TRIVARIATE RESEARCH

INDUSTRIALS WILL UNDERPERFORM

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SUMMARY AND CONCLUSIONS

We are negative on the industrials sector relative to the market and would initiate new shorts, or sell down large long positions now

1. **Macro softening**: Our proprietary gauge of macro indicators of industrial activity shows a softening of late after a huge recovery since March of 2020. In particular, C&I loans, manufacturing capacity utilization, durable goods orders, industrial production, PMI, and North American carloads have all rolled over.
2. **Not a good place to allocate resources**: While dedicated industrials analysts may think there are a litany of reasons to buy an individual stock in this sector, our work shows that most analyst signals are picking the same winners and losers today. While everyone knows industrials are a more "macro" sector, the constitution of the industrials sector has changed, with over 60% of the current market capitalization in the middle tercile on style, i.e. in our "neither" bucket (meaning not growth nor value). The most idiosyncratic industrials stocks are small cap, so industrials investing is largely "macro / neither ". With the macro rolling over, and stock-picking tough, this is not a great fishing hole for portfolio managers
3. **Earnings expectations are high**: Despite the softening of macro data, bottom-up analyst earnings estimates for the GICS industrial sector appear to embed sustained economic strength, with above 20% YoY earnings growth forecasted each quarter through 2022, among the highest expectations for any of the large sectors. These expectations seem excessively optimistic to us, as gross margins have already fully recovered to pre-COVID levels and net margins are nearing previous cycle peaks. Further margin expansion from here likely requires an accelerating, not decelerating macro backdrop

SUMMARY AND CONCLUSIONS

4. **Inventory not lean**: While there have been ample supply-chain shortages and logistics problems for many manufacturers, our judgment is that inventory levels for the industrials companies themselves are average. Aggregation of the data can be tricky as a huge amount of the inventory dollars are the long-tailed aerospace and defense sub-group. Machinery inventory days are above pre-COVID levels. Hence, we don't see an inventory refresh as a likely bull case to drive the margin expansion factored into the consensus outlook

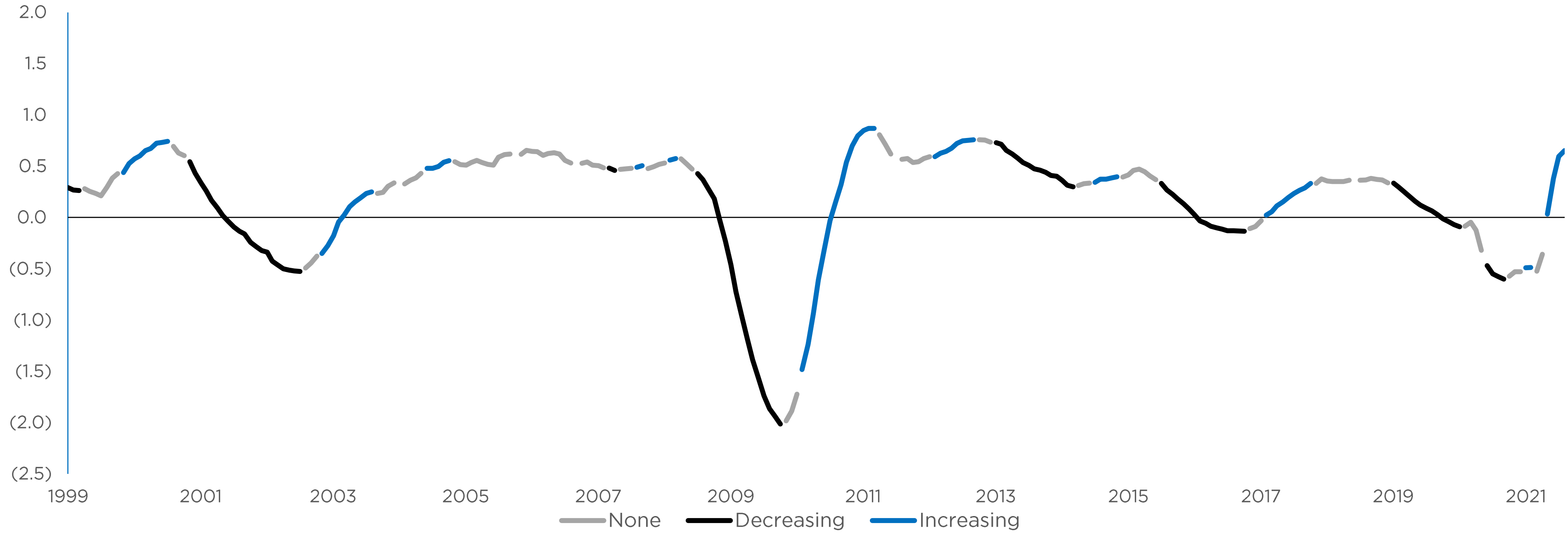
5. **Group is expensive**: Valuations have become elevated, so unlike materials and energy which are cheap on peak earnings, many / most of the industrials' industries are in the 95th percentile or higher vs. their own history on EV-to-EBITDA. This would be reasonable to us if balance sheets had materially improved (they have not as companies on average have more leverage this cycle than last) or if there was outsized M&A driving up multiples (this also is not the case). Industrials conglomerates and machinery are among the industries that are particularly expensive

6. **Use margin expectations to find short ideas:** Therefore, it appears that the key to investing today will be further margin expansion. Our judgment is to short stocks where incremental margin expectations are high. Industrial activity is decelerating, valuations are high, profits have recovered, and expectations appear aggressive.   We offer short ideas where profits have already recovered and incremental margin expectations are high, or where incremental margin expectations are high vs. historical achievement and our quantitative model also disfavors the stocks (Slide 13). **We are negative on the industrials sector relative to the market and would initiate new shorts, or sell down large long positions now**

OUR INDUSTRIAL ACTIVITY GAUGE APPEARS TO BE PEAKING

Or industrial activity gauge, which is a broad-based combination of several metrics like C&I loans, Baker Hughes rig count, private nonresidential construction, capacity utilization, new orders of durable goods, PMI, industrial production, and several others show that industrial activity rebounded sharply off the lows of March 2020. However, several signals have begun to roll-over, causing the overall gauge to begin to flatten starting in May of 2021, at about the same level as the gauge did in 2010 / 2011

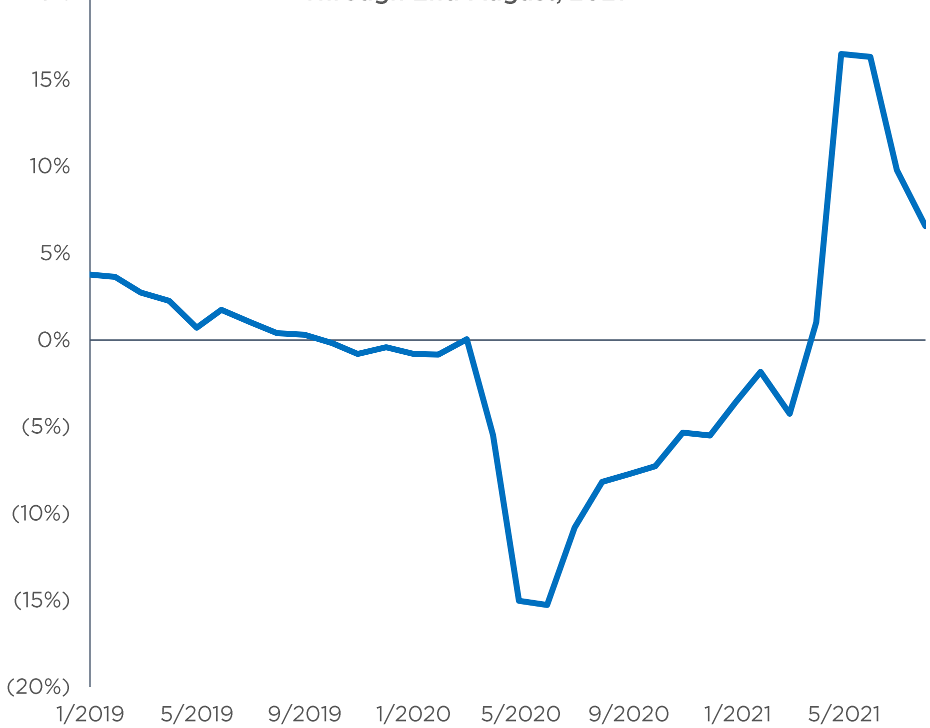
Trivatiate's Industrial Activity Signal
Through End-August



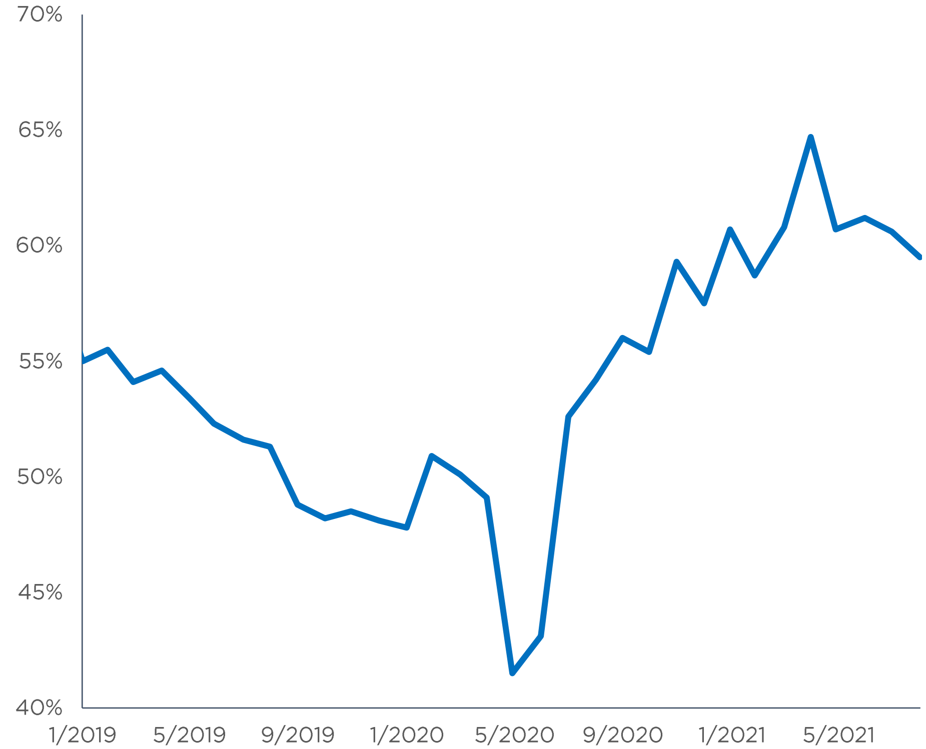
INDUSTRIAL PRODUCTION AND PMI IN PARTICULAR HAVE SOFTENED

Among the inputs we track, industrial production (left chart) appears to be more sharply rolling over, although ISM purchasing managers index has also decelerated (right chart). While both remain high in absolute terms, indicating we are far from a recession, the decline from the peak in May of 2021 is a driver of our judgment that corporate fundamentals likely will not achieve forecasted heights

US Industrial Production
YoY Percent Change
Through End-August, 2021

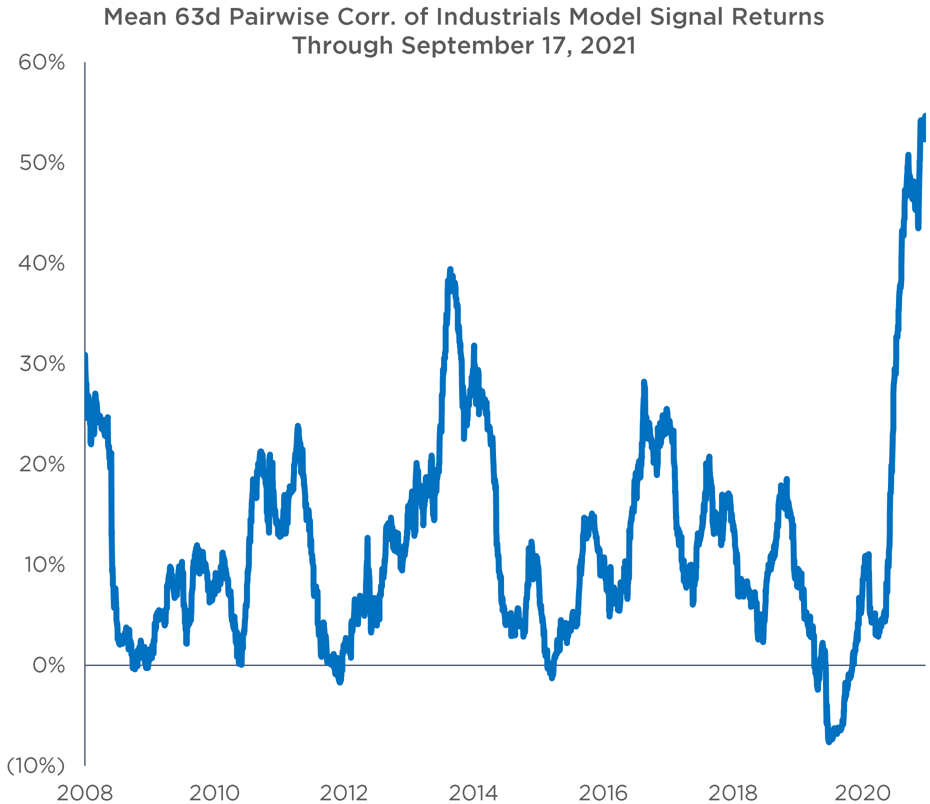


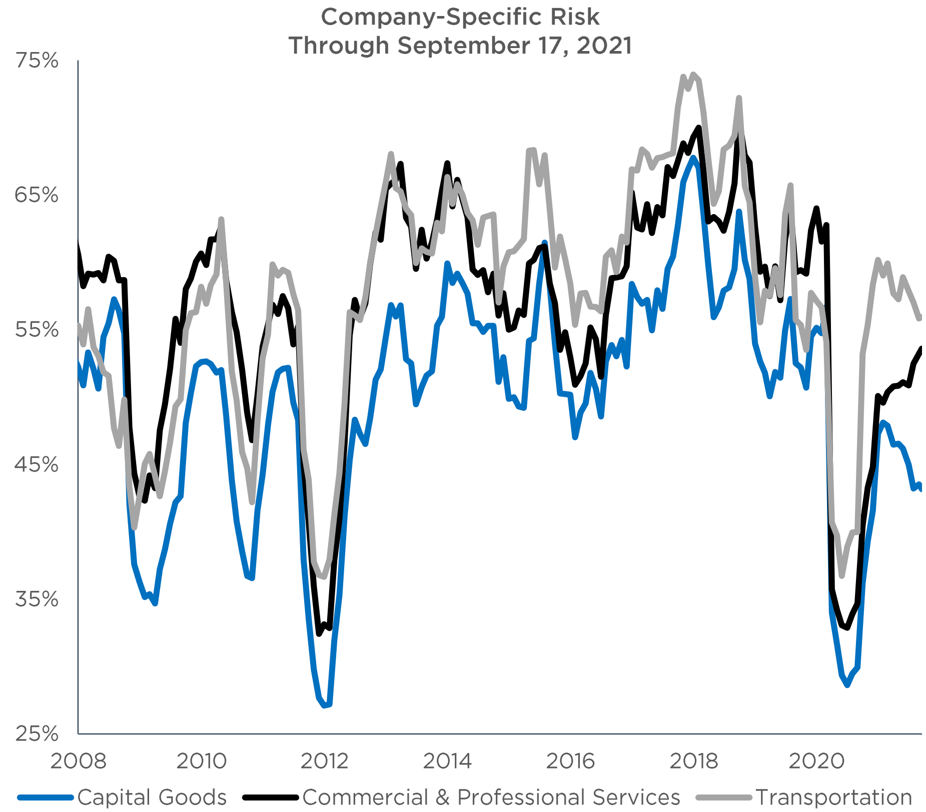
ISM Purchasing Managers Index
Through End-August, 2021



INDUSTRIALS ARE NOT A GOOD PLACE TO SPEND TIME

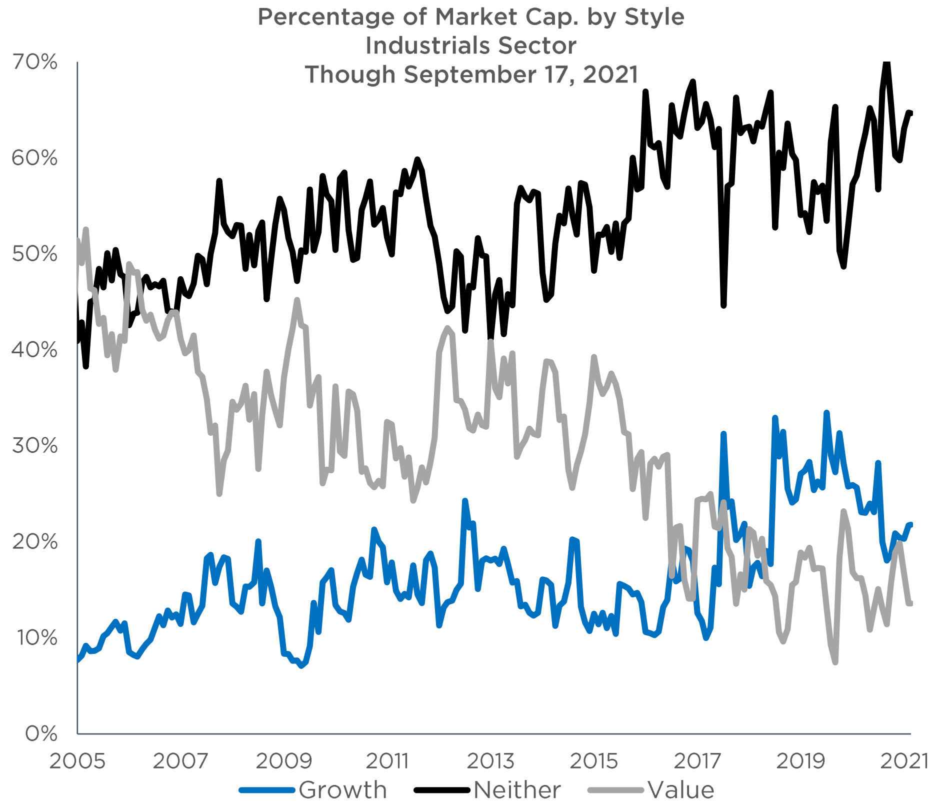
Using common metrics to pick stocks will be challenging today. Signal correlation was around .15 from 2012-2019 for industrials and today that is closer to 0.6 (left chart). This means that the returns of variables that fundamental analysts use to pick stocks are all correlated to each other. Company-specific risk is also generally lower than average and declining for capital goods and transportation, meaning you need to get the macro call right to get paid in industrials (right chart)

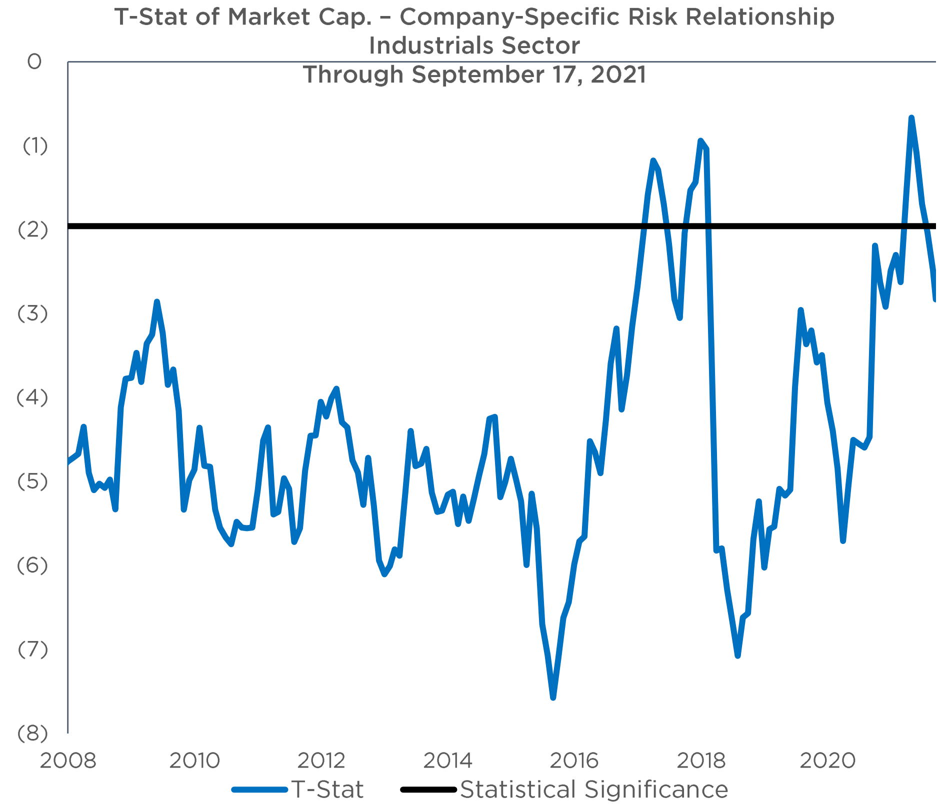




NEARLY 2/3 OF THE MARKET CAP IS NOT GROWTH OR VALUE

Over 60% of the industrials market cap is neither growth nor value (left chart). So even if current macro "roll-over" reverses and improves, making estimates more achievable, it is hard to find growth or value stocks in the group and beat the average. Smaller industrials companies are generally more idiosyncratic (right chart) – but finding large capitalization, idiosyncratic ideas is difficult





OVERLY OPTIMISTIC EXPECTATIONS FOR EARNINGS GROWTH?

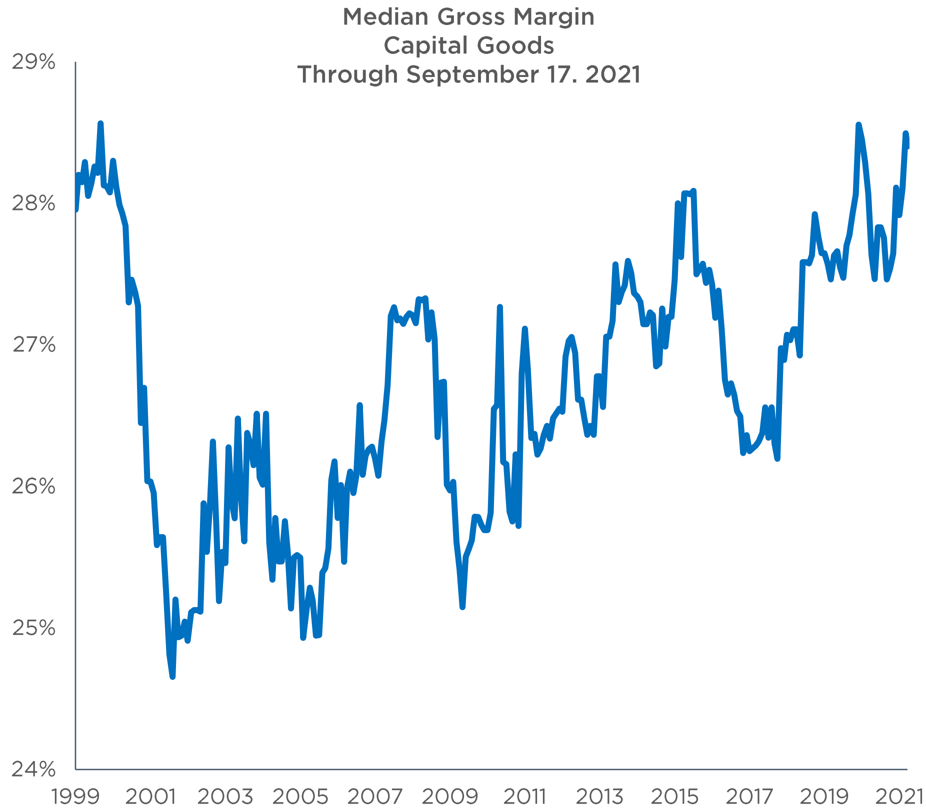
Sell-side analyst consensus earnings forecasts for the industrials sector are for well over 20% YoY growth every quarter through 2022. Growth expectations are the highest of any major sector over the full year next year, making relative estimate achievability well below average. In our judgment, many industrials are embedding a massive infrastructure bill being passed, and that almost assuredly has a lower near-term earnings impact than many expect

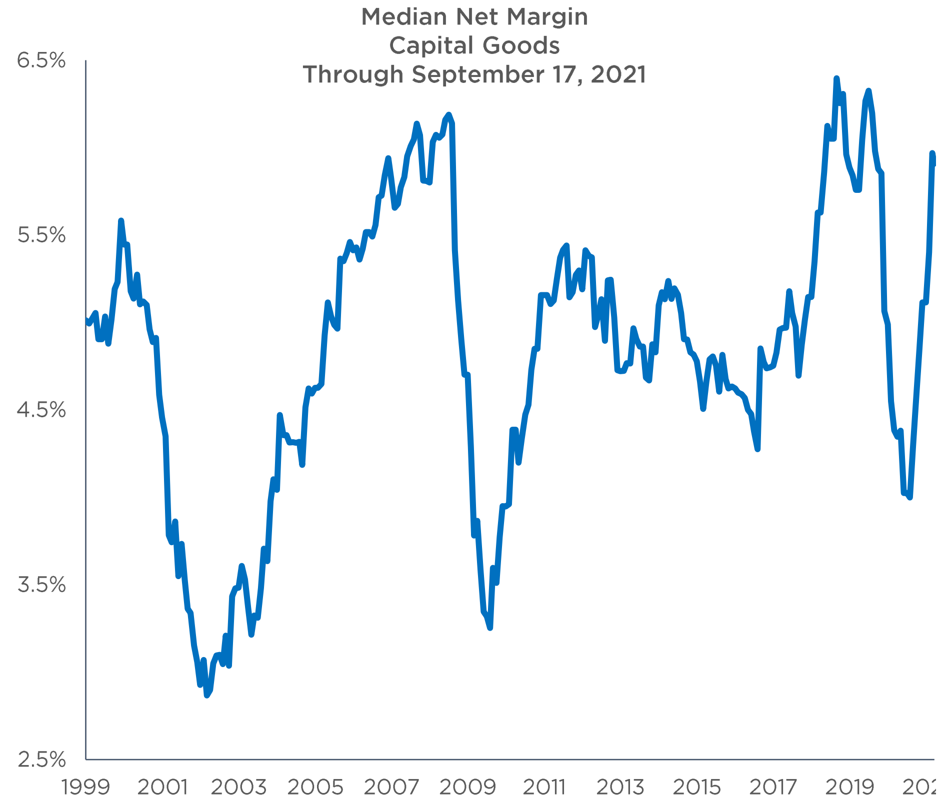
Bottom-Up Analyst Earnings Growth Expectations
September 17, 2021

Sector	2Q21	3Q21E	4Q21E	1Q22E	2Q22E	3Q22E	4Q22E
S&P 500	92.4%	25.0%	21.4%	6.0%	3.9%	14.1%	12.8%
S&P ex-Financials	73.0%	27.5%	27.2%	13.4%	9.5%	15.4%	13.4%
Consumer Discretionary	258.2%	0.5%	17.2%	9.9%	27.7%	46.5%	32.5%
Consumer Staples	15.9%	(0.9%)	1.9%	5.5%	6.2%	10.7%	10.1%
Energy	#N/A	#N/A	#N/A	107.0%	26.7%	4.0%	(2.5%)
Financials	251.8%	13.8%	(2.0%)	(20.5%)	(18.4%)	7.5%	9.8%
Health Care	20.1%	10.1%	16.1%	5.2%	3.7%	9.7%	3.9%
Industrials	384.1%	70.1%	133.6%	62.3%	32.8%	33.4%	23.0%
Info Tech	41.9%	26.0%	14.5%	7.5%	6.6%	14.0%	15.5%
Materials	128.3%	87.6%	58.1%	30.2%	(3.0%)	(10.3%)	(9.2%)
Communication Services	68.2%	23.1%	11.1%	2.4%	3.2%	16.1%	18.4%
Utilities	13.7%	(0.7%)	(0.1%)	7.8%	(11.9%)	4.1%	17.3%
REITS	27.5%	15.5%	13.0%	5.5%	0.6%	8.8%	9.5%

CAPITAL GOODS PROFITABILITY HAS RECOVERED

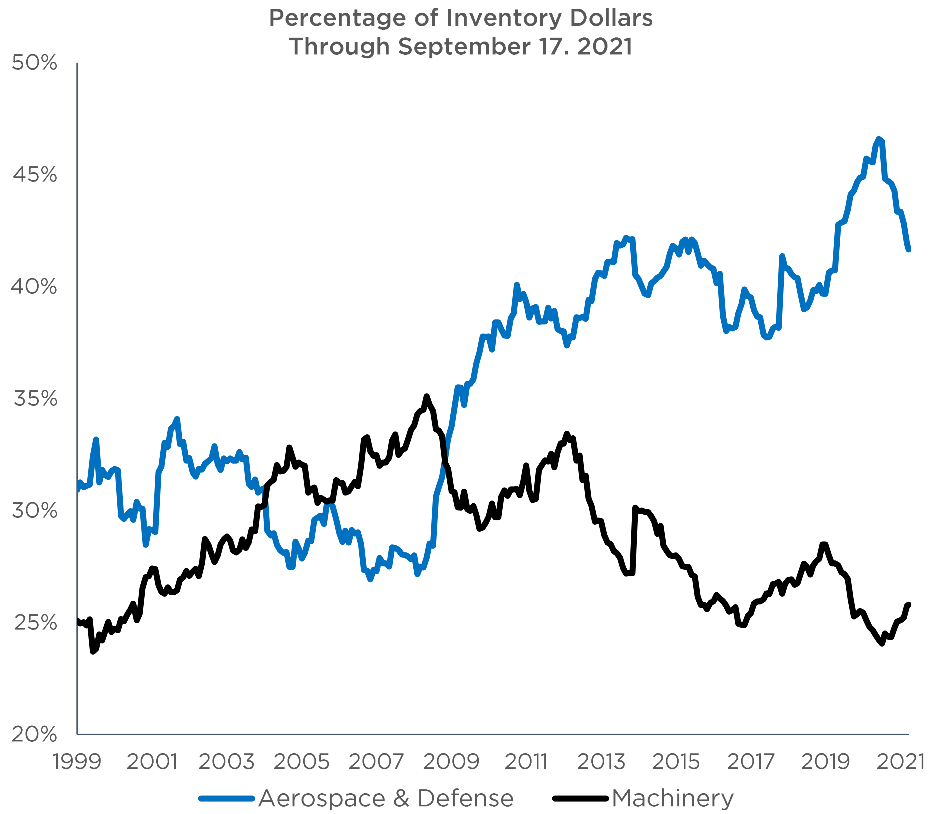
Within industrials, profitability (gross margin) has reached 20-year highs for the Capital Goods industry group, which makes up over 65% of industrials names with market capitalization over $1 billion (left chart). Net margins are also nearing peaks (right chart). With forward estimates for earnings growth strong even from these peak levels, it seems clear to us that stronger industrial activity and limited headwinds to future profitability will need to emerge for these forecast to be realized – and that does not seem likely to us

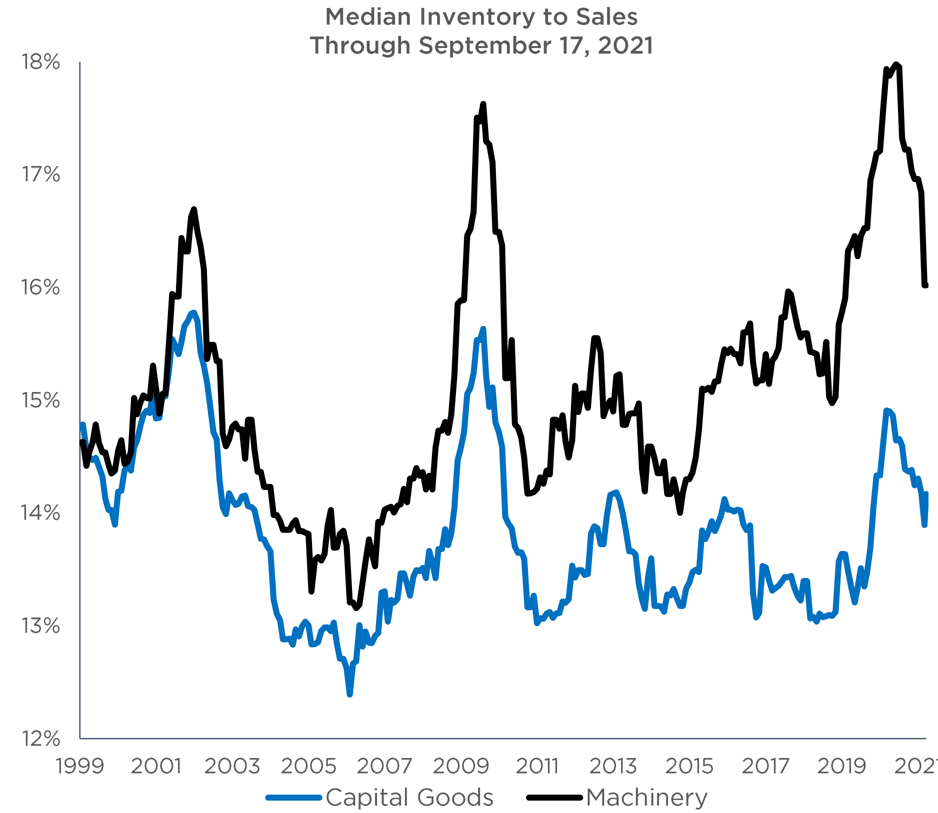




MACHINERY AND CAPITAL GOODS INVENTORY IS NOT LEAN

Margin expansion can be helped if inventory levels are low. However, it is not obvious to us that rising factory utilization will drive better cost absorption from here. Aerospace and defense (A&D) alone make up over 40% of the industrials sector inventory dollars (left chart), making sector-level aggregation of inventory dollars misleading. Capital goods and machinery inventory levels are above pre-COVID levels, even if they've declined recently (right chart)

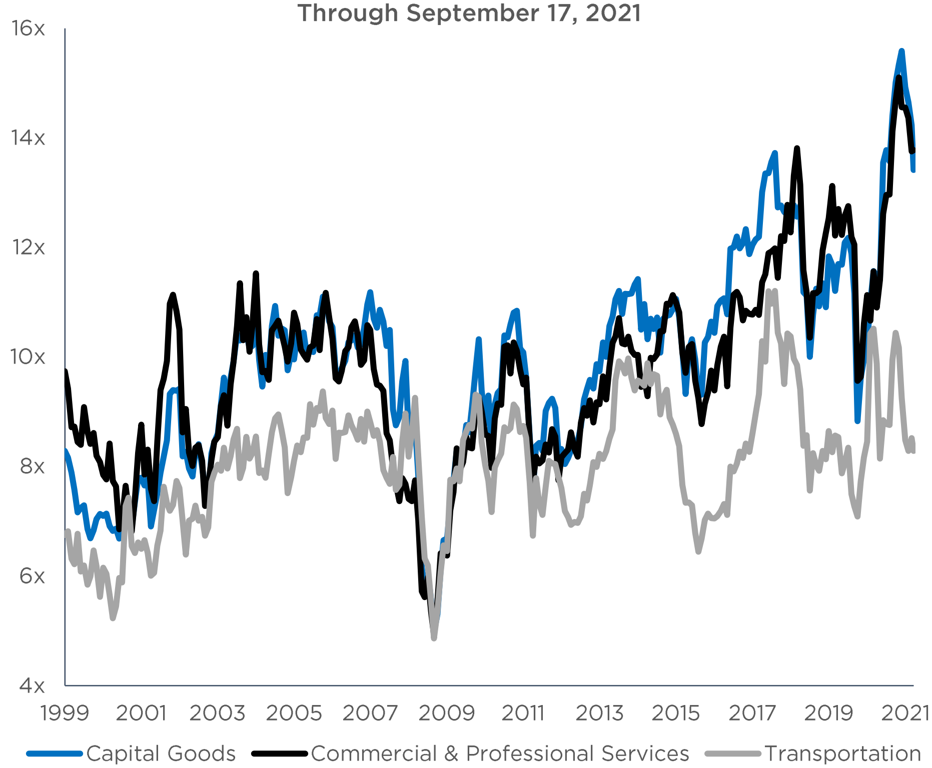




VALUATIONS HAVE EXPANDED FOR INDUSTRIALS

While other cyclicals like materials and energy have seen sharp multiple contraction as there is a view that they are over-earning, that is not the case for industrials, with elevated EV-to-EBITDA (left chart) multiples across capital goods and professional services. Conglomerates, commercial and professional services, machinery, and electrical equipment have rarely, if ever, been more expensive (right chart). Airlines are the lone exception

Median EV-to-EBITDA
Through September 17, 2021



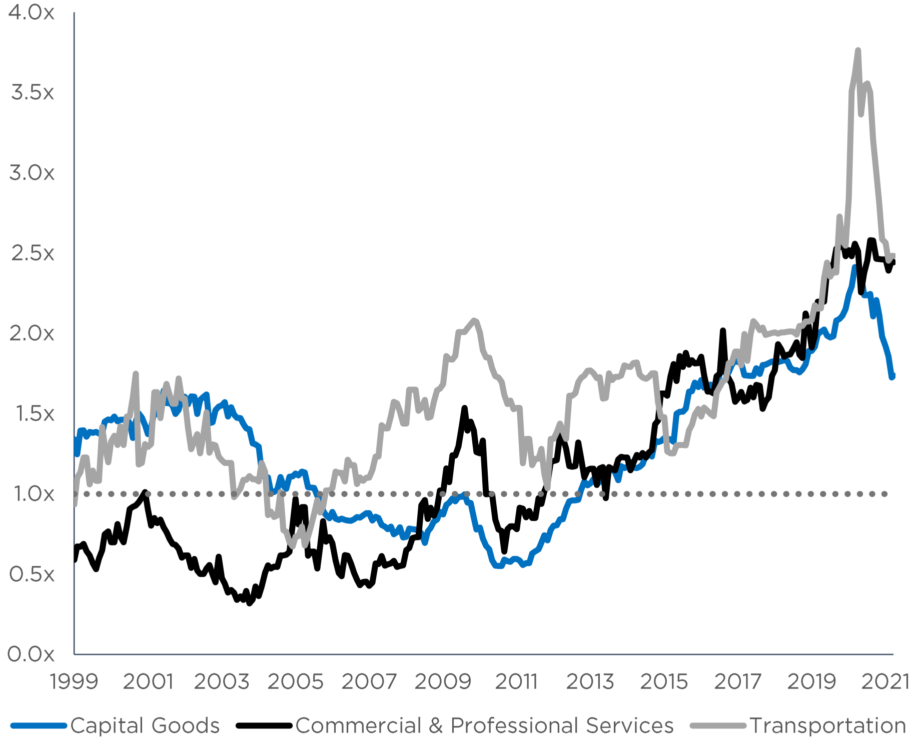
Median EV-to-EBITDA
Percentile Rank vs. History
September 17, 2021

Industrials GICS Industry	Rank
Industrial Conglomerates	100%
Trading Companies & Distributors	99%
Transportation Infrastructure	98%
Commercial Services & Supplies	97%
Professional Services	96%
Machinery	96%
Electrical Equipment	94%
Building Products	87%
Construction & Engineering	85%
Aerospace & Defense	84%
Air Freight & Logistics	75%
Road & Rail	63%
Marine	60%
Airlines	2%

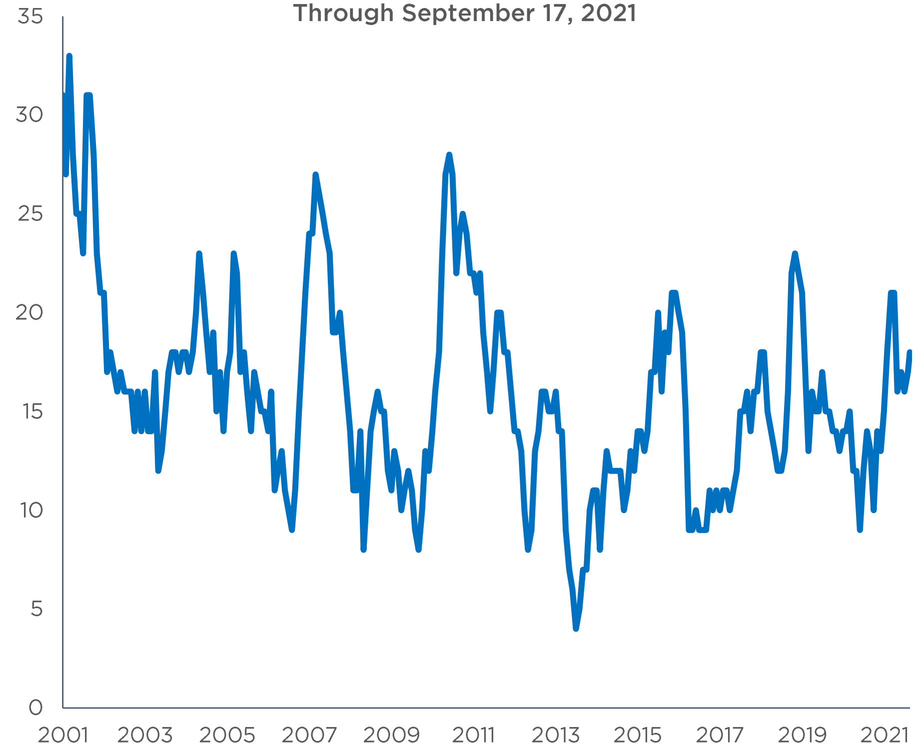
LEVERAGE HAS MODESTLY PICKED UP, M&A NOT PARTICULARLY ACTIVE

Elevated valuations can be at least partially justified if balance sheets have massively improved, or if there has been an outsized amount of M&A in a sector. But that is not the case. Companies on average have higher leverage than they did in previous cycles (left chart) and the current number of industrial-sector deals is roughly at a 20-year average (right chart), meaning there is not sector-related euphoria about a rash of imminent deals

Median Net Debt-to-EBITDA
Through September 17, 2021



Number of Industrials Involved in "Large Deals"
M&A (Target or Acquiror) Over 20% of Market Cap.
Through September 17, 2021



SHORT IDEAS: IT ALL COMES DOWN TO MARGIN EXPECTATIONS

Our conclusion therefore is to short non-growth industrials with near-record profit margins that are forecasted to have improved profitability next year despite the industrial activity roll-over (left chart), or those with high incremental gross margin expectations that screen badly in our quantitative models (right chart). We think these are good places to search for short ideas

High 2022 Incremental Margin Forecasts and Already At / Near Record Profitability
September 17, 2021

Ticker	Company	Industry Group	Market Cap. (US$ Bil.)
HON	Honeywell International Inc.	Industrial Conglomerates	150.85
ITW	Illinois Tool Works Inc.	Machinery	68.00
ROP	Roper Technologies, Inc.	Industrial Conglomerates	49.20
PH	Parker-Hannifin Corporation	Machinery	37.13
PNR	Pentair plc	Machinery	12.64
AGCO	AGCO Corporation	Machinery	9.51
SITE	SiteOne Landscape Supply, Inc.	Trading Companies & Distributors	8.89
RXN	Rexnord Corporation	Machinery	7.45
CFX	Colfax Corporation	Machinery	6.44
CR	Crane Co.	Machinery	5.36
AIMC	Altra Industrial Motion Corp.	Machinery	3.56
AIT	Applied Industrial Technologies, Inc.	Trading Companies & Distributors	3.22
TEX	Terex Corporation	Machinery	3.13

High Forecasted Incremental Margins vs. Current Gross Margins
Bottom Half of Trivariate Quantitative Model
September 17, 2021

Ticker	Company	Industry Group	Market Cap. (US$ Bil.)
GE	General Electric Company	Industrial Conglomerates	110.28
CAT	Caterpillar Inc.	Machinery	109.36
TT	Trane Technologies plc	Building Products	43.67
SWK	Stanley Black & Decker, Inc.	Machinery	30.35
IR	Ingersoll Rand Inc.	Machinery	22.81
MAS	Masco Corporation	Building Products	14.15
FBHS	Fortune Brands Home & Security, Inc.	Building Products	13.06
GGG	Graco Inc.	Machinery	12.76
PNR	Pentair plc	Machinery	12.64
LII	Lennox International Inc.	Building Products	11.37
AOS	A. O. Smith Corporation	Building Products	10.39
CSL	Carlisle Companies Incorporated	Building Products	10.37

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