

# Material Sector

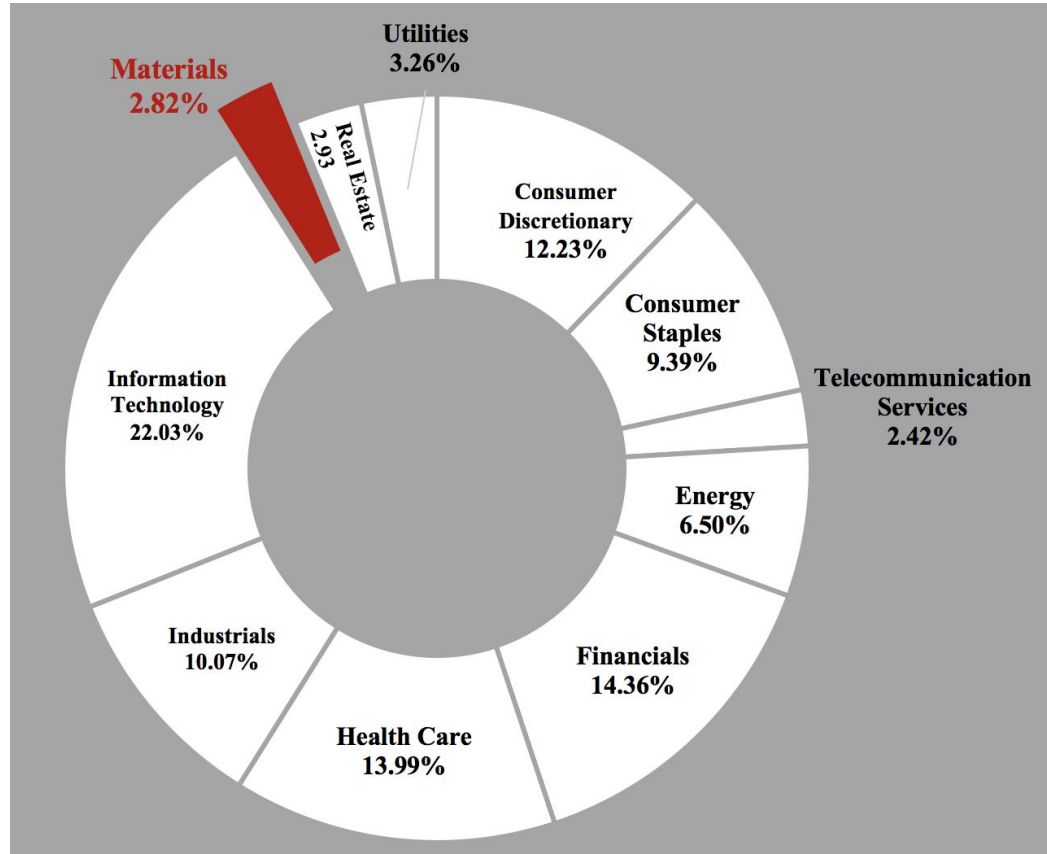
Kyle Hendrickson  
Liyin Huang  
Min Zhang

## S&P 500 Sector Breakdown

Market Cap: 1.89 T

S&P 500: 2.82%

SIM: 2.84%



## Industries

| Industry ▲              | Last % Change<br>12:00 PM ET 03/30/2017 | % CHANGE |                        |          |          |
|-------------------------|---|----------|------------------------|----------|----------|
|                         |   | YTD      | 1 - Year<br>03/29/2017 | 3 - Year | 5 - Year |
| <b>Materials</b>        | +0.22%                                  | +5.40%   | +16.72%                | +11.45%  | +41.18%  |
| Chemicals               | +0.08%                                  | +8.12%   | +15.62%                | +14.44%  | +61.24%  |
| Construction Materials  | -0.37%                                  | -4.52%   | +23.15%                | +67.55%  | +160.20% |
| Containers & Packaging  | +0.13%                                  | -0.57%   | +17.12%                | +26.73%  | +68.91%  |
| Metals & Mining         | +1.71%                                  | -2.05%   | +19.78%                | -22.07%  | -36.34%  |
| Paper & Forest Products | --                                      | --       | --                     | --       | --       |
| S&P 500 ® Index         | +0.19%                                  | +5.46%   | +15.91%                | +27.11%  | +67.99%  |

## Top 5 largest companies

## SIM



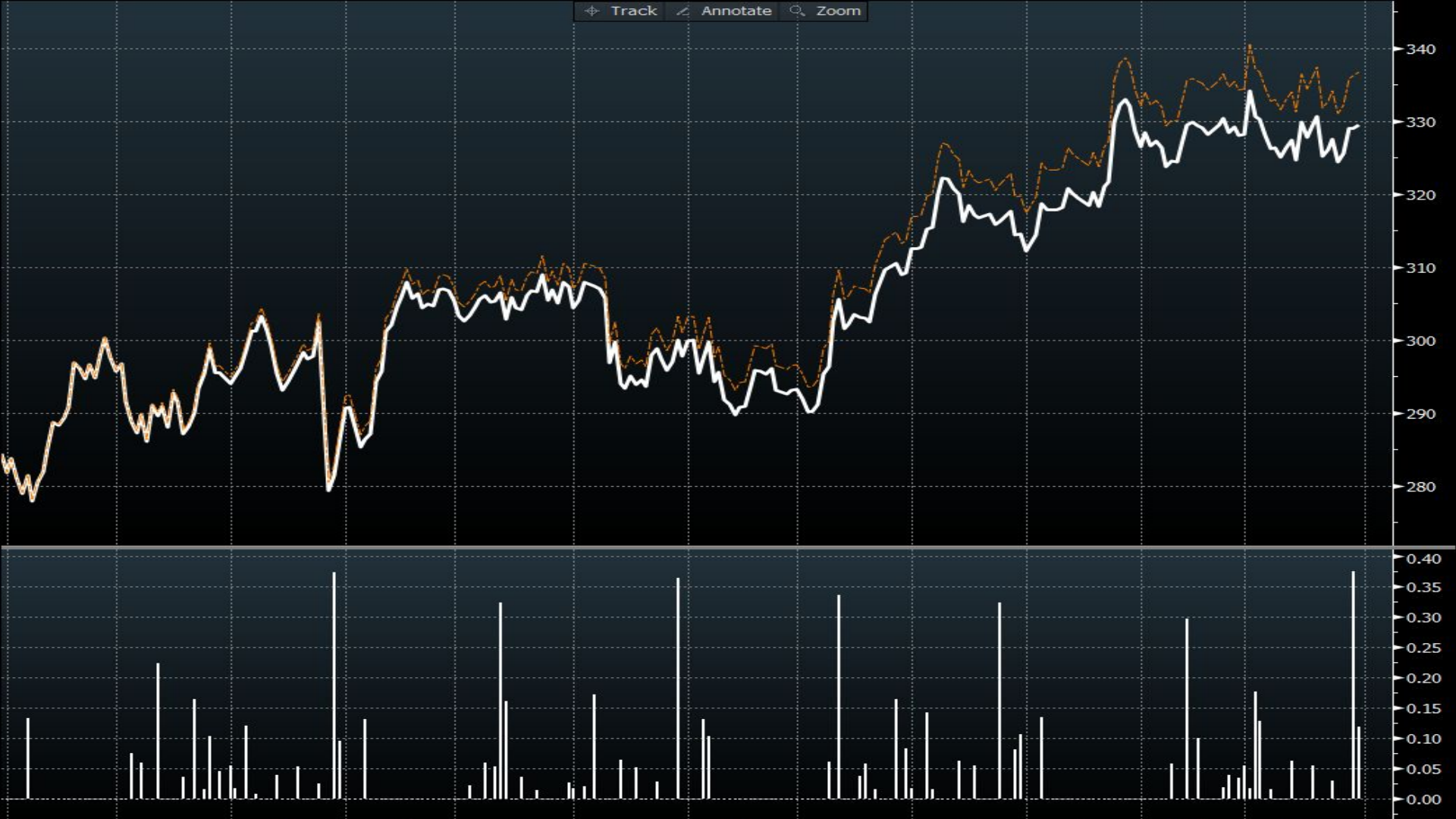
Chemicals Industry



Chemicals Industry



Container & Packaging

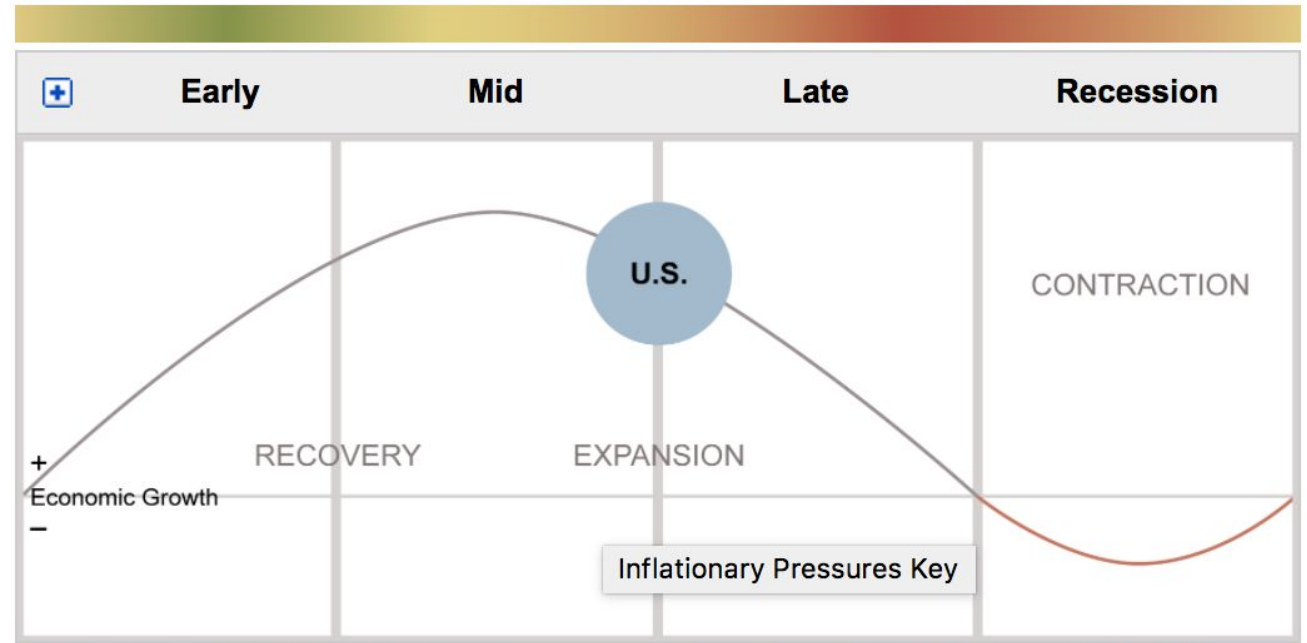


## YTD Performance



## Business Cycle

Cyclical Industry



| Sector           | Early | Mid | Late | Recession |
|------------------|-------|-----|------|-----------|
| <b>Materials</b> |       | --  | ++   | -         |

## Porter's Five Forces Analysis

| 5 Forces                                  | Level            |  |
|---|------------------|--|
| <b>Threat of New Entrant</b>              | <b>LOW</b>       | High capital investment<br>Regulation and permits      |
| <b>Threat of Substitutes</b>              | <b>LOW</b>       | Majority of basic materials products are provided      |
| <b>Power of Buyer</b>                     | <b>HIGH</b>      | Non-differentiated products<br>Switching cost is lower |
| <b>Power of Supplier</b>                  | <b>LOW</b>       | Price taker  |
| <b>Rivalry between Existing Companies</b> | <b>Very HIGH</b> | Price competition<br>Low cost production               |



## Demand and Supply Analysis

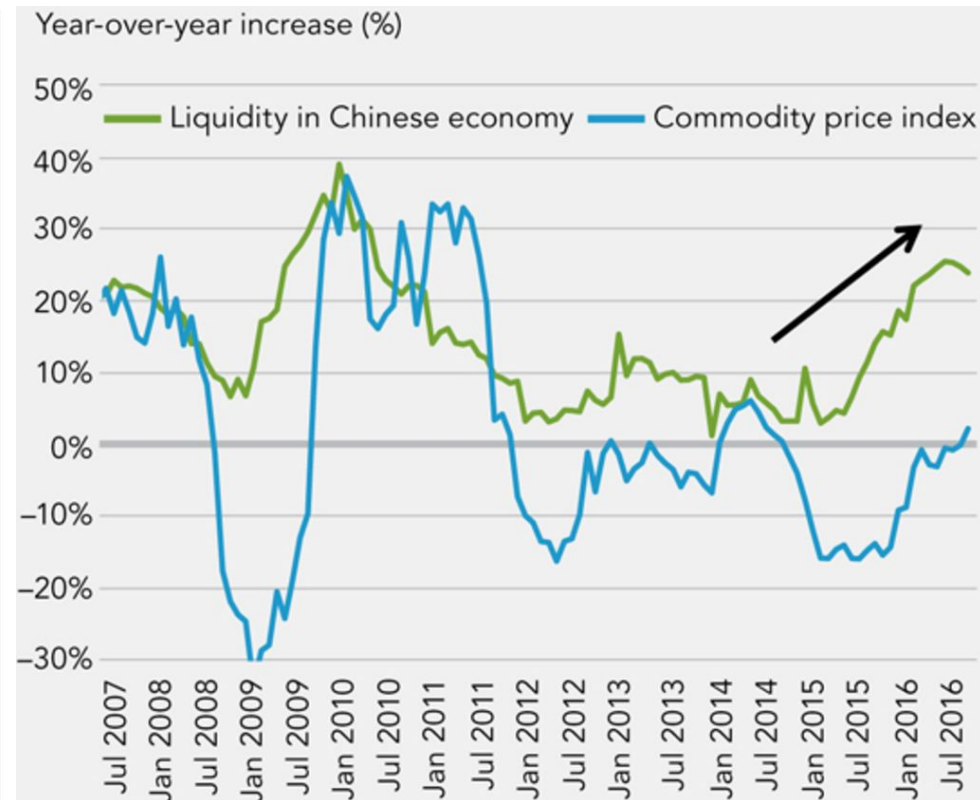
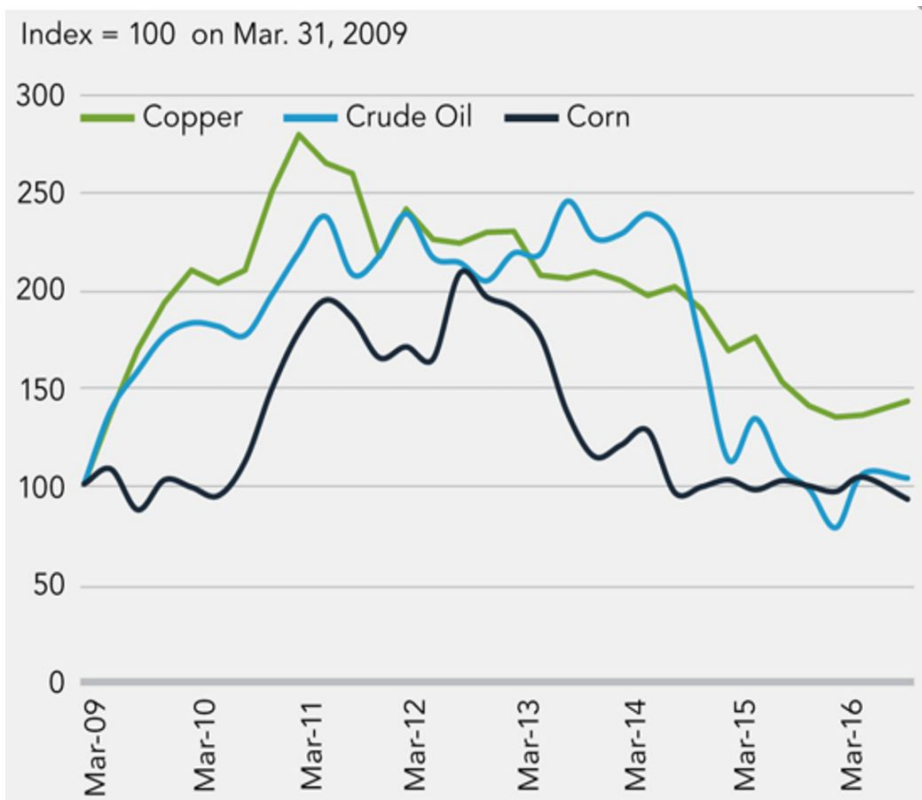
Commodity Price is highly driven by demand and supply

### Positive

- Demand catching up oversupply
- A wave of robust demand for commodities from developing countries.
- Infrastructure spending in the U.S. is set to accelerate.
- Easing monetary and fiscal conditions in developed countries.
- The potential for widespread M&A.

### Negative

- Commodity price uncertainty
- Labor cost and high-skilled labor shortage
- Inventory is still high in China



## US Food and Agriculture World Food Price Index



## US GDP Nominal Dollars SAAR



## US Exports Total NSA



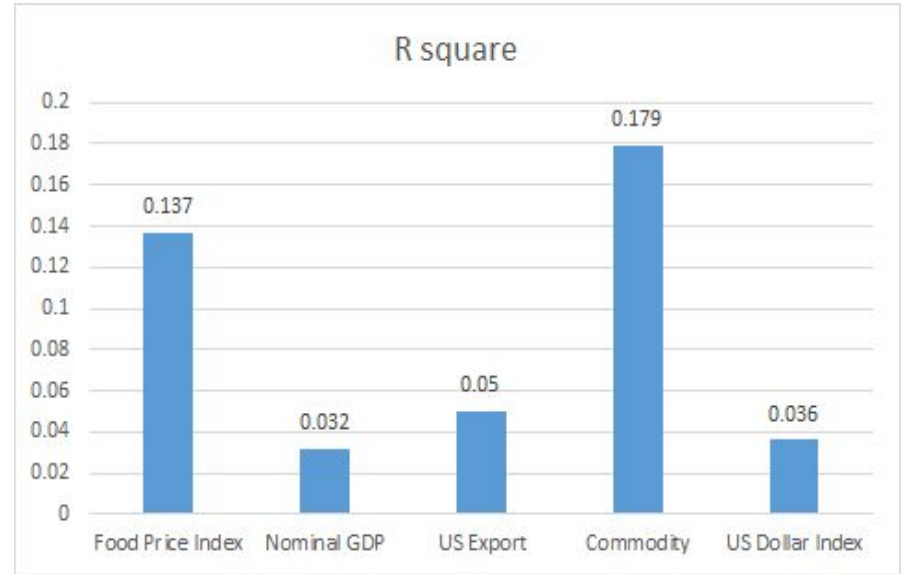
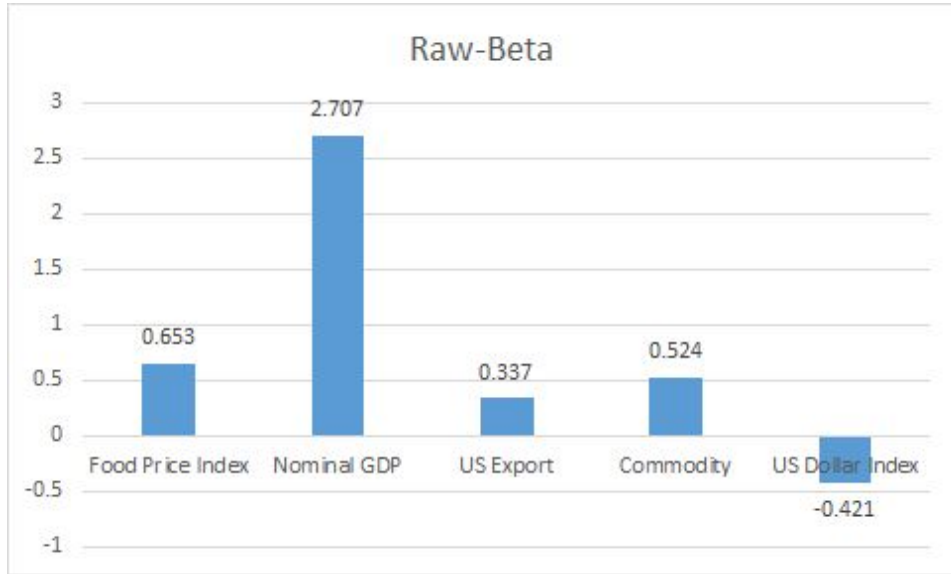
## Commodity



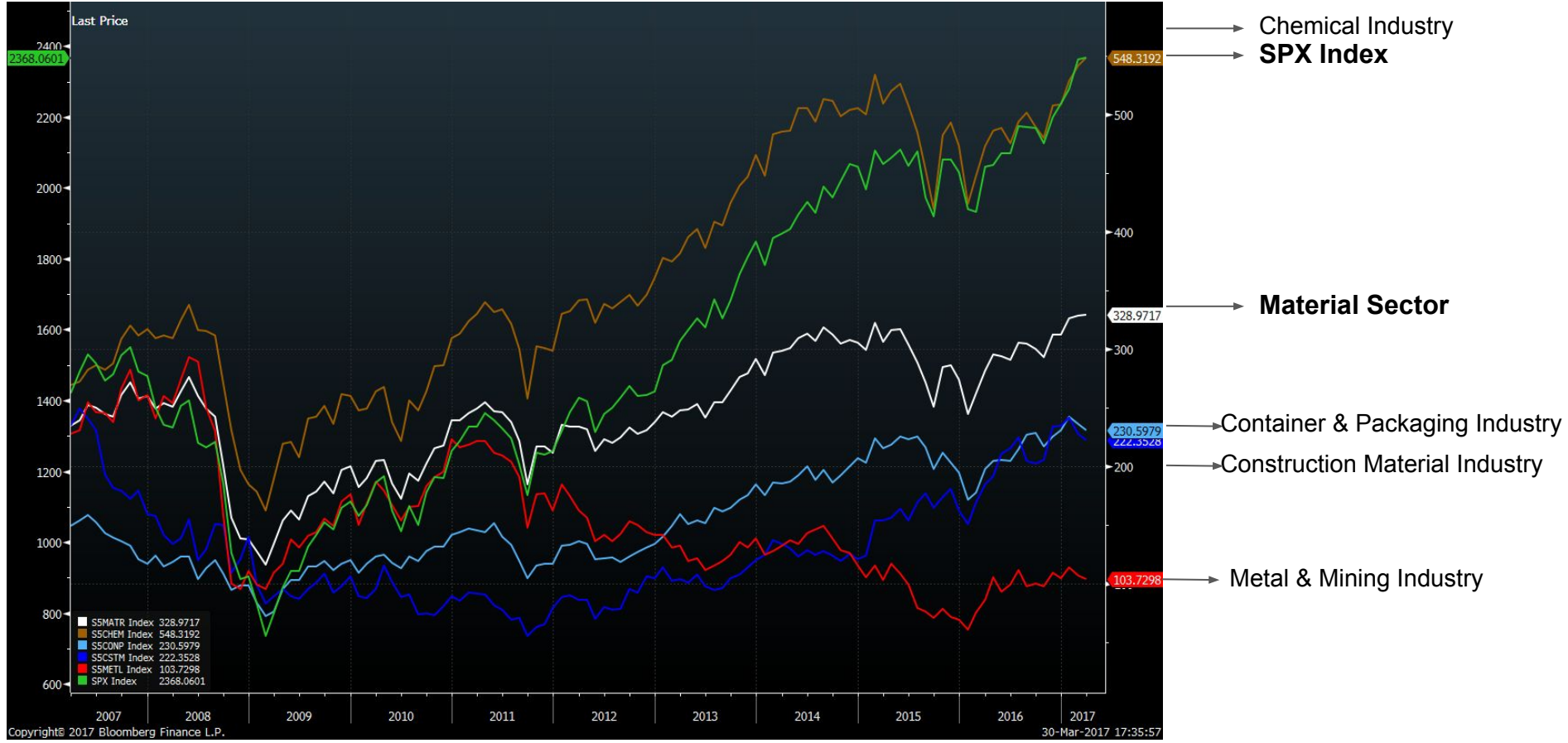
## US Dollar Index Spot Rate



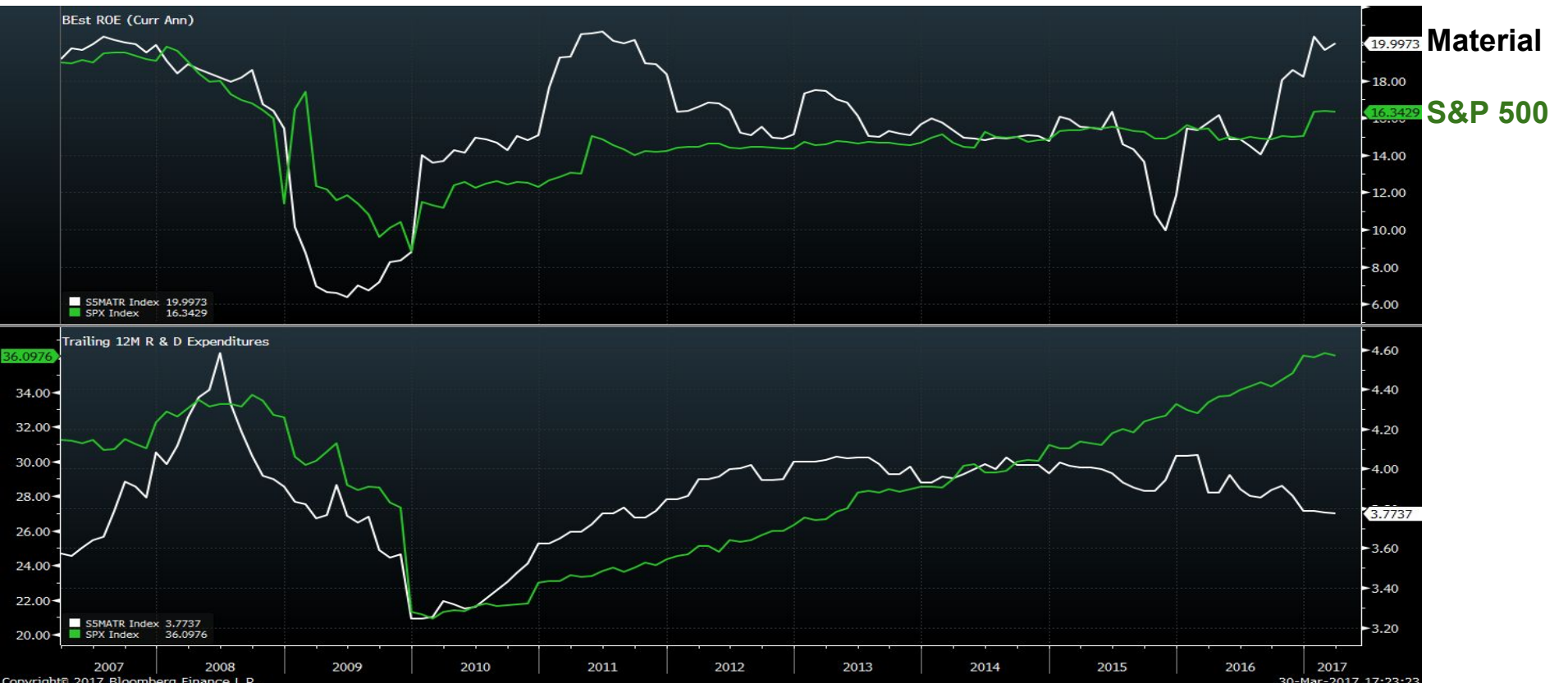
## Conclusion



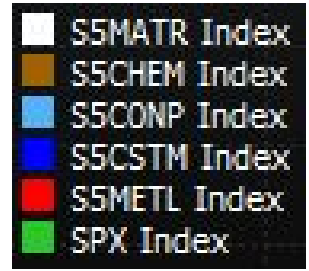




## ROE and R&D Expenditures

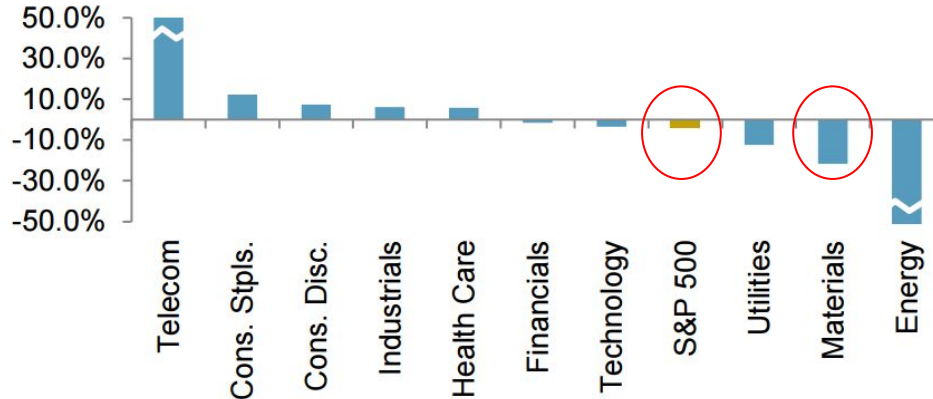


## Sales, Operating Margin, and ROE

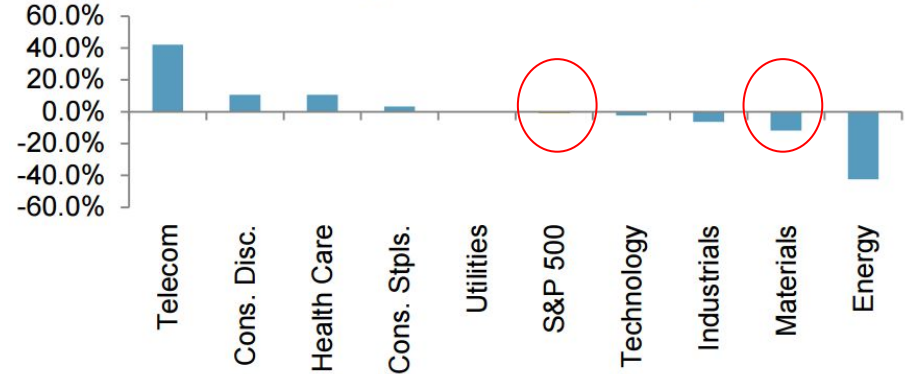


## Earning Growth

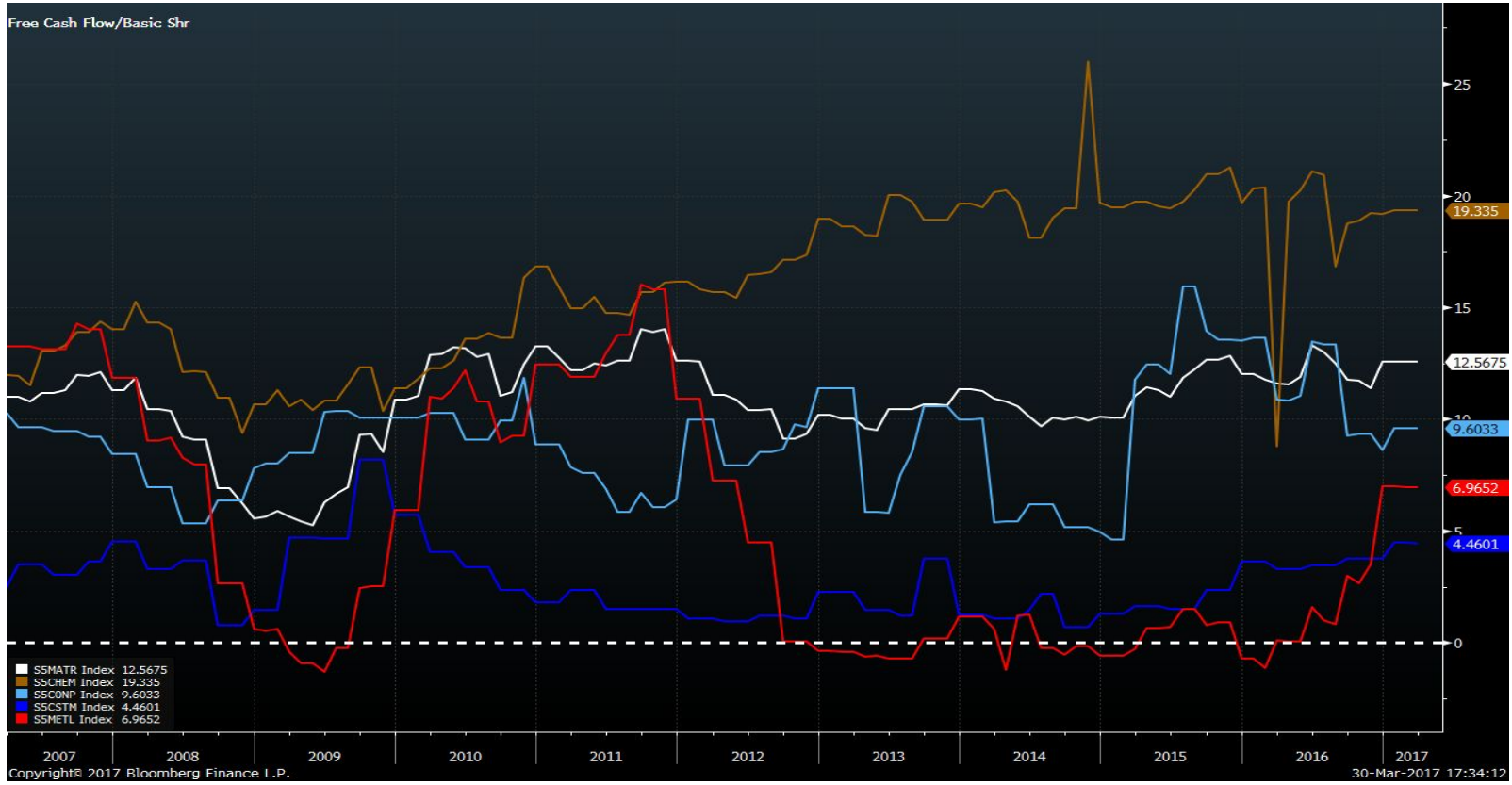
### EPS Growth (Last 12 Months)



### EBITDA Growth (Last 12 Months)



## FCF/Share



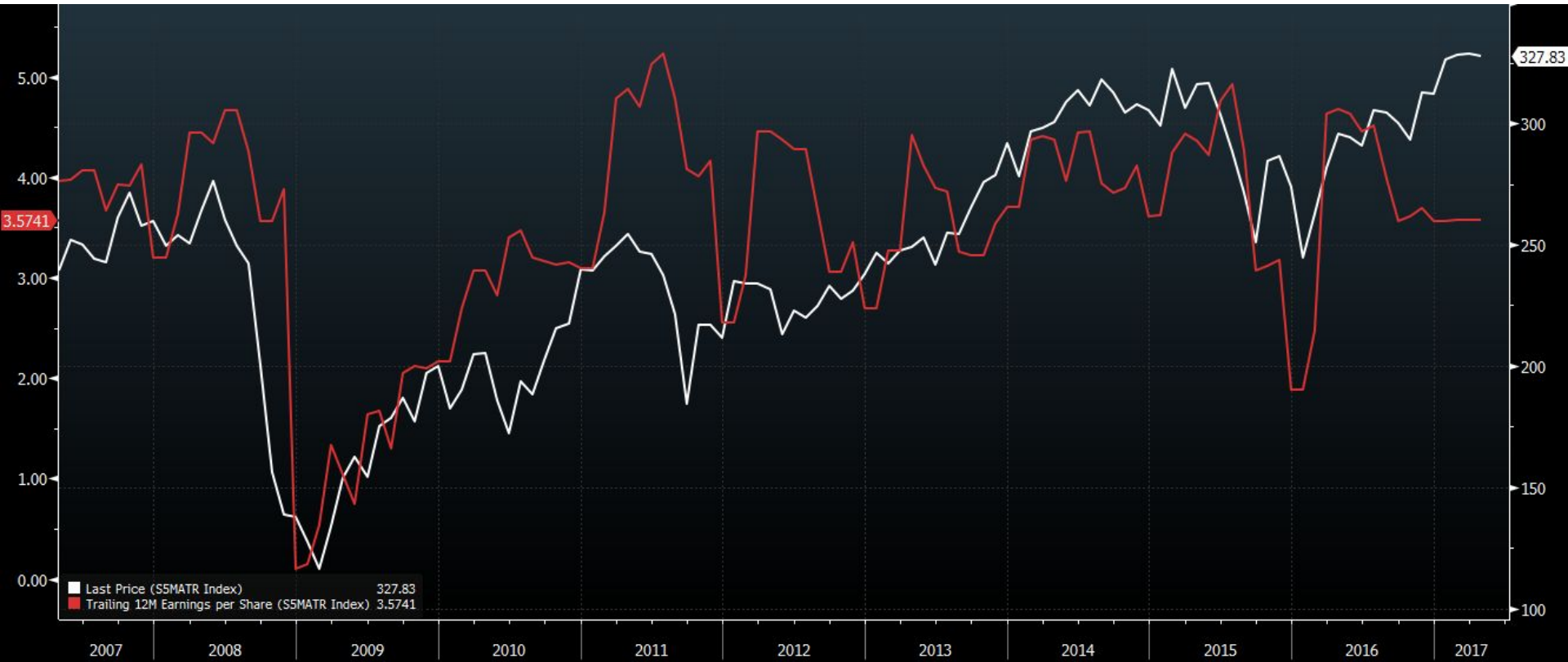
- S5MATR Index
- S5CHEM Index
- S5COMP Index
- S5CSTM Index
- S5METL Index

# Materials Index Price



■ Last Price (S5MATR Index) 327.88

## Price Relative to EPS



## Material Sector

|         | High  | Low   | Average | Current |
|---------|-------|-------|---------|---------|
| PE      | 21.62 | 12.72 | 18.27   | 20.04   |
| PB      | 4.02  | 2.29  | 3.11    | 3.99    |
| PS      | 1.94  | 1.05  | 1.45    | 1.92    |
| PEBITDA | 16.11 | 7.96  | 11.97   | 14.28   |

### 5 Year Absolute Valuation

- Sector is currently trading above its averages, across all metrics
  - Consistent with the overall trends in the market of large valuations
    - Frothy conditions
- Is this the right time to increase our position, given these valuations?



## Material Relative to S&P 500

|         | High | Low  | Average | Current |
|---------|------|------|---------|---------|
| PE      | 0.99 | 0.95 | 1.04    | 0.92    |
| PB      | 1.29 | 1.14 | 1.20    | 1.28    |
| PS      | 0.93 | 0.85 | 0.86    | 0.92    |
| PEBITDA | 1.22 | 0.98 | 1.10    | 1.10    |

\*Materials sector relative to S&P 500 over the past 5 years

- Valuations across the board are high
  - Highest CAPE Ratio since the tech bubble
- Materials come in above the S&P in some metrics, below in others
- All told, this is a difficult time to find value in the markets

## Materials Relative to S&P- 10 year



- Generally move together, but greater volatility in the materials sector (cyclical nature)
- Larger than usual gap in P/B

## Industry P/E 10 year

### Averages

- Materials (green):  
18.07
- Chemicals (blue):  
17.45
- Construction and Packaging (red): 15.50
- Metals (orange): 24.93
- Construction Materials (gray): 43.74



## Industry P/B

### Averages

-Materials (dark blue):  
2.86

-Chemicals (yellow)  
3.62

-Construction and  
Packaging (gold): 2.86

- Metals (pink): 1.82

-Construction  
Materials(light blue)  
2.12



## Recommendations

Our recommendation is to hold the current weight of the materials sector relative to the S&P

- Current weight is 2.84% relative to 2.82% in the overall S&P
- We want to keep that in line

Rationale:

- Too much overall uncertainty in business and economic factors, particularly internationally
  - Positive recent trends in demand-side indicators (international demand, spending from developing nations, increase in US infrastructure) but they are early stage.
- Difficult time to find value in the markets
  - High valuations across the board
  - Materials sector with its highest valuation across multiple metrics
  - Technically speaking, does not feel like the right time to add to the position
- Encouraged by the performance of the containers and packaging industry (up +17% over past 12 months) and our position within it.
- Hold position in chemicals with perhaps a slight trim to our individual holdings

Thank You

Any Questions?