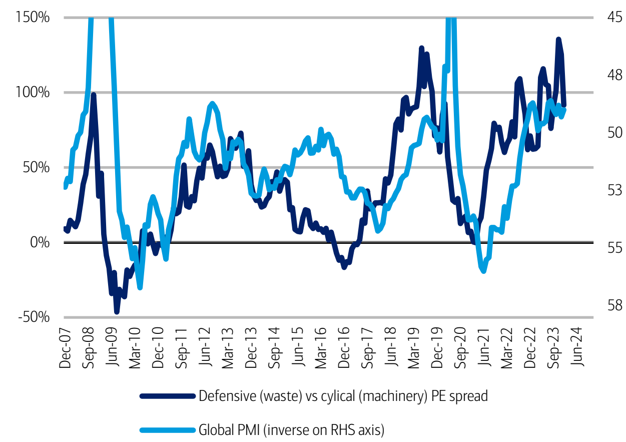
Exhibit 65: Defensive premium vs Global PMI (inverse in chart)

PMI bottoms and recovers (inverse below), defensive premium narrows



Source: DataStream, Bloomberg, Waste (average WM, RSG), cyclicals (average CAT, DE)

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Exhibit 66: Machinery vs Waste performance after valuation spread hits record highs (100-130% premium)

After defensive (waste) vs cyclical (machinery) valuation spread hits record highs, there is massive rotations in performance on a 3/6/9/12 month basis

	CAT				DE			
	3 month	6 month	9 month	12 month	3 month	6 month	9 month	12 month
Nov-08	-23%	-1%	24%	56%	-3%	25%	29%	42%
Aug-09	23%	13%	-5%	18%	16%	10%	-9%	28%
Jul-22	5%	41%	23%	43%	20%	37%	25%	37%
Nov-23								
	WM				**RSG**			
	3 month	6 month	9 month	12 month	3 month	6 month	9 month	12 month
Nov-08	-5%	-10%	-3%	7%	1%	-4%	8%	17%
Aug-09	-5%	4%	-15%	-5%	-2%	9%	-9%	1%
Jul-22	3%	0%	7%	9%	2%	-5%	5%	16%

Source: Bloomberg

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10) Stock watch

Large cap Machinery: sticking with Caterpillar

To be fair, we do not see significant momentum in our large-cap Machinery OEM (original equipment manufacturer) space: used values are rolling over, price increases are moderating, inventories are elevated, backlogs are falling, and capex forecasts are plateauing. That said, we do not want to completely exit Machinery given i) lead indicators are likely to bottom and gradually improve in '24 (BofA Global Wave, PMIs, copper), ii) valuation spread between defensives vs cyclical at extreme levels, iii) China expectations are low/depressed, iii) trough EPS is much higher than prior downcycles, and iv) Fed easing underpins multiple expansion (albeit, this can sometimes come over a year later). Simply put, we advise retaining some Machinery exposure approaching '25.

The two Machinery bellwethers – Caterpillar & Deere – are both trading at ~13.5x 2024 EPS. We lean more positive on Caterpillar (Buy) relative to Deere (Neutral) as we see more upside to 2025 (i.e., ability to grow EPS in 2025) with exposure to mining+energy over farm equipment. We reduce our Caterpillar 2024 EPS forecast to $21.25 ($21.50) on slower growth in Resources (mining trucks) and North America construction. We raise our PO to $319 ($258) based on 15x 2024E EPS of $21.25 (vs 12x prior), as we believe a higher multiple is warranted as BofA economists see an easing cycle and GDP acceleration in the 2H. Our target multiple is broadly in line with historical average.

Waste: positive attributes, yet be mindful of a rotation

Similar to 2023, nuances are likely to come into focus for the waste sector opposed to 'rising tide lifts all boats'. We see some operators reporting free cash flow growth in 2024, while others reporting constrained FCF due to sustainability projects (i.e., green capex). We see some operators with runway for M&A, while others with less white space. Overall, there are positive for waste into 2024: higher price vs cost spread, recycled commodity prices recovering, margins likely to break out to new highs, and no China/Europe exposure. That said, valuations are high and vulnerable to a rotation as Global PMI data bottoms, inflects, and gradually recovers into 2025. We downgraded GFL to Neutral in a separate report out today following the shares rally into year-end.

Republic Services: top pick in the waste space, Buy

We slightly raise our estimates 2024 ($6.00 vs $5.95) on the back of positive price vs cost trends. We maintain our Buy-rating on Republic Services (RSG): the lowest valuation multiple out of the 'Big 3' (WM, RSG, WCN), highest FCF growth in 2024, less vulnerable to a RINs regulatory headlines, and a 'rate of change' story (management team striking the right balance of volumes, positive price, profitability vs prior leadership). We raise our PO to $182 ($172) based on 14x 2024E EV/EBITDA as we believe a higher multiple is warranted given the FCF visibility (vs 13.5x prior).

Waste Connections: signs WCN can get its mojo back, Buy

We maintain our Buy-rating as we see believe the return of Ron Mittlestaedt as CEO can keep WCN on strong footing, landfill ETLF (elevated temperature landfills) is contained, and 'best-in-class' status remains intact (margins, M&A runway not reliant on low rates, sticking to core portfolio).   We slightly raise our estimates 2024 (EBITDA $2.81bn vs prior $2.755bn). We raise our PO to $165 ($155) based on 17x 2024E EV/EBITDA (vs 16.5x), bringing our valuation range in line with its 5 year average (~17x). Maintain Buy.

Waste Management (Neutral): positive margin story, looking for more visibility

We raise our 2024 estimates (EBITDA $6.37bn vs $6.29bn prior) on the back of positive price vs cost trends. The good news – we see visibility for WM margin to break out to the upside in 2024 (29.3%) and likely 2025 (29.8%) following the tight range over the last seven years (28.3-28.7%). That said, the FCF visibility is limited. In 2023, WM pushed out growth capex on project timing, creating an element of volatility around FCF profile. WE believe these projects are accretive longer-term, yet the sustainability strategy leaves WM vulnerable to headlines around RINs. We raise our PO to $185 ($174) based on 14x 2024E EV/EBITDA (vs 13.5x prior), bringing valuation multiple in line with national peer Republic Services. Reiterate Neutral on balanced risk/reward.

Casella Waste (Underperform): positive long-term, yet valuation limited,

We are updating estimates (EBITDA $355mn vs prior $300mn) to reflect Q3 results (Nov 1st) and the completion of several acquisitions in the third quarter. We lower our PO to $86 ($89) based on 16x 2024E EV/EBITDA (VS 19x 2023 EV/EBITDA), as we move one year forward and apply a multiple in line with its 7 year average. To be clear, Casella is a high-quality operator with a positive outlook driven by pricing power, M&A runway, stability of solid waste, restructured recycling program, and an attractive landfill footprint across the Northeast. That said, we struggle to see significant upside to valuation multiple that is approaching 'best-in-class' operator Waste Connections that can fund M&A runway via inherent free cash flow profile While we do not see absolute downside to CWST shares at these levels, we struggle to see significant upside relative to our Waste coverage and maintain a relative Underperform rating.

Caution short cycle coverage on tough start to 2024

IPG Photonics: reducing estimates, reiterate Underperform

We reduce 2024 EPS estimate 9% on a weaker start to the year than previously expect: Manufacturing PMIs remain below 50 across all key regions (China, US, Europe), slower global EV adoption rates could push out the battery build out theme (~20% of IPGP sales), and high inventories could weigh on fixed cost absorption if growth does not materialize. We now forecast 2024 EPS of $4.60, a decline on a YoY basis, vs consensus expecting growth ($5.05), due to a more challenging start to the year. We raise our PO to $91 ($86) on 10x 2024E EV/EBITDA, as we believe a higher multiple is warranted (vs 8.5x prior) as we expect growth to gradually recover in the 2H (and 2025), further China downside is likely limited, and balance sheet remains strong. We reiterate Underperform.

Timken: reducing estimates, reiterate Underperform

We reduce 2024 EPS estimates by 3% to $6.75, assuming a slight decline on a YoY basis (2023e: $6.85). Our lower estimates are a function of still soft industrial trends, de-stocking headwinds bleeding into early 2024, and a weak China wind market. We believe the normal sequential ramp from Q4 to Q1 is likely to be weighed down by these factors. Our 2024 EPS estimate sits below consensus ($6.85). We raise our PO to $71 ($67) based on 7x 2024E EV/EBITDA, as a slightly higher multiple is warranted as the tightening cycle is largely complete (vs 6.5x). On a PE basis, our $71 PO implies 10.5x PE, near the bottom end of the historical range (8-18x) as there are still headwinds to the cycle that are holding back earnings growth. Reiterate Underperform.

Farm equipment: remain selective given worrying trends

AGCO: strong execution yet farm equipment fundamentals keep us Neutral

We reduced our 2024 EPS estimates 4% to $13.25 as we expect a down year of earnings given worrying farm equipment fundamentals (lower farmer income, higher used equipment inventories, new equipment moderating). To be fair, this is somewhat known (consensus $13.25) following Deere guiding its FY24 net income down 21% at the midpoint (November 23rd). We slightly raise our PO to $132 ($131) based on 10x 2024E EPS (vs 9.5x prior) as we believe a slightly higher multiple is warranted given AGCO's strong execution around margin in recent quarters. We reiterate our Neutral rating on balanced risk/reward.

CNH Industrial: only Buy-rating in farm equipment due to levers beyond ag cycle

We reduce our 2024 EPS estimates to $1.35 ($1.50) following Deere's FY24 guidance of a pullback in equipment demand (November 23rd). We expect CNH to guide both farm equipment and construction equipment down in 2024, similar to Deere. While we are not positive on farm equipment fundamentals, there is deep value in CNH – maintain Buy-rating. We see some levers to the CNH story: executing a $550mn cost savings program (30% realized '23, bulk in '24 with sourcing), sizeable restructuring (5% reduction in headcount costs + 5-10% of SG&A), single listed trading in the US (no longer dual-listed in Milan), already took some 'pain' on inventory de-stocking in 2023 to provide some cover in 2024. We raise our PO to $13.50 ($12) based on 10x 2024E EPS (vs 8x prior) to bring our valuation multiple in line with peer, AGCO (10x).

Rental: be selective with operators vs suppliers

United Rentals (Buy): we focus on the bigger picture – top Machinery pick

We continue to like Buy-rated United Rentals (URI). Last year (2023), URI delivered top line growth of 22%, EBITDA growth of 21.5%, and positive FCF of $2.4bn, in a backdrop of rising rates, contraction in manufacturing economy (ISM below 50), integrating a large acquisition (Ahern) and declining fleet productivity. Simply put, URI was not exactly 'firing on all cylinders' in 2023. We believe some of these metrics likely improve in 2024 – lapping Ahern, utilization rates normalize, fleet rotation returns to a normal cadence. There is no question that growth is slowing yet we believe a bigger picture story is emerging – higher barrier to entry, ability to grow in an uneven backdrop, capital deployment flexibility, and capturing higher growth in new verticals each cycle.

Valuation is higher than prior mid cycle levels yet we believe this is justified. URI balance sheet is underlevered (1.6x vs 2-3x target range) and the company is generating consistently higher FCF. For example, 2023 is set to be a near record FCF year of $2.4bn, right behind the record FCF year in 2020 ($2.45bn) - highlighting the ability to generate strong FCF in the best of times (2023) and recession (2020). In our waste coverage, the valuation re-rated as the market appreciated the higher level of baseline FCF generated by the operations. In our view, a similar dynamic can be observed with URI and we believe a rising dividend and share repurchases are the best way to underpin that argument. We raise our 2024 EBITDA estimate ($7.15bn vs $7.02bn prior) on the back of stronger growth. We raise our PO to $650 ($490) based on 7.5x 2024E EV/EBITDA (vs 6x prior), as we believe a higher multiple is warranted given impressive free cash flow characteristics. While this is near the high end of the historical range (4-8x EBITDA, EV fleet nearing 2.4x), we believe a re-rating vs prior cycles is credible.

Aerial equipment suppliers: some caution on legs to aerial cycle

Terex (Genie brands) and Oshkosh (JLG brands) are two of the largest manufacturers of access equipment, including telehandlers, boom and scissor lifts. Over 90% of sales goes through the gen rent channel and customers. The set up in the near term remains steady – construction spending is positive, rental capex is elevated, and EPS estimates for 2024 are not overly aggressive. That said, Aerial used values are negative on a YoY basis, rental fleet age is back to pre-covid levels, capacity is rising across the industry (i.e, more supply coming on stream) and rental operators can exert flexibility on purchasing plans if any signs of a demand slowdown occur, leaving suppliers in a tight spot.

We raise Oshkosh 2024 EPS to $10.25 ($9.35) to incorporate the strong Q3 results (October 26th) and AeroTech acquisition. Our forecast is in line with consensus (source: Bloomberg). We raise our PO to $102.5 ($89) based on 10x 2024E EPS (vs prior 9.5x) as we believe a higher multiple is warranted as vocational backlog is repriced and execution is improving. Our Underperform rating is based on concerns around the trajectory in the 2H24 and into 2025 – Aerial cycle is approaching its 'last legs' following a multi-year upturn and the failed re-compete of the JLTV defense contract could be a headwind.

Aggregates: quality beneficiaries of infrastructure

We slightly raise our Vulcan Materials (VMC) 2024 estimates on more positive price vs cost trends. While volumes are likely to be sluggish in 2024 (headwinds warehouses vs tailwinds infrastructure, manufacturing), we see a favorable price vs cost spread. Highway contract awards are up nearly 20% in 2023 providing confidence that public infrastructure is a 'growth market' in 2024 and likely up mid single digit in 2025 as well. Public construction is one of the biggest exposures for VMC: 25-30% of shipments to highways, another 10-15% to other non-highway infrastructure (water, sewer, airports). Additionally, a rate easing cycle could provide support for residential shipments down the road. We maintain our Buy-rating. We raise our PO to $260 ($225) based on 17x 2024E EV/EBITDA (vs 15x prior) given the higher visibility to growth and in line with the midpoint of the historical range.

We slightly raise our Martin Marietta (MLM) 2024 estimates on more positive price vs cost trends. We are encouraged by MLM's recent portfolio actions: divesting certain West Coast Cement operations (August 24th), divesting South Texas Cement and related Concrete operations to CRH (November 21st), acquiring core aggregates assets in Colorado (January 16th). MLM is increasingly its exposure to more higher quality areas of the materials space and lowering its cyclicality (ready mix concrete, cement). We believe this is a clear long-term positive. What keeps us on the sidelines with a Neutral rating is the fact that we see a limited upside to its preliminary 2024 outlook (volumes flat vs VMC 'flat to modestly down', pricing up 'low double digits' vs VMC 'high single digit to low double digit'). We raise our PO to $550 ($490) based on 16.5x 2024E EV/EBITDA (vs 15x prior) as we believe a higher multiple is warranted given the portfolio actions to raise exposure to higher quality areas (aggregates vs ready mix, cement).

Price objective basis & risk

AGCO Corp (AGCO)
AGCO: Our PO of $132 is based on 10x 2024E EPS, near the low end of the historical range (8-17x) given caution around farm equipment demand, high exposure to Europe, and rising inventories. We do not believe the very low end of the range is appropriate given the improved profitability per unit and margin expansion through cycle.

Downside risks to our price objective are 1) grain prices rollover due to a bumper crop this Spring or renewed trade tension with China, 2) improved margins in the Americas prove unsustainable, 3) large cutback in European farm subsidies, 4) sudden strengthening of the USD, 5) short term earnings disappointment.

Upside risks are 1) substantially improved profitability in the Americas, 2) grain prices continue to rise further, 3) sustainable growth returns to the EMEA farm equipment market at a faster and more robust clip that we currently assume, 4) higher than expected precision ag growth, 5) bigger cash return to shareholders.

Casella (CWST)
Our 12-month price objective on Casella Waste is $86 per share. This is based on 16x 2024 EV/EBITDA, in-line with its seven year average (7-25x). Our target multiple is a premium to our valuation framework in the waste sector given Casella's growth prospects are higher than the industry. We note CWST has lower liquidity and does not pay a dividend. On our $86 PO, CWST would trade on a 2.5% FCF yield (below sector average 2.7%) although we expect the company to deliver over double digit FCF growth rate over the next few years.

Upside risks:
i) Stronger than expected price gains across collection and disposal business lines.
ii) Higher than expected M&A activity.
iii) Expanding EBITDA margin and FCF conversion above expectations.

Downside risks:
i) Elevated costs and capex required to sustain growth.
ii) Labor, inflationary costs impact solid waste margin more than anticipated.
iii) Competitive pricing dynamics emerge in the Northeast disposal market.

Caterpillar Inc (CAT)
Our $319 PO on CAT is on based on 15x 2024e EPS which is in-line with the long term historical range of 15-16x. While we see some headwinds that are likely to slow growth (higher inventories, capex plateauing, pricing moderating, backlog softening), there are unique macro and business cycle factors that are underpinning stronger cycle over cycle earnings: infrastructure, construction spending mix shifts towards heavy vs light, higher miner free cash flow generation, aging fleets, and data centers.

Downside risks to our PO: 1) widening global coronavirus pandemic that tilts global economy into recession, 2) a greater-than-expected reduction or delay in capital spending among large mining, and oil and gas customers, 3) intensifying pricing pressure in the construction and mining equipment industries, 4) greater than expected dealer destocking, 5) ongoing deterioration in dealer sales growth.

Upside risks: 1) a faster recovery in the global economy, 2) firming earthmoving construction equipment market, 3) stronger-than-expected fleet replacement, 4) continuing recovery in commodity prices, 5) stronger-than-expected demand trends in gas compression, 6) quicker-than-expected resolution to the pandemic.

CNH Industrial NV (CNHI)

Our 12-month price objective for CNH Industrial is $13.50. Our PO is based on 10x 2024E EPS and near the lower end of the historical range (7-15x) given caution around farm equipment demand, high exposure to Europe, and rising inventories. We do not believe the very low end of the range is appropriate given significant cost savings, restructuring programs, and management initiatives to improve the company's overall profitability longer-term.

Upside risks to our PO could come from higher than expected earnings resulting from a stronger than expected grain market, further rerating than anticipated as CNH proves out its precision ag strategy and shares new financial targets, upside to Raven synergies, and accretive acquisitions.

Downside risks to our PO are a sudden reversal of soft commodity price momentum, a triggering of a renewed global downturn in farm equipment demand, supply chain disruption, and/or renewed concerns of global recession.

Cummins Inc (CMI)

Our 12-month price objective of $225 is based on 12.5x 2024E EPS, which is near the middle of the historical range (8-19x) and in line with other truck-related Machinery peers. We do not believe the high end of the range is appropriate given economic uncertainty, likely downturn in the truck market, and funding needs for the New Power segment. That said, we do not believe the low end of the range is appropriate given tailwinds around data centers, infrastructure, power generation, and market share gain opportunities. Historically, Cummins has traded at a low to mid-teens PE through the cycle.

Downside risks to our PO include a hard landing for the China or North American heavy duty truck market, faster than expected BEV penetration without a commensurate number of offsetting wins from Cummins, failure of the hydrogen story to ever truly materialize.

Upside risks are a sustained recovery in the NA heavy duty truck cycle, positive developments in the Cummins hydrogen story, stronger-than-expected resilience in China truck, rising government incentives for renewables driving impetus for new emission regulation and/or a large, accretive acquisition.

Deere & Co (DE)

Our $399 PO is based on 14x our FY24 EPS forecast. Our target 14x PE multiple is slightly below the long term average range of 15-17x given the rising rate environment, lower ag commodity prices, and macro concerns that farm equipment units could enter a downturn. We do not believe a lower multiple is appropriate relative to its historical range given Deere is generating higher profits per unit vs prior cycles.

Risks to our PO: 1) slowdown in the farm economy due to better expected yields later this year, 2) disappointment in construction equipment, 3) peak in the used equipment market, 4) extended improvement in commodity prices reverses, 5) ongoing supply chain disruption leads to earnings misses.

GFL Environmental Inc (GFL / YGFL)
Our 12-month price objective of C$46 (USD $35) is based on a target 2024E EV/EBITDA multiple of 11.5x, a discount to the public national waste operators due to higher leverage & more back end weighted FCF. We believe EV/EBITDA is the most comparable metric due to high debt levels. We rely on comparable company analysis with a group of publicly traded nonhazardous waste operators, all of which are larger and more liquid than GFL. While GFL's growth profile is significantly higher than the national players, the higher leverage ratio and M&A integration are risks.

Upside risks: 1) driving stronger top line growth than the national players over the next 2-3 years, 2) expanding EBITDA margins (ie, driving profitable growth), 3) organically de-leveraging its balance sheet over the cycle via free cash flow generation, 4) higher than expected synergies from acquisitions.

Downside risks: 1) More cyclical waste stream tied to construction, Industrial activity, new project development impact earnings more than expected, 2) struggle to generate free cash flow, limiting ability to de-lever balance sheet organically, 3) struggle to price the business above rising costs, 4) challenges with integrating acquisitions.

IPG Photonics (IPGP)
We value IPGP at $91 per share, based on 2024E EV/EBITDA of 10x, near the low end of the historical range (7-25x). In our view, the uncertainty around China, rising rate environment, shift in production footprint and escalating geopolitical risks are likely to constrain the multiple near-term. That said, we do not view the very low end of the range as appropriate given the long-term secular shift in on-shoring manufacturing processes and multi-year investments to build out EV battery manufacturing provide some valuation support.

Upside risks: 1) US-China trade tensions dissipate, 2) Stronger top-line growth over the next 2-3 years driven by higher conversion to laser technologies, 3) Better than expected execution on operating leverage, and 4) Quicker than expected adoption of fiber laser technology outside of industrial markets.

Downside risks: 1) Greenfield projects and capital investments continue to be pushed out to the right, 2) A bigger than expected downturn in automotive capex, 3) Intense pricing pressure from smaller competitors, and 4) Customers develop internal fiber laser technology quicker than expected.

Martin Marietta Materials (MLM)
Our $550/share PO uses 16.5x 2024E EV/EBITDA, at the higher end of the historical range (10-17x). Several factors underpin MLM's valuation: i) infrastructure stimulus provides funding visibility over the next few years, ii) BofA Strategists prefer high quality firms with strong cash flow characteristics and inflation protection, and iii) minimal exposure to the more uncertain themes facing Industrials and Materials (China, supply chains, capacity constraints). That said, we see some risks i) integrating a large transaction in a new territory (i.e, out West), ii) cement exposure: more cyclical operations and now exposure extends out West (cement peers trade at lower valuation ranges) and iii) rates: a faster than expected tightening cycle could weigh on housing and constrain high valuation multiples.

Downside risks are: 1) aggregates prices and volumes fail to rise or fall as we forecast, 2) demand for residential and non-residential construction stalls with rising rates, 3) integration challenges with Lehigh Hanson acquisition, 4) price-cost challenges with rising input costs 5) weather or transportation-related operating disruptions.

Upside risks are: 1) aggregates prices and volumes above forecasts, 2) better demand for residential and non-residential construction than we expect, 3) Infrastructure bill drives higher multiplier effect than previously expected, 4) energy and equipment costs falling, and 5) greater return of cash to shareholders.

Oshkosh Corp. (OSK)

Our PO of $102.50 is based on 10x 2024E EPS. The historical multiple ranges from 7x to 20x with the 10-year average near 15-16x. We believe the low to mid-range is appropriate given higher rates, loss of JLTV recompete contract, and profitability below prior cycles in certain business segments. We do not believe the very low end of the valuation range is appropriate given infrastructure spending, USPS deal, and vocational backlog re-pricing in recent quarters.

Upside risks are 1) stronger-than-expected Defense wins over the next 1-2 years including international sales, 2) stronger than expected resurgence in non-residential construction activity, 3) a material pick-up in capex spending by independent rental companies, 4) upside to our margin assumptions for the USPS next generation vehicle contract that OSK was awarded, 5) higher than expected synergy opportunities with AeroTech.

Downside risks to our PO are 1) challenging price-cost in an inflationary environment, 2) acute supply chain constraints, 3) slowdown in construction spending- 4) lower-than-expected margins for recent Defense contract wins, and 5) execution issues as USPS ramps in coming years.

PACCAR Inc (PCAR)

Our $97 price objective is based on 12.5x 2024E EPS. Our 2024E EPS estimate assumes a peak class 8 SAAR of 335k in 2023 and a return to more replacement demand levels by 2024. PACCAR valuation range is typically 10-20x earnings over the cycle, with the lower end of the range (10x) typically applied to peak. We think the higher multiple is warranted in 2024 as we are one year removed from peak and closer to mid-cycle. We do not believe the higher end of the valuation range is appropriate given depressed spot freight rates and concerns on the cycle.

Upside risks to our price objective are 1) faster than expected recovery in used truck pricing, 2) better than expected incremental margins, 3) sector M&A, 4) more robust scenario in Europe than we are forecasting.

Downside risks to our price objective are: 1) Continued COVID-19 driven demand declines including the potential for another wave, 2) steeper than expected decline in Class 8 orders, 3) European truck registrations decelerate at a faster than expected pace, 4) renewed pressure in used truck prices.

Republic Services (RSG)

Our $182 price objective is based on 14x EV/EBITDA for 2024E, near the high end of its historical valuation range and consistent with peer Waste Management. We believe the high end of the range is appropriate as earnings are likely to continue to recover in 2024, waste offers higher visibility than other sectors, pricing backdrop continues to improve, and FCF is likely to remain positive. Relative to history, higher multiple stems from an improving pricing discipline for the waste industry, sustainability initiatives and overall stability in an uncertain, global industrial backdrop, in our view.

Upside risks to our PO are: 1) stronger-than-expected housing data, 2) higher-than expected pricing trends, and 3) more aggressive cash return to shareholders than we currently envision. Downside risks to our PO are: 1) lower-than-expected CPI, 2) environmental liabilities. 3) Mix impact from higher waste generation at the home. 4) continued COVID-19 concerns.

Terex Corp. (TEX)

Our PO of $57 is based on 8x 2024e EPS, near the low end of the historical range (6-18x), as we are likely nearing a peak on Access equipment. In prior cycles, we typically see a low multiple ascribed to Terex's peak earnings - which we believe could be playing out in 2024. While the company is executing well and possesses a strong balance sheet, we believe some cyclical tailwinds (tight supply/demand, fleet replacement needs, pricing) are starting to fade.

Upside risks are 1) stronger and longer than expected recovery in Aerial Work Platforms underpinned by secular and cyclical drivers in construction, 2) better than expected growth opportunities in Material Processing, 3) higher reset of margin targets in the future, 4) bigger than expected capital redeployment.

Downside risks are 1) supply chain disruptions and manufacturing inefficiencies with production transitions, 2) rates are higher for longer and weigh on construction activity, 3) inability to price for higher inputs, 4) higher capacity in certain markets overwhelm the pricing environment.

Timken Company (TKR)

Our $71/share PO is based on 7x 2024E EV/EBITDA, which is near the low to middle end of the historical range (5-12x). We do not view the very low end of the range as appropriate given Timken is demonstrating cycle to cycle margin improvement with an improved business mix over the last decade and growing exposure to higher multiple end markets. That said, we do not view the high end of the range as appropriate given higher rates, slowing growth across the industrial backdrop, and a weaker backdrop for the China wind market

Upside risks to our PO: 1) a faster and stronger than expected recovery in the global economy, 2) China stimulus tailwind stronger than expected, 3) better than expected price vs cost performance 4) shaper drive towards renewables driven by government policy.

Downside risks to our PO: 1) integration issues on recent acquisitions, 2) deterioration in the pricing environment, 3) weaker than expected growth in renewables, 4) prolonged auto strikes weigh on production.

United Rentals Inc (URI)

Our PO of $650 is based on 7.5x 2024E EV/EBITDA multiple, at the high end of the historical range (4-8x). We believe a higher multiple is warranted given impressive free cash flow characteristics. While higher rates and macro economic concerns are headwinds, URI has managed downturns extremely well and the balance sheet leverage is the lowest in a decade (1.6x vs 2-3x range).
Upside risks to our price objective are better-than-expected rental pricing, stronger-than-expected FCF, a better-than-expected resurgence in non-residential construction, and overall cost cutting effort. Downside risks to our price objective are a more hawkish Federal Reserve Board trying to keep a lid on inflation, increased volatility in the high yield credit markets, renewed weakness in energy markets, or a slower than expected recovery in rental rates in the event that the rental sector accumulates too much fleet in the next 12-18 months.

Vulcan Materials (VMC)

Our $260/share price objective is based on 17x 2024E EV/EBITDA, which is near the middle of the historical average (12-21x). Vulcan Materials is exposed to construction markets that are vulnerable to an economic slowdown and higher rates. In our view, there several factors are likely to underpin Vulcan's multiple from trading at the very bottom of its range: i) Infrastructure stimulus provides funding visibility over the next few years even as the economic recovery matures, ii) BofA Strategists prefer high quality firms with strong cash flow characteristics and inflation protection, and iii) minimal exposure to the more uncertain themes facing Industrials (China, supply chains, capacity constraints). Additionally, VMC is a much more profitable and cash generative company in the past on a unit shipment basis.

Downside risks are: 1) aggregates prices and volumes fail to rise as we forecast, 2) bottlenecks (labor, supply chain, COVID) push out the volume recovery, 3) dislocation in rates slow down housing and non-residential construction recovery, 4) price-cost dynamics struggle to improve, limiting operating leverage, 5) Mexico quarry issues unresolved.

Waste Connections Inc (WCN)
Our $165 price objective values WCN on 17x 2024e EV/EBITDA, in line with the average of the valuation range the last 7 years (12-21x). Our PO implies 33x Price to FCF in 2024e, at the higher end of the historical range (20-32x), justified by Connection's sector leading profitability and FCF conversion, in our view. Our PO implies nearly a 0.8% dividend yield, in line with its current valuation over the last 12 months. Relative to history, our higher valuation stems from an improving pricing backdrop for the waste industry, more active M&A environment, and ability to improve margins and FCF generation (double digit growth) through the cycle.

Upside risks to our PO are: 1) stronger-than-expected housing data, 2) higher-than expected CPI trends, 3) more aggressive cash return to shareholders than we currently envision, and 4) stronger-than-expected recovery in Exploration and Production (oil and gas) activity.

Downside risks to our PO are: 1) lower-than-expected CPI, 2) environmental liabilities, 3) higher than expected inflationary costs, and 4) execution risk around acquisitions.

Waste Management (WM)
Our $185 price objective is based on 14x EV/EBITDA for 2024E, at the high end of the company's historical range (8-14x) and in-line with peer Republic Services. We believe the high end of the range is appropriate given margins are expected to break out to the upside this year and likely next year (following the tight range over the last seven years), waste offers more visibility than other sectors, and better price vs cost discipline. That said, FCF visibility is limited as WM pushed out growth capex on project timing, creating an element of volatility around FCF profile.

Upside risks to our PO are 1) higher-than-expected contribution from renewable natural gas, 2) faster-than-expected volume and price recovery, 3) more aggressive cash return to shareholders than we currently envision. Downside risks to our PO are 1) Higher than expected labor costs, 2) execution issues on growth capex initiatives, 3) lower than expected pricing in the open market.

Analyst Certification

I, Michael Feniger, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.

US - Machinery Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
	AECOM	ACM	ACM US	Michael Feniger
	Blue Bird Corp	BLBD	BLBD US	Sherif El-Sabbahy
	Caterpillar Inc	CAT	CAT US	Michael Feniger
	CNH Industrial NV	CNHI	CNHI US	Michael Feniger
	Construction Partners Inc.	ROAD	ROAD US	Michael Feniger
	ESAB Corp	ESAB	ESAB US	Sherif El-Sabbahy
	Finning International Inc.	YFTT	FTT CN	Sherif El-Sabbahy
	H&E Equipment Services Inc	HEES	HEES US	Sherif El-Sabbahy
	Knife River Corp	KNF	KNF US	Sherif El-Sabbahy
	Republic Services	RSG	RSG US	Michael Feniger
	Techtronic Industries Co Ltd	TTNDF	669 HK	Michael Feniger
	Techtronic Industries Co Ltd	TTNDY	TTNDY US	Michael Feniger
	United Rentals Inc	URI	URI US	Michael Feniger
	Vulcan Materials	VMC	VMC US	Michael Feniger
	Waste Connections Inc	WCN	WCN US	Michael Feniger
	WillScot Mobile Mini	WSC	WSC US	Sherif El-Sabbahy
NEUTRAL				
	AGCO Corp	AGCO	AGCO US	Michael Feniger
	Deere & Co	DE	DE US	Michael Feniger
	Fluor	FLR	FLR US	Michael Feniger
	GFL Environmental Inc	GFL	GFL US	Michael Feniger
	GFL Environmental Inc	YGFL	GFL CN	Michael Feniger
	Jacobs Eng.	J	J US	Michael Feniger
	Kennametal Inc.	KMT	KMT US	Michael Feniger
	Martin Marietta Materials	MLM	MLM US	Michael Feniger
	NV5 Global Inc.	NVEE	NVEE US	Michael Feniger
	PACCAR Inc	PCAR	PCAR US	Michael Feniger
	RB Global, Inc	RBA	RBA US	Michael Feniger
	Waste Management	WM	WM US	Michael Feniger
UNDERPERFORM				
	Allison Transmission Holdings Inc.	ALSN	ALSN US	Sherif El-Sabbahy
	Casella	CWST	CWST US	Michael Feniger
	Cummins Inc	CMI	CMI US	Michael Feniger
	Herc Holdings Inc	HRI	HRI US	Sherif El-Sabbahy
	IPG Photonics	IPGP	IPGP US	Michael Feniger
	Oshkosh Corp.	OSK	OSK US	Michael Feniger
	Terex Corp.	TEX	TEX US	Michael Feniger
	Timken Company	TKR	TKR US	Michael Feniger

Disclosures

Important Disclosures

Equity Investment Rating Distribution: Autos Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships [R1]	Count	Percent
Buy	67	55.83%	Buy	39	58.21%
Hold	30	25.00%	Hold	15	50.00%
Sell	23	19.17%	Sell	12	52.17%

Equity Investment Rating Distribution: Engineering & Construction Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships [R1]	Count	Percent
Buy	9	42.86%	Buy	5	55.56%
Hold	7	33.33%	Hold	3	42.86%
Sell	5	23.81%	Sell	3	60.00%

Equity Investment Rating Distribution: Machinery/Diversified Manufacturing Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships [R1]	Count	Percent
Buy	27	42.19%	Buy	8	29.63%
Hold	17	26.56%	Hold	8	47.06%
Sell	20	31.25%	Sell	8	40.00%

Equity Investment Rating Distribution: Global Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships [R1]	Count	Percent
Buy	1895	53.62%	Buy	1083	57.15%
Hold	832	23.54%	Hold	454	54.57%
Sell	807	22.84%	Sell	383	47.46%

[R1] Issuers that were investment banking clients of BofA Securities or one of its affiliates within the past 12 months. For purposes of this Investment Rating Distribution, the coverage universe includes only stocks. A stock rated Neutral is included as a Hold, and a stock rated Underperform is included as a Sell.

FUNDAMENTAL EQUITY OPINION KEY: Opinions include a Volatility Risk Rating, an Investment Rating and an Income Rating. VOLATILITY RISK RATINGS, indicators of potential price fluctuation, are: A - Low, B - Medium and C - High. INVESTMENT RATINGS reflect the analyst's assessment of both a stock's absolute total return potential as well as its attractiveness for investment relative to other stocks within its Coverage Cluster (defined below). Our investment ratings are: 1 - Buy stocks are expected to have a total return of at least 10% and are the most attractive stocks in the coverage cluster; 2 - Neutral stocks are expected to remain flat or increase in value and are less attractive than Buy rated stocks and 3 - Underperform stocks are the least attractive stocks in a coverage cluster. An investment rating of 6 (No Rating) indicates that a stock is no longer trading on the basis of fundamentals. Analysts assign investment ratings considering, among other things, the 0-12 month total return expectation for a stock and the firm's guidelines for ratings dispersions (shown in the table below). The current price objective for a stock should be referenced to better understand the total return expectation at any given time. The price objective reflects the analyst's view of the potential price appreciation (depreciation).

Investment rating	Total return expectation (within 12-month period of date of initial rating)	Ratings dispersion guidelines for coverage cluster[R2]
Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

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