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Materials Sector

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Sector Overview

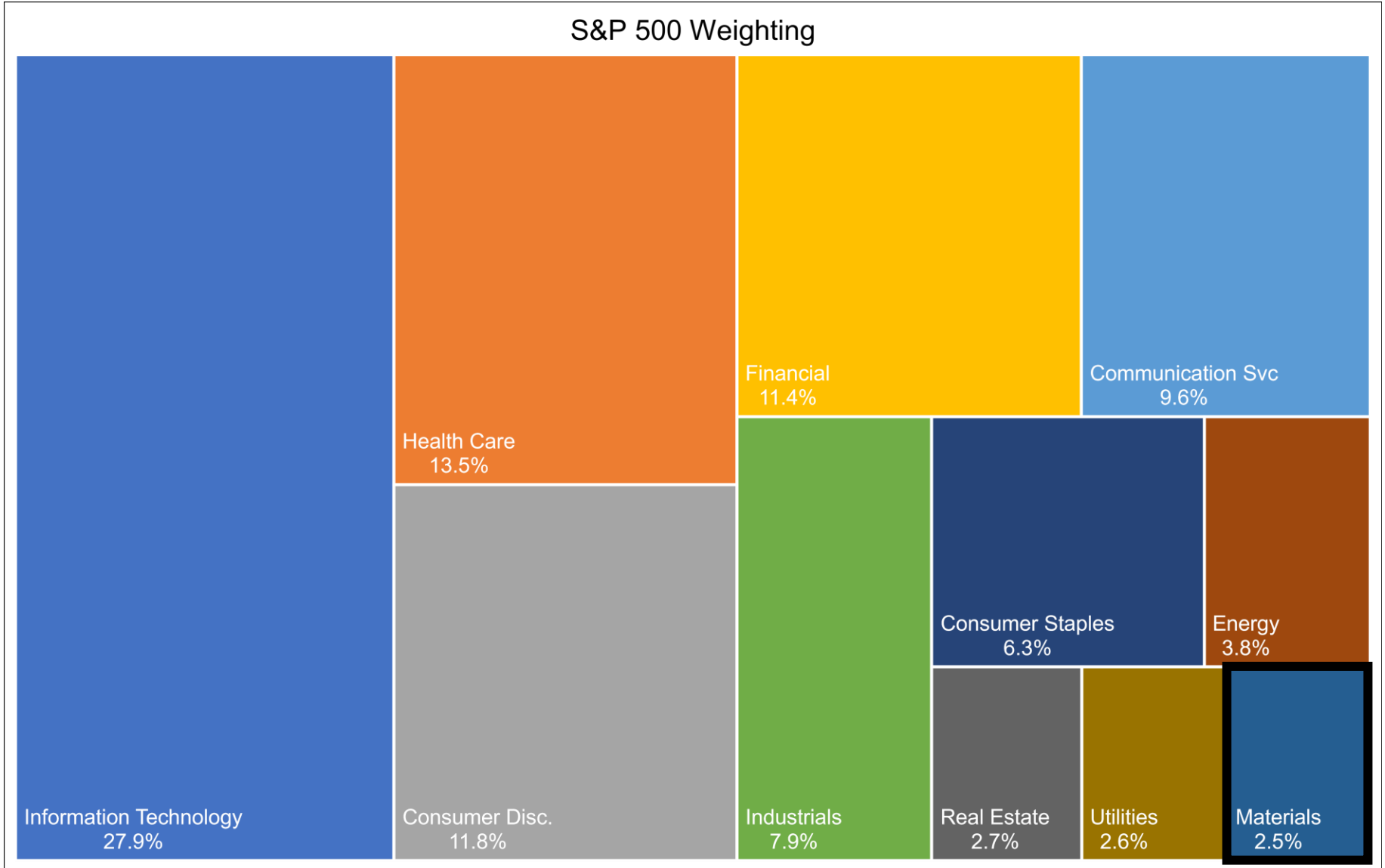


What is the materials sector?

- Companies directly working in processing of raw materials/natural resources.
 - Mined products like iron, copper, aluminum, gold, forestry products.
 - Chemical producers.
 - Containers and packaging: Glass, metal, cardboard.
- Sensitive to economic cycles; overall cyclical.
- Finished raw materials sold to nearly all other sectors; leading to high dependability

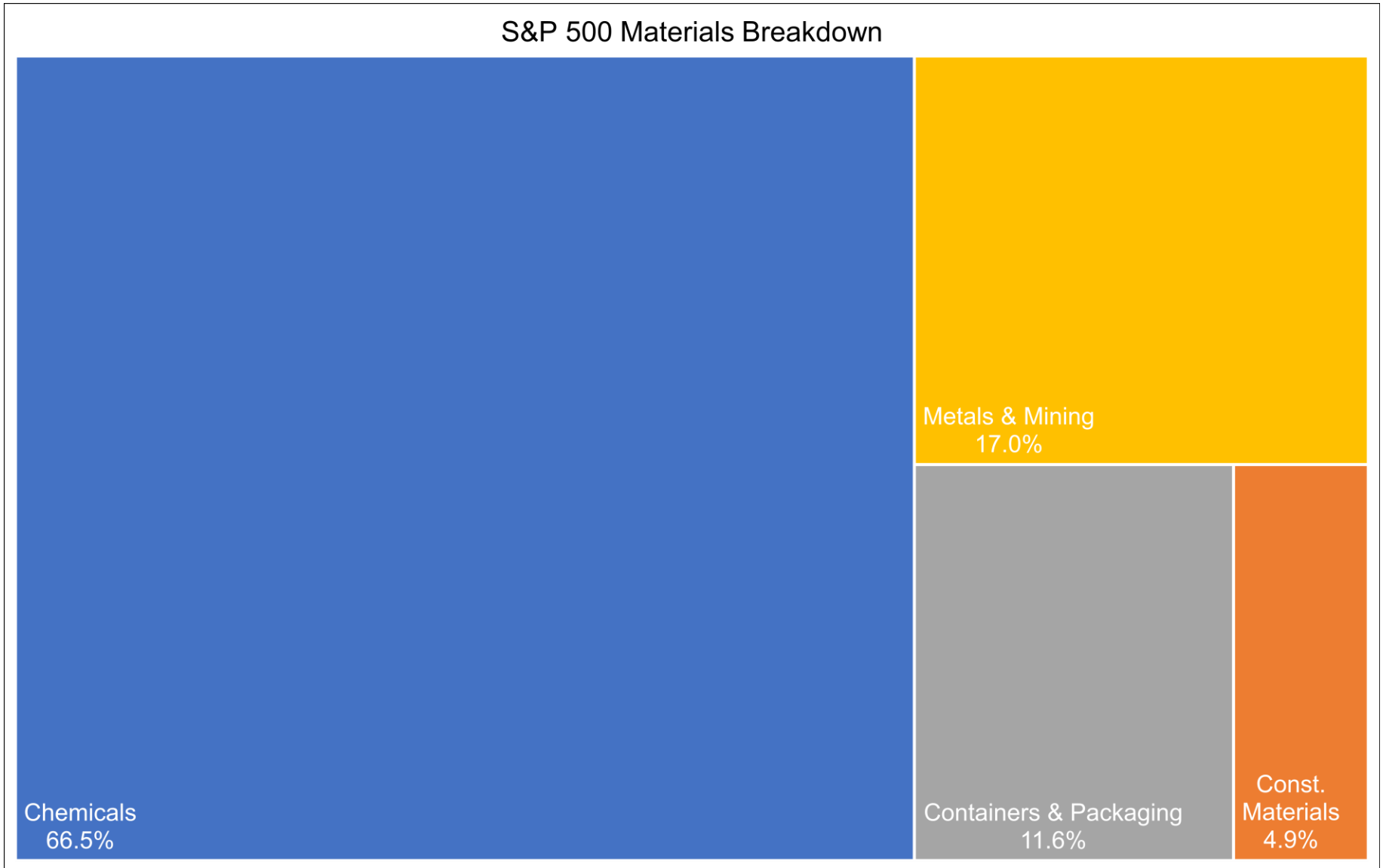


S&P 500 Weighting



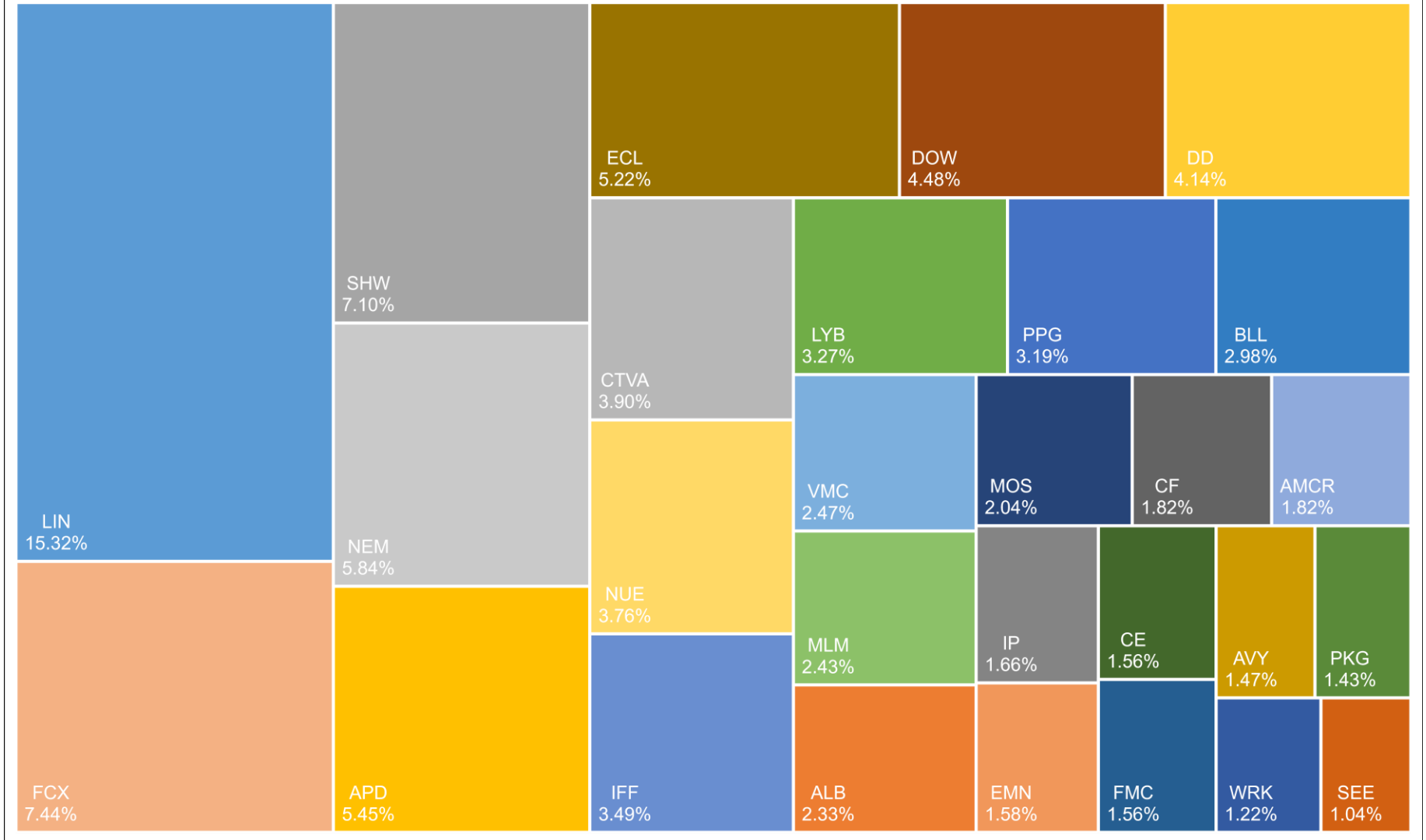


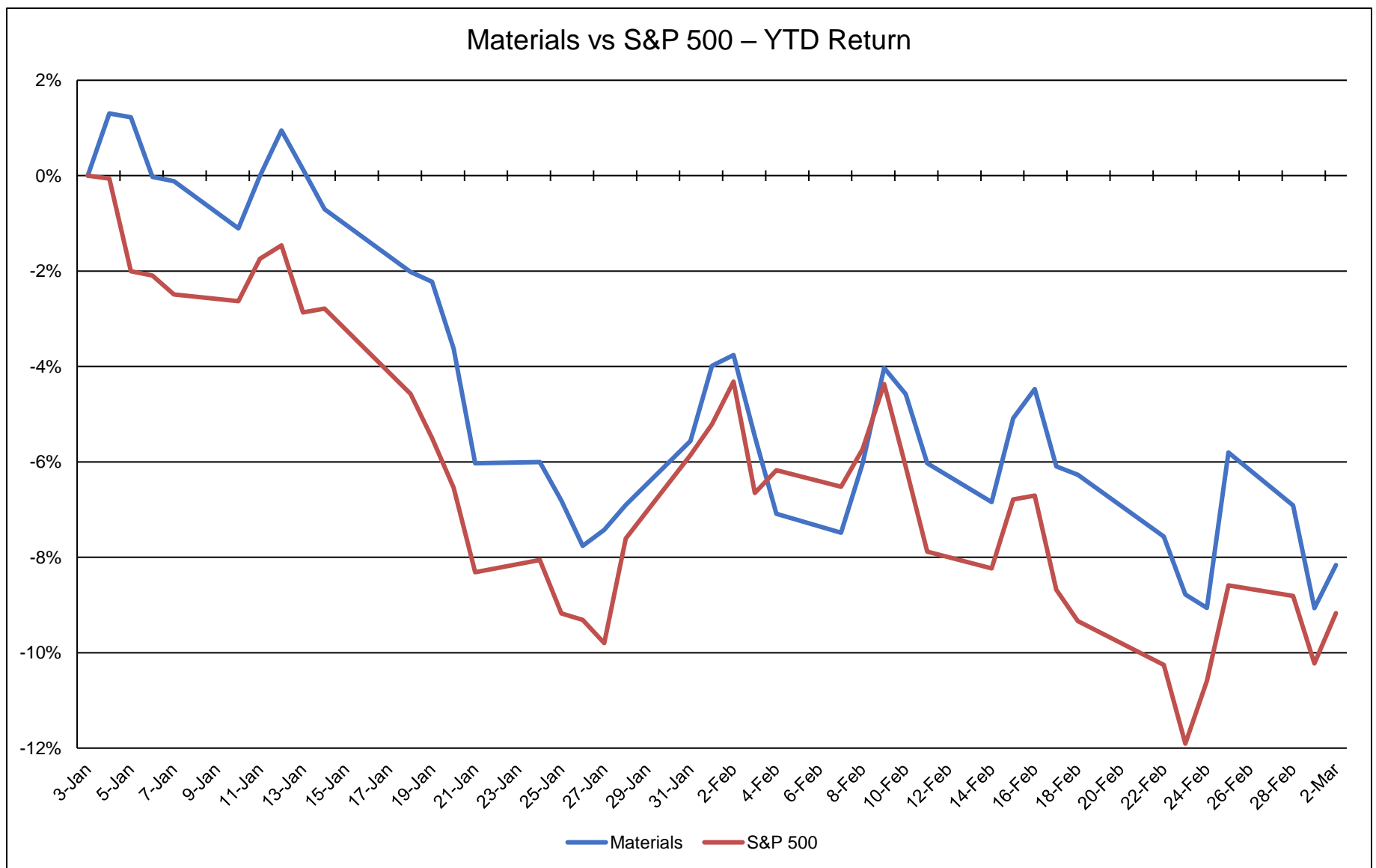
S&P 500 Materials Breakdown

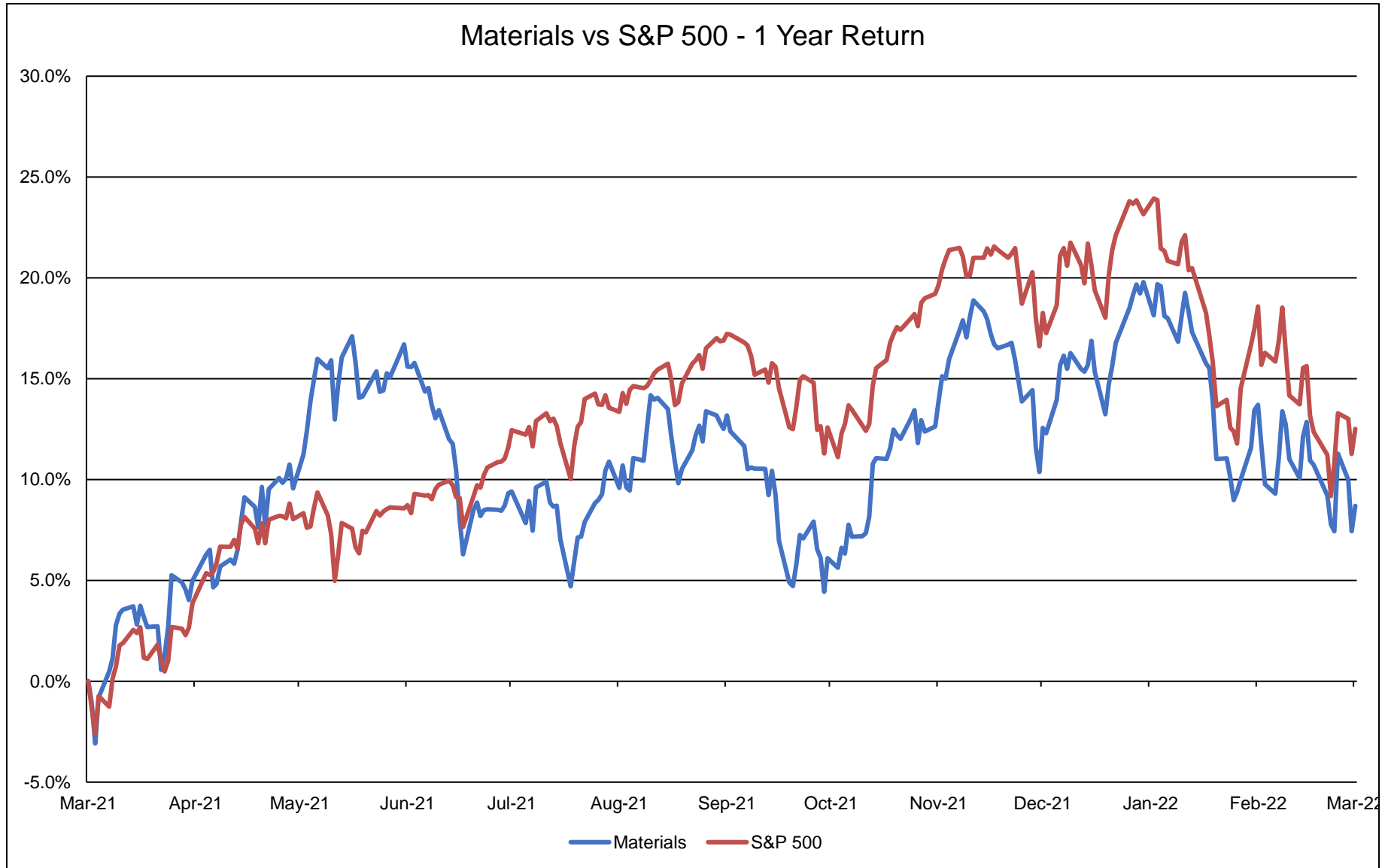




Materials Constituents









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Business Analysis



Porter's 5 Forces Analysis

Threat of new entrants: Low

- Dependent on extraction of natural resources through mines, forests, and land.
- Permits for many projects are already owned and require large capital investment.
- Length of leases for projects are usually high.
- New players were formed through mergers within pre-existing companies.

Supplier Power: Low

- Prices are highly dependent on government policies/external supply chain regulations.
- Only first in chain suppliers have some pricing power.
- Many companies have secondary products dependent on their own supply.

Buyer Power: High

- Switching costs for commodity products usually low.
- Product differentiation is low.
- Usually bought in enormous quantities, ample negotiation power lies with the buyer.

Threat of Substitutes: Low

- Raw materials are essential goods and cannot be fabricated.
- Most of the world depends on it and the materials aren't replaceable.

Competitive Rivalry: Medium

- Each subsector has key dominant players active within the industry since many years.



Phases of Economic Cycle

- Materials sector is cyclical.
- Tends to do well in the early and late stages of business cycles.

Sector Performance by Business Cycle Phase

Sector	Early	Mid	Late	Recession
Financials	+			
Real Estate	++			--
Consumer Discretionary	++	-	--	
Info. Tech	+	+	--	--
Industrials	++			--
Materials	+	--	++	
Consumer Staples			++	++
Health Care	--		++	++
Energy	--		++	
Communication Services		+		-
Utilities	--	-	+	++

++ Consistently Overperform -- Consistently Underperform □ No Clear Pattern
+ Overperform - Underperform



External factors

- Russian sanctions disrupting global commodity supply chains
- Interest rate, this decides factors like government spending, materials sector thrives when government spending is high.
- Continued US housing market growth; slowing Chinese real estate development
- Inflation slowing consumer spending affecting containers and packaging companies
- Seasonality and weather affecting agricultural chemicals and fertilizers
- Increased Environmental Regulation



Chemicals

- Agricultural chemicals: Ammonia, Nitrogen, Urea.
 - Valuations have fallen with increased farming and energy costs.
- Global basic and diversified chemicals: Petrochemicals, polymers.
 - Growing consensus that the segment has already peaked in FY 2021; worries about excess capacity.
- Specialty Chemicals: Adhesives, cosmetics, flavors and fragrances, cleaning, industrial.
 - High inflation, Supply chain and margin pressures felt in FY 2021. FY 2022 hopes to see healthy cash flows and industry consolidation.



Metals and mining

- Aluminum
 - Tight supply due to power shortages and rising raw material cost might be favorable for aluminum prices in FY 2022.
 - China to grow production capacity by just 1% in FY 2022 vs 5.6% in FY 2021, might help in driving prices up.
 - Infinite Recycling ability brings aluminum products in favorable light.
- Copper
 - Global copper prices might suffer from a setback due to oversupply, relatively low demand within China.
 - Copper prices up 5.5% YTD



Metals and mining

- Steel:
 - Outperformed in FY 2021
 - Expected to face lower demand rise due to pressured infrastructure demand in China and less demand in European auto industry.
 - EV/EBITDA for Steel near 10-year lows, providing some valuation support.
- Gold
 - Inflation continues to drive up demand for gold.
 - Gold up 13.4% YTD
- Coal
 - Pricing improvement expected if China removes import ban from Australia, global demand recovering.



Containers and Packaging

- Paper packaging and forest products outperformed the market in FY 2021 because of tight supply and rising demand.
- Glass and corrugated metal packaging outperformed in FY 2021.
- Costs being passed down to consumers with rising inflation might cause reduction in demand for products like Soda, beverage cans in the short term.
- Metal cans market expects long-term demand increase as recyclability of product becomes important to global industries.



Construction Materials

- Sector looks positive on the back of anticipated demand growth and has 25% YTD total returns in FY 2022.
- Green-economy deals, decarbonization targets and huge infrastructure plans are increasing construction material valuations.
- U.S Regional building materials companies might outperform global peers.



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Economic Analysis



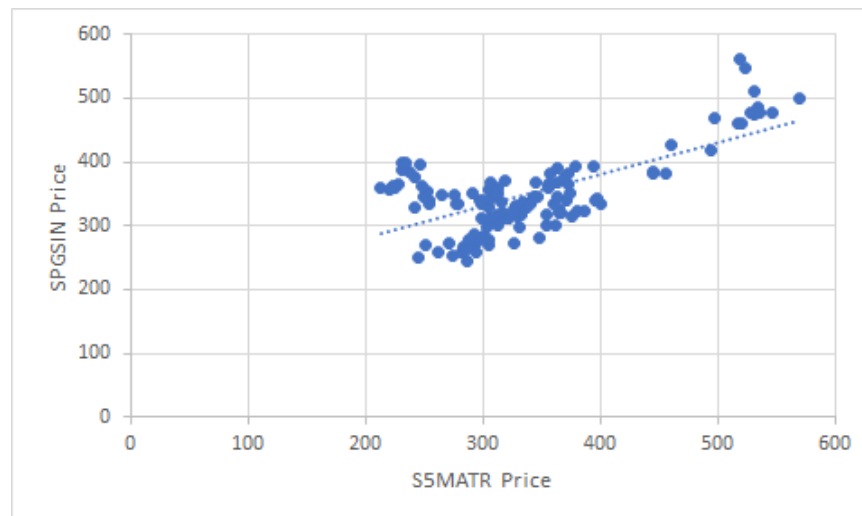
Indicators for Materials Sector

- Cyclical sector, prone to economic cycles
- Tested for:
 - Industrial Metals Index
 - Producer Price Index – Construction Materials
 - Consumer Price Index
 - House Price Index
 - Federal Funds Rate
 - Real GDP
- To note, all regression models use S5MATR Index as x-variable



Correlation with Industrial Metals Index

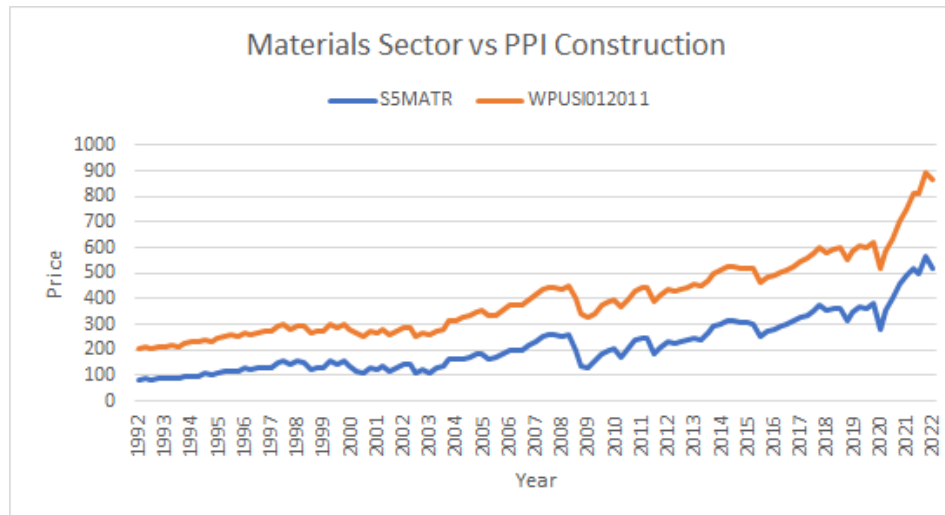
- S&P Industrial Metals Spot Index (SPGSIN) is a benchmark for performance in the industrial metals market.
- $Y=0.497327x + 180.7789$; line of best fit
- $R\text{-squared}=0.450878$; correlation factor
- Carries a **moderately positive** correlation with the S&P Industrial Metals Index (SPGSIN)





Correlation with PPI - Construction

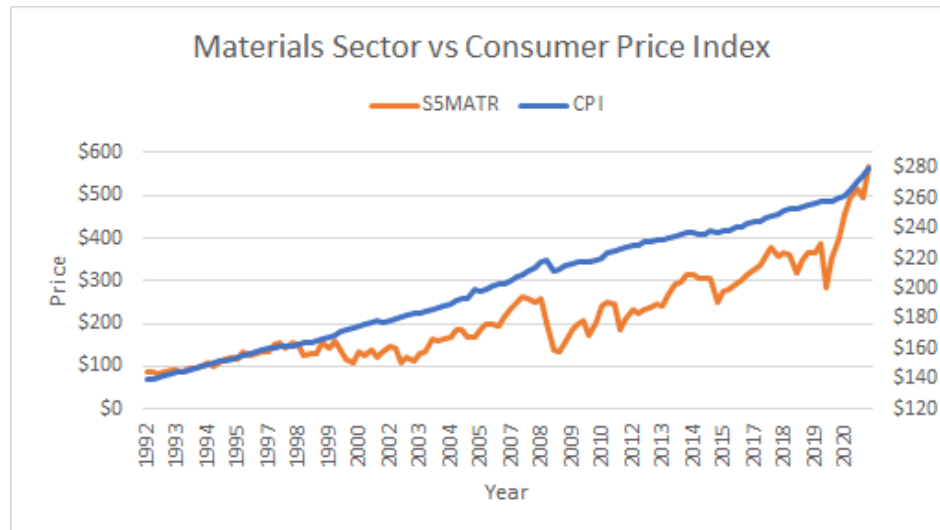
- Federal Reserve Economic Data of PPI in Construction Materials
- Best fit: $y=2.298585x - 201.517$
- Correlation coefficient: R-squared=0.899971
- Materials carries a **very strong positive** correlation with PPI – Construction Materials on a 1-quarter lag period for the sector





Correlation with Consumer Price Index

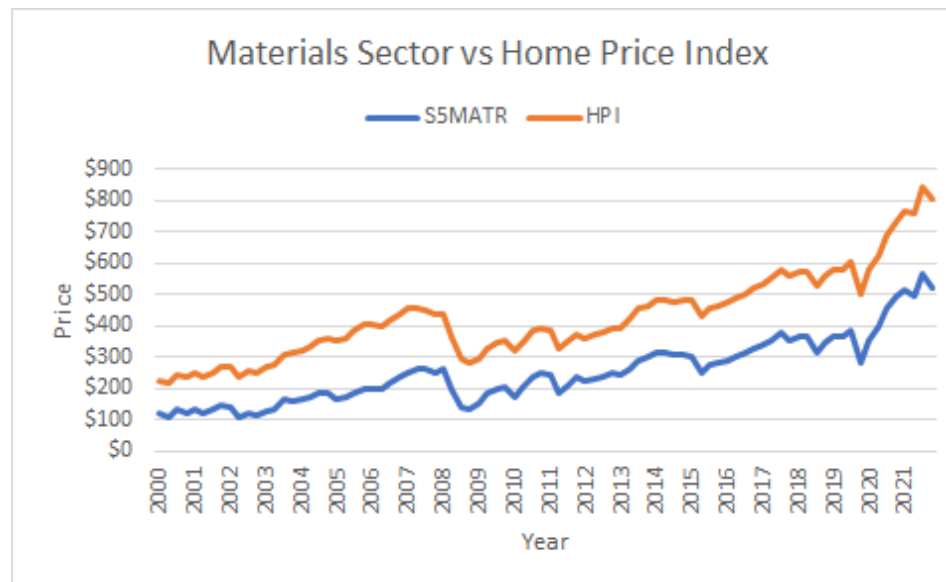
- Federal Reserve Economic Data of Consumer Prices in United States
- Best Fit: $y=2.49x - 290.734$
- Correlation: R-squared= 0.831692
- Materials carries a **strong positive** correlation with CPI, 1-quarter lagging for Materials





Correlation to House Price Index

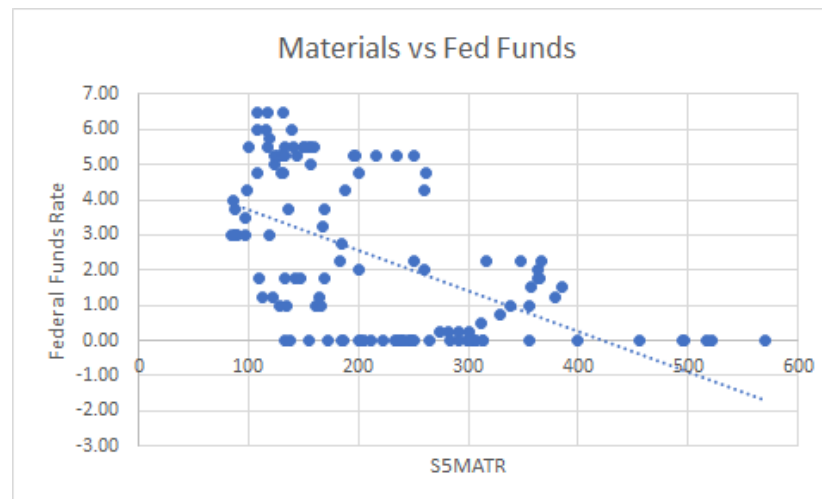
- Federal Reserve Economic Data of housing prices in United States
- Best Fit: $y=2.255765x - 139.113$
- Correlation: R-squared= 0.724515
- Materials carries a **strong positive** correlation with HPI, 1-quarter lagging for Materials





Correlation to Federal Funds Rate

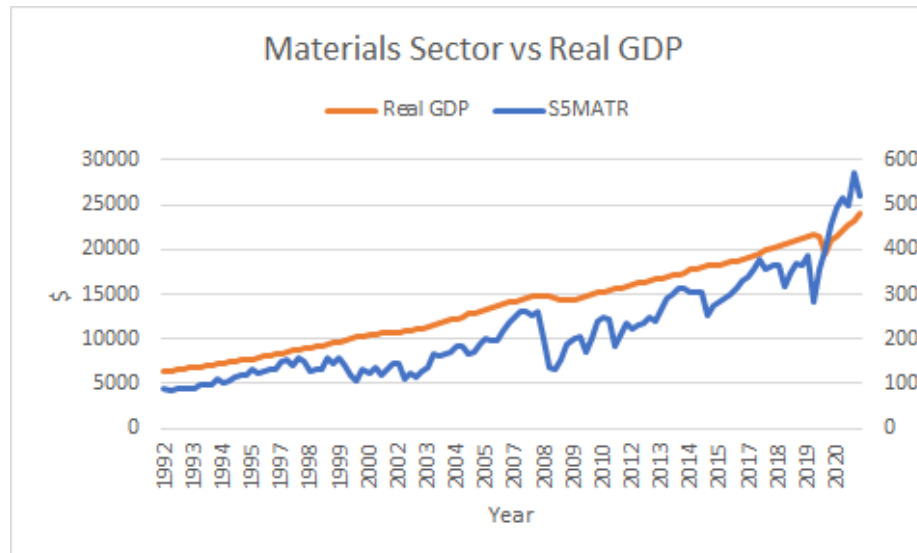
- Borrowing rate established by Federal Reserve, impacts all other domestic borrowing rates
- Best Fit: $y = -26.8633x + 280.7191$
- Correlation: R-squared = 0.310128
- Materials carries a **weak negative** correlation with the Fed Funds Rate





Correlation to Real GDP

- Measure of economic output and growth in the United States, adjusted for inflation
- Best Fit: $y = 0.020506x - 68.2572$
- Correlation: R-squared = 0.86729
- Materials carries a **strong positive** correlation with Real GDP





Correlation Summary

Correlation Indicator	Relationship to Materials Sector
Industrial Metals Index (SPGSIN)	Moderately Positive
Producer Price Index – Construction Metals	Very Strong Positive
Consumer Price Index	Strong Positive
House Price Index	Strong Positive
Federal Funds Rate	Weak Negative
Real GDP	Strong Positive

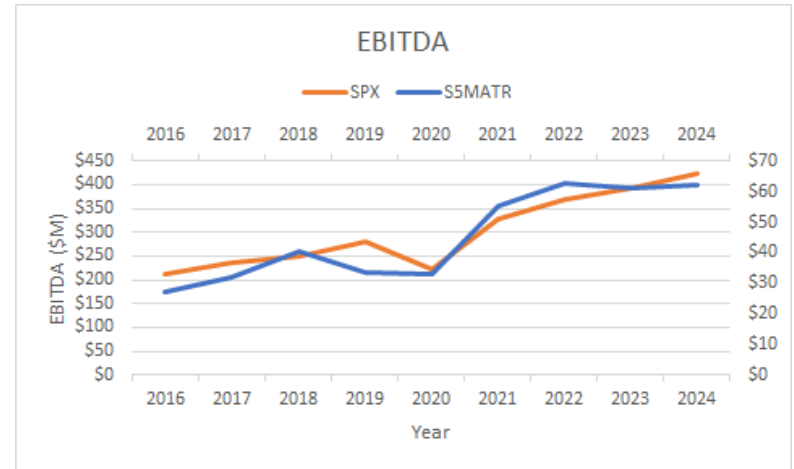
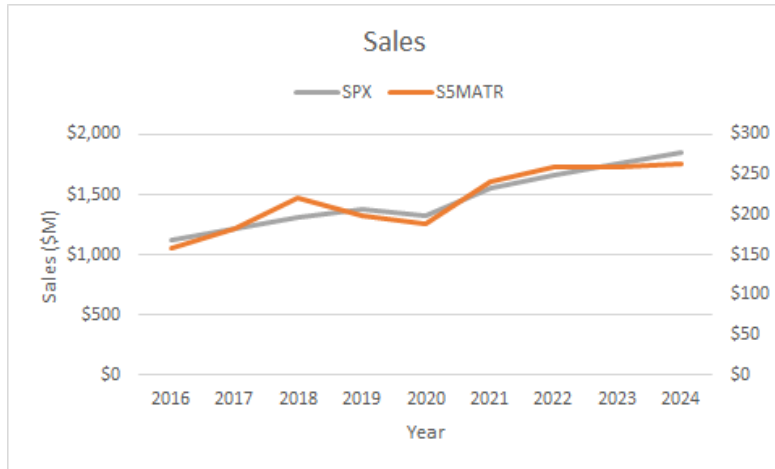


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Financial Analysis



Sales and Earnings



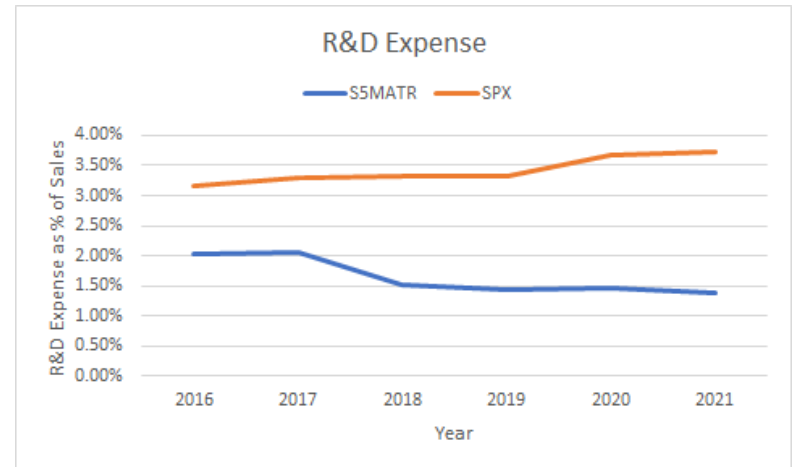
Materials

- Sales Up 7.40% Average [-10.13, 28.28]
- EBITDA 13.11% average annual Increase

S&P 500

- 6.47% Sales Increase YoY [-3.92, 16.66]
- EBITDA Increased 10.30% on annually

Diverging R&D Expense trends





Cash Flows

S&P 500 Materials Sector GICS Level 1 Index (S5MATR) - Cash Flow

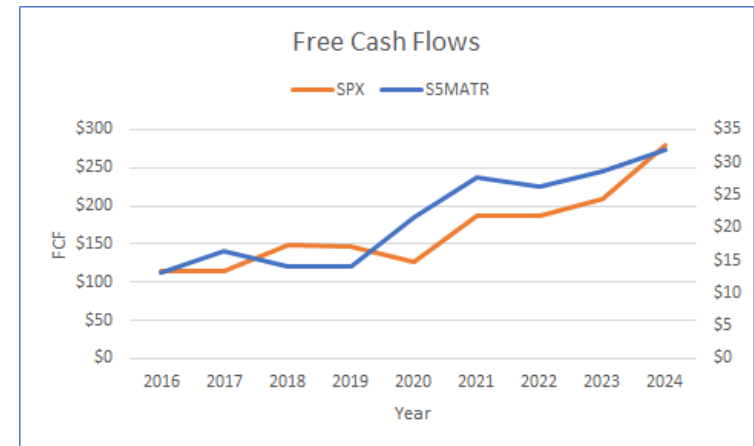
12 Months Ending	CY 2016 12/30/2016	CY 2017 12/29/2017	CY 2018 12/31/2018	CY 2019 12/31/2019	CY 2020 12/31/2020	CY 2021 12/31/2021	CY 2022 Est 12/31/2022	CY 2023 Est 12/31/2023	CY 2024 Est 12/31/2024
Cash Flow Items per Share	2,016	2,017	2,018	2,019	2,020	2,021	2,023		
Cash From Operations	26.14	27.90	27.77	30.01	34.90	42.71	46.06	47.51	49.36
Cash Flow From Investing	-8.45	-16.44	-22.01	-14.08	-12.80	-20.06			
Cash From Financing	-12.26	-8.38	-8.91	-26.86	-6.88	-29.08			
Capital Expenditures	-12.84	-11.57	-13.72	-16.02	-13.20	-15.07	-19.66	-18.79	-17.50
Free Cash Flow	13.17	16.35	14.13	14.00	21.70	27.76	26.40	28.73	31.82
YoY % Change		24.10%	-13.57%	-0.92%	55.03%	27.91%	-4.87%	8.79%	10.76%

Source: Bloomberg

S&P 500 INDEX (SPX) - Cash Flow

12 Months Ending	CY 2016 12/30/2016	CY 2017 12/29/2017	CY 2018 12/31/2018	CY 2019 12/31/2019	CY 2020 12/31/2020	CY 2021 12/31/2021	CY 2022 Est 12/31/2022	CY 2023 Est 12/31/2023	CY 2024 Est 12/31/2024
Cash Flow Items per Share									
Cash From Operations	184.91	188.88	232.92	233.69	204.45	273.46	300.62	332.31	394.70
Cash Flow From Investing	-161.94	-144.00	-172.40	-143.25	-248.79	-242.46			
Cash From Financing	-21.13	-20.81	-87.23	-75.72	211.99	3.42			
Capital Expenditures	-70.39	-73.57	-84.09	-86.36	-77.24	-86.30	-100.32	-109.93	-105.19
Free Cash Flow	114.31	115.18	148.49	147.36	126.80	187.38	187.65	208.25	279.29
YoY % Change		0.76%	28.92%	-0.76%	-13.95%	47.77%	0.14%	10.98%	34.11%

Source: Bloomberg



- Nearly identical trends, 13.40% increase for Materials, 13.50% for S&P
- Outperformance of Materials during early pandemic
- Estimates of S&P relative recovery



Margins and Returns

S&P 500 Materials Sector GICS Level 1 Index (S5MATR) - Profitability

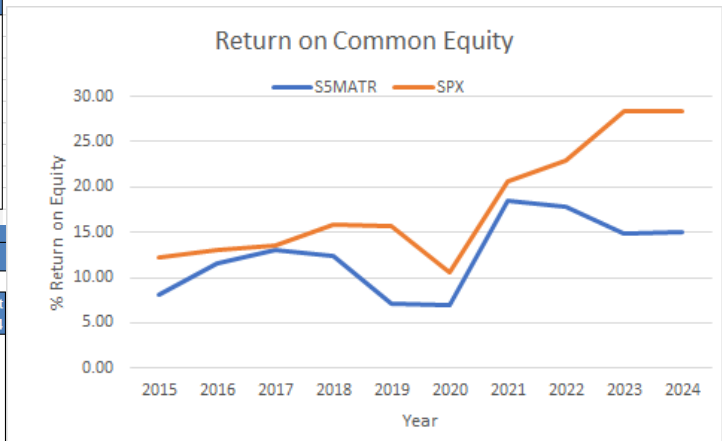
12 Months Ending	CY 2015 12/31/2015	CY 2016 12/30/2016	CY 2017 12/29/2017	CY 2018 12/31/2018	CY 2019 12/31/2019	CY 2020 12/31/2020	CY 2021 12/31/2021	CY 2022 Est 12/31/2022	CY 2023 Est 12/31/2023	CY 2024 Est 12/31/2024
Gross Margin	24.95	29.55	28.24	26.73	27.18	27.85	30.18			
EBITDA Margin	13.96	17.29	17.46	18.33	16.99	17.57	22.87			
Operating Margin	7.49	10.67	10.84	12.08	8.59	8.71	15.97			
YoY % Change		42.42%	1.59%	11.38%	-28.86%	1.34%	83.43%			
Profit Margin	4.00	5.71	9.26	8.32	5.45	5.54	12.61			
Return on Assets	2.52	3.50	5.25	5.12	2.92	2.75	7.69	8.20	6.93	7.22
Return on Common Equity	8.09	11.53	13.12	12.40	7.10	6.99	18.49	17.91	14.87	15.08
Return on Capital	4.64	8.31	9.09	8.70	5.42	5.30	12.00			

Source: Bloomberg

S&P 500 INDEX (SPX) - Profitability

12 Months Ending	CY 2015 12/31/2015	CY 2016 12/30/2016	CY 2017 12/29/2017	CY 2018 12/31/2018	CY 2019 12/31/2019	CY 2020 12/31/2020	CY 2021 12/31/2021	CY 2022 Est 12/31/2022	CY 2023 Est 12/31/2023	CY 2024 Est 12/31/2024
Gross Margin	33.35	33.62	33.48	33.91	33.99	33.83	35.28			
EBITDA Margin	17.72	18.78	19.36	19.02	20.29	16.78	21.08			
Operating Margin	12.31	12.94	13.24	13.31	13.50	9.97	16.13			
YoY % Change		5.11%	2.33%	0.55%	1.42%	-26.14%	61.74%			
Profit Margin	8.24	8.94	9.16	10.26	10.20	7.33	13.06			
Return on Assets	2.61	2.71	2.86	3.37	3.18	2.11	4.11	5.25	5.29	19.61
Return on Common Equity	12.26	13.00	13.58	15.87	15.73	10.61	20.61	23.02	28.45	28.41
Return on Capital	6.46	6.84	7.38	8.14	7.81	5.48	10.15			

Source: Bloomberg



- Steady underperformance of sector
- Estimates appear optimistic despite 2022 start and current events



Industry Breakdown – Chemicals

S&P 500 Chemicals Industry GICS Level 3 Index (S5CHEM) - Income Statement										
12 Months Ending	CY 2016 12/30/2016	CY 2017 12/29/2017	CY 2018 12/31/2018	CY 2019 12/31/2019	CY 2020 12/31/2020	CY 2021 12/31/2021	CY 2022 Est 12/31/2022	CY 2023 Est 12/31/2023	CY 2024 Est 12/31/2024	
Income & Expenses per Share										
Sales	216.20	267.08	329.00	307.78	272.77	348.40	375.75	379.71	391.09	
Gross Margin %	37.04	30.33	27.48	29.49	30.19	30.75	29.76	30.02	30.23	
EBITDA	45.82	45.24	56.21	51.71	46.81	77.41	88.38	88.21	91.49	
Margin %	21.19	16.94	17.09	16.80	17.16	22.22				
R&D Expense	6.95	7.99	7.48	7.07	6.02	7.75	7.46			
% of Sales	3.21%	2.99%	2.27%	2.30%	2.21%	2.22%	1.99%			
<i>Source: Bloomberg</i>										
S&P 500 Chemicals Industry GICS Level 3 Index (S5CHEM) - Profitability										
12 Months Ending	CY 2014 12/31/2014	CY 2015 12/31/2015	CY 2016 12/30/2016	CY 2017 12/29/2017	CY 2018 12/31/2018	CY 2019 12/31/2019	CY 2020 12/31/2020	CY 2021 12/31/2021	CY 2022 Est 12/31/2022	CY 2023 Est 12/31/2023
Return on Assets	8.19	8.43	6.48	5.08	4.79	2.48	2.41	7.56	7.04	7.36
Return on Common Equity	22.12	26.97	20.94	11.71	10.64	5.62	5.85	17.40	15.58	14.87
Return on Capital	13.58	14.49	11.23	7.99	7.82	4.59	4.51	11.70		
<i>Source: Bloomberg</i>										
S&P 500 Chemicals Industry GICS Level 3 Index (S5CHEM) - Cash Flow										
12 Months Ending	CY 2015 12/31/2015	CY 2016 12/30/2016	CY 2017 12/29/2017	CY 2018 12/31/2018	CY 2019 12/31/2019	CY 2020 12/31/2020	CY 2021 12/31/2021	CY 2022 Est 12/31/2022	CY 2023 Est 12/31/2023	
Cash Flow Items per Share										
Cash From Operations	40.77	38.10	41.79	37.35	45.23	52.11	61.67	64.39	69.33	
Cash Flow From Investing	-19.07	-14.61	-28.05	-26.00	-18.75	-21.05	-32.35			
Cash From Financing	-24.59	-18.95	-7.50	-16.44	-46.96	-5.19	-46.74			
Capital Expenditures	-21.38	-17.70	-16.41	-18.41	-23.41	-19.17	-21.31	-25.97	-25.66	
Free Cash Flow	19.69	20.50	25.40	19.03	22.06	32.97	40.51	38.42	43.67	

- Best Performer: Sales, Margins, ROE
- Highest R&D Expenses
- Highest Cash Flows



Industry Breakdown – Metals and Mining

S&P 500 Metals & Mining Industry GICS Level 3 Index (S5METL) - Income Statement										
12 Months Ending	CY 2016 12/30/2016	CY 2017 12/29/2017	CY 2018 12/31/2018	CY 2019 12/31/2019	CY 2020 12/31/2020	CY 2021 12/31/2021	CY 2022 Est 12/31/2022	CY 2023 Est 12/31/2023	CY 2024 Est 12/31/2024	
Income & Expenses per Share										
Sales	72.71	81.18	94.46	77.04	74.76	117.20	124.71	112.08	106.57	
Gross Margin %	7.25	23.25	24.75	18.25	24.62	37.15	41.69	38.05	35.63	
EBITDA	5.77	19.18	23.31	14.27	18.67	39.59	44.72	37.66	25.21	
Margin %	7.94	23.62	24.68	18.52	24.97	33.78				
R&D Expense	0.23	0.27	0.28	0.24	0.20	0.26				
% of Sales	0.32%	0.33%	0.30%	0.31%	0.27%	0.22%				
Source: Bloomberg										
S&P 500 Metals & Mining Industry GICS Level 3 Index (S5METL) - Profitability										
12 Months Ending	CY 2014 12/31/2014	CY 2015 12/31/2015	CY 2016 12/30/2016	CY 2017 12/29/2017	CY 2018 12/31/2018	CY 2019 12/31/2019	CY 2020 12/31/2020	CY 2021 12/31/2021	CY 2022 Est 12/31/2022	CY 2023 Est 12/31/2023
Return on Assets	0.10	-7.48	-4.72	4.06	6.77	3.85	4.07	10.94	10.36	5.38
Return on Common Equity	0.29	-22.36	-15.28	10.99	17.56	9.30	9.63	24.78	21.37	11.97
Return on Capital	2.61	-10.90	1.61	7.48	11.77	5.57	6.92	16.39		
Source: Bloomberg										
S&P 500 Metals & Mining Industry GICS Level 3 Index (S5METL) - Cash Flow										
12 Months Ending	CY 2015 12/31/2015	CY 2016 12/30/2016	CY 2017 12/29/2017	CY 2018 12/31/2018	CY 2019 12/31/2019	CY 2020 12/31/2020	CY 2021 12/31/2021	CY 2022 Est 12/31/2022	CY 2023 Est 12/31/2023	
Cash Flow Items per Share										
Cash From Operations	15.90	15.70	14.70	15.01	12.06	17.29	30.03	32.50	27.55	
Cash Flow From Investing	-15.28	4.03	-5.97	-13.46	-8.27	-4.77	-11.17			
Cash From Financing	2.78	-10.22	-9.35	-0.90	-8.43	-2.48	-13.20			
Capital Expenditures	-14.31	-8.25	-4.99	-7.44	-9.03	-7.82	-8.95	-14.16	-12.97	
Free Cash Flow	0.57	7.05	9.71	7.60	2.81	9.45	21.18	18.34	14.58	

- Worst performer recently
- Lowest margins, highest estimates



Industry Breakdown – Containers and Packaging

S&P 500 Containers & Packaging Industry GICS Level 3 Index (S5CONP) - Income Statement

12 Months Ending	CY 2016 12/30/2016	CY 2017 12/29/2017	CY 2018 12/31/2018	CY 2019 12/31/2019	CY 2020 12/31/2020	CY 2021 12/31/2021	CY 2022 Est 12/31/2022	CY 2023 Est 12/31/2023	CY 2024 Est 12/31/2024
Income & Expenses per Share									
Sales	209.42	204.71	231.22	227.16	218.63	249.73	262.45	268.83	277.53
Gross Margin %	25.67	24.98	26.20	24.81	23.79	23.57	23.16	23.57	23.61
EBITDA	25.03	29.14	38.09	35.78	27.78	39.00	44.06	45.92	45.74
Margin %	11.95	14.24	16.47	15.75	12.70	15.62			
R&D Expense	0.99	0.68	0.74	0.80	0.82	0.91			
% of Sales	0.47%	0.33%	0.32%	0.35%	0.38%	0.36%			

Source: Bloomberg

S&P 500 Containers & Packaging Industry GICS Level 3 Index (S5CONP) - Profitability

12 Months Ending	CY 2014 12/31/2014	CY 2015 12/31/2015	CY 2016 12/30/2016	CY 2017 12/29/2017	CY 2018 12/31/2018	CY 2019 12/31/2019	CY 2020 12/31/2020	CY 2021 12/31/2021	CY 2022 Est 12/31/2022	CY 2023 Est 12/31/2023
Return on Assets	3.38	2.21	1.67	4.01	5.03	3.75	2.34	5.68	7.36	7.53
Return on Common Equity	15.06	10.42	7.69	16.94	18.73	13.70	8.66	18.79	22.49	23.03
Return on Capital	9.00	5.63	5.04	7.50	9.08	7.44	5.66	10.34		

Source: Bloomberg

S&P 500 Containers & Packaging Industry GICS Level 3 Index (S5CONP) - Cash Flow

12 Months Ending	CY 2015 12/31/2015	CY 2016 12/30/2016	CY 2017 12/29/2017	CY 2018 12/31/2018	CY 2019 12/31/2019	CY 2020 12/31/2020	CY 2021 12/31/2021	CY 2022 Est 12/31/2022	CY 2023 Est 12/31/2023
Cash Flow Items per Share									
Cash From Operations	26.23	20.67	22.23	29.06	30.07	29.60	27.28	33.24	36.91
Cash Flow From Investing	-28.78	-18.46	-14.84	-23.38	-11.51	-9.35	1.59		
Cash From Financing	1.30	5.74	-9.38	-7.88	-14.41	-18.87	-30.78		
Capital Expenditures	-12.14	-11.66	-11.18	-14.75	-12.05	-10.45	-13.03	-16.85	-15.27
Free Cash Flow	13.50	8.64	11.03	14.46	17.94	19.12	14.35	16.38	21.64

- Steady margins estimated ahead
- Closer to average sales, returns for sector



Industry Breakdown – Construction Materials

S&P 500 Construction Materials Industry GICS Level 3 Index (S5CSTMX) - Income Statement

12 Months Ending	CY 2016 12/30/2016	CY 2017 12/29/2017	CY 2018 12/31/2018	CY 2019 12/31/2019	CY 2020 12/31/2020	CY 2021 12/31/2021	CY 2022 Est 12/31/2022	CY 2023 Est 12/31/2023	CY 2024 Est 12/31/2024
Income & Expenses per Share									
Sales	55.41	59.42	66.41	74.63	74.05	84.59	101.95	112.11	118.91
Gross Margin %	25.86	25.00	23.96	25.18	26.44	24.82	25.22	26.76	27.86
EBITDA	14.41	14.87	16.38	20.45	21.23	22.89	27.33	31.33	34.51
Margin %	26.00	25.03	24.67	27.40	28.66	27.06			
R&D Expense	0.00	0.00	0.00	0.00	0.00	0.00			
% of Sales	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			

Source: Bloomberg

S&P 500 Construction Materials Industry GICS Level 3 Index (S5CSTMX) - Profitability

12 Months Ending	CY 2014 12/31/2014	CY 2015 12/31/2015	CY 2016 12/30/2016	CY 2017 12/29/2017	CY 2018 12/31/2018	CY 2019 12/31/2019	CY 2020 12/31/2020	CY 2021 12/31/2021	CY 2022 Est 12/31/2022	CY 2023 Est 12/31/2023
Return on Assets	2.36	3.31	5.15	4.78	5.08	5.92	5.89	4.94	6.35	7.29
Return on Common Equity	4.23	5.95	9.36	9.20	9.74	11.27	11.06	10.62	12.48	13.86
Return on Capital	4.73	5.91	8.31	7.20	7.47	8.26	8.10	6.92		

Source: Bloomberg

S&P 500 Construction Materials Industry GICS Level 3 Index (S5CSTMX) - Cash Flow

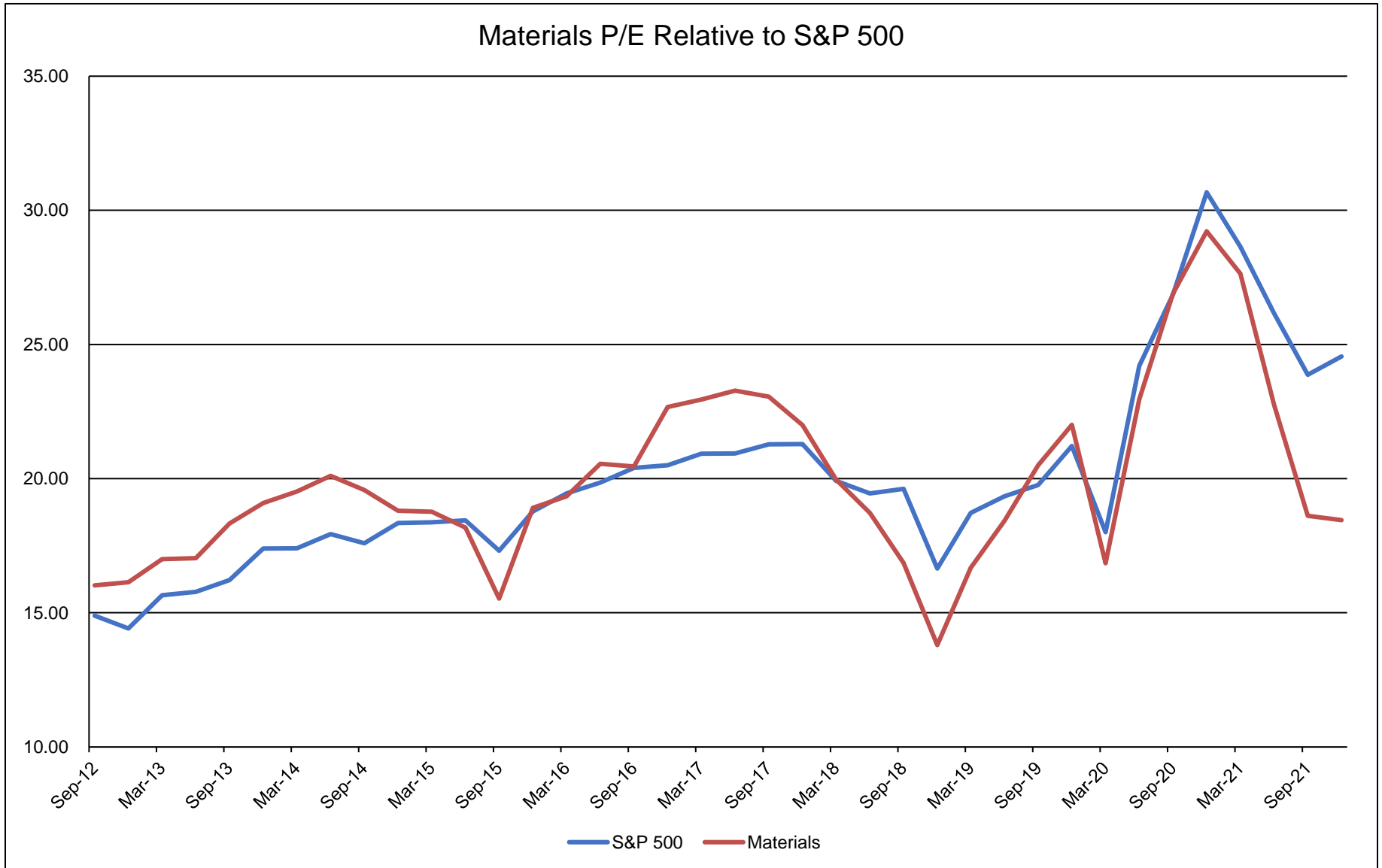
12 Months Ending	CY 2015 12/31/2015	CY 2016 12/30/2016	CY 2017 12/29/2017	CY 2018 12/31/2018	CY 2019 12/31/2019	CY 2020 12/31/2020	CY 2021 12/31/2021	CY 2022 Est 12/31/2022	CY 2023 Est 12/31/2023
Cash Flow Items per Share									
Cash From Operations	8.24	9.75	10.67	11.84	15.05	16.38	16.58	21.02	24.74
Cash Flow From Investing	-1.64	-7.07	-7.98	-20.22	-6.19	-6.11	-41.25		
Cash From Financing	-5.12	-5.90	1.38	-3.27	-7.27	-0.95	16.95		
Capital Expenditures	-4.59	-5.76	-6.46	-6.52	-6.00	-5.58	-6.74	-8.56	-8.90
Free Cash Flow	3.68	4.04	4.22	5.34	9.05	10.80	9.84	12.46	15.84

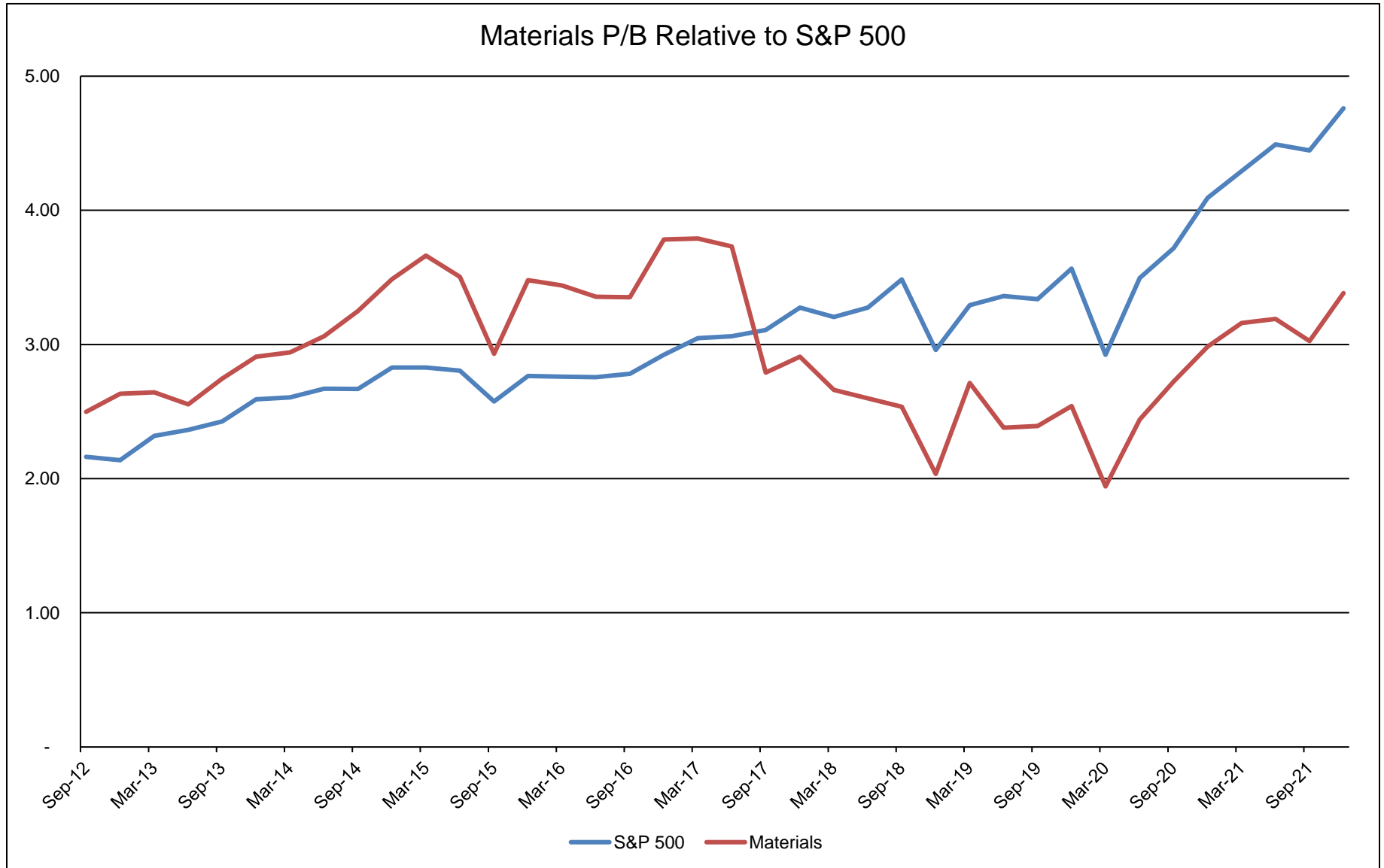
- Steady margins estimated ahead
- Closer to average sales, returns for sector
- No R&D expenses, low cash flows

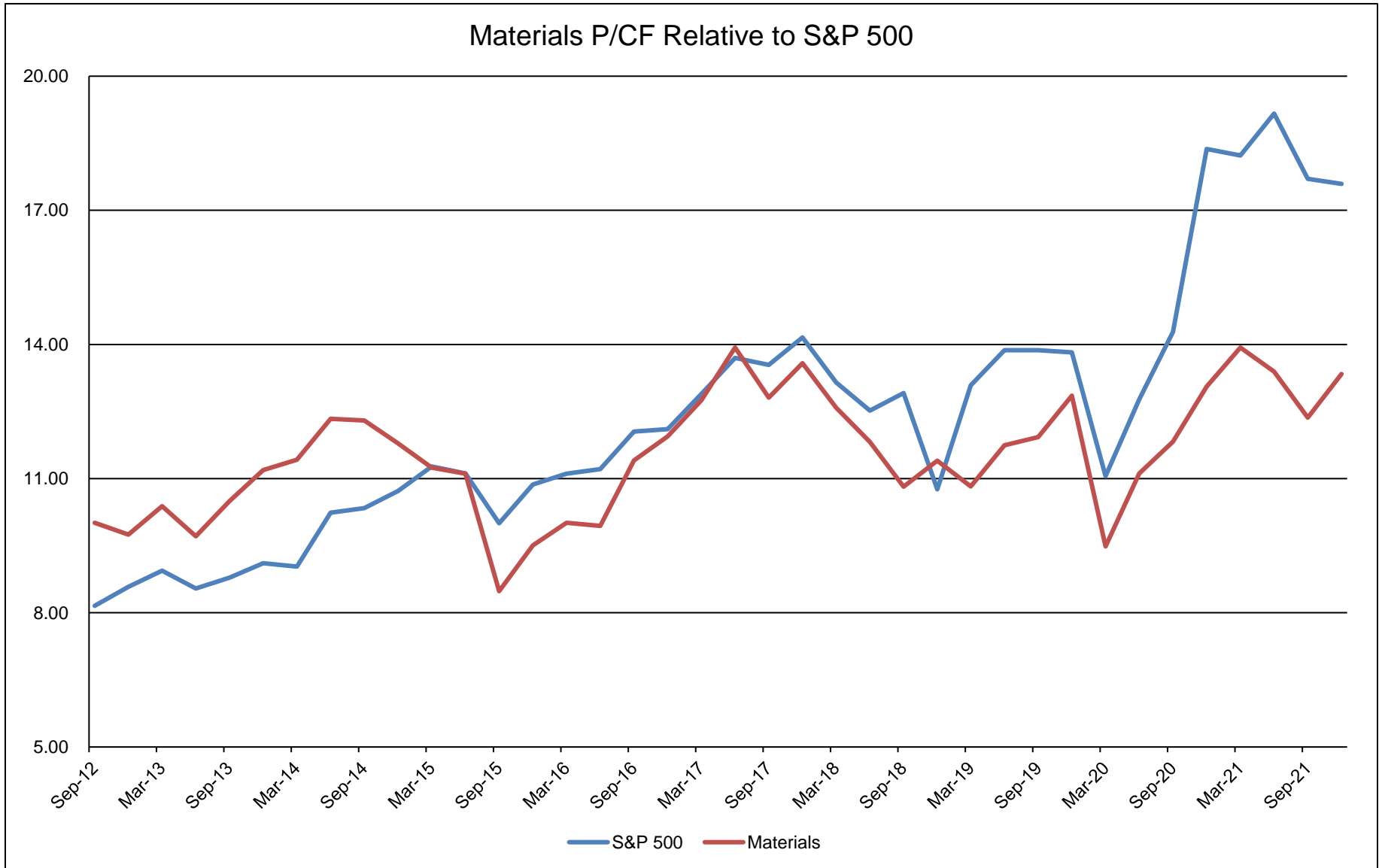


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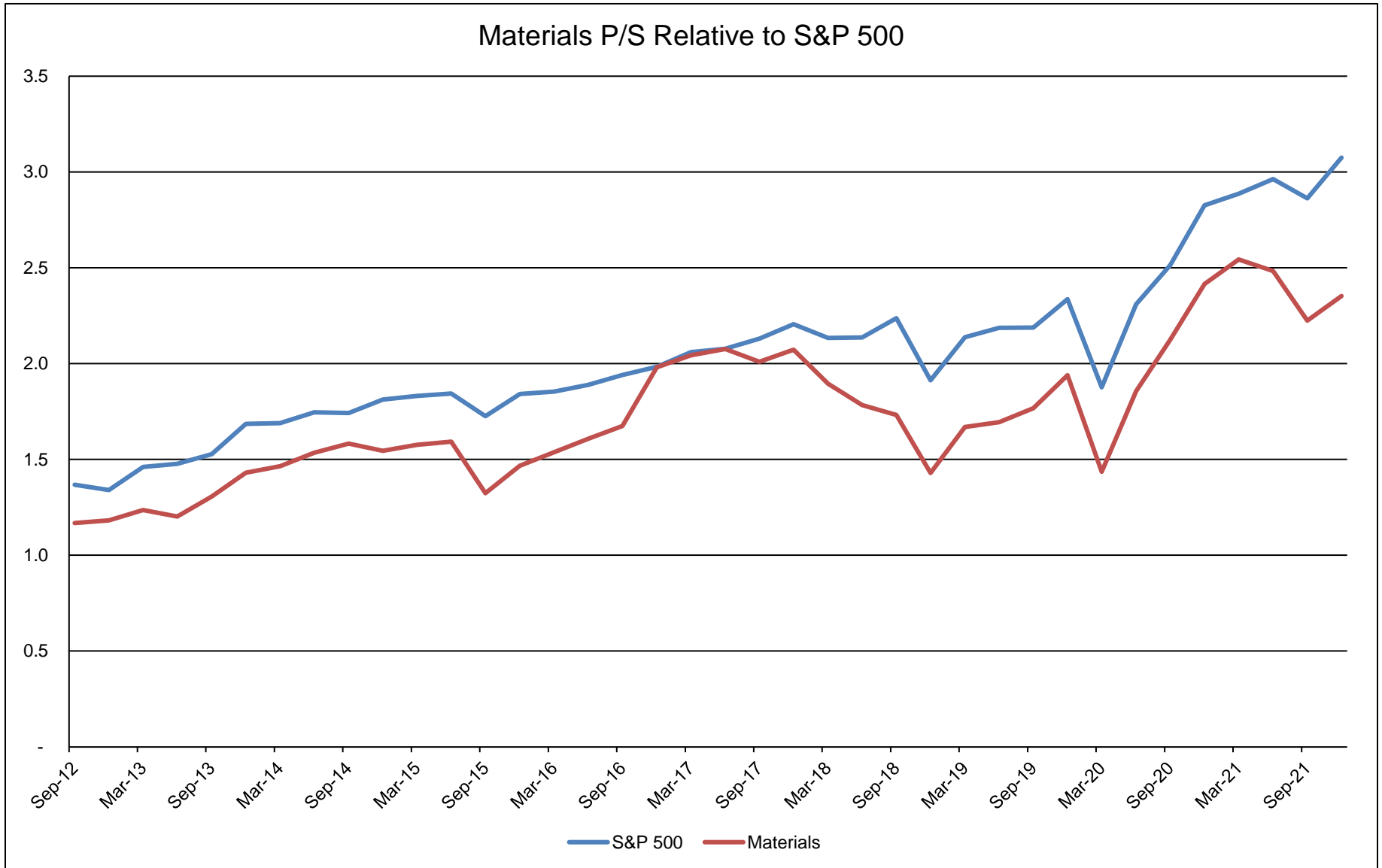
Valuation Analysis



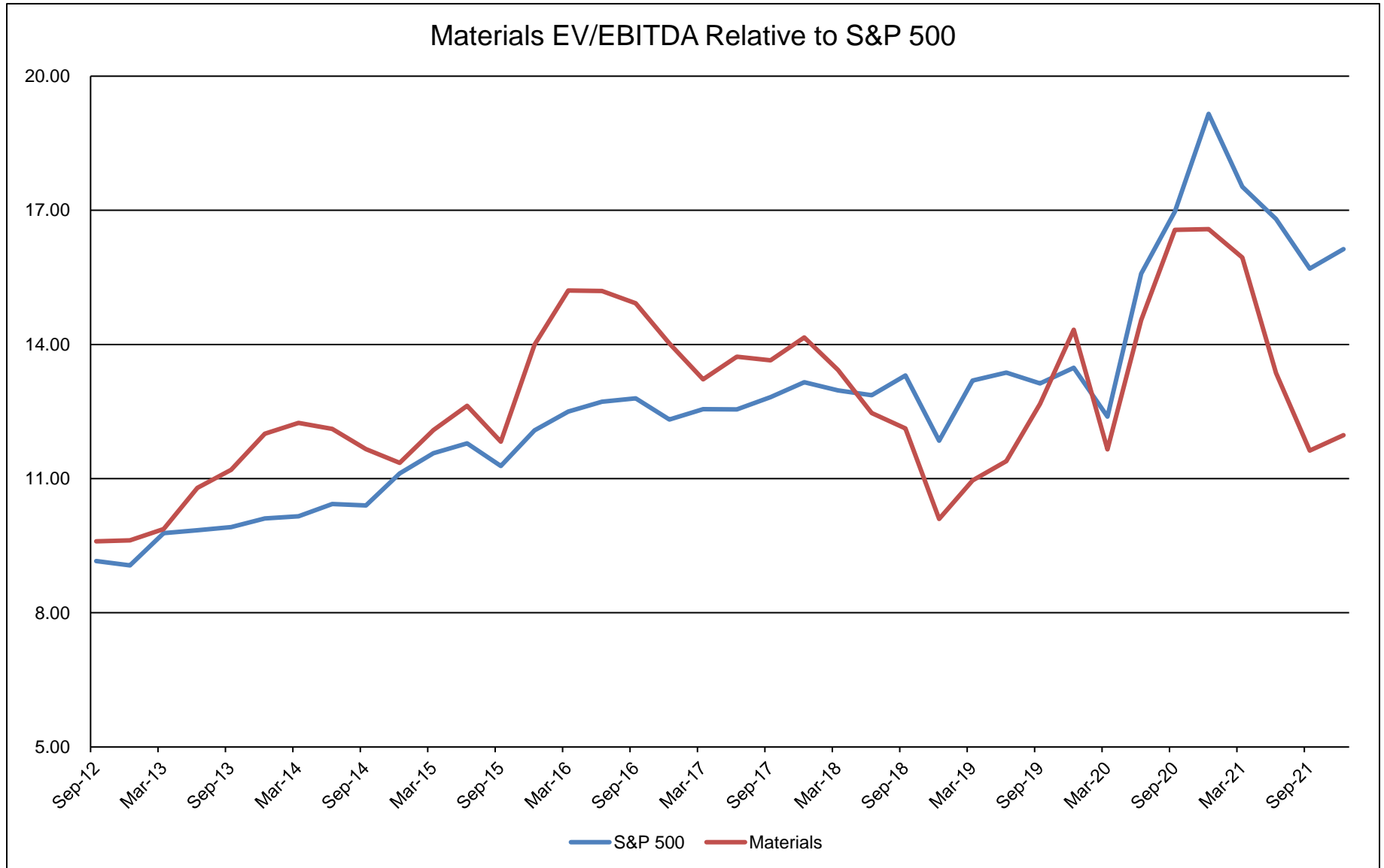




Source: Bloomberg, LP, 2022



Source: Bloomberg, LP, 2022





	Materials Ratios (% of S&P 500)					
	S&P 500	<u>10-yr Avg.</u> Materials	Mat/S&P	S&P 500	<u>Current</u> Materials	Mat/S&P
P/E	20.0	19.9	99.6%	22.0	16.6	75.5%
P/B	3.1	3.0	94.9%	4.3	3.1	71.2%
P/CF	12.4	11.5	93.4%	14.3	11.2	78.1%
P/S	2.0	1.7	84.8%	2.7	2.1	77.2%
EV/EBITDA	12.7	12.8	100.5%	14.9	11.0	74.2%

- Materials historically trades on par with Index on average
- Currently trading 20% below historical values across valuation metrics



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Recommendation



- Headwinds

- Russian Sanctions – Russia's top exports are industrial and agricultural commodities to EU¹
- Chinese property bubble and devaluation; slowing Chinese demand²
- Continued US inflation; specifically, consumer facing industries
- Rising interest rates; ~4 projected³
- Shift in economic cycle

- Tailwinds

- Increased US Infrastructure spending
- Increased diversification of EU commodities and energy dependence

¹ Observatory of Economic Complexity

² Stevenson-Yang, A. (2022, January 17). *Soft or hard? China's property sector is coming in for a landing*. Forbes.

³ US Federal Reserve (2021, December 15). *Summary of Economic Projections*



- SIM portfolio should be overweight in the materials sector by 300bps
- Justification
 - Relative Valuations of Materials is 20% below 10-year average.
 - Rising interest should bring S&P valuations closer to historical; materials presents better opportunity for capital preservation.
 - Materials presents opportunity to pass on inflation
 - Overall demand not slowing due to increased infrastructure spending; M&M and CM upside and potentially inflationary.

Industry	Recommendation
Chemicals	Neutral
Metals and Mining	Overweight
Containers and Packaging	Neutral
Construction Materials	Overweight



Questions?